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Agricultural cooperatives and the social economy in Kenya's changing governance landscape

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1990/91		1991/92		1992/93		MILK PRODUCTION & PAYMENTS	
PRODUCTION	RATE	PRODUCTION	RATE	PRODUCTION	RATE	PRODUCTION	RATE
33743 KG.	4.20	157189 KG.	4.20	184408 1/2 KG.	5.10	183890	8.20
39483 1/2 "	3.60	171440 1/2 "	4.10	192898 "	5.10	17908	8.40
38550 1/2 "	3.60	185884 1/2 "	4.00	195558 "	5.60	210494 1/2	8.40
140093 1/2 "	3.45	185994 "	4.10	195592 "	5.50	294450 1/2	8.40
116686 1/2 "	4.40	144513 1/2 "	4.00	189521 "	5.00	164440 1/2	10.50
106604 1/2 "	4.00	118416 "	4.00	194811 "	5.00	157757 1/2	10.40
124848 "	4.50	115124 "	4.40	164539 "	6.00	175567 1/2	11.80
146829 "	4.00	167763 1/2 "	4.70	187748 1/2 "	6.00	215467 1/2	11.80
143724 "	4.00	163350 "	4.60	194427 1/2 "	6.05	228487 1/2	11.80
143087 "	4.00	167763 1/2 "	4.90	182265 "	7.05	233107	11.80
146924 "	4.15	166748 "	5.60	185499 "	8.50	244316	11.80
1817 "	6.50	156996 "	8.61	180400 1/2 "	8.50	244841	11.80
		189359 1/2 "	4.50	2244705 "	13.70	244999 1/2	11.80
		158200 "		187059 "	6.10	244999 1/2	11.80

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Abstract

This research aims to gain insight into the performance of Kenyan agricultural producer organizations in supporting their farmer membership in a changing governance environment. As Kenyan agriculture becomes increasingly liberalized and embedded in regional and global agricultural markets, Kenyan small-scale farmers, and the farmer organizations that support them, are increasingly facing new challenges requiring adaptation and innovation. In particular, mounting pressures to commercialize the dairy sector have important implications for rural livelihoods and farmer rights in Kenya. Thus drawing on the fields of cooperative theory, political economy, new institutional economics, and rural sociology, and utilizing qualitative research methods, this research will produce insight into how the services and activities of agricultural producer organizations, and in particular dairy cooperatives, are part of a social economy, the agricultural policies that frame this engagement, and the implications for these organizations' efforts to adapt to a changing governance landscape.

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Abbreviations

AI	- Artificial Insemination
CIAT	- International Center of Tropical Agriculture
FAO	- Food and Agriculture Organization of the United Nations
FO	- Farmer Organization
ILRI	- International Livestock Research Institute
NGO	- Non-governmental organization
PO	- Producer Organization
RPO	- Rural Producer Organization
SACCO	- Savings and credit cooperative organization

1. Introduction

Over the past two decades, small-scale family farming¹ in Kenya has undergone profound changes with the liberalization of agricultural markets, the deconstruction of farmer support systems, and the introduction of new international market competitors and opportunities (Kilelu et al. 2016). These market and governance transitions have in-part contributed to new emerging forms of, and challenges to, farmer agency and livelihoods, which also shape the Kenyan agriculture system and development trajectories in new ways. In the context of these changes, this Master thesis research project seeks to analyze the changing socio-political context of small-scale family farming in Kenya by examining how farmer organizations, and particularly dairy cooperatives, facilitate and address farmer needs and interests through services, specifically social services that seek to support farmer livelihoods beyond only economic benefits, product bulking, and marketing functions.

This research topic is meant to contribute to the current agricultural development discourses in Kenya, which are often narrowly focused on the ‘meta-narrative’ of how to commercialize small-scale farming in Kenya (Poole et. al, 2012). But too often the strategies toward commercialization of subsistence and small-scale farming are not critically examined, nor are the perspectives and interests of the farmers (particularly the most marginalized) most impacted by these development efforts usually incorporated into implementation processes (particularly top-down government-led processes). This challenge is emphasized by the recent work of Kilelu et al. (2016, 1-2) who states that “a majority of smallholders are unable to transition from subsistence to commercialised production... [which is]...exacerbated by smallholders’ limited political voice in influencing agricultural policies and by other institutional biases that disadvantage their participation in markets, thereby broadly affecting sustainable agricultural development....An extensive body of literature on smallholder commercialisation indicates the importance of mobilising and effectuating collective action amongst smallholder producers to overcome the above-noted challenges and enhance producers’ capacities.” This recognition highlights the need to critically consider concepts of farmer agency, agricultural governance, and the holistic socio-economic needs of rural producers, and has contributed to the re-emerging academic and practitioner attention to farmer organization collective action, as a form of farmer agency, in the late 20th and 21st century global context of political decentralization and privatization of agricultural development efforts (Gouët and Van Paassen 2012). Historically, as well as in the current Kenyan agricultural context, agricultural cooperatives have been a primary organizational mechanism for supporting small-scale farmer interests and livelihoods through collective action service delivery to their members.

Building on academic literature of agricultural cooperatives, agricultural governance, and the social economy, the focus of this research project is to analyze how agricultural cooperatives, and specifically dairy cooperatives, in Kenya are engaging in the social economy in the context of Kenya’s changing governance landscape to support cooperative member² livelihoods. Considering that cooperatives are organized as democratic, membership farmer organizations, and the services and functions of these organizations are

¹ For the purposes of this paper “small-scale family farmer” or “small-scale producer” (used interchangeably) is the primary research focus, and is defined as a mixed farm (both livestock and crop production) of less than 1 hectare to 5 hectares of land, which relies on family labor, and engages in markets (formal or informal) as agricultural sellers, as well as buyers of agricultural inputs and household consumption goods.

“Subsistence farmer” or “subsistence producers” is differentiated as a farmer that has fewer assets than small-scale farmers and produces primarily for home consumption, thus engages minimally in markets as a seller. These definitions are drawn from academic literature and field research interviews.

² For the purposes of this research, ‘member’ here refers to the farming family (as a cohesive unit) that has formal membership in a cooperative organization.

determined by the cooperative membership, analysis of how cooperatives support farmer member livelihoods through the social services requested by their members offers important insight into the challenges, opportunities, and identities of small-scale farmers in Kenya. This analysis of cooperative social services, and the farmer livelihood and agency implications of these services in the context of changing agricultural governance frameworks, is particularly important in the Kenyan context where agricultural cooperatives are a central pillar in the country's agricultural economy.

To explore this topic, qualitative research was conducted in Kenya for two months in April and May 2016 including twenty-two interviews with cooperative leadership (managers and board members), cooperative stakeholders (cooperative teachers, consultants, and research institutes) and agricultural policy-makers (farmer advocates, NGOs and government representatives). Additional insight was gained through informal conversations with cooperative farmers, as well as cooperative and development experts in civil society, academia, and international agencies in Kenya. By engaging stakeholders from the farm level to the policy arena, the research aims for a broad and holistic understanding of the role of cooperatives in Kenya in the context of political and market change in the country. An initial literature review on this topic indicated that this area of study related to cooperative adaptation in Kenya is relevant to a number of on-going rural development policy and programming discussions with Kenyan governmental and international development stakeholders, while at the same time being under-researched (Wanyama 2009; FAO 2011).

The following research question is the focus of this research: how are agricultural cooperatives supporting Kenyan farmer livelihoods through social service delivery, and how is the changing governance environment in Kenya impacting these cooperatives and the services they provide their members? To answer this above research question, the following sub-questions (presented in figure 1 below) formed the basis of the semi-structured interview questions. The main respondent group was cooperative leaders (managers and board members), with additional interviews posed to cooperative stakeholders (cooperative teachers, consultants, and research institutes) and agriculture policy stakeholders (farmer advocates, NGOs and government representatives):

Figure I: Research sub-questions

- A. Why are cooperatives' social services important for their members?**
- i. What are the most important social services that cooperatives currently provide their members?
 - ii. How do these current social services support the member?
 - iii. How does government policy support the cooperative's delivery of this service to their members?
- B. How are governance changes (recent or expected at national, county, and community levels¹) causing cooperatives to adapt the social services they are currently offering their members?**
- i. What are the main ways that government policies impact cooperatives?
 - ii. How are governance changes challenging cooperative members?
 - iii. How are cooperatives attempting to overcome these challenges?
 - iv. How are cooperatives using political advocacy to represent their member's interests?
- C. What additional social services could cooperatives provide to their members?**
- i. Why would this additional service be important for the cooperative member?
 - ii. How could government policy support the cooperative's delivery of this additional service to their members?

Thus these research question and sub-questions aim to contribute to the current academic re-evaluation of the role of farmer organizations, and particularly agricultural cooperatives, as these organizations attempt to fill the new socio-political and economic spaces emerging from ruptures in local and global food regimes (Torgerson et al. 1997; Van der Ploeg 2008). To explore how these research areas will be approached through the paper's theoretical framework, some conceptual framing is first presented below.

2.1 Conceptual background

To better understand how farmer organizations, such as cooperatives, effectively serve farmers, this research draws initially on Van der Ploeg (2008) to illuminate the diverse socio-economic nature of farmers themselves. Traditionally farmers are characterized by their economic activities of production as private, profit-orientated businesses selling on markets. But as Van der Ploeg (2008) emphasizes, small-scale producers, and particularly subsistence farmers, are better recognized as semi-capitalist entities engaging in different overlapping social systems. On one hand, as private businesses producing and selling for a farm income they are indeed impacted by markets. But on the other hand, subsistence agricultural production as a livelihood activity (i.e. centered on household food security with limited inputs and little commercialization) are fairly autonomous from formal economic systems.³ Furthermore local non-economic exchange of goods through social networks, rather than through formal markets, is common (particularly in contexts of market failure) and further highlights how small-scale farmers are only partially embedded in market economies (Van

³ The research of Van der Ploeg (2008) does not only examine dairy farmers, but as noted in the Context Analysis section later in this research paper, this perspective on small-scale and subsistence farming is relevant to dairy farmers in Kenya as most dairy farmers in Kenya raise livestock in a mixed farming system with crops, often produce milk for domestic consumption, and also sometimes sell their milk on the informal dairy market (i.e. not through formal economic and market channels such as cooperatives).

der Ploeg 2003, 2008). This characterization of farmers as semi-capitalist and socially entrenched, is appropriate for this research project because it recognizes that farmers have both (and perhaps even conflicting) social and economic goals and interests which also change over time. Recognizing that farmers, and by extension farmer organizations, are dynamic and multifaceted in their actions, needs, and interests is important when evaluating farmer organization services.

With this brief acknowledgement of farmers as semi-capitalist entities, farmer organizations⁴ can be defined as:

“A formal or informal (registered or unregistered) membership-based collective action institution serving its members, who are rural dwellers that get part or all of their livelihood from agriculture (crops, livestock, fisheries and/or other rural activities). Services provided by the farmer organization aim to improve the livelihoods of its members, and include access to advice, information, markets, inputs and advocacy (FAO 2014, 2)”

At the core of this definition of farmer organizations lies the political economy perspective that individual small-scale farmers have little political and/or economy power as individual entities, but through collective action have more power in protecting their interests (Bienabe and Sautier 2005; Penrose-Buckley 2007). As emphasized by Bernard and Spielman (2009), there has been a renewed focus on these potential farmer benefits offered by farmer organization collective action since the mid-2000s, particularly in sub-Saharan Africa. Through collective action, networking, and advocacy, farmer organizations can play a number of different roles in supporting farmers and rural communities (particularly during periods of political, social, and economic transition) to maintain their socio-political and economic sovereignty and compete for their livelihood interests against more powerful actors (Bienabe and Sautier 2005). According to Kilelu et al. (2016, 3):

“Several studies report that collective action amongst smallholders through the formation of producer groups and farmer cooperatives creates economies of scale, reduces transaction costs and improves farmers’ bargaining capacity... Despite mixed results on the effectiveness of these farmer organisations, there is wide consensus that coordinating collective action is important to enhance smallholders’ position and promote inclusive agrifood value chains.”

This perspective clearly emphasizes the important role of collective action in the economic goals and functions of farmer organizations for their farmer members in agriculture value chains. To compliment this economic perspective, Bienabe and Sautier (2005, 7-8) state that farmer organizations also provide a range of social services (such as political advocacy), which are also promoted through collective action:

⁴ These kinds of organizations take many names in academia. For the purposes of this research ‘farmer organization,’ ‘producer organization,’ and ‘rural producer organization’ are used interchangeably. Cooperatives are considered a kind of farmer organization with specific characteristics, which are detailed in the paper’s theoretical framework below.

“Basically POs (producer organizations) can defend farmers’ interests and improve their participation in three domains: In decision making processing over program and projects, in policy making processes regarding their market access reinforcement and market environment enhancement (forma recognition of specific product quality negotiation about tariffs to encourage the development of the national production...) and finally in a prospective reflection about the role of family agriculture in a liberalized and global environment, the challenge being to propose and defend general policy orientations which would be more consistent with small-small farmers’ objectives, strategies, and specific constraints.”

Thus this collective action function of farmer organizations allows them to “provide a wide range of services, including marketing services, facilitation of collective activities, financial services, technological services, education services, [and] health services” (Gouët and Van Paassen 2012, 370). This diversity of different roles and services relates to the observation by Bienabe and Sautier (2005, 8-9) that in more rural contexts, farmer organizations “tend to assume a multifunctional role integrating several economic, representation, and advocacy activities, with a stronger cohesion and a stronger link to local development issues.”

To better analyze how farmer organizations support farmers toward their livelihood and development goals, Bosc et al. (2001) frames farmer organizations’ activities around four core functions:

- (1) Economic functions: supply, production and marketing of goods and services.
- (2) Social functions: cultural, education, health, drinking water and mutual support programmes.
- (3) Representation: defense of group interests and advocacy on local, national or international levels.
- (4) Information sharing.

For the purposes of this research, these four functions are reclassified into two groupings – economic services (related directly to production activities such as procurement, processing, and marketing of goods and services) and social services (in-directly related to production activities such as political representation, knowledge transfer, and social cohesion efforts). This characterization of the roles of farmer organizations between social and economic activities is not a binary differentiation, but rather represents the spectrum of ways that farmer organizations serve the plurality of farmers with different livelihood and development interests and goals. In this context, particular attention is placed on the role of farmer organizations (particularly producer cooperatives, as described below) in delivering social services for farmer livelihood needs. This focus is appropriate for the Kenyan context where small-scale farmers constitute the majority of farmers, many of whom may not consider agricultural commercialization to be a primary goal or means to achieve their livelihood needs.

A second way in-which these two categories of farmer services can be analyzed is through the ways in-which services link farmers across different socio-political systems and value-chain levels. Bijman et al. (2011), Poulton et al. (2010), and Kilelu et al. (2016) discuss these concepts primarily from an economic or market perspective in relation to farmer coordination and integration into value chains. According to Kilelu et al. (2016) (building on the writings of Hounkonnou et al. (2012), Mmari, (2015), Poulton et al. (2010), Trienekens

(2011), and Yang et al. (2014)), “[i]t is argued that enabling combined horizontal and vertical value chain coordination in order to better integrate and upgrade smallholders in value chains requires effective intermediary institutional forms” (Kilelu et al. (2016, 2). But this perspective can also be adapted to a social economy framework to view farmer organizations as providing services across horizontal and vertical levels that integrate farmer interests not only into value chains (i.e. economic systems) but also social and political systems. According to Kilelu et al. (2016, 6), a horizontal level farmer service is a service that links farmers at common places in the value chain “with the aim of fostering beneficial collaboration to address shared constraints and exploit opportunities associated with scale.” An example of a horizontal farmer social service thus could be social networking and knowledge exchange among farmers at agricultural fairs or farm demonstration plots where information ranging from improved production practices to livelihood services such as health care can be exchanged. In this sense farmers are receiving an important service that can support their on-farm production, but does not immediately facilitate the farmer engaging with other kinds of stakeholders in the value chain or local community. On the other hand, vertical farmer services links “different actors at different levels in the value chain” (Kilelu et al. 2016, 6). Utilizing this concept in a political agricultural governance context, political advocacy could be characterized as a vertically-orientated social service as the political interests of farmers at the field level are translated up the political hierarchy to county or national political offices. This differentiation of horizontal versus vertical farmer services is not the focus of this research project, but it does help illustrate how farmer organizations link their members to different social, political, and economic systems through their services and it provides a helpful alternative analysis lens to compliment this research project’s theoretical framework.

Thus to conclude this introductory section, this research attempts to recognize some of the significant shifts in agricultural governance, farmer agency, and collective organizing in Kenya’s food regime, and position itself within the corresponding and rapidly changing academic debates on farmer agency and agricultural development, through the lens of farmer organizations and services. This is a relevant and important debate to attempt to contribute to, as the political ideological hangover and stigma of the Cold War period against organized labor and cooperatives has lessened, a wide range of development stakeholders and social movements have pushed for strengthening farmer organizations (and in particular ‘new generation’ cooperatives) as a means to promote farmer rights and social justice in rural development (Bernard and Spielman 2009). But as indicated by Ragasa and Golan (2014), research on how producer organizations achieve this goal has been understudied. With this renewed focus, and the uneven development results it has fostered, farmer organizations continue to face a familiar (although perhaps in new contexts) “delicate balancing between community norms that prioritize social inclusion and solidarity, and business norms that demand professional and competitive RPOs (rural producer organizations). Policymakers and donors throughout sub-Saharan Africa have drawn further attention to these issues with new investments in cooperative promotion efforts, but without the corresponding knowledge needed to address the potential efficiency–equity tradeoffs” (Bernard and Spielman 2009, 61; Bienabe and Sautier 2005). The following research thus aims to contribute to this knowledge gap primarily through the theoretical lens of the social economy, detailed below.

2. Theoretical Framework

For this research, a three-part conceptual framework was used drawing on the disciplines of cooperative theory, political economy, new institutional economics, and rural sociology. The first component of this conceptual framework considers the core functions of the cooperative model, and how this core function impacts the organization's ability to adapt to change as well as determine which services to prioritize and offer its membership. The second component examines the characterization of the social economy, and how the activities of cooperatives can be considered to be part of this socio-political and economic space. The final component of this conceptual framework considers broadly the concept of political governance, and how the rules and regulations of government policy shape agricultural systems, cooperatives, and development.

3.1 Cooperatives defined

Agricultural cooperatives are a type of farmer organization with distinct characteristics differentiating it from other farmer organizations. As the primary unit of analysis for this research, a clear understanding of how cooperatives are defined in this research is thus needed. According to the International Cooperative Alliance, "a co-operative 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 of cooperatives is important in its differentiation from other farmer organizations for two reasons: 1) it recognizes that the services provided by cooperatives in theory attempt to support their membership in a holistic manner through meeting not only their economic needs but also their social and cultural priorities; 2) it emphasizes the internal organizational structure of cooperatives are democratic in nature, meaning that members have both more political control within the structure of the organization, as well as more responsibility for the direction and function of the organization. This d

Despite the above mentioned International Cooperative Alliance definition of cooperative, in academia there longstanding debate regarding cooperative theory is whether cooperatives, at their core, should be defined as firms (i.e. decision-making entities) or as an organization of aggregated economic units (i.e. a group of coordinated producers) (Ortmann and King 2006). Utilizing organizational theory, Helmberger and Hoos (1962) focus on treating cooperatives as decision-making entities that are non-hierarchical and not vertically integrated, with each cooperative member maintaining some degree of organizational autonomy and agency while still being bound in some ways to the group decisions of the cooperative organizations. This organizational framework sees individual cooperative members as able to make decisions, or express their agency, at the individual firm (or farm) level to place their production strategy in-line with the other cooperative members (i.e. farm planting strategies in-order to meet production quotas for the cooperative), as well as able to make coordinated decisions with other cooperative members on the trajectory of the cooperative as a whole (i.e. voting on cooperative internal governance by-laws or marketing strategies). Thus Helmberger and Hoos (1962) present cooperatives structures at a fundamental level as differentiated from traditional hierarchal firms based on their organization of decision-making structure because of how this democratic decision-making structure places farmer agency at the core of the organization itself. This farmer agency characteristic, coordinated through collective action, both shapes how the cooperative supports its members, and how cooperative members engage with other actors. This theoretical framework considering cooperatives as decision-making entities working in coordination will form the basis of the research's evaluation of cooperatives. The reason for

this choice is that in highly dynamic political and economic environments, as is found in Kenya, cooperatives must make collective decisions on how to adapt their production, marketing, and service strategies to stay competitive in the market. Stated differently – in periods of change, cooperatives must first make decisions on how to adapt their social and economy activities before actually going through processes of aggregating agricultural production in new ways for the marketplace. This characterization follows King (1995) who states that the greatest strength of cooperatives “is their ability to generate institutional innovations that allow them to respond to changing conditions and needs” (as quoted by Ortmann and King 2007: 23). And this ability to change and adapt to the needs and goals of the cooperative members includes the market orientation of cooperatives. Helmberger and Hoos (1962) further differentiate cooperatives from traditional firms based on cooperative member’s use of agency (as decision-making firms) to potentially orient the cooperative as a non-profit making entity. Although cooperative theory suggests economic services are a core function of cooperatives, it is not the only role that cooperatives offer, and the economic goals of the organization can be adapted as desired by the cooperative members working collectively. This possibility of cooperative members to use cooperative collective action to achieve social goals not while not necessarily being completely orientated toward the economic role allows these organizations to play innovative roles in agricultural and livelihood development.

3.1.2. Cooperative services

Considering that collective decision-making, as a form of collective farmer agency, is a core characteristic of cooperatives, this democratic decision-making characteristic ultimately shapes which services the organization offers its members, based on the needs and interests of the cooperative members. Following this point, this research draws on the writing of Penrose-Buckley (2007) to evaluate cooperative services that result from this farmer collective agency and action. According to Penrose-Buckley (2007), cooperatives offer a common range of services (which as mentioned previously, for the purposes of this research are being grouped into economic and social services) that include both economic and social dimensions. Despite the recognition that subsistence farmers are semi-capitalist entities, most cooperative scholars consider producer cooperatives to be first and foremost economic organizations providing economic services. From this perspective, traditionally producer cooperatives’ services are primarily focused on protecting the bargaining power and financial sustainability of farmer members by opposing monopsonies and monopolies through collective action with coordinated production and aggregation (Zamagni 2012; Ortmann and King 2007; Braverman et al. 1991). These services can vary according to the sector and needs of the cooperative members, but often include securing and raising the economic bottom-line of the cooperative members through price bargaining in markets, collective bulking of production, providing financial services such as access to credit, and price negotiations for agricultural inputs (Zamagni 2012; Ortmann and King 2007).

Complementary to this economic service role, cooperatives also provide a broad range of formal and informal social services orientated toward improvement of farm member livelihoods that are demanded by the cooperative members (again highlighting the farmer agency characterization of this kind of farmer organization) and that the market fails to effectively provide (Levi and Davis. 2008; Ortmann and King 2007; Fecher et al. 2008; Braverman et al. 1991; Sexton, R.J. & Iskow, J. 1993). In-fact the ability to offer social services that provide benefits not directly related to production and profit-making activities is a distinct characterization and comparative advantage for cooperative organizations in terms of attracting farmer membership (Braverman et al. 1991; Sexton, R.J. & Iskow, J. 1993). At the same time, the fact that cooperatives are beholden both to the economic goals of the

organization (and its members) through their engagement in the market, as well as the social needs of their members, which may overlap with or be in contradiction with the organization's economic goals, highlights both the benefit and challenge of the cooperative model. Like cooperative economic services, cooperative social services can also be diverse depending on the context, but generally range from securing access to state supports such as subsidies through advocacy and political lobbying, knowledge transfer for improved production, organizing education and training opportunities, building social capital and social cohesion through networking, and improving access to other livelihood services such as healthcare (Ortmann & King 2007; Schwettmann 2015). Typically these services are not directly related to agricultural production activities, but do have important impacts on the livelihoods of the producers themselves, and therefore do have implications for the success of the cooperative itself. Some of these social services, such as access to state financial supports, have direct economic impacts on the competitiveness of the cooperative's individual member farms. But in other cases the economic impacts of a cooperatives' social services can be less clear; social services may not be economically quantifiable or may have few economic benefits (but may contribute to social, cultural, or political capital of the farmer) (Moulaert and Ailenei 2005).

Literature by Braverman et al. (1991), Sexton, R.J. & Iskow, J. (1993), and Penrose-Buckley (2007) state that there is a common trajectory of what kind (i.e. more economic and productionist or social and livelihood based) of services are effectively offered by cooperative depending on the lifecycle stage of the cooperative. Due to the core economic function of cooperatives, cooperative services often begin with an economic support orientation, focusing on marketing services (such as bulking, processing, and selling) to economically support the organization's membership (Braverman et al. 1991). After establishing a degree of economic stability in-terms of market access for its farmer members, organizations are then able to expand their range of services into more non-productionist services demanded by its members (i.e. once the cooperative is financially sustainable enough to cover its costs of bulking and marketing its product, it can then offer additional services such as knowledge transfer). Often times these services are demanded by cooperative members in the context of market failure, where farmers are not able to access desired services either due to lack of availability or prohibitive cost (Sexton, R.J. and Iskow, J. 1993; Torgerson et al. 1997), and therefore cooperatives are requested to offer this requested service. But as indicated by Braverman et al. (1991) based on analysis of cooperatives in sub-Saharan Africa, it is important that cooperatives only attempt to offer non-business or economic services once the organization has established a degree of economic stability. Cooperatives first and foremost must reach a certain level of business volume to get to the point where their product price covers their costs of production, marketing, and higher internal governance transaction costs, and be competitive with non-cooperative producers (Braverman et al. 1991). Once this has been achieved, the cooperative can then expand the range of their services, but not without risk. Expanding cooperative services outside of base economic marketing services may fill critical development gaps needed by farmer members but also this shifting in economic and social services can lead to a range of challenges for the cooperative if the organization is not well prepared or skilled in offering new social services (Penrose-Buckley 2007). Delivery of social services outside the scope of expertise of the cooperative management can lead to excessive costs for the organization and threaten the core economic function of the cooperative. Furthermore, these services must 1) match the needs of the cooperative members, and 2) must be provided at a cost that is lower than the cooperative's competitors (Penrose-Buckley 2007). Provision of services at economic costs that are uncompetitive in the market will have negative impacts on the economic sustainability of the organization as a whole. Thus cooperatives must strike a careful balance

of maintaining the core economic functions while balancing the member-requested social services needed to help farmer members effectively meet the production needs of the cooperative.

3.1.3 Cooperative adaptation

For cooperatives to effectively engage their membership and provide the most needed social services, cooperative leadership (managers and board members) must be able to effectively respond to the needs and interests of its members, as well as engage the external governance environment that support or limit cooperatives' functions and respond to market changes. In political governance and economic environments that are rapidly changing, navigating this political-economic landscape can be challenging, and cooperatives are forced to adapt both to the changing needs of its membership and the external governance mechanisms in-which cooperative leadership advocate for their members. Contemporary cooperative theory suggests that cooperative organizations are slow to adapt to changes in the governance and economic environment (Cropp 2002; Royer 1999; Fulton 1995). In part this slow adaptation relates to cooperatives' democratic (or less hierarchical) model of decision-making which requires collective action to adapt to change (Ortmann & King 2007). Significant changes in agricultural policy or market dynamics (such as rapid increases in foreign direct investment in business enterprises competing with cooperatives) may impact cooperative members differently (or at different times), leading to cooperative members to choose to not make collective action decisions in the same way or at the same time, and therefore the adaptation of the cooperative as a whole may be slow, causing a competitive disadvantage for the organization in the market. Royer (1999) in particular maintains this view of cooperatives in utilizing a New Institutional Economics framework to evaluate the institutional changes made by cooperatives in response to new situations. Royer questions whether there are "fundamental features intrinsic to the cooperative organizational form that restrict cooperatives from being able to compete effectively in an increasingly complex economy and that ultimately threaten their long-term survival" (Royer 1999: 44). Authors such as Harte (1995) similarly argue that cooperatives are only competitive in contexts of chronic market failure, and with the liberalization of markets, the need for cooperatives decreases (Ortmann and King 2006). But this perspective has been criticized by others such as Sexton and Iskow (1993) who determine that there is little evidence that cooperative are inherently less efficient than other forms of investor-owned and profit-orientated businesses (Ortmann and King 2006). Cook (1995) further argues that traditional cooperatives are able to adjust their property rights constraints by making the collective decision to restructure their organizational forms and institutions to become more competitive (Ortmann and King 2006). And as mentioned, King (1995) believes that the ability to adapt through a participatory and more democratic process of collective decision-making is the greatest strength of cooperatives. These differing perspectives on the root challenges and capacities of cooperatives in dynamic environments are mentioned here to demonstrate that the question of whether and how cooperatives adapt to changing market and political contexts is still an open question in academia. But for the purposes of this research's analytical framework, the writings of Helmberger and Hoos (1962), Ortmann and King (2006), King (1995) and Cook (1995) will be used to indicate that cooperative are challenged by political change, but adaptation is possible, and this adaptation determined primarily by the decision-making capacity of the organization to adapt its internal decision-making structures, membership services, and production and marketing strategies.

3.1.4. Cooperatives as networks

In the context of state withdrawal from agricultural markets, farmers in particular are increasingly challenged in gaining access to important agricultural inputs (such as seed and fertilizer), new technologies and processing infrastructure, and local and international markets (Gouët and Van Paassen 2012). Subsistence farmers (as well as small-scale commercial farmers) that are less embedded in these markets are also similarly impacted from government withdrawal from agricultural services and development activities such as public agricultural extension services. This context of government withdrawal from the agricultural sector provides both an opportunity and challenge for agricultural cooperatives – cooperatives can ‘fill the gap’ left by the withdrawal of the State and market failures by providing these goods and services to their members. At the same time, cooperatives are most effective when providing a select range of services to members that they have specialized competitive advantage i.e. cooperatives may not have the capacity to meet all of their members’ service needs.

In considering ways in-which cooperatives adapt to the needs of their members, as well as contextual challenges such changing agricultural governance structures, analyzing cooperatives and their services through a network framework is relevant. Drawing on the research of Murdock (2000) farmer organizations, such as cooperatives, can be one form of an organizational network that can facilitate rural development in diverse and innovative ways. According to Murdock (2000) agricultural networks can be classified into vertical chains that connect producers to agricultural markets and value-chains, and horizontal relationships with link producers to other non-productionist sectors and services. Networks are also often analyzed in the ways in-which they integrate both market-orientated and state actors and services, much like the way in-which cooperatives are viewed as being neither fully profit-orientated or non-profit organizations when analyzed through a social economy framework. Thus within this framework cooperative social services as studied in this research project are most likely to be classified as being delivered through horizontal networks.

Building on this network theory, knowledge transfer related to agricultural extension services deserves particular attention. The research of Hermans (2015) analyzes agricultural knowledge systems and the role of these systems in social and agricultural innovation, and can be integrated with network theory in interesting ways. In contexts where public agricultural extension services have been privatized (such as Kenya), cooperatives offer one potential network through which agricultural knowledge can be transferred, in turn allowing cooperatives to be ‘brokers’ of agricultural knowledge and innovation for agricultural development.

In the context of Kenya, this network framework is particularly relevant as writings from the ILO indicate that the cooperative ‘hub’ model has been particularly promoted by agricultural development stakeholders in East Africa (Schwettmann 2015; Wanyama 2009; Kilelu 2016). Through this model cooperatives are used as nodes or networks through which producers can access a range of different services such as access to credit, access to healthcare, agriculture inputs, and agricultural extension services, etc. some of which may be provided directly by the cooperative and pertain directly to agricultural production, or may be delivered through partnerships with other organizations but utilize the cooperative farmer network for knowledge/service dissemination (such as HIV education) (Heifer International 2014). Thus in analyzing the kinds of social services cooperatives offer to farmer members (including knowledge transfer related to agricultural production practices but also agricultural governance issues), the function of cooperatives as networks for transferring knowledge and services for agricultural development is considered relevant.

3.2 Social Economy

With the understanding that cooperatives deliver a range of both economic services related directly to production, and social services orientated more toward supporting farmer livelihoods (and therefore in-directly to production), a theoretical framework that can capture both of these areas of farmer-cooperative interaction is needed. And the concept of the social economy offers this relevant framework. According to Moulaert and Ailenei (2005: 6), building on the approach of Levesque et al. (1999), the social economy represents a socio-economic space that is “different from the traditional public ‘general interest serving’ and the private market sectors, that combines: formal and informal elements at the level of organization (market, state, volunteering, self-help and the domestic economy), market and nonmarket-oriented production and valorization of goods and services, monetary and non-monetary resources at the level of funding.” These production and valorization processes are guided not by the principle of making profits as the overriding motivation for these activities, according to Wolpert and Reiner (1985), but rather “achieving social development goals that transcend the market per se” (Moulaert and Ailenei 2005: 6). The International Labour Organization supports this characterization by defining the social economy as “a concept designating enterprises and organizations which have the specific feature of producing goods, services and knowledge while pursuing both economic and social aims and fostering solidarity (Schwettmann 2015,15).”

Thus the social economy incorporates the alternative forms of economic and social activity that strive toward goals that are not purely capitalistic, but also build social, environmental, and cultural ‘value.’ Examples of these activities can include efforts toward social inclusion through community building, strengthening the political voice and representation of marginalized groups, strengthening farmer agency, and promoting environmental conservation. Furthermore, the organization of the actors carrying out these activities generally can neither be classified as solely private or public, but rather are shaped and supported by both private sector influences as well as public sector governance structures. Classic examples from academic literature of these kinds of organizations include non-profit and voluntary organizations, as well as more private sector-orientated organizations such as producer cooperatives (Moulaert and Ailenei 2005). And according to Schwettmann (2015:15) “[c]ooperatives clearly belong to the social economy and in many countries constitute its main pillar.”

For the purposes of this research, the conceptualization of the social economy is important because it recognizes and incorporates the social services provided by cooperatives to their members while recognizing the intimate link between these social services and the more traditional economic-orientated services of cooperatives (which together support the social and economic sustainability of the cooperative member). Additionally, the social economy concept also recognizes that both economic and social services provided by cooperatives are not exclusively captured by the members receiving these services, but rather there is a broader ‘spill-over’ effect of these services, often benefiting the members’ local communities as well, which can have important implications in an agricultural development context (Torgerson et al. 1997). And according to Moulaert and Ailenei (2005), who sees cooperatives as a core stakeholder in the social economy, this role of cooperatives contributing to the broader development of their communities (and not just their individual members) is precisely what makes these organizations appealing and successful for small-scale farmers. Thus by using the conceptual framework of the social economy this research aims to holistically analyze how and why cooperatives are able to support their members outside the narrow lens of the market, and how this support helps cooperatives and their members adapt to changes in the market and governance landscape.

2.3. Agricultural Governance

After falling out of favor in academia and international development literature in the 1990s, the concept of governance has re-emerged in the current context of increasing globalization and integration of agricultural markets. Broadly, Gliberman and Shapiro (2002) define governance as the institutions and policies affecting economic performance. In an agricultural context, a significant amount of academic literature has examined the link between governance and agricultural performance: “[G]overnance...may affect agricultural performance in several ways. For instance, the government creates and maintains institutions that are crucial to the functioning of the market system. The protection of property rights and a judicial system administering justice and enforcing contracts strongly affect the incentives for production and investment” (Lio and Liu, 2008: 1; Hall and Jones, 1997, 1999; Keefer and Knack, 1997; Knack and Keefer, 1995). Furthermore, as mentioned, governance is considered to have a highly significant impact on cooperatives (Ortmann & King 2007).

Thus based on the above academic conceptualizations and research, it is clear that governance has important impacts directly on family farms and agricultural production. But this relationship between government institutions and policy and agricultural production should not be analyzed too narrowly. Considering that this paper’s theoretical framework also incorporates the concept of the social economy, which purposefully takes a more holistic analysis of the intertwined social and economic activities and relations that shape agricultural systems, the governance definitions of the United Nations are also relevant. According to the Food and Agriculture Organization, governance is “the complex mechanisms, processes, relationships and institutions through which citizens and groups articulate their interests, exercise their rights and obligations and mediate their differences” and which “contributes to, a social contract between the state and its citizens, where both parties recognize the legitimacy of the rules governing society” (FAO 1999: 68, FAO Term Database). It is important to note that this “social contract” related to the rules and responsibilities of how society is governed do not only concern formal government policy, but should be considered in a broader socio-political context. In much of East Africa, customary institutions and norms continue to play a prominent role in shaping rural communities and livelihoods (Quinn 2014; FAO 2015). Furthermore, in some contexts, these customary institutions and norms hold more social legitimacy than more formal governance institutions and policies. Thus customary institutions and rules should also be considered part of the governance environment. These definitions of governance are important because they emphasize that governance is a social construction that shape relationships among stakeholders. And as mentioned earlier, these social relationships shaped by governance mechanisms have impacts on economic development and agricultural productivity. More precisely in the context of farmer organizations, it should be recognized that cooperatives, as collective agents, both help shape governance mechanisms through political advocacy as well as are impacted by these governance mechanisms as described above. In-fact according to Ortmann and King (2007), public policy is one of the most influential factors impacting the success of cooperatives. Public policy shapes the market environment in-which cooperatives compete with non-cooperative profit-orientated private sector actors. But public policy can also play important impact on the internal organization of the cooperative itself, such as who can qualify for cooperative leadership positions, which can highly influence how cooperatives operate and compete in the marketplace (and this is the case in Kenya where government policy has historically played a major role in the cooperative sector) (Ortmann and King 2007; Wanyama 2009). Finally public policy also determines government support and services to cooperatives, such tax break, government-backed credit interest rates, or public processing infrastructure. Thus analyzing agricultural governance issues, particularly in the

relatively recently agriculturally liberalized context of Kenya, is quite relevant to the study of cooperatives.

Considering the above definitions of governance, for the purposes of this paper, ‘governance landscape’ and ‘governance environment’ refer to the general institutional and policy environment of a country’ while ‘governance mechanism’ refers to the more specific institutional capacity to implement and enforce a policy. Drawing both on the broad social-orientated definition of the FAO, as well as the more technical and economic-orientated definition of Gliberman and Shapiro (2002), this paper will consider governance broadly in considering how government institutions and policies, the market, and the agency of agricultural stakeholders shape and are shaped by each other.

In summary, the theoretical framework of this paper has three components:

- Cooperatives are analyzed as collective decision-making firms which make choices on the economic and social services they provide to their members and what institutional support is needed to provide those services in a cost-effective way. The way in-which these services are delivered by cooperatives gives the cooperative the characteristics of a network.
- The social economy is a socio-economic space in-which businesses and organizations engage with each other, often through non-capitalist orientated activities, to create social, cultural, and political value.
- Governance is the rules and responsibilities shaping society, expressed primarily through government institutions and policies, that represent the social contract between citizens and government, and which have direct and significant impacts on farming organizations.

Using the above three lenses for analyzing the cooperative sector in Kenya, the research builds on these theories to form the field-based research component of the project, described below.

3. Methodology

The methodology used to explore this research topic had three main steps carried out from March 2016 to August 2016. Due to limited time and resource constraints and other challenges related to the field interview component, the methodology was adapted during the course of the research (as detailed below).

3.1 Literature review

The first methodological step for the research was an in-depth literature review on the subjects of farmer organizations, producer cooperatives, farmer agency, social economy, and political and agricultural governance, primarily through the academic lenses of rural sociology, political economy, and institutional economics. Additionally the research review examined the Kenyan agriculture sector broadly, and the dairy sector in-particular. The literature review took place in March and April of 2016 through the online Wageningen University and Research Centre library. These conceptual foundations formed both the basis of the theoretical framework of the research project as well as the research and interview questions.

An immediate challenge encountered during this review was a lack of academic research on some aspects of the research topic. As mentioned, systematic research (i.e. beyond case-studies) on how farmer organizations broadly contribute to agricultural development is lacking, as well as baseline and longitudinal data on cooperative organizations (Ragasa and Golan 2014; Bijman et al. 2012; Santini et. al, 2013). Reasons for this lack of data of this kind are many, but highlight the rapid and recent changes taking place in agriculture systems globally (particularly since the 2007/2008 food crisis) and the diversity of different farmer organizational responses of adaptation to these changes, particularly for producer cooperatives. In addition to the lack of recent broad theoretical research on farmer organizations, the literature review process also indicated that there were also gaps in existing research on the research project's Kenyan country context. Although relatively (compared to some other sub-Saharan African countries) much research attention has been dedicated to the subject of agricultural development and dairy cooperatives in Kenya, the particular study topic related to cooperative social services and the social economy has been understudied according to experts academics familiar with Kenya (Wanyama 2009). According to Wanyama 2009 "[w]hereas cooperative development in Kenya during the first era (during the period of State support and control prior to 1997) is well documented in the existing literature, the second era of cooperative development (since 1997) is yet to be adequately researched and understood" (Wanyama 2009, 9). In-part this is related to the lack of raw data collected by Kenyan government offices, such as the Department of Cooperatives and the Ministry of Agriculture, Livestock and Fisheries such as up-to-date records on farm typology, number of cooperatives, or contact information of farmer organizations. For example, according to Wanyama (2009, 10) (and which was confirmed by the researcher):

“The Ministry (of Cooperative Development and Marketing) seems not to have up-to-date disaggregated data on the movement. This data is also missing key variables. For instance, the register of cooperatives contains a cumulative number of registered cooperatives and cooperative membership since 1966. The figures do not tell how many of the cooperatives are active or dormant. In regard to membership, it is not possible to tell which cooperative members are active or dormant. It is not possible to know if the cooperative is dormant, active or has ceased to exist. There is also some chance that some cooperators belong to more than one cooperative. Indeed, one official at the office of the Commissioner for Cooperative Development admitted that the statistical data on the number of cooperatives and their membership may not be very accurate.”

The two main reasons attributed to this lack of information on the Kenyan context are related to the lack of government investment in agricultural research, and the high rate of agricultural and political change occurring in the country over the past decade (Wanyama 2009). Thus at various points during the field research project the researcher approached various government offices for data which simply wasn't accessible. These country-level research gaps presented challenges for the development of relevant research questions before engaging with stakeholders in the field. This literature review finding, together with the forecasted limited amount of time available for the research project, influenced the researcher from the outset to orient the research project toward a qualitative approach, comparing the responses from different stakeholder groups in a geographically limited area in the field. By limiting the research in this way, the research then aimed to try to fill some of the research gaps identified by the above authors.

Following the literature review, the researcher then identified the research focus on producer cooperatives, the dairy sector, and agriculture governance issues in Kenya. In consultation with the thesis advisors from the Wageningen University Rural Sociology group and Management Studies group, the researcher then developed the research and interview questions for the research project, with the main research question asking how are agricultural cooperatives supporting Kenyan farmer livelihoods through social service delivery, and how is the changing governance environment in Kenya impacting these cooperatives and the services they provide their members? This research question aimed to use a social economy framework to examine cooperatives in Kenya during the current period of governance transition, in a way not identified in current academic literature and that would offer a substantive contribution to agricultural development debates and policy discussions in Kenya. To answer this research question, the project developed three core sets of sub-questions upon-which the semi-structured interviews of the project would be based:

A. Why are cooperatives' social services important for their members?

- i. What are the most important social services that cooperatives currently provide their members?
- ii. How do these current social services support the member?
- iii. How does government policy support the cooperative's delivery of this service to their members?

B. How are governance changes (recent or expected at national, county, and community levels⁵) causing cooperatives to adapt the social services they are currently offering their members?

- i. What are the main ways that government policies impact cooperatives?
- ii. How are governance changes challenging cooperative members?
- iii. How are cooperatives attempting to overcome these challenges?
- iv. How are cooperatives using political advocacy to represent their member's interests?

C. What additional social services could cooperatives provide to their members?

- i. Why would this additional service be important for the cooperative member?
- ii. How could government policy support the cooperative's delivery of this additional service to their members?

3.1.1. Methodological limitations

The research at this point took a deductive approach, with the research and interview questions being developed from literature and academic experts. The limitation of this approach is that the Kenyan cooperative context, although having been written about extensively in the past by other authors, is changing quite quickly, therefore the relevancy of cooperative theory in this dynamic context was somewhat unknown at the start of the research project. Alternatively, the researcher could have taken a more inductive approach with less of a theoretical basis and involving local stakeholders from the beginning. This research strategy likely would have made the research respondents feel more involved and included in the project, as the research would have taken on a more participatory-action approach. But involving local stakeholders' input in the development of research and interview questions would have required another set of methodological steps to ensure objectivity of the research and prevent researcher bias. Furthermore, the researcher's literature review and consultation with academic experts at the beginning of the research project did indicate that the proposed deductive approach was relevant to the current Kenyan context. Thus the decision not to take an inductive approach was a necessary methodological decision in part because of the limited time for the research project and the limited number of in-country contacts of the researcher prior to the beginning of the field work component of the research project.

3.2 Field interviews

The second methodological step of the research project was the field research component. This took place in April and May 2016 in Kenya and began with informal interviews by two agricultural development organizations working in Kenya – The Food and Agriculture Organization (FAO) of the United Nations (Kenya country office) and Agriterra. Prior to arriving in Kenya, agreements were made between FAO, Agriterra, and Wageningen University to collaborate on the research project. FAO was chosen as a strategic partner because of their high-level agricultural policy work in Kenya, and the opportunity for FAO to facilitate access to a number of government offices for interviews. FAO expressed interest in the research project because of their limited work to-date on cooperative issues. Agriterra, a Dutch NGO, was strategically chosen as a research project partner because of their experience working directly with cooperatives through capacity development workshops at the local level and the cooperative contacts they could provide. Agriterra expressed interest in the research project because they are currently exploring ways to improve the political

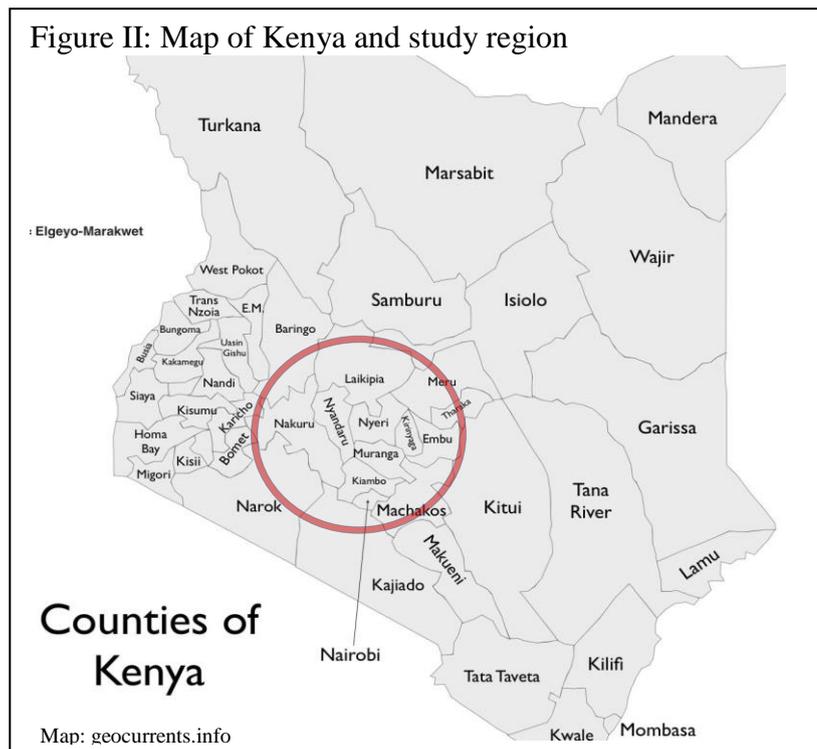
⁵ Community governance includes both formal and customary rules, laws, and norms

advocacy skills of cooperatives in Kenya in response to the country's political devolution process. The aim therefore was to engage these two organizations to gain contrasting grassroots and high policy-level perspectives on the research topic.

Given the short time period available for the research project, the researcher decided to limit the geographical scope of the research. There are 47 counties in Kenya, five (Kiambu, Maranga, Nyandarua, Nyri, Kiranyaga) of which compose the relatively geographically small Kenya Central Province.⁶ Kenya Central Province was decided upon as the primary study region (encircled in red in Figure I below) for the reason detailed below. In addition, based on the Snowball sampling methodology related to the cooperative interviews, two additional counties (Meru and Kajiado countries) contiguous to Central Province were added to the study area (but still maintaining the geographical cohesiveness of the study area). Additionally, again due to the Snowball sampling methodology related to the cooperative interviews, one additional centrally located county (Baringo) was also added to the study as a comparison county. The Central Province of Kenya was decided upon for the study region for the following reasons:

1) According to the literature review and the informal interviews, dairy and livestock production as a livelihood activity is done throughout Kenya. But two regions, the Rift Valley Province in western Kenya and the Central Province around Mount Kenya both have higher concentrations of commercial dairy production (Rift Valley more than Central). This high commercialization is related to annual rainfall, soil type, and historical land ownership trends. Rift Valley has always been a top agricultural production region due to its fertile soils and good rainfall, and as a result, land plots are generally larger (this is in-part a holdover from land ownership during the colonial period). The Rift Valley is known for its industrial cut-flower industries, as well as its high maize and wheat production as well as commercial dairy. In contrast, Central also has good rainfall, and has some agricultural commercialization (particularly in tea, coffee, and bananas) including the dairy sector, but the subsistence farming and typical small-scale commercialized family farm of the Central Province are more representational of Kenyan agriculture as a whole than the Rift Valley agricultural characteristics. Therefore of these two dairy regions, the Central was chosen because it was more family farmer orientated and more typical of the country's production systems nation-wide.

Figure II: Map of Kenya and study region



1) According to the literature review and the informal interviews, dairy and livestock production as a livelihood activity is done throughout Kenya. But two regions, the Rift Valley Province in western Kenya and the Central Province around Mount Kenya both have higher concentrations of commercial dairy production (Rift Valley more than Central). This high commercialization is related to annual rainfall, soil type, and historical land ownership trends. Rift Valley has always been a top agricultural production region due to its fertile soils and good rainfall, and as a result, land plots are generally larger (this is in-part a holdover from land ownership during the colonial period). The Rift Valley is known for its industrial cut-flower industries, as well as its high maize and wheat production as well as commercial dairy. In contrast, Central also has good rainfall, and has some agricultural commercialization (particularly in tea, coffee, and bananas) including the dairy sector, but the subsistence farming and typical small-scale commercialized family farm of the Central Province are more representational of Kenyan agriculture as a whole than the Rift Valley agricultural characteristics. Therefore of these two dairy regions, the Central was chosen because it was more family farmer orientated and more typical of the country's production systems nation-wide.

⁶ Prior to the 2013 election in Kenya, the political administration of the country was divided into 8 Provinces, with each Province consisting of a number of Counties. After the 2013 election, the Province administration system was disbanded and now there are only county governments. Although three years have passed since this change, people in Kenya still refer to themselves as residents of the old Provinces therefore this system is also used loosely to define the study area.

2) A second reason for choosing Central Province as the study area is the density of dairy production, which is represented by a graph from Makoni et al. (2014) that is presented in Appendix I. Furthermore the study also has a high density of dairy cooperatives and milk processors and their proximity to markets. Of the 417 dairy cooperatives listed in the Kenyan Dairy Board registry, 233 of them (approximately 56%) were listed in the eight counties of the study region. Furthermore, this higher density region of cooperatives is relatively close to Nairobi, which is biggest domestic milk market in Kenya. Producer and processor proximity to consumer markets in the formal milk sector is important because of high transportation costs and poor infrastructure, and according to Makoni et al. (2014) cooperatives that are closer to main markets have a distinct advantage. This is (in-part) because during the rainy season roads, particularly in rural areas, are often impassible, therefore as a milk producer or processor how close you are to a market where your milk is sold the more likely you are to be able to sell your milk. This point is particularly important for larger cooperatives that do their own milk processing and who are competing directly with the larger processors like Brookside Dairies (the largest milk processor in Kenya). For these cooperatives trading perishable raw milk with relatively limited storage facilities, getting milk to a processor every week or month is extremely important to stay competitive. Thus these issues of cooperative density (which imply more cooperative competition) and market proximity (which imply competitive advantage) raise a number of different issues related to farmer choice (of which cooperative or processor to take their milk) and agency which are not explored in this research. But these issues do make the central region of Kenya an interesting and relevant area for this research project, which contributed to why this region was chosen.

3) Finally, the Central Province region was chosen to have a relatively small and geographically uniform⁷ area to better compare how the size of the dairy cooperatives interviewed impacted social service delivery.

With the finalization of the research questions, the researcher conducted formal semi-structured interviews with three main respondent groups: cooperatives, agricultural policy stakeholders, and cooperative stakeholders. Templates of the semi-structured interview questions used for each respondent group (the questions across the groups are more-or-less the same) can be found in Appendix II. The first respondent group categorized as 'cooperatives' involved respondents who were in leadership positions in the cooperative society or cooperative union - primarily cooperative managers and board members. But in some cases these interviews also involved cooperative farmer members. In the majority of the cooperative interviews the semi-structured interview involved multiple cooperative leaders (between 1 and 6 respondents), although in some cases only the cooperative manager was present. One assumption made by the researcher, based on the responses in these interviews, is that the number of cooperative leader respondents present during the interview did not have a significant impact on the kind of information provided. The second respondent group categorized as 'agricultural policy stakeholders' involved government officials and NGOs that worked directly on agriculture policy issues related to agricultural development, the dairy sector, and/or cooperatives. In all cases the respondent representing this interview group was a single person in a position of authority within that organization (such as a NGO Executive Director or government Department Head). The third respondent group categorized as 'cooperative stakeholders' consisted of other kinds of organizations that worked directly in the dairy, livestock, and/or agriculture sectors either as important research organizations or providing important services to cooperatives (such as advisory or processing services).

⁷ i.e. the counties in the central part of the country are more similar than comparing central counties with coastal counties or more desert counties in the northern part of the country.

Policy stakeholder and cooperative stakeholder interviews took place in Nairobi. A short description of each interviewee organization is mentioned below the following table.⁸ All of the formal interviews are listed in chronological order below:

Date	Interview	Respondent	Organization Type	Interview categorization
21/4/16	Cooperative University College of Kenya	-Research & extension Coordinator -Deputy Institute Director -Institute Director	Academic institution	Cooperative stakeholder
26/4/16	Baringo Agricultural Marketing Services Cooperative Society	-Financial manager -Farmer member -Board chairman	Dairy cooperative	Cooperative
27/4/16	Kirinyaga Dairy Cooperative Society Ltd.	-Cooperative manager -Board chairman -2 Farmer board members	Dairy cooperative	Cooperative
28/4/16	Meru County Dairy Cooperative Society	-Cooperative financial manager -Cooperative accountant	Dairy cooperative	Cooperative
3/5/16	Ololaiser Dairy Farmers Cooperative Society	-Cooperative manager	Dairy cooperative	Cooperative
3/5/16	Lemelepo Dairy Farmers Cooperative Society	-Cooperative manager -Board chairmen -3 Farmer board members	Dairy cooperative	Cooperative
3/5/16	Kiserean United Dairy	-Cooperative manager -Farmer member	Dairy cooperative	Cooperative
5/5/16	New Kenyan Cooperative Creameries	-Head of Raw Milk Supply and Extension	Public dairy processor	Cooperative stakeholder
6/5/16	Kenyan government Division of Cooperatives	-Deputy Commissioner for Cooperative Development	Government office	Policy-stakeholder
6/5/16	Kenyan Dairy Board	-Senior Dairy Development Officer	Government office	Policy-stakeholder
6/5/16	Cooperative Alliance of Kenya	-Program Director	NGO	Policy-stakeholder
9/5/16	Kenyan government Ministry of Livestock	-Department Director	Government office	Policy-stakeholder
9/5/16	Kenyan Market Trust	-Diary Sector Director	Private sector consulting firm	Cooperative stakeholder
9/5/16	Agri-Experience	-Consultant & Technical Specialist	Private sector consulting firm	Cooperative stakeholder
10/5/16	Endarasha Dairy Farmers Cooperative Society	-Cooperative manager	Dairy cooperative	Cooperative
12/5/16	Mumberes Dairy Farmers Cooperative Society	-Cooperative manager	Dairy cooperative	Cooperative
12/5/16	Gakindu Dairy Farmers Cooperative Society	-Cooperative manager	Dairy cooperative	Cooperative
13/5/16	Kenya National Farmers Federation	-Executive Director	NGO	Policy-stakeholder
13/5/16	Tetu Dairy Farmers Cooperative Society	-Cooperative manager	Dairy cooperative	Cooperative
16/5/16	International Center for Tropical Agriculture-Kenya	-Market Economist	NGO	Cooperative stakeholder
16/5/16	East Africa Farmers Federation	-Program Officer (Policy and Advocacy)	NGO	Policy-stakeholder
19/5/16	Mukurweini Wakulima Dairy Cooperative Society	-Cooperative manager	Dairy cooperative	Cooperative

⁸ Information for these organizations was taken from interviewees and from research on the different organizational websites.

Cooperative University College of Kenya is the primary academic institution in Kenya focused on training cooperative leaders and members in Kenya, as well as conducting research on the cooperative movement in the country. The main Cooperative University College of Kenya campus is located in Karen, just south of Nairobi.



Photo credit: Jordan Treakle

Baringo Agricultural Marketing Services Cooperative Society is a cooperative dairy union consisting of 19

cooperative societies with a total of 12,000 active members. They bulk and trade 30,000 – 50,000 litres (depending on the season) of raw milk per week, selling to New KCC, Brookside Dairy Limited, and Sameer Limited. Baringo Agricultural Marketing Services Cooperative is located in Baringo County (northwest of Nairobi).

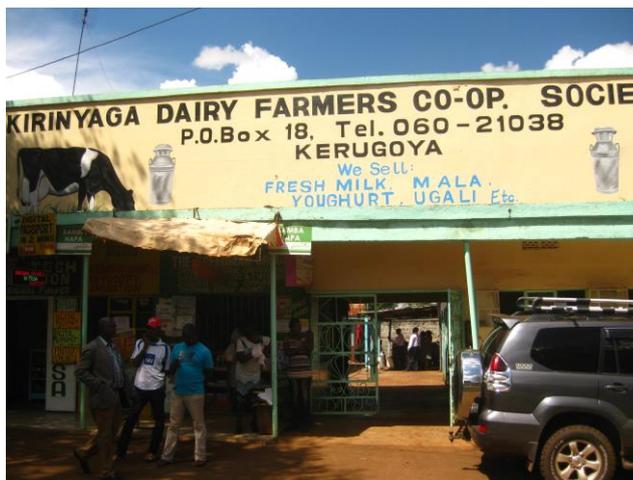


Photo credit: Jordan Treakle

Kirinyaga Dairy Cooperative Society Ltd. is a dairy cooperative society with 650 active members. They bulk 7,500 – 10,000 litres of raw milk per week which they sell to New KCC. Having recently received a small milk pasteurizer (400 liter capacity) from the county government they sell a small amount of processed milk from the cooperative on-site store. Kirinyaga Dairy Cooperative Society Ltd. is located in Kirinyaga County, north of Nairobi.

Meru County Dairy Cooperative Society is a cooperative dairy union consisting of 26 cooperative societies with a total of 30,000 members. They bulk 750,000 – 975, 000 litres per week, 50%-60% of which is from cooperative members and 40% - 50% is from non-cooperative members who organize into their own self-help groups and sell to the cooperative. The union does their own milk processing and marketing, with 50% of their processed being sold to milk distributors selling to supermarkets in Nairobi (the other 50% is to other big towns and cities in the region). Meru County Dairy Cooperative Society is in Meru County, north of Nairobi.

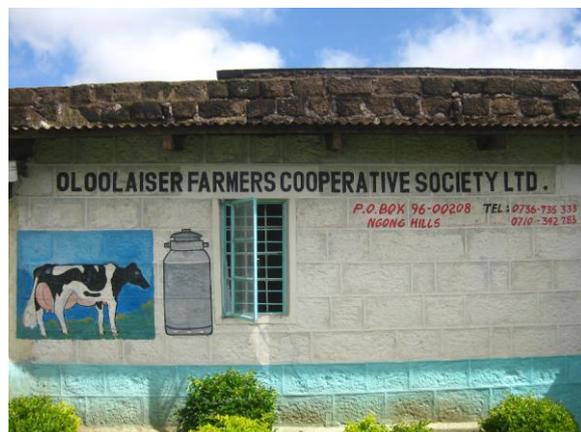


Photo credit: Jordan Treakle

Oloolaiser Dairy Farmers Cooperative Society is a dairy cooperative society with 300 members. They bulk 7,000 – 21,000

litres of raw milk per week, and pasteurize a small amount of this (approximately 10%) and sell from the cooperative store. They also process a limited amount (approximately 20%) as add-value products such as cheese, yogurt, and mala, which they sell locally. The rest of the milk is chilled and sold as raw milk locally). Oloolaiser Dairy Farmers Cooperative Society is in Kajiado County, south of Nairobi.

Lemelepo Dairy Farmers Cooperative Society is a dairy cooperative society with 24 active members. They bulk 2,000 – 3,750 litres of raw milk per week, 70% of which they market to wholesalers (their main buyer is a local hotel which buys 40 litres per day). About 30% of the milk is sold directly to consumers as raw milk from the cooperative’s on-site store. Lemelepo Dairy Farmers Cooperative Society is in Kajiado County, south of Nairobi.



Photo credit: Jordan Treakle

Kiserean United Dairy is a dairy cooperative society with 10 active members. They bulk and chill 30 – 45 litres of raw milk per week, which they sell directly to consumers from the cooperative on-site store. Kiserean United Dairy Society is in Kajiado County, south of Nairobi.

New Kenyan Cooperative Creameries is one of the largest dairy processors in Kenya. In 2005 New KCC was registered as a state

corporation, thus the organization functions as a government business rather than a cooperative (in the past New KCC did function as a traditional cooperative) despite its name and therefore is categorized as a Cooperative Stakeholder for this research. At the beginning of 2016 the Kenya media began reporting plans of the government to privatize New KCC and allow shareholders to invest in the business. This plan was confirmed by interviews with New KCC staff. New KCC is located in Nairobi.

Division of Cooperatives is a subdivision of the Ministry of Industry, Trade, and Cooperatives and is the primary government authority on cooperative issues. Their office is located in Nairobi.

Kenyan Dairy Board is a Kenyan government “parastatal” agency, and is the primary government authority regulating the dairy industry in Kenya. Their office is located in Nairobi.

Cooperative Alliance of Kenya is a member-based NGO, and the apex organization (i.e. working on issues at the national and international level and representing the broadest range of cooperatives) for all cooperatives in Kenya. The Cooperative Alliance of Kenya is located on the campus of the Cooperative University College of Kenya, south of Nairobi.



Photo credit: CAK

Department of Agriculture, Livestock and Fisheries is the Kenya government authority on livestock issues. Their office is located in Nairobi.

Kenyan Market Trust is an NGO that works closely with the private sector to promote dairy commercialization and the livestock sector, primarily through research, business development trainings, and consulting. Their office is located in Nairobi.

Agri-Experience is a consulting firm that works in Kenya, and internationally, in advisory services for agricultural development (particularly related to seeds issues). Their office is located in Nairobi.

Endarasha Dairy Farmers Cooperative Society is cooperative dairy society with 3,000 active members that bulks 75,000 litres of raw milk per week, which it sells on local regional markets. Endarasha Dairy Farmers Cooperative Society is located in Nyeri County, north of Nairobi.

Numberes Dairy Farmers Cooperative Society is a dairy cooperative society with 2,400 members that bulks 75,000 litres of raw milk per week. The cooperative markets this milk to the processor Diama. Numberes Dairy Farmers Cooperative Society is located in Baringo County, northwest of Nairobi.

Gakindu Dairy Farmers Cooperative Society is a dairy cooperative society with 800 active members that bulks 2,400 litres of raw milk per week. The cooperative markets 12% of its raw milk directly to local consumers, and the rest of its member's production is marketed to the processor Brookside Dairy. Gakindu Dairy Farmers Cooperative Society is in Nyeri County, north of Nairobi.

Kenya National Farmers Federation is a membership-based NGO and apex organization working to support farmers across the agricultural sectors. Kenya National Farmers Federation is located in Kikuyu, just west of Nairobi.

Tetu Dairy Farmers Cooperative Society is a dairy cooperative society with 52 active members that bulks 4,000 liters of raw milk per week. 80% of the cooperative's milk is sold directly to consumers through the organization's on-site milk bar, and the other 20% is marketed to New KCC. Tetu Dairy Farmers Cooperative Society is in Nyeri County, north of Nairobi.

International Center for Tropical Agriculture-Kenya is an international research center working to support ecological agriculture in Kenya. Their office is located in Nairobi.

East Africa Farmers Federation is an international NGO working and regional apex organization representing the interests of farmers across agricultural sectors. East Africa Farmers Federation is in Kikuyu, just west of Nairobi.

Mukurweini Wakulima Dairy Cooperative Society is a dairy cooperative society with 6,000

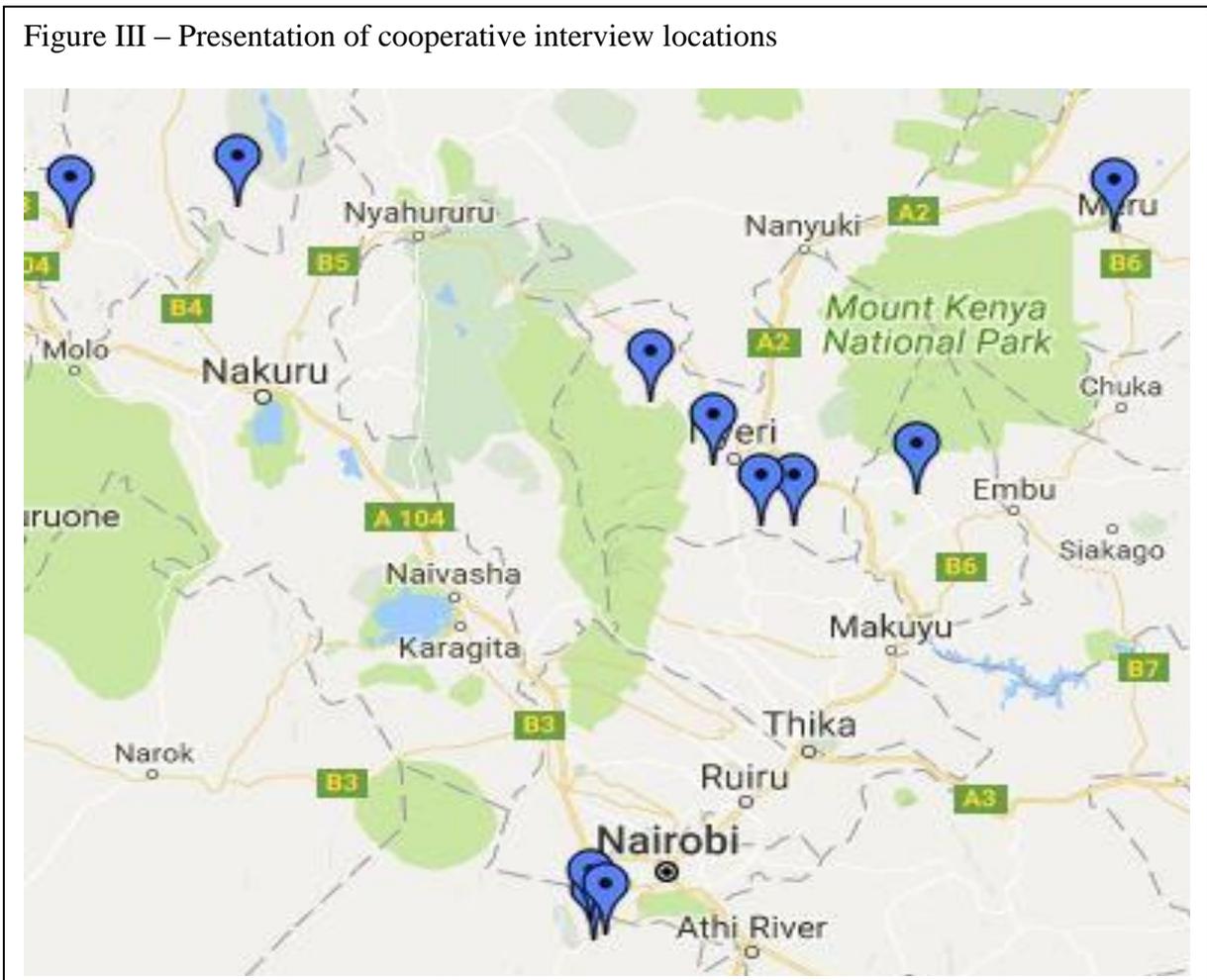


Photo credit: EAFF

active members. They bulk 225,000 litres of raw milk per week and pasteurize 95% of this milk themselves to market to distributors. They also process a small amount of their milk into yogurt. Approximately 5% of their raw milk they sell to Brookside Dairy to maintain a business relationship with the processor so that they can sell to the process of their milk supply exceeds their processing capacity. Mukurweini Wakulima Dairy Cooperative Society is located in Nyeri County, north of Nairobi.

A geographical presentation of the location of all cooperative interviews is shown below in Figure III.

Figure III – Presentation of cooperative interview locations



In all formal interview cases the semi-structured interview method was used. Semi-structured interviews are a qualitative research method which seeks to get ontological responses from interviewees by building a discourse between the researcher and one or more subjects (De Steur, 2015). Unlike more structured interview methods, this kind of interview starts with open questions, developed by the researcher beforehand, followed by a set of loosely (previously) formulated interview questions that the researcher can adapt and re-order depending on the responses of the interviewee (Barriball et al, 1993). This flexible framework, which allows for focused, as well as novel interview responses to be gathered, offers two main advantages: 1) the method allows the researcher to adapt interview questions during the course of the interview, depending on the responses of the interviewee, which allows the interviewee to initiate and discuss related topics relevant to the research and allows the researcher to exploring topic areas not foreseen prior to the interview; and 2) the method,

when combined with a discourse analysis research method, allows the researcher to consider the non-verbal communication strategies (i.e. use of body language) of the interviewee (World Bank, 2000; FAO, 2013). The rationale for choosing this research method follows the writings of Bernard (1988), who states that the semi-structured interview is the best research method when the researcher only has one chance to interview an individual, which was the case for this research project. Additionally, it is a rapid method for gathering information from individuals or small groups, which were the interview targets for this research. Finally this method presents less bias in the transaction of information and a higher response rates than written questionnaires (Hamzaoui et al 2012).

In addition to the formal semi-structured interviews with cooperatives, agriculture policy stakeholders, and cooperative stakeholders, the researcher also conducted a number of more informal and unstructured interviews with a number of NGOs, agricultural development consulting firms, and farmers. These respondents were approached in an informal manner because they were not working directly on cooperative or dairy issues per-se, but still offered helpful (usually broad level) information on the Kenyan agriculture system or agriculture policy process. Additionally, engaging these organizations not directly involved in the research sector of interest also allowed the researcher to triangulate the information and responses of the formal interviews with other sources to improve the objectivity of the research. Organizations involved in these informal interviews are listed in the following table:

Date	Organization
6/4/16	Agriterra
7/4/16	Food and Agriculture Organization of the United Nations
11/4/16	British Institute of East Africa
11/4/16	University of Nairobi
15/4/16	The Department for International Development of the United Kingdom
5/5/16	International Livestock Research Institute

In summary, the research conducted formal interviews with 11 cooperatives, five cooperative stakeholders, and six policy stakeholders. Additionally five other informal interviews took place. The majority of the formal interviews were audio recorded with the approval of the respondents. The informal interviews were not recorded. In all interview cases the interviewees agreed to have their names and contact information associated with the interview.

3.2.1 Sampling and data

For the above field interviews the researcher used a Snowball Sampling Method to establish contact with the interviewees in the three respondent groups. According to Cohen and Arieli (2011, 426-427) “Snowball sampling Method, or chain-referral sampling, is a distinct method of convenience sampling which has been proven to be especially useful in conducting research in marginalized societies.” The Snowball Sampling Method is defined as “a useful method in a variety of research populations. This is a technique for finding research subjects where one subject gives the researcher the name of another, who in turn provides the name of a third, and so on thus the sample group grows like a rolling snowball.” (Vogt, 2005: 300; Cohen and Arieli 2011, 424).

In utilizing this Snowball Sampling Method, in general, for the interviews with respondents who did not work for the Kenyan government and who were not members of a cooperative, the researcher was able to approach the respondent independently by email or phone to establish an interview. Determining which organizations to contact was

accomplished through the informal interviews, conversations with FAO and Agriterra, and online research. Approaching the government representatives and cooperatives required different approaches. As mentioned, the Snowball Sampling Method approach for reaching dairy cooperatives was supported by the two advisory research partners FAO and Agriterra and is summarized as follows: Agriterra was hosting a political organizing workshop, organized in collaboration with the NGO KENAFF (which the research also interviewed at a later date) in the town of Nyeri (central Kenya) from April 26th to April 29th. Agriterra had invited four cooperatives (two dairy and two coffee cooperatives) to train them in political advocacy strategies to be utilized in advancing their cooperative efforts at the county level. The researcher saw this event as an opportunity both to engage a number of cooperatives in a short time period (four days) as well as gain a more in-depth understanding the agricultural governance issues impacting cooperatives in a number of different central Kenyan counties. Thus the researcher asked Agriterra to attend the workshop as an observer for three of the four days. The workshop gave the researcher the opportunity to interview multiple cooperative leaders from the two dairy cooperatives, as well as interview staff from the NGO KENAFF. The two cooperative interviews from this workshop were important to the research because these cooperatives were more politically orientated and prepared to engage in advocacy than some other cooperatives interviewed just by the fact that they had been chosen by Agriterra to participate in the workshop (although the cooperatives still had very little advocacy training). Thus they represented one end of a spectrum of political-orientation compared to other cooperatives which had no political training or advocacy involvement, and thus these two cooperative interviews added to the diversity of the cooperative responses for the research. On the other hand, interviewing cooperatives with prior relationships with Agriterra offered challenges for ensuring that their responses were unbiased and representative of cooperatives outside of Agriterra's network. Recognizing this issue the researcher actively sought to contact cooperatives for interviews outside of the Agriterra network to ensure that the research responses were not biased by only speaking with cooperatives working with politically-orientated foreign NGOs. A second outcome of participating in this Agriterra advocacy workshop is that the researcher developed a relationship with the Kenyan NGO KENAFF, which also agreed to provide contacts with other cooperatives (which Agriterra was not working with) for later interviews.

The other approach the researcher took to reach dairy cooperatives for interviews was through FAO. FAO helped the researcher establish contact with the Kenyan government Department of Cooperatives (who the researcher interviewed). Through this contact, as well as an independent relationship established between the researcher and the University of Nairobi, the researcher was able to contact the Kenya Dairy Board (another Kenyan government entity, also interviewed by the researcher). Upon request, the Kenyan Dairy Board provided a list of officially registered dairy cooperatives. With this list, the researcher was able to independently contact dairy cooperatives to ask for interviews. The benefit of this approach is that the researcher could take a more randomized approach to interviewing cooperatives without going through third party relationships, and the potential bias that could result from these relationships. The challenge of this approach is that the contact information for many of the cooperatives on the Kenyan Dairy Board list was out of date and not usable. Furthermore, many cooperatives were unwilling to provide an interview because the researcher was not going through a third party relationship as was the case with the Agriterra policy workshop. In the end, three of the eleven interviews were established through relationships with third-party NGOs, while the other eight interviews were established independently by the researcher.

As with establishing contact with the dairy cooperatives, reaching government representatives for interviews almost always required an introduction by a third party. Of the

six interviews in the policy stakeholder respondent category, three were established through third party relationships. One assumption of the research is that these third party relationships did not significantly bias the responses of these interviews.

Finally, regarding the field interview step of the research, it should be mentioned that the University of Nairobi provided a Kenyan Masters student to support the researcher in three of the cooperative interviews. The researcher wanted to have someone with Kiswahili language skills available (which in the end were not needed) for interviewing some of the smaller cooperatives in the southern part of the research area, and the Masters student expressed interest in the research subject and gaining some field research experience. But during these three cooperative interviews the cooperative leaders interviewed gave no indication during the interview that they preferred to communicate with Kiswahili, therefore the entirety of all interviews took place in English. Additionally, the discourse analysis (described below in section 3.3) performed by the researcher on the results of the interview provided no indication that the respondents in these three interviews provided answers that varied significantly from other interviews in-which the Kenyan Masters student was not present.

3.2.2. Methodological limitations

The main methodological weakness for this component of the research project is the fact that the researcher did not do many interviews with cooperative farmers as a separate respondent group. Of the 36 people involved in the 22 formal interviews, only 10 were farmer members. The main problem why the researcher decided these interviews could not be considered a separate respondent group is that in only a few cases were these cooperative farmer members interviewed alone and not with other cooperative leaders. Furthermore all of these cooperative farmer members were in positions of some kind of authority on a cooperative board, therefore the researcher was unable to determine whether the perspective of these farmer board members reflected cooperative farmer members who were not in positions of leadership in the cooperative. This was an unexpected methodological challenge faced in the field. The original plan of the research was to interview regular cooperative farmer members separately from cooperative leaders, but in each case when the researcher tried to approach farmer members directly, the cooperative leaders insisted on joining the interview. In the opinion of the researcher, having a cooperative leader present during the interviews with cooperative farmers could have influenced the responses by the farmers (for example the farmers may not have been willing to be critical of the cooperative leadership in front of a cooperative board member) in ways that the researcher may not have been able to recognize or avoid. And due to lack of time, the researcher was not able to develop alternative ways to reach the farmers for interviews that did not include cooperative leaders. Thus the researcher recognizes that getting unbiased perspectives from farmers would have been preferred, but was not possible. Therefore the research project focuses primarily on the responses of the cooperative leaders (which include farmer representatives), and triangulates these responses with the interviews of the cooperative stakeholders and policy stakeholders as well as with secondary literatures sources.

3.3 Discourse analysis

The third and final methodological step of the research project was a discourse analysis of the interview results. Discourse analysis is a broad methodology used to analyze the meaning behind different forms of expression. Based on a range of theoretical traditions this dynamic methodology rejects the realist assumption that language is simply a neutral means of communication, but rather that informed meaning is conveyed in all forms of expression (i.e. body language, appearance, word choice etc.) (Gill 2000). In recognizing this

complexity of expression, discourse analysis attempts to be holistic in its analysis of social interaction by simultaneously analyzing discourse and the interpretative context in-which the discourse takes place. Therefore discourse analysis goes beyond more simplistic research methods, such as Conversation Analysis, by focusing both on nonverbal forms of communication as well as language content (Gill, 2000).

The rationale for using discourse analysis is closely related to the other research methods used in this project. Discourse analysis compliments the semi-structured interview research method well, because it can analytically capture the non-verbal expression that can accompany an interviewee changing the course of an interview question to a related subject, or responding to a research question with emotion. Additionally, because the research topic relates to potentially sensitive issues such as economic stability of the cooperative, sustainable livelihoods in a rural community, or political marginalization, it is important to consider all of the ways communication is used to give meaning to these issues and responses. Therefore discourse analysis is seen as a highly relevant method for analyzing the results of the semi-structured interviews and research questions detailed below. The discourse analysis of the interview results took place in June and July 2016 during the final writing of the thesis project.

3.3.1. Methodological limitation

The main methodological weakness for this final research step is that non-verbal forms of communication, which can be captured by discourse analysis, are often shaped by cultural norms. And for outside researchers not familiar with the local culture and local forms of non-verbal expression, so of this data can be missed by the researcher. In this case, the researcher had been to Kenya before (also working on agricultural and livestock issues) and other countries in East Africa, but Kenyan culture was still a new cultural context. In general, respondents were very straightforward in their answers to questions, and at no point did a respondent refuse to answer a question, but it is recognized that some respondent non-verbal communications were not recognized by the researcher and incorporated into the final results.

4. Context analysis of the Kenyan agriculture system

In 2014⁹ Kenya had a land area of 580,367 km², of which 25 percent is arable, and had the largest economy in East Africa (Makoni et al. 2014, 78). Agriculture is a foundational part of the Kenyan economy accounting for 25% of GDP (Wanyama 2009). With 70 percent of the country's population living in rural areas, smallholder and subsistence agricultural production is the main economic activity for the majority of Kenyans, representing the single largest sector of employment in Kenya and over half of the country's labor force (Wanyama 2009; Makoni et al. 2014). As agricultural production has historically been a driver of the Kenyan economy, the current Kenyan government's development plan for the coming decades, called Kenya Vision 2030, envisions agriculture as continuing to be "among the priority economic sectors that will drive growth and development" (Makoni et al. 2014, 78). Thus agriculture as a sector is a top political priority in Kenya, and cooperatives have played a key role in this agricultural and political trajectory.

4.1 The Kenyan cooperative sector

To understand the intricate relationship between Kenya's strong agricultural development, agricultural governance priorities, and producer cooperatives, a brief historical analysis is needed. The history of cooperatives supporting small-scale producers traces back to Kenya's colonial history and follows the global trend of the emergence of neoliberal economics in the 20th century. Under British colonial rule from the early 20th century until 1963, the British government attempted to replicate European and Indian agricultural collective production models (with political control of these organizations being monopolized by European elites in Kenya) in East Africa, with commodity goods being largely produced for export to foreign markets (Schwettmann 2015). These organizations thus are not considered true cooperatives per the ICA definition offered previously, as they were production models focused on aggregation but they were largely not democratic in their decision-making structure. Although the social and economic benefits of this top-down colonial model were not distributed equitably, they did offer some employment opportunities for small-scale growers, and perhaps more importantly this colonial model established a governance structure promoting collectivized production in Kenya's agriculture system. By the mid-20th century, as economic opportunities for commercial agriculture expanded in Kenya, conflicts over land rights in rural areas grew and contributed to political independence movements in the country, indicating the political nature of agricultural governance and the agricultural economy.

By 1963 Kenya had gained independence from the British, and the new independent government maintained state control and support for the cooperative sector. As written by Wanyama (2009, 7):

"Most of the primary cooperatives in Kenya have their origin in state-controlled promotion of cooperative development, which saw most of the people join cooperatives not on the basis of their common bonds and mutual trust, but due to the directive from the state that compelled those engaged in similar economic activities to join specific types of cooperatives. For instance, in the agricultural sector it became mandatory for cash crop farmers to join cooperatives in order to market coffee, cotton, pyrethrum, and milk."

⁹ This data was the most up-to-date information found by the researcher

State support for cooperatives in the mid to late 20th century fostered a large growth of the sector, as cooperative organizations established virtual monopolies in the agriculture system while developing significant dependence on government intervention (Wanyama 2009). But decades of State patronage contributed to poor management of many cooperatives and with the globalization of many agricultural markets with the emergence of international neoliberal economics in the 1980s, the cooperative sector in Kenya was viewed as inefficient and lost significant domestic political support. This political and economic transition led to the Kenyan government radically changing its governance approach to cooperatives with the liberalization of the sector in 1997. The goal of the policy shift was “to make cooperatives autonomous, self-reliant, self-controlled and commercially viable institutions. The role of the government was redefined from one that sought to control cooperative development, to one that now seeks to regulate and facilitate their autonomy. The monopoly of cooperatives in the agricultural sector, which had made them the sole marketers of cash crops in Kenya, was removed. The consequences of this meant that cooperatives now had to compete with other private enterprises in the marketing of agricultural produce” (International Labour Organization 2009). But the government did little to support cooperatives to transition to this new governance landscape, and the shock of quickly liberalizing Kenya’s agricultural markets had significant impacts on the cooperative sector. As written by (Schwettmann 2015, 5):

“The sudden removal of state support and state control, the abolition of monopolies and other privileges, democratic reforms and the withdrawal of external assistance, brought to light a triple crisis, i.e.:

- *A crisis of identity*: the existing cooperatives were cooperatives by name only, not by nature;
- *A crisis of environment*: the legal, institutional and administrative context was preventing, not supporting, the emergence of genuine, self-managed cooperatives;
- *A crisis of effectiveness*: The existing cooperatives were unable to survive without subsidies, state protection and government control.”

This period of crisis and transition for the Kenyan cooperative sector forced cooperatives to adapt to a new liberalized economic landscape; many cooperatives were not successful in this transition and cooperative membership declined significantly for years after liberalization (Schwettmann 2015). According to Wanyama (2009, 5):

“The 1997 Act empowered the members to be responsible for the running of their own cooperatives, through elected management committees. Nevertheless, cooperatives had not been prepared for this freedom. For the first time ever, the cooperatives were left without a regulatory mechanism to play the role that the government had previously played. Consequently, the immediate impact of liberalization on cooperatives was principally negative.”

But many cooperatives were able to adapt to these radical policy changes, and those cooperatives that were able to adapt “emerged rejuvenated as genuine, member-owned, member-run and economically viable cooperative ventures” (Schwettmann 2015).

In 2016, the primary cooperative governance framework in Kenya is the Cooperative Societies (Amendment) Act of 2004 (Republic of Kenya, 2004a) (Wanyama 2009). This framework maintains the core intention of the 1997 Cooperatives Act to ensure the self-sufficiency and autonomy of cooperatives in the country while clarifying the role of government in regulating and supporting these organizations. According to Wanyama (2009, 6)

“[t]he legislation stipulates that the roles to be undertaken by government include:

1. Creating the policy and legal framework for development of cooperatives;
2. Improving the growth and development of cooperatives by providing the requisite services for their organization, registration, operation, advancement and dissolution;
3. Developing partnerships with cooperatives through consultative processes that are focused on policy, legislation and regulation.”

Thus there is a clear political commitment by the government of Kenya for continuing to support and strengthen the cooperative movement in the currently context of liberalization.

Today farmer cooperative membership in Kenya has more than tripled in this liberalized governance context, with the number of cooperatives growing from 6,181 to 10,800, and cooperative membership expanding from 2,685,000 to 8,507,000 from the period of the mid-1990s to 2010 (Schwettmann 2015). Furthermore, from a livelihoods perspective, a stunning 63% of Kenyans participate in a cooperative and 80% per cent of Kenya’s population derives their income either directly or indirectly through cooperative activities (Wanyama 2009). Economically, cooperatives also continue to have a significant impact on the Kenyan economy: in the agriculture sector cooperatives account for over 40% of sales, and in the dairy and coffee sectors this market share is over 90% (Wanyama 2009). Thus in many ways the cooperative sector in Kenya has recovered from the crises of identity environment, and effectiveness mentioned by Schwettmann 2015 above, and from a development perspective, it is clear that Kenya’s cooperative sector continues to be a foundational part of the Kenyan economy and supportive of a majority segment of the Kenyan population. But as discussed below in the data analysis and discussion sections of this paper, new and emerging issues related to this liberalized agricultural context and recently changes in Kenya’s agricultural governance (i.e. political decentralization) are challenging agricultural cooperatives and dairy producers in new ways.

4.2 The Kenya Dairy Sector

Following this brief overview of the Kenyan cooperative sector, this analysis now turns to the Kenya dairy sector (and more precisely the Kenya dairy cooperative sector) as this sector is the focus on this research project. According to Makoni et al. (2014, 79) “[t]he cooperative sector is a major player in the dairy industry” in Kenya. This is in-part due to the fact that small-scale farmers producing bulk commodity agricultural products requiring processing, such as milk, are challenged in accessing needed processing and storage infrastructure due to the high cost of this infrastructure, thus it is especially advantageous for these small-scale producers to access processing infrastructure and storage cooperatively to distribute infrastructure costs and work toward building economies of scale (Kilelu et al. 2016, 13; Abdulai and Birachi, 2009). Thus Kenya dairy is a particularly relevant sector to this project’s research questions because in many ways is it a nexus of the many political, social, and economic issues, opportunities, and challenges discussed so far. Politically, the

Kenyan government has placed high prioritization on developing the dairy sector as it is seen as a sector with significant development potential. Socially, dairy is an important livelihood activity, providing a basic food security source and income to the subsistence and small-scale producers who make up the majority of the sector. According to SNV (2013) and Verjans (2014), “because the (dairy) sector employs many women and youths and contributes to nutritional and food security, it can be seen as a key sector for pro-poor economic and social development.” And economically the sector is both attracting foreign investment and becoming more globalized and concentrated (at least in-terms of dairy processing). Thus subsistence and small-scale dairy producers are faced with a number of both challenges and opportunities in this rapidly changing agricultural landscape.

To understand the importance of the dairy and livestock sector, first a brief overview. From 2006 to 2014 the Kenyan dairy sector was estimated to be growing by four to five percent annually, resulting in a yearly production of roughly 5 billion liters (EADD 2009). Approximately 55 percent is marketed, while the remaining 45 percent is used for home consumption, feeding calves or sales to neighbors. “Of the marketed milk it is estimated that only 32 percent reaches the market through formal (implicating processed) channels” (EADD 2009; Verjans 2014). The livestock (in particular the dairy livestock sector) sub-sector employs over 90 percent of the population living in arid and semi-arid regions¹⁰ (Makoni et al. 2014). For these smallholder farmers in the dairy livestock sector (owning 1-3 dairy cows), who account for 80 percent of milk produced in this critical agricultural sector in Kenya, the majority access (both formal and informal) markets and critical services through cooperatives (Makoni et al. 2014). Services provided by these dairy cooperatives can be quite varied across the social-economic service trajectory, but almost always include (at a minimum) the chilling and bulking of milk from farmers for selling to larger processor. Many larger cooperatives also provide other basic services such as milk collection, milk processing, bulk purchasing in agricultural inputs, and agricultural extension services. These services are typically paid for by the farmer members through a per-litre milk flat tax what is deducted from each member’s milk payment at the end of each month. Thus cooperatives constitute “a major support mechanism for the smallholder dairy farmer” (Makoni et al. 2014: 76; Wanyama 2009). And the Kenyan dairy sector “has positive implications on food security and nutrition and has the potential to reduce poverty, particularly in rural areas (Makoni et al. 2014: 74). Thus given common nature of dairy production in Kenya, and the characterization of this sector being primarily subsistence and small-scale family farming, it is important to consider the livelihood implications of dairy development and commercialization.

From an agricultural development perspective, the Kenyan government has recognized the potential of the Kenyan dairy sector and “ha[s] focused on dairy by developing national strategies that give emphasis to the dairy sector and its potential for GDP growth” (Makoni et al. 2014, 8). In particular, the Kenyan government has emphasized the importance of public-private-partnerships as a strategy for commercializing the dairy sector to be a driver for economic development rather than a subsistence livelihood activity (Makoni et al. 2014: 9). This approach, which coincides with the broad agricultural liberalization and privatization measures mentioned previously, again has different implications for profit-driven versus cooperative-orientated farmer organization and business models. One particularly relevant example of a non-cooperative approach to coordinating small-scale dairy farmers that has been supported by foreign donors and the national government is the Producer Organization Hub Model. This model is important because it is a relatively new farmer organizational approach, but also because it clearly illustrates the farmer livelihood implications of cooperative versus more profit-driven approaches to agricultural development

¹⁰ Arid and semi-arid regions account for 75% of Kenya’s land mass (Makoni et al. 2014)

specifically for the Kenyan dairy sector. According to Jaleta et al. (2013, 252) dairy hubs broadly are “either as a single business entity supplying inputs and providing services, or the existence of several business entities supplying inputs and/or providing services in a specific geographic area serving beneficiaries’ needs. These different entities could be private, cooperative, or public owned.” More precisely, Kilelu et al. (2016, 5) draws from the writings of Tesfazghi (2013) to conceptualize the dairy hub model as an intermediary organization in three ways, which are summarized below in Figure IV:

Figure IV: Dairy Hub model

“(1) The hub as a one-stop shop. Here, the hub is viewed as a mechanism for collective marketing and improving accessibility to services....in one central location...”

In this conceptualization, the hub organization itself provides all offered services to members from the hub’s central headquarters, rather than collaborating or outsourcing these services to other organizations.

“(2) The hub as a cluster. Here, a hub is conceptualised as a clustering of firms to stimulate and optimise the flow of knowledge, technology and support services for innovation....”

In this conceptualization, the hub is a geographical space in-which a variety of different service organizations are gathered to provide services to local farmers and rural residents.

“(3) The hub as a broker. Here, the hub is considered a node that connects various collaborating actors, as often within hubs some actors take on coordinating and facilitative roles.”

Finally in this hub model conceptualization, the dairy hub plays a facilitation role in connecting hub farmer members to other service organizations, or outsourcing services to partner organizations, (which may or may not be geographically in close proximity to the hub infrastructure itself) for access to services. Thus there are different typologies of this hub approach, which can be applied to any kind of farmer organization or business entity.

Source: Kilelu et al. (2016, 5)

In the context of the Kenyan dairy sector, this Hub Model approach has been most strongly supported through the East Africa Dairy Development project, which was piloted in Kenya from 2008 to 2012 and funded by the Bill and Melinda Gates Foundation and Heifer International who have providing the start-up capital needed for investing in milk chillers and generators (Heifer International 2014). According to Kilelu et al. (2016, 2), who recently produced a study of this model, “[t]hese hubs are characterised as focal points in value chains, coordinating various multi-actor networks that link smallholders to inputs, innovation support services and output markets. The hubs are seen as enhancing relationships and enabling co-learning between actors in order to improve smallholder participation in agrifood value chains.” In practice these East Africa Dairy Development hubs consist of administrative units called Dairy Farmers Business Associations, which manage a dairy chilling plant and the collection and bulking of milk from member farmers in a 10 kilometer

radius around the chilling plant (Verjans 2014). Essentially, the East Africa Dairy Development project dairy hubs act in similar ways to dairy cooperatives in the service they provide to farmers, although these services seem to be generally economically orientated toward commercialization of the farmer, rather than providing social services. But in-terms of

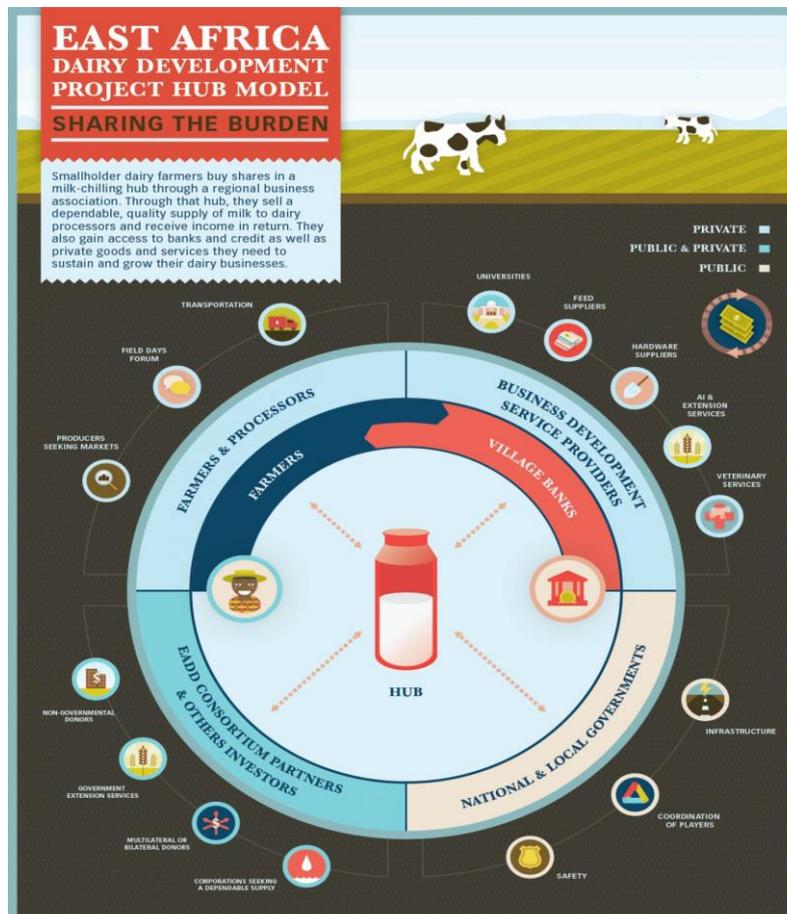


Photo credit: EADD

the governance of these organizations, they are seen to be an alternative to dairy cooperatives.

The governance difference lies in the fact that the Dairy Farmers Business Associations are “farmer-owned,” with Dairy Farmers Business Association board of directors being “member farmers selected (elected) from the various administrative locations within [the hub] catchment [area],” which are both similar characteristics to cooperatives (Kilelu et al. 2016, 7; Heifer International 2014). But the true democratic structure of the cooperative model which promotes farmer agency has been stripped from the model. Although hub

leadership is elected, farmers must buy shares in the organization (this cost is in addition to the membership fees farmers must pay to supply the hub with milk) in order to receive dividends and have the right to participate in electing members of the board of directors. In addition, “a team of professional staff... [is]... hired in each DFBA to provide operational management,” which suggests that the organization’s structure is primarily orientated toward economic/commercialization goals (Kilelu et al. (2016, 7). Thus essentially the East Africa Dairy Development project’s Dairy Farmers Business Association hub model approach maintains the collective action component of cooperative milk bulking while privatizing the leadership structure of these organizations (i.e. only farmer members who pay an additional fee in addition to membership dues can vote for their leaders, rather than following the traditional cooperative principle that all cooperative members have equal democratic votes. The obvious result of this approach to coordinating dairy farmers is that only economically successful commercial producers with excess income to invest in the Dairy Farmers Business Association will participate in the organization’s governance (i.e. through the board member elections).

Thus to conclude this context overview section of the Kenya cooperative and dairy sectors, it is emphasized that in utilizing the agricultural governance component of this paper’s theoretical framework, it is clear that Kenya’s cooperative sector has historically been closely linked with government policy. But over the past two decades the liberalization of the Kenyan agricultural sector has had significant impacts on cooperatives, and in

particular in the dairy sector which supports a large proportion of the rural Kenyan population who are subsistence and small-scale farmers. These impacts are on-going, and the continuing withdrawal of the State (in-terms of effective regulatory action and reduction in the provision of State support for the cooperative sector) from the agriculture sector is contributing to the emergence of new foreign donor funded dairy hub models that mimic dairy cooperatives' bulking characteristics but not their internal organizational structure.

4.3 Political administration

Finally a note about the political administration of Kenya: Prior to 2013 Kenya was organized into 47 counties which were politically administered by Provincial governments. Following the 2013 Kenyan general election and the constitutional changes that resulted, the Provincial political administrations were disbanded and political and budgetary control was 'devolved' or decentralized, with political power from the national and provincial level to the county level. This is important because following this change, counties were given the political authority to develop county specific agricultural development strategies and policies, as long as they were in-line with broad national policy commitments, as well as dedicate funds for implementation, thus potentially impacting a number of agricultural regulations and public farmer support services. This county-orientated governance shift has not been immediate or without conflict, but in principle it has brought most rural agricultural stakeholders geographically closer to the political system (i.e. shifting political power to their local county rather from the national government in Nairobi and provincial governments). Given the recentness of this governance change, there has been little research on how shift toward county-driven agricultural governance is impacting the cooperative sector, thus this research attempts to contribute to filling this research gap.

5. Analysis of field data

This section presents the findings from the formal semi-structured field interviews with the three interview groups. Given that the three sets of core research sub-questions were posed to the three interview groups separately for the purposes of comparing the responses across the different groups, the results of each interview group will be presented separately below each core interview topic.

5.1 The role of cooperative social services in supporting member farmers

Dairy cooperatives in central Kenya are currently functioning as more than just business entities, they are facilitating farmer access and engagement in a number of different social, political, and market forums.

5.1.1 Cooperative leadership responses

Basic services of bulking and collective marketing

Of the eleven registered cooperatives that were interviewed about social services, all listed milk bulking and selling (either directly to consumers in raw or processed form, or to processors) as the primary service provided to its members. All cooperative respondents indicated in one form or another that this bulking and selling function was critical to the livelihoods of the cooperative members because it allowed them access to the formal dairy market and to support their farm and families.¹¹ Out of these eleven cooperatives, the smallest cooperative (10 active members) and the third smallest cooperative (52 active members) did not provide any additional services. In these two cases the leaders of both cooperatives stated their desire to provide additional services, in particular quality animal feeds at a below-market cost, but stated that the lack of financial capital from their small membership prevented the cooperative from investing in other services. For one of the cooperatives (Kiserean United Dairy) the reason for the small membership was that the cooperative is located in a dry region south of Nairobi with little milk production. For the other cooperative (Tetu Dairy Farmers Cooperative Society) a clear reason for not providing additional services was not given, but references to competition from other cooperatives in the area was indicated in reference to other interview questions. It is worth indicating that for both of these cooperatives, the leadership seemed to be the least



Cooperative staff dumping milk due to lack of enough storage capacity

Photo credit: Jordan Treakle

¹¹ It should be noted that although cooperative bulking and marketing services were mentioned as a critical economic service supporting farmer members' engagement in formal markets and economic systems, most cooperative leaders indicated that their members owned mixed farms – producing both crops and milk – and had other sources of income outside of the dairy cooperative payments

knowledgeable or interested in the agricultural governance mechanisms (such as cooperative policy, county agricultural extension services, etc.) impacting their cooperative members, as well as that both of these two cooperatives made in-direct references to the financial challenges of the cooperative.

For the nine other cooperatives that were providing services beyond bulking and marketing of milk, the following services are grouped in descending order from the most commonly offered services to the least:

Cooperative facilitation of farmer access to the political systems through advocacy

The most common service offered by all nine cooperatives offering services beyond only bulking and marketing of milk was farmer/cooperative lobbying and advocacy in agricultural governance systems (i.e. local and national government offices related to agricultural and cooperative issues).

“We do feel that we should represent the cooperative societies more in lobbying, so we can see the changes we want.” – Meru Dairy Cooperative Union

Although this social service was the most pervasive, the nature of this service across the different cooperatives was quite diverse. A summary of these differences include:

- The way in-which cooperatives engaged in political lobbying differed, and reflected the lack of a common institutionalized mechanism for public participation in Kenyan governmental processes, both at the county and national levels. According to the respondents, approximately half of the cooperatives engaged in lobbying through informal channels, by contacting government officials through personal connections. Timelines for how long it would take a cooperative leader to set up an informal meeting varied significantly depending on the official contacted and the issue. The other half of the cooperative leaderships went through more formal (but not clearly institutionalized) processes that usually began at the local level by submitting a request for a meeting with a county government agricultural extension agent (if one existed in the particular county). The extension agent would then transmit this request up the political hierarchy to a higher government official (in some cases this could even be the county governor). This process typically would take between two weeks and three months, depending on the issue. The potentially long timeline of this formal channel was cited by several cooperative leaders engaging government officials informally as a reason for not going through the more formal system. Once a meeting with a government official was set (either through formal or informal means), the ways in-which the cooperatives delivered or expressed their interests and requests for government support or attention also varied significantly. Several cooperatives stated that they only made verbal requests, while others submitted written requests; two cooperatives submitted formal business plans in requests for milk processing infrastructure. But none of the cooperative leaders stated that they had a cohesive or long-term lobbying strategy or specific staff for these activities.
- Similarly to the variety of different lobbying approaches, the issues lobbied for varied among the cooperatives. But generally, the top lobbying issues by the cooperative leaders can be categorized into four groups:
 - Services – The most common request by cooperatives was for access to agricultural services, usually related to subsidized public agricultural extension services, veterinary services, and in a limited number of cases for public dealers of animal

fodder. A minority of cooperatives also requested access to financial services such as low interest loans.

- Infrastructure – A minority of cooperatives lobbied for infrastructure, typically milk chillers or processors.
- Policy development/change - Policy development/change requests related to the government tax on milk sales were common, as well as request by cooperative leaders for the development of new and transparent quality standards for seeds, animal feeds, and animal breeds.
- Enforcement – Many cooperatives lobbied government for enforcement of milk handling and selling regulations to eliminate the informal milk sector, which they considered to be undercutting the formal cooperative milk sector.

There were no apparent correlations between cooperative size, location, or services offered to the issues lobbied for by the cooperatives.

- Cooperative leaders were asked specifically how they decided which issues to lobby for. Only four of the nine cooperatives consulted the cooperative’s farmer members before approaching government officials for lobbying. For the other five cooperatives, these decisions were left to the cooperative board to decide.

“And actually now the ministry of cooperatives have recently approached us for recommendations on policy changes, but we have not responded, because I cannot respond just with my opinions, we need to hire a consultant to speak with the cooperative members, so we have not yet responded to the ministry” – Meru Cooperative Dairy Society.

- Cooperative leaders were also asked specifically whether they lobbied as a single organization, or with other partners. Only one cooperative, the largest cooperative union interviewed, said that they worked directly with NGO partners in specific lobbying efforts. The fourth smallest cooperative, with 300 active members, said they partnered with other neighboring cooperatives to conduct their lobbying efforts. The other seven cooperatives said they lobbied alone.

- Finally, when asking cooperative leaders about whether they felt their lobbying efforts accomplished their lobbying goals, a minority of cooperatives said they felt their efforts had tangible positive results. Only one cooperative, who received low interest loans and a grant to purchase a milk chiller from the county government, indicated that their lobbying efforts had directly led to a positive result. Additionally three other cooperatives indicated that they received some kind of government support (such as collaborative staffing for trainings, or agricultural extension services) but did not attribute this support to their lobbying efforts. Surprisingly, only one cooperative, the smallest, expressed significant frustration when asked about government accessibility for their lobbying efforts. In this case the cooperative leader angrily indicated that the county governor was ignoring the dairy sector in the county because of conflicting tribal affiliations. But in general, most cooperatives felt they were able to eventually meet with a government official (although many cooperatives indicated that the formal process of setting up a formal meeting with a government official was too slow), even if this meeting did not successfully translate to their requests being rewarded. Unsurprisingly almost all cooperatives stated that they wanted to be more effective in their lobbying efforts and that this service was becoming more important in the context of political devolution. It is worth noting that only

cooperatives who engaged in some kind of lobbying effort received support from government.

“We have not been as engaged with the policies. But we would like to develop a county specific dairy policy that would regulate dairy prices in the county” - Baringo Agricultural Marketing Services Cooperative Society Ltd

“Apart from the work we did on the cooling plant, we don’t see a lot of opportunity to work with the government on regulations. These are government organizations, they are assisting themselves. We are developing interventions to our own problems”- Meru Dairy Cooperative Union

Cooperative facilitation of knowledge transfer

Knowledge transfer, either from cooperative staff to members, or cases in-which the cooperative facilitates a third party to provide this service, was listed by eight cooperatives. Knowledge transfer in these cooperative service contexts was described in two ways:

1) Knowledge transfer was characterized as an opportunity for farmers to learn a new skill set for improving agricultural production on their farm that they (versus an agricultural extension agent or veterinary technician) would implement. Examples include animal husbandry trainings, improved fodder management, environmental conservation for improved production (i.e. agricultural soil and water conservation), and general agricultural extension learning opportunities (such as on-farm advising for crop production). This service was highlighted by many cooperative leaders as being important for cooperative members because it allowed the members to improve the quality and quantity of their milk production without having to rely on third-party service experts (which were characterized as being expensive on the private market), which in-turn provided the farm with a more stable income.

“Most farmers are not just dairy farmers, you cannot support your family with 2-3 cows selling milk. So most farmers have mixed farms. So we plant potatoes, and then oats depending on the season. And this training on production rotation helps our whole farm, not just the dairy production, so we can support our family” - Mumberes Dairy Farmers Cooperative Society

2) Knowledge transfer was characterized as an opportunity for farmers to gain information for making informed livelihood decisions outside of their on-farm (and agricultural production) context. Examples include access to public health information, information on cooperative roles and responsibilities, security issues, etc.

Cooperatives in this group responding with this knowledge transfer service ranged in size of active members from 300 to 24,000 members located across the study region. The only other common factor among this group of cooperatives is that all eight cooperatives providing this service also indicated they had engaged in some form of political lobbying on behalf of their members.

Cooperative facilitation of access to veterinary services

Access to veterinary services, including AI services, provided by either cooperative staff or by non-cooperative third party service providers, was listed by six cooperatives.

Veterinary services here are differentiated from agricultural production services because these services are delivered by a trained expert to the farmer on an on-demand basis, in contrast to educational agricultural trainings in-which farmers receive knowledge and then implement this knowledge on his or her own. Access to veterinary services was highlighted by many cooperative leaders as being important for cooperative members because these services both improve the quality of milk production, and is a form of risk management for preventing livestock death, as cows are an important and expensive asset for farmers.

“One of the biggest challenges for farmers is getting good information on semen types. The private sector inseminators are just looking for margins, they do not provide good services and it is costly for farmers. So the cooperative educates farmers and then they will look for an inseminator for the farmer when the farmer needs it. The cooperative then negotiates for the farmer on the price, and then the coop can deduct the price from the farmer’s production income. Alternatively, the farmer can find an inseminator himself and then still pay for it through the cooperative (against his production)” - Mumberes Dairy Farmers Cooperative Society

Cooperatives providing this service ranged in size of active members from 650 to 24,000. Cooperatives located in the drier southern part of the study region (known more for beef production than milk production) did not offer this service (but there is not enough data on this point to imply that there is a correlation between this service and geographic location). The only two other common factors among this group of cooperatives is that all six cooperatives providing this service also indicated they had engaged in some form of political lobbying on behalf of their members and all cooperatives providing this service also provided knowledge transfer services for improved agricultural production.

Cooperative facilitation of access to agricultural inputs

Five cooperatives listed improved access to agricultural inputs, such as animal feeds and fertilizers as an important service. A common challenge mentioned by most cooperative leaders was the lack of access to good quality animal feeds at reasonable prices for small-scale producers. So the ability of cooperatives to find good feeds producers and purchase in-bulk (therefore reducing the cost for farmer members) was highlighted as an important service for improving the quality of milk production and reducing farmer costs. In all cases where this service was offered, the cooperatives sold the inputs to their members through a one-stop-shop store where milk deliveries were made. Cooperatives offering this service ranged from 24 to 6,000 active members and were located across the study region.

“We sell animal feeds to our farmers on credit against their production, at a slightly lower price than they can get on the market (1,700 Kenyan shillings for 250 kg). The big benefit of this is that we can ensure that the feeds are of high quality, because there are a lot of low quality feeds on the market and farmers do not know what they are getting” - Gakindu Dairy Farmers Cooperative Society.

Cooperative facilitation of access to financial systems

Access to financial systems, such as formal banks, credit unions, and/or community savings groups was listed as a cooperative service by five cooperatives. Gaining access to credit (based on milk deliveries) or low interest loans were mentioned as important for producers for two main reasons: 1) access to credit helped them purchase agricultural inputs directly from their cooperative at reduced prices. In this way farmers gained access to better quality and cheaper production inputs without the risk of having to handle and store cash; and 2) loans helped farmers pay annual school fees for their children. Farmers mentioned that the once-per-year payment was a financial burden¹² for most farming families who often do not have the financial savings to pay the fees in one payment. These two reasons are noted because they contrast, in that one is directly related to agricultural production, while the other is not, and rather focused on a livelihood need (access to children's educational opportunities). In only one case was access to financial institutions mentioned as a means to scale-up on-farm production (i.e. buy more land, cows, or machinery) by a cooperative that was not currently offering this service.

In most cases this cooperative facilitation of access to financial services was delivered in the form of a brokered service, meaning that the cooperative would negotiate and partner with a local bank or credit union. Farmers would be paid for their milk deliveries at the end of each month through the bank, and would immediately be approved for a loan or line of credit. In no cases did farmers say they were restricted to only using the bank or credit union that was partnering with their cooperative. In most instances, community-based cooperative banks, or SACCOs, were the financial institution providing services to the cooperative. The emergence of SACCOs is a relatively recent movement that is particularly strong in Kenya according to all respondents, and respondents generally seemed quite pleased with the services offered by these institutions. In only two cases, the two biggest cooperatives interviewed, did the cooperative actually own the Sacco (i.e. representing a one-stop-shop cooperative model rather than a brokered service). And in only one case was a more informal and independent community-based savings group set up and used by a limited number of cooperative members (the cooperative organized trainings on how to set up and participate in this kind of savings group) for gaining access to credit. Cooperatives offering this access to financial systems service ranged in size from 24 to 24,000 active members and spanned across the study region.

Cooperative facilitation of social/educational networking

Three cooperatives listed facilitating decentralized networking opportunities for farmers from different regions as an important social service. In most cases this service was framed as an important educational opportunity. This service is differentiated from agricultural extension services because in this case cooperatives would actually visit each other and exchange knowledge through farm visits (without an agricultural "expert" present for teaching purposes), thus representing an activity that better reflects a horizontally-orientated service (i.e. peer to peer) than a vertical service of an expert visiting an individual farm or cooperative and providing a technical training. This service was highlighted as being important because it was a form agricultural education in-practice (i.e. farmers could see the results) which was attempting to fill the void of a lack of government agricultural extension

¹² The Kenyan Standard Daily newspaper, one of the country's top two papers, ran an article in January 2016 profiling the impact of high cost school fees, which are expensive in-part due to corruption and the failure of some schools to adhere to national school fee caps: <http://www.standardmedia.co.ke/article/2000186802/fees-shocker-to-parents-in-kenya-as-schools-defy-ministry-s-guide>

services. Cooperatives offering this service ranged from 24 to 24,000 active members and were located across the study region.

Cooperative facilitation of access to health care

Only two cooperatives listed providing farmer access to health care services, although it was mentioned by many cooperatives as an important service. Most cooperatives said that the cost of health care insurance prevented most farmers from accessing it, although most farmers wanted access. Furthermore most cooperative leaders said they did not offer this service because of the high cost and bureaucratic challenges of setting up this service with the government. The two cooperatives offering this service had larger membership sizes of 2,400 and 12,000 and were located in the more northern regions of the study area.

Cooperative facilitation of social development of marginalized groups

The last common service provided by cooperatives, as listed by two cooperatives' leaders, was social development activities for marginalized groups not directly related to the dairy cooperative. Several cooperatives emphasized the lack of inclusion of women in cooperatives, and the lack of entrepreneurial opportunities for youth, as being both negative for the cooperative movement (in-terms of reduced membership) and having negative social impacts (youth and women having few opportunities for agricultural innovation and development). But only two cooperatives mentioned organizing targeted trainings for women and/or youth to provide them with the entrepreneurial skills to run their own business. Although in some ways this social service could be considered the most traditional social service (meaning it is more differentiable from economic cooperative services because it is not as closely related to the economic or productive functions of the cooperative or the cooperative members' farms), but it was clearly not a top priority for cooperatives, even for those two cooperatives that did provide these trainings.

“Women in dairy, we want to do a major capacity development training to get more women in dairy.... More women in dairy will increase (cooperative) membership, increase milk production, and it will reduce poverty. Now the men earn the money and it trickles back home, but we want to see the women also earning for themselves. If we have empowered men we just have empowered individuals, but if we have empowered women we have empowered family farms” - Baringo Agricultural Marketing Services Cooperative Society Ltd.

“the trainings for women are quite important because we have a male dominated culture here, so women are less involved in the cooperative. So by getting trainings on poultry production, rabbit production, and how to set up community savings groups women are supporting the households through their own activities” - Mumberes Dairy Farmers Cooperative Society

Most important cooperative services

Following the scoping questions to cooperative leaders on the different kinds of services offered by cooperatives to their members, the respondents were then asked which of these services (beyond bulking and marketing of milk)¹³ were the most important for farmers

¹³ Respondents were allowed to give more than one answer to this question

(and in-turn the success of the cooperative as a whole). Despite the range of different services offered, almost all cooperative leaders clearly emphasized only one service as the most important: ‘knowledge transfer for improved agricultural production,’ with eight of the nine cooperatives offering services listing agricultural extension training opportunities (particularly related to animal husbandry).¹⁴ The second most listed response was ‘access to agricultural inputs,’ which was listed by three cooperatives. No other service was listed by more than one cooperative. Thus there was more-or-less consensus among all the cooperative leaders that access to agricultural production knowledge and services was most critical for farmers. When asked why this service was important, all answers from the respondents were some variation of the following two quotes which also reflect the different kinds of knowledge transferred (as described on page 46):

“The trainings are most important because they give the farmers more skills.... they really help our farmers in their (animal and agricultural) production” - Oloolaiser Dairy Farmers Cooperative Society

“These services are important because they strengthen the farmer loyalty to the cooperative. The services help the farmer families, are less expensive, and this makes the farmers more committed to the cooperative” - Mumberes Dairy Farmers Cooperative Society

5.1.2 Policy stakeholder responses

Services provided by cooperatives

Policy stakeholder¹⁵ responses were categorically similar to the responses by cooperative leaders: political lobbying, access to agricultural inputs, access veterinary services, access to financial systems, knowledge transfer, and social development activities were all cooperative services mentioned by the respondents. For example, one NGO response closely mirrored the sentiments of cooperatives leaders on this question:

“Education and training [is the most important social service], because knowledge is power, and with knowledge you can sort out a lot of problems. If the farmers have access to knowledge then they can improve on the other areas.” – Cooperative Alliance of Kenya

Thus the policy stakeholder respondent group did not list any cooperative services that were not also listed by the cooperative leaders. But one important point worth noting is which respondents *did not* list knowledge transfer, a top priority service listed by cooperative leaders, as a service offered by cooperatives. The two government agencies that are primarily responsible for supporting and developing dairy cooperatives – the Department of Cooperatives and the Ministry of Livestock – did not list knowledge transfer, access to agricultural extension services, or any kind of farmer training as a service that cooperatives provide their members. When asked more specifically about this service, the response by the Ministry of Livestock gave a particularly interesting answer:

¹⁴ The one cooperative that did not list this service was the smallest cooperative providing services and did not offer agricultural extension services to its members, meaning it could not list this answer.

¹⁵ As mentioned previously in the paper, policy stakeholders include government and non-government (such as NGOs) actors who work directly on cooperative policy issues.

“No the government does not provide any of the services for farmers and cooperatives, all of those services were privatized back in the 1990s. They were privatized because of a structural adjustment program that said that the government should not spend on these services. We privatized the AI services, the veterinary services, the agricultural extension services, the agro-feeds industry. But at that time the farmers were not prepared, that why we had a challenge....So are training a lot of people in the private sector to provide services to farmers but we are not providing any public services. Some counties under the devolution process are providing agricultural extension services.” Ministry of Livestock

This point is highlighted because it indicates that the Ministry of Livestock considers the private sector, and in some cases the county governments, as the only entities offering knowledge transfer services, which does not correspond with the interview responses of the cooperatives leaders themselves. Furthermore, this response corresponds closely with a number of points emphasized by the cooperative leader responses – 1) in some counties, but not all, public agricultural extension services are being offered, 2) the national government (versus the county governments) is continuing to directly support the privatization of the agricultural extension services and other farmer services (such as AI), and 3) the devolution process is related to the change of agricultural services offered by the government.

Most important cooperatives service

When asked about the most important services that cooperatives provide their members, policy stakeholders’ were similar to the cooperative responses, although with a weaker degree of consensus: Knowledge transfer¹⁶, access to agricultural inputs, and access to veterinary services were all tied in the number of respondents listing them as a priority service. In these cases the service was mentioned as being important both because it helped the farmer improve the quality and consistency his or her farmer production (i.e. produce better milk and crops, more consistently) which in turn improved the stability of the farming family.

One interesting observation related to the policy stakeholders’ responses to questions on priority cooperative services is related to the lack of emphasis on access to financial systems. Only one respondent, the Department of Cooperatives, listed access to financial services as a priority service for cooperatives and their members. Furthermore this respondent specifically related access to financial services as being important for cooperative members because it helped them cover livelihood expenses such as “burials and school fees.” Access to credit for farm development was not mentioned as being a priority.

5.1.3 Cooperative stakeholder responses

Services provided by cooperatives

Cooperative stakeholder¹⁷ responses were also categorically similar to the responses by cooperative leaders and policy stakeholders: access to agricultural inputs, access to veterinary services, access to financial systems, knowledge transfer, and social development activities were all cooperative services mentioned by the respondents. All cooperative

¹⁶ As described on page 46

¹⁷ As mentioned previously in the paper, cooperative stakeholders include academic, research, and private sector actors who work on cooperative issues (such as cooperative training, research or development) but do not work directly on policy development.

stakeholder respondents mentioned that social services were an important part of cooperative functions, and it is these services that differentiate cooperatives from their private sector competitors:

“[milk] prices is not a reliable way to keep farmers together, because prices change” – New KCC

Three notable differences of this respondent group include the following:

1) Four of the five respondents emphasized the role that cooperatives play in offering farmer members access to medical services, a more prominent response than in the other respondent groups:

“Too often, farmers don’t have medical services and get sick, and don’t go to the hospital unless it’s a last resort, then it is too late or very costly. So medical coverage is very important.” – New KCC

2) Cooperative stakeholder respondents did not emphasize the role of cooperative lobbying, a trend that likely corresponds to the fact that this respondent group is more orientated toward agricultural research rather than policy development.

3) One respondent, the Cooperative University College of Kenya (which is only respondent organization in this respondent group focused exclusively on cooperative issues) placed significant emphasis on the role that cooperatives play in building social cohesion:

“We also see that cooperatives play an important role in building social cohesion...I’m talking about the co-existence of different communities within a particular cooperative. The cooperative organizes members of these different communities and helps them to live together. For example we have 42 tribes, but it is through the cooperative that a sense of communalism is developed. Through the cooperatives better understanding of different tribes is achieved, and security is achieved. In that way we are able to work together and have a commonness in-terms of understanding.” – Cooperative University College of Kenya

Thus the cooperative stakeholder respondent group did not list any cooperative services that were not also listed by the cooperative leaders.

Most important cooperatives service

When asked about the most important services that cooperatives provide their members, cooperative stakeholders’ were similar to the cooperative responses, with three of the five respondents emphasizing knowledge transfer in the form of agricultural extension services as being key:

“Education (agricultural extension) services are the most important, because access to information is empowering, especially for the youth and women, because it is often only in the cooperative forum where they (youth and women) can come freely.” – Cooperative University College of Kenya

“Cooperatives have a commitment to educate their members. Education is one of the seven principles of the cooperative movement. So that makes it possible for the dairy cooperatives to gather their members and give them information about the cooperative, but also give their members information that is life enriching for the members. So they can provide information about nutrition and milk consumption or public health information. And it is during these cooperative education meetings that sometimes the local chiefs will also attend with other community members, even those people who are not cooperative members, and give information about the local security situation. And this kind of education livelihood service builds solidarity in the cooperative, so this is important social service that also benefits the whole community.” – Cooperative University College of Kenya

Access to veterinary services and access to agricultural inputs were listed by two respondents as the most important service. Similarly to the policy stakeholder respondents, these service was mentioned as being important both because it helped the farmer improve the quality and consistency of his or her farmer production (i.e. produce better milk and crops, more consistently) which in turn improved the stability of the farming family.

Also similar to the policy stakeholder responses was the interesting observation was that again only one respondent, the Kenyan Market Trust (the most private sector orientated respondent of all the interviews), listed access to financial services as a priority service (in addition to other services) for cooperatives and their members.

5.2 Cooperative social service gaps and directions for innovation

Following the above interview questions about the kinds of services cooperatives provide their members, and which of these services are most important, the interview groups were then asked which services cooperatives should be providing but are not. This question was phrased to the respondents in ways to try to elicit a response that was not just a ‘wish list’ of desires (such as ‘higher milk prices’) but tangible and feasible social services that respondents think cooperatives actually have (almost) the capacity to provide but cannot for some reason. Respondent answers are summarized below:

5.2.1 Cooperative leadership responses

Cooperative leaders’ responses¹⁸ to this question were generally quite frank and clear, highlighting the need not for radically new or innovative services, but rather better quality, more accessible, and expanded versions of services provided by their cooperative or neighboring cooperatives. For example, cooperatives indicated they were offering animal husbandry trainings but wanted to expand their educational offerings to include financial bookkeeping related to livestock management:

“A lot of market and environmental changes are happening these days, so trainings always need to be adapted and expanded, and we don’t really have the capacity to do this in the way we would like”
- Mukurweini Wakulima Dairy Cooperative Society

¹⁸ Respondents were allowed to provide more than one answer

“I think that we need a financial training, because most farmers do not do this as a business, they just do it as a regular activity. And this hurts the farmers because they don’t know the economics, they don’t know the cost of production, and they are not getting as much benefit as they could” - Oololaiser Dairy Farmers Cooperative Society

In-part this response by cooperatives of not wanting categorically different services reflects the general sentiment among cooperative leaders that either government or the cooperative itself (if it had the resources) is better at providing important services, rather than the private sector, where cooperatives often must go to contract out services for their members:

“The trainings are the most important because our farmers only have the private sector for these services and they are expensive.... even though we try our best to provide these services, we have financial constraints, and we cannot provide them as they are needed. We have to pay these consultants to train our farmers, and we have to reach deep into our pockets...so by (the cooperative) providing these services farmers improve their production and reduce their costs...[or] if there was a way for the county governments to sponsor these trainings that would be good, for example for at least a two training quota. More trainings would really help our farmers with their production”- Oololaiser Dairy Farmers Cooperative Society

In line with the above point, four of the eleven cooperatives stated that either public or cooperative agricultural extension services were needed; three of the four cooperatives listing this service were already offering this service by paying private consulting firms, which they were not satisfied with due to the poor quality and high cost. There were no common characteristics of the cooperatives requesting this service.

Following the agricultural extension services listed as a priority needed service, three cooperatives highlighted improved access to quality agricultural inputs as a lacking service. There were no common characteristics among the cooperatives requesting this service.

Three cooperatives also requested quality veterinary services, including AI, as a needed service not being provided. Again there were no common characteristics among the cooperatives.

Finally, the last commonly listed needed service was access to financial services (such as access to credit), which was requested also by three cooperatives with no common characteristics.

The only trend noted by the researcher in the requested cooperative services is that the two biggest cooperatives both mentioned access to medical services as a priority service.

5.2.2 Policy stakeholder responses

Policy stakeholder responses to this question were much more mixed than the cooperative leaders’ responses. The general response of policy stakeholders was similar to the cooperative leaders in that most respondents indicated that categorically new cooperative services were not needed as much as major improvement in the quality and accessibility of services currently provided by cooperatives such as access to veterinary services and agricultural inputs. When asked more specifically about these services, three of the six respondents listed knowledge transfer, either in the form of model farms or farmer

networking opportunities, as a cooperative service that was needed but not being provided. Again this response is surprising as knowledge transfer was the second most likely cooperative service to be offered according the cooperative leaders. After knowledge transfer, no other cooperative service was listed by more than one policy stakeholder respondent. Other services mentioned by a single respondent included elder care for aging cooperative members, non-farm employment opportunities for youth, and improved leadership training for cooperative leaders (such as communication skills).

5.2.3 Cooperative stakeholder responses

Similar to the policy stakeholder responses to this question, the cooperative stakeholder responses were more mixed than the cooperative leader responses. Improved knowledge transfer (in the form of agricultural extension services) and access to veterinary services (including AI) were both listed by three respondents. Access to agricultural inputs (in particular better quality seeds for improved pasture management) were listed by two respondents. Again this response is somewhat surprising as knowledge transfer and veterinary services are two of the most likely cooperative service to be offered according the cooperative leaders.

5.3 Cooperative sector and agricultural governance changes

As mentioned, Kenya's agricultural governance frameworks have been in significant flux since the late 1990s when the Kenyan government initiated the liberalization of the cooperative and agricultural sectors (A point and time period emphasized repeatedly by all of the interviewees). As mentioned in section 4, and emphasized repeatedly by many of the interviewees (as described below), most recently the devolution of political power from the national government to the county governments has been changing how government provides services to farmers, how agricultural stakeholders lobby government, and how government regulates the agricultural sector. The following responses were given on how this governance transition process is impacting cooperatives and their services.

5.3.1 Cooperative leader responses

Responses from cooperative leaders on how devolution is impacting dairy cooperatives was quite mixed – six of eleven cooperatives said there was little or no impact from devolution, two cooperatives said the changes were positive, and three cooperatives said the change was negative.

Positive impacts: closer proximity to political power & more attention to dairy issues

The two cooperatives who responded that the changes were positive came from cooperatives in two different counties in the northern part of the study region, and both cooperatives stated that they were receiving some kind of support or collaboration from the county government (which may account for their positive response although other cooperatives that were also receiving government supports indicated that they felt the devolution process was negative). These cooperatives are also quite different in size – one has 12,000 active members, and the other 650 active members. Finally both cooperatives indicated that they did engage in lobbying, without collaborating with other partners in this activity.

One cooperative indicated that devolution was positive because it meant that more resources were being distributed to counties that could be used for public financial services (such as low interest loans and grants) that cooperatives (not their members) could receive for cooperative development:

“We started the introduction of the cooperative development fund, where the county government is giving a loan with a very low interest rate to cooperative development. So some cooperatives have been able to buy chillers or vehicles. And the county government now has a budget for cooperative grants, to support us in the establishment of a processing plant. Before devolution, when it was under the national government, getting these kinds of resources were hard, it was not possible” - Baringo Agricultural Marketing Services Cooperative Society

A few important notes on this respondent: 1) this cooperative was the furthest from Nairobi (the main dairy market), 2) this cooperative was the most focused on providing financial services for its members, and 3) it was a large cooperative in a county (Baringo) with less cooperative competition than in other study counties. Although not conclusive, these factors may indicate that this cooperative was both more reliant on its county government for support (because of the distance to the Nairobi dairy market – the largest in the country) and had more political capital and lobbying strength (due to its size and lack of cooperative competition in the county) than other cooperatives interviewed.

The second cooperative that indicated that devolution was positive highlighted that dairy issues were now getting more political attention than before:

“Yes, before at the national level, dairy farming did not receive very much attention. Now the devolution process is having a big impact on the dairy sector because the county government is addressing dairy issues...Also because of the devolution, we are now closer to the county government, we take our problems directly to the county governor, we have access to him, and we can get support such as the milk processor that we received through the county cooperative officers” - Kirinyaga Dairy Cooperative Society Ltd.

According to this respondent, the result of this raised political attention to cooperative dairy issues has been a movement towards developing public dairy processing infrastructure and a common marketing strategy for the cooperatives:

“Through the county government we are forming a county association with the dairy producers to develop a single dairy market in the county. Through this approach the county government is trying to set up a public milk cooling center where all the cooperatives can take their milk, and the county government will find a market for this product and negotiate a price for the cooperatives” - Kirinyaga Dairy Cooperative Society Ltd.

The cooperative indicated that the coordination and planning of these goals mentioned above had been initiated, but that no new infrastructure for these projects had been started. But this cooperative surprisingly enthusiastic about the progress of this plan, which it saw as the right public response to a number of market challenges emphasized by most other cooperatives in other counties.

Thus a minority of the cooperatives saw devolution positively, but those that did felt that the increased political power of the counties was bringing both political and financial capital and resources to the dairy sector that would primarily support cooperatives.

Negative impacts: Lack of government capacity, more government meddling in cooperative management, and further liberalizing of the agriculture sector

Three cooperatives said that the devolution process was bad, and these respondents differed in size (10, 24, and 3,000 active members), location, and reasoning. One cooperative response was that the devolution process had led to a lack of governance clarity, with different agencies now competing for the same amount of government funds, which was ultimately inefficient and hurting farmers:

“One of the main issues we have told the government is that it seems that devolution is coming and its messed up a lot of things. You hear that the county officers are supposed to be part of the county government, and when he is called by the county governor, but he cannot do his job because he must also answer to the national government. So there are still a lot of issues around that, a lot of those guys are very frustrated, because they don’t know who to answer to. And they can’t do their job, because they also don’t have the budget to do anything” - Lemelepo Dairy Farmers Cooperative Society.

This sentiment of county governments having few resources for providing services was echoed by many other cooperatives, although many did not attribute this to the devolution process (i.e. there was little indication that this was a new phenomenon).

A second cooperative negative response was that devolution was leading to more (county) government involvement in the internal workings of cooperatives i.e. cooperatives were losing their political sovereignty through this governance transition:

“The devolution process has not been good for the dairy cooperative sector. With devolution we see the county government becoming more involved in the functioning of our cooperative, they come to our management committee meetings, but they have very little training in dairy or cooperative issues, so they only cause problems. There are also issues of corruption. But still it’s the KDB (Kenyan Dairy Board) board that is still making most of the regulatory changes. But overall is has been bad” - Endarasha Dairy Farmers Cooperative Society

This cooperative sentiment does correspond with responses from other cooperatives who stated that some county governments were pushing cooperatives to change their internal organizational structures toward more business orientated models (but other cooperatives did not indicate they thought this was a bad thing), but who did not attribute this to the devolution process. Thus it is likely that the devolution process is leading to some county governments trying to have more influence on cooperatives’ organizational issues and services offered. But it should be highlighted that the three other cooperatives interviewed in the same county indicated that the devolution process was having little impact on their organizations.

Finally, a final common cooperative negative response to devolution was that it was contributing to a further liberalizing of the agricultural sector, which in-turn was causing

market failures in the form of localized monopolies and price gauging by private sector actors. One of the most common complaints by cooperatives was that there was a lack of adequate regulations and lack of enforcement of existing regulations to ensure access to quality animal feeds, animal breeds, and agricultural seeds at reasonable prices. And many (but not all) cooperatives with this sentiment indicated that they thought devolution away from the national government would exacerbate this trend.

No impact

The majority of the cooperative respondents indicated that the devolution process currently was having no major impacts on dairy cooperatives, but several respondents in this category felt this could soon change in the future: generally larger cooperatives were more positive about this potential change as they saw it as a chance for more lobbying opportunities, while smaller cooperatives were more negative in that they foresaw it leading to more market liberalization and price gauging by private sector input suppliers and milk processors.

“We think political advocacy is an important service, but we are not fully getting what we want through this process. Partially this is because the devolution is only been three years old, so many things have not been fully streamlined” - Kirinyaga Dairy Cooperative Society Ltd.

Thus cooperative perspectives on Kenya’s changing agricultural governance were mixed, with few trends related to cooperative size or geographic position. This likely reflects the fact that the devolution process is largely having different impacts in different counties, with each county’s political administration taking a slightly different approach.

New county cooperative policies

Finally, a common response among the cooperatives leaders, which could not be characterized as either completely positive or negative, was that some county were developing their own county-specific cooperative policies. Few of the cooperative leaders interviewed had a clear understanding of what would be the outcome or impacts of this policy process, but most cooperative leaders were frustrated by the lack of political participation opportunities for cooperative stakeholders such as themselves, which is captured by the below quote:

“The last thing we have had with the county government, they told us that they are drafting a county cooperative policy, because currently they don’t have any. But I don’t think it will have an effect, because you know we are the stakeholders, but we have never been voting in coming up with it. I thought we are the people to be involved in it (in making policy) because we are the people on the ground. We are in the county office, but we don’t know what is happening (with the policies), we should have been included, they should hear our arguments, and then they should consider it. But you know it’s just the people in the office coming up with something”- Oloolaiser Dairy Farmers Cooperative Society

5.3.2 Policy stakeholder responses

Policy stakeholder responses to the question of how agricultural governance changes are impacting cooperative and how cooperatives are adapting in response were again more mixed and nuanced than the responses from cooperative leaders. The responses are summarized and presented in three main points:

Devolution is furthering the impacts of agricultural liberalization

One common trend in policy stakeholder responses to questions about the impacts of devolution on cooperatives was that many respondents viewed the devolution process as being tied to the general trend of liberalization of the Kenyan agricultural sector, dating back to the late 1990s, and this liberalization trend in the context of devolution was continuing to negatively impact cooperatives:

“Since devolution and the liberalization of the agricultural sector, the cooperatives in agriculture have had more trouble bouncing back (compared to cooperatives in other sectors), and this is because the cooperatives were not prepared for the [devolution] transition. Now they face very stiff competition from the private sector, and this has challenged them...[A] big challenge is the lack of information on dairy management. Because the farmers have had a significant reduction in access to agricultural extension services since the 1990s...[County agricultural extension services are] not full scale. For the training and extension services, the government staff are few, they cannot meet the needs of the farmers. So cooperatives can offer the training of service providers to fill this gap.” – Cooperative Alliance of Kenya

Thus policy stakeholders viewed government support for public farmer services (agricultural extension, veterinary services etc.) and regulation of key agricultural input markets as important roles supporting cooperatives and their members, but in the context of devolution county governments are now responsible for these functions, but do not have the financial resources to employ staff to effectively carry out these responsibilities, a perspective also echoed by national government respondents:

“But there is a major problem of funding at the counties for these [farmer and cooperative] services. And very little of the funds from the national government that goes to the counties goes toward farmer services.” – Ministry of Livestock

Thus this trend toward the further withdrawal of the State from supporting agricultural services in the devolution context is viewed by policy stakeholders as disproportionately negatively impacting cooperatives compared to their private sector non-cooperative competitors.

County governments and local agricultural governance

A second common theme raised by policy stakeholders emphasized the growing political power of county governments to shape new local policy (even if these governments may not have the financial resources to effectively implement these policies). In almost all cases respondents said that now county governments have more responsibilities for driving agricultural and cooperative development at the local level:

“I can assure you that, unless there is a political vacuum, yes the counties are making new cooperative and livestock policies.... but they [county governments] are realizing that the counties have to align themselves with the national level.” – Department of Cooperatives

In the opinion of the NGO respondents, the increasing power of county governments was having different impacts on cooperatives (in-terms of new opportunities for lobbying and advocacy to shape these local policies in ways to support the cooperative movement) but only a minority of cooperatives were prepared with the advocacy skill-sets to capitalize on this change in the agriculture governance landscape:

“Each county is developing its own agricultural development agenda, and the more proactive cooperatives are getting involved in that process....There is a principle of inclusion in the government policy making process, and in practice is it open. It is just that few cooperatives walk through that open door. We see that for those cooperatives that do try to engage with the government, the government usually welcomes them with open arms... I put it back on the cooperatives, it is on them to proactively approach their county governments to work toward their goals and support the county government on policy development.” – East African Farmers Federation

But other NGO respondents were less optimistic on potential benefits of political power being decentralized to the county-level, as this shift in agricultural governance power also opened possibility of new (negative) political relations:

“With devolution we are seeing the county governments have more power to craft local policies, it also means that the cooperatives are closer to this new power. And some of the county governments have noticed the (political) power of the cooperatives, and their power to organize votes. So there has been a push in some counties to change this power structure [of cooperatives]. Kiambu county was the trigger, they started crafting a new policy that said when [the policy] was passed in the county, all cooperative leaders (board members) would cease to have their position [in the cooperative leadership] and there would have to be new cooperative elections. The governor of Kiambu County wanted this to happen....So the spirit behind this action was to disempower cooperatives and their members. And we see this effort also no happening in other counties.” – Cooperative Alliance of Kenya

These NGO respondent opinions that county-level policy changes could have significant impacts on cooperative internal organizational structures were partially echoed by national government staff respondents (although the case of Kiambu county was not addressed specifically) speaking about other potential significant shifts in county-level dairy cooperative policies related to payments and cooperative leadership regulations:

“We are working with the KDB [Kenyan Dairy Board] on adapting [milk] payment rules to make [cooperative] payments [to farmer members] orientated around the milk quality, that something that is going to give boom for this country, this will make a big difference. Now it (payments) is volume based and [cooperative] members can take anything (i.e. any quality milk) they want to the cooperative.” – Department of Cooperative

“Cooperatives are member based, based on one man, one woman, one vote. If we can crack that, so that we do not have leadership that was there 20 years ago and that will take another 20 years before they leave office, that is better because after that amount of time your role in the cooperative has been clouded... This is the challenge. So we are trying to make sure that the leaders truly have a stake in the cooperative, such as the volume of milk that they are giving to the cooperative. So we are trying to move toward a model where the farmer members that produce more have more say in the cooperative, because they have more at stake. So we want cooperatives to pass resolutions that only members that produce a certain amount, not too high not too low, so that you don't lock out too many people, can be elected to the boards of the cooperatives” – Department of Cooperatives.

Thus respondents agreed that counties are developing their own agricultural and cooperative development policies, with indications that some policy changes could have significant impacts on cooperative structure (such as payment schemes and leadership structures) and lobbying opportunities.

Growing market power of dairy processors

Finally, several policy stakeholder respondents indicated that the withdrawal of the State from the agriculture sector through devolution was contributing to the growing market power of dairy processors, which in-turn was challenging dairy cooperatives (particularly dairy cooperatives who are not doing their own milk processing). Government respondents cited the increasing concentration of the dairy processing sector (which they in-part attributed to foreign investment in dairy processing) and the likelihood of the imminent privatization of the public dairy processor New KCC as factors that strengthen the bargaining power of processors in negotiating milk prices with dairy producers and bulkers (such as cooperatives). NGO respondents shared this view and the economic implications for cooperatives:

“Basically, the cooperatives are missing out to the private sector on processing. They do the bulking of the milk, but then sell to the processors, and they (the processors) are making the value and profit on the milk. The cooperatives need to up their game and invest in processing to capitalize on this processing value” – Cooperative Alliance of Kenya

Government respondents also acknowledged that national government activities were contributing to this trend of the growing power of dairy processors, as dairy processors are increasingly offering agricultural services:

“Right now the processors are increasingly offering extension services, so they are working with the private sector and the government to extend these services through the private sector. And we think this is important because the private sector sees the service gaps that the government is missing. They know the real core issues that are affecting them. A market-drive approach to services is very good. If the market calls you to provide a better product, it is easier to struggle toward that through the market” – Kenyan Dairy Board

“We are training a lot of people in the private sector to provide services to farmers but we are not providing any public services” – Ministry of Agriculture

When asked, these government respondents clarified that these processor services were only accessible to dairy producers who were selling their raw milk to the dairy processor providing the service and these services are typically not free (i.e. it is not a public service). This point was confirmed by respondents from New KCC (a public dairy processors that is in the process of being privatize):

“The government extension services are no longer,... they are not what we expected them to do. So we as a government processor are offering our own market-led extension services.... We no longer do the group trainings, because we felt like this strategy was not leading to practices being implemented on the ground, farmers were staying the same. So we decided maybe it is not just knowledge that is lacking. So now we have extension services that go directly to the farm when they are needed. And the farmers pay for this through a tax on their milk production.” – New KCC

But when government respondents were asked if small-scale farmers, the majority of producers in Kenya (and the target stakeholder group of national government support policies as stated by the respondent), could access privatized farmer services from dairy processors (other than the government-supported New KCC), government respondents offered similar variations of the following response:

“I would say no, most small-scale farmers cannot afford to access privatized agricultural extension services” – Kenyan Dairy Board

Therefore the national government is supporting the training of private sector agricultural service providers, in coordination with dairy processors, which are not accessible to the majority of farmers in Kenya. Furthermore, according to the NGO policy stakeholder respondents, these dairy processors are now more directly competing with dairy cooperatives for the loyalty of larger dairy producers through their delivery of privatized agricultural extension services. Thus the policy stakeholder responses on the devolution’s impact on cooperatives and cooperative members can be generally characterized as being negative.

5.3.3 Cooperative stakeholder responses

Cooperative stakeholder responses to the question of how agricultural governance changes are impacting cooperatives and how cooperatives are adapting in response were

again more mixed and nuanced than the responses from cooperative leaders. The responses are summarized and presented in three main points that are somewhat similar to responses by the policy stakeholder respondent group:

Major impacts of withdrawal of government farmer services

The dominant message from all five respondents was that through the process of devolution, the agricultural sector was becoming further liberalized, and the biggest impact of this process was the further withdrawal of the State from providing or subsidizing agricultural extension services for cooperative farmers (or farmers in general) and effectively supporting cooperative development:

“In some of the counties the government agricultural services are quite thin, quite limited, and the national government withdrew from extension... I think the farmers need some extension beyond what the government is offering... [Extension] seems quite a challenge for the county governments” – CIAT Kenya

“On farmer services, the government has really taken one step back, they are allowing things to take their own course” – New KCC

“Some county governments are giving temporary agricultural services, like veterinary services, but these are only for a month or two and then they stop, they come home and the farmer still need these services but they are not available... This is not a sustainable model.” – Kenyan Market Trust

“Only in a few counties is the government subsidizing AI services.... And the government is offering this service like it is private service, the farmers still have to pay... But even for the farmers who get the subsidies, they don't know how to take advantage of this because they don't have the technical know-how, because the agricultural extension services have been cut. It's like giving someone a car but not teaching them how to drive” – Agri-experience

The outcome of this privatization of government agricultural services (that according to several respondents has been occurring gradually since 2003 but has increased in the last three years through the devolution process) for cooperatives and their members has been market failure, according to the private sector respondents. This market failure is characterized by the trend that farmers need agricultural services from the private sector but are not able to access them either because the services are simply not available in some rural areas or because the services cost too much:

“The privatized agricultural services are not accessible by small-scale producers because they are just not available in the very rural areas. And there is so little regulation of these services, there is no transparency on what is being provided, so the farmers don't know what they are getting, they don't trust these private businesses for AI, for feeds, or animal health services.” – Agri-experience

This message of inaccessibility of small-scale farmers to privatized agricultural services in the context of the devolution process echoes the similar message from the policy stakeholder group.

Growing power of dairy processors

The second common message from respondents was that under devolution dairy processors are gaining market bargaining power as they work closely with county and national government officials. This point was confirmed by dairy processor New KCC that is in the process of being privatized:

“Dairy processors are working closely with the county governments, because dairy processors don’t want counties to go into processing and become competitors. So we work with the county governments, and the Kenyan Dairy Board, on the county’s dairy master plans, so that we are working in coordination with the county governments.” – New KCC

This statement by the New KCC also supported a common complaint by dairy cooperative leaders who stated that government officials were biased toward dairy processors:

If we try to go to the KDB they don’t have time for you. You see they are attuned to talking with the big guys, you know, the processors. – Lemelepo Dairy Farmers Cooperative Society

There was no indication from interview responses that dairy processors lobbying government was a new trend since devolution, but there was a theme from respondents that in the context of devolution, processors were perceived as gain more political and market power, that was directly negatively impacting cooperatives and their members:

“At the county level policy making, the governments are supposed to be inclusive [of the different stakeholders such as cooperatives]. For the high level national policies, there has been a lot of talk about how the Kenya Dairy Board is pro-processing, there is a feeling by some people that they are trying to push their own agenda in the private market, instead of trying to be inclusive. It seems that they buy their ideas [on policy development] from the other side (from processor stakeholders). So there is that fear.” – Kenyan Market Trust

“Also there is a fear of monopolies in Kenya... This fear of monopolies is because we see that some big processors are buying up all the small ones, the start-ups... Right now three processors are processing 85% of the milk. And this is not good because these small organizations are very innovative, and the kind of market penetration is very good. The problem is, this person who buys up the small ones, this will [negatively] impact farmer prices, and farmer services. This is about setting [milk] prices. And it undercuts the cooperatives. These processors control the market, the producers, they control the milk prices, the prices go down [for producers]. That’s the biggest problem.” – Kenyan Market Trust

Again this cooperative stakeholder response closely echoes similar responses by policy stakeholder respondents.

Emergence of bulking private sector associations

Finally a third common message by cooperative stakeholders on the impacts of devolution was that private sector dairy associations that bulk milk are emerging and directly challenging dairy cooperatives in the market place:

“We have new players in the dairy sector, these private businesses of farmers that come together and bulk their milk, but they are not cooperatives, and they are undercutting the cooperatives. This is possible because in devolution the agricultural sector has become highly liberalized.” – Agri-experience

The rise of these private sector dairy associations was directly attributed to the East African Dairy Development program by one respondent (Kenyan Market Trust). Generally, these private sector dairy associations were characterized by respondents as competing directly with cooperatives because they similarly offer economic services through bulking and selling to dairy processors, but are different from cooperatives in that they rarely offering social services:

“The more private sector associations that we see in the dairy sector, they do not have as much of a social function as the cooperatives, they are more focused on income and profit issues.”
– CIAT Kenya

This point on the rise of private sector dairy associations is discussed in more depth in the Discussion section below.

Thus the process of devolution was characterized by cooperative stakeholder respondents as being generally negative for cooperatives and their farmer members.

5.5 Cooperative challenges

Through the process of interviewing the three interview groups on issues of cooperative services and agricultural governance issues summarized above, two important challenges facing cooperatives were raised which trended across the interview groups which are noted below.

Cooperative organizational challenges

Six of the eleven respondents from the policy stakeholder and cooperative stakeholder interview groups emphasized poor cooperative leadership as a challenge for these organizations (unsurprisingly cooperative leaders themselves and the Cooperative University College of Kenya which responsible for training cooperative leaders did not mention this as a challenge). Generally this critique was referenced in relation to cooperative’s struggles to innovate toward building new markets, providing categorically new social services (i.e. services not currently being offered in the cooperative sector), creating new opportunities for women and youth, and ineffective political lobbying strategies.

“We do need better cooperative rules to limit corruption, so rules on who can run a cooperative and how they effectively market their product. They need this change to be able to innovate and compete today.” - Agri-experience

“We need new management structures that delink the cooperatives from politics. So we see this to be possible by changing the cooperative by-laws by the county governments. These changes could make requirement on who can be cooperative manager or board members, such as having a certain education level, and this change would help get the right kind of management involved in the cooperatives.” – Kenyan Markey Trust

Interestingly, when questioned further on why poor cooperative leadership was not leading to more farmers joining alternative farmer organizations, such as private sector dairy associations, respondents admitted that it was not clear why cooperative farmer members did not leave cooperatives. Thus it is unclear how significant these cooperative leadership challenges are actually negatively impacting cooperative farmer members.

Regulatory issues

A second major challenge referenced in thirteen of the twenty-two interviews across all three interview groups was the lack of effective regulations of agricultural inputs (seeds and animal feeds particularly) and animal breeds (unsurprisingly two government agency respondents did not see poor government regulations as a challenge) which was contributing to a severe lack of market transparency for farmers (meaning farmers do not know the quality of the inputs they are purchasing) and high market prices for poor quality inputs. According to several respondents, this lack of an effective regulatory environment is a contributing factor to why some cooperatives invest in developing their own agricultural input systems (i.e. making their own animal feeds to sell to cooperative members rather than buying in bulk from agricultural input suppliers) rather than investing in social services for farmers:

“Increasingly cooperatives are trying to provide their own [agricultural input] services because by providing their own services they can better control the quality and reduce the costs” – New KCC

“So they (cooperatives) will contract with an animal feeds provider and buy in bulk, and then sell a lower price to the farmer. Unfortunately this can be a killer for cooperatives because sometimes these cooperatives get into a contract with an animal feeds provider that is selling low quality feeds” – Department of Cooperatives

In response to this challenge, several cooperatives mentioned (unsuccessful) political lobbying attempts with both county and national governments to try to improve agricultural input quality standards.

6. Discussion

In interviewing the three interview groups on cooperative social services and the impacts of agricultural governance changes in Kenya, a common response was that cooperative social services were becoming increasingly important for farmer members in the context of agricultural liberalization (in which the majority of interviewees viewed the agriculture sector as becoming increasingly more liberalized with less and less national government involvement in agricultural regulatory issues and farmer supports and services) and more recent political devolution to the county governments. But despite this importance of cooperative social services, only a minority of dairy cooperatives are currently offering formal social services beyond collective bulking and marketing of milk: two respondents (the Department of Cooperatives and the Cooperative Alliance of Kenya) suggested that only 30-50 dairy cooperatives are offering formal social services (although both respondents agreed that there was a lack of data on this subject).

In analyzing the common responses across the three interview groups, this paper makes the following observations:

- 1) Dairy cooperatives offer a variety of different social and economic services, but lobbying and advocacy, knowledge transfer, access to agricultural inputs, and access to veterinary services (including AI) are the most prevalent services offered by cooperatives to their farmer members. Considering the theoretical framework and conceptual themes of this paper, two of these services, political lobbying and knowledge transfer, can be clearly categorized as social services.¹⁹ But it should be noted that this range of important and prevalent cooperatives services are not purely ‘social’ in nature, meaning that these services have both social and economic characteristics and clearly impact the economic bottom-line of farming families. A minority of respondents mentioned social services that more closely align themselves with Moulart and Ailenei (2005: 6)’s characterization of social services that strive toward “social development goals that transcend the market per se.” These social services that do not as directly impact the agricultural production activities of cooperative farmer members include access to medical services, empowerment of marginalized groups (such as women and youth), and building social cohesion.

A second related note on cooperative provision of social services is that two of the smallest and seemingly least economically stable (according to the interview responses of the cooperative leaders) cooperatives provided no additional services to their members other than bulking and marketing. Considering the paper’s theoretical framework on cooperative social services, and the writings of Braverman et al. (1991), Sexton, R.J. & Iskow, J. (1993), and Penrose-Buckley (2007) which state that cooperatives must first be economically sustainable through their provision of bulking, processing, and marketing services before expanding to providing social services, there is reason to believe that in this Kenyan context there is a correlation between the size of the cooperative and the likelihood of the cooperative being able to provide social services to its membership (i.e. the larger the cooperative – in-terms of farmer members – the more likely it is to provide social services).

- 2) There is a relative consensus among respondents in all the interview groups that knowledge transfer is a critical social service for small-scale farmers, and that the continued withdrawal of the State from supporting farmer access to knowledge transfer

¹⁹ In line with the paper’s theoretical framework and conceptual themes, knowledge transfer is categorized as a social service rather than an economic service while acknowledging that knowledge transfer does have economic impacts on farmer livelihoods.

opportunities, such as in the form of public agricultural extension services, is having significant negative impacts on small-scale farmers. In the context of political devolution over the past three years, most respondents agreed that agricultural extension services are becoming less accessible to small-scale producers as the private sector fails to provide needed services at affordable prices. In response to this challenge, cooperatives as well as dairy processors are trying to fill this gap in services, and in-turn competing for dairy farmer loyalty through offering this service. Thus in considering this paper's theoretical framework related to the social economy and agricultural governance, this paper considers knowledge transfer as a social service that has significant social and economic impacts for farmer livelihoods and will continue to be an increasingly politicized farmer service and less a public common good (as it was prior to the 1997 liberalization of the cooperative and agricultural sectors).

A second important observation related to knowledge transfer, again drawing on the social economy component of the paper's theoretical framework, is that several respondents associated knowledge transfer with the concept of socio-economic "empowerment," particularly with regards to marginalized members of society such as women and youth. In asking respondents to clarify this term of "empowerment" respondents generally provided two characterizations of this concept: 1) empowerment (particularly of women) through improved economic stability, resulting from gaining knowledge which improved agricultural productivity, was viewed as contributing to improved social standing and a better livelihood; 2) empowerment through making more informed (i.e. better) decisions about their livelihoods and social interactions outside of their on-farm context through access to information not related to their agricultural production. This point on empowerment is interesting because it indicates knowledge transfer is not viewed as only a purely mechanical process in-which farmers receive information and agricultural production practices are changed (although this agricultural function does play a role), but rather has a multifaceted concept that relates both to economic prosperity and social standing and interaction. Thus these respondent perspectives on knowledge transfer as leading to different forms of socio-economic "empowerment" indicates that respondents view this cooperative service (as the facilitating mechanism of knowledge transfer from one agent to another) and farmer production activities (as the mode through which this knowledge is implemented and expressed) as not apolitical, but rather as practices with socio-economic and political implications through which farmer agency is expressed. This point on the political nature of access to knowledge is more clearly emphasized by interviewee responses which drew connections between cooperative political lobbying for improved agricultural extension services and the competitive socio-economic environment between dairy cooperatives and dairy processors who are bargaining over milk prices and competing for farmer loyalty (in part by offering agricultural extension services).

- 3) There is broad agreement from respondents across the interview groups that the political devolution process is leading to counties developing their own agricultural and cooperative development policies. As this process of crafting new county-level cooperative policies was on-going at the time of the interviews, it was unclear exactly how these new policies would impact cooperatives, but in some cases cooperative leader respondents indicated that changes were already taking place:

“They [the county government] wanted to change the shareholding structure of the cooperative. Before everyone, regardless of their production would have the same shares, and if the cooperative made a profit then everyone would get the same money. Now they changed it so that everyone has to pay in a minimum of 4,000 schillings (40 shares) to be in the cooperative and receive services. But you can also now buy more shares, up to a 100 shares, and you will get a great payout at the end of the year if the cooperative makes a profit...It’s a way for the cooperative to raise capital.” –
Mumberes Dairy Farmers Cooperative Society

Other respondents indicated that political decentralization offered more opportunities for cooperatives to promote their farmer members’ interests, while others suggested that local political rivalries and corruption are being exacerbated, with government officials attempting to undercut cooperative leadership through changing cooperative policy related to cooperative leadership eligibility and payment structure. Likely both of these perspectives on the impacts of devolution are somewhat rights, as impacts are likely to be different across the different counties. Considering the agricultural governance component of this paper’s theoretical framework, the benefits and drawback of the devolution process for cooperatives are likely to be determined (largely) by the capacity and skill of dairy cooperatives to lobby their local county governments to shape how the devolution process unfolds in their locality. Thus cooperative lobbying social services are likely to increasingly play an important role in cooperative dairy development.

A second point in-relation to the political decentralization process (again considered through the paper’s agricultural governance component of the theoretical framework) worth noting is that devolution is also impacting the cooperative policy stakeholders (particularly the cooperative advocacy NGOs) who in the past worked primarily at the national level, but now were having to adapt and adjust their advocacy strategies to working increasingly at the county level. Given this shift (and likely weakening of the NGOs’ advocacy capacity), it is likely that the cooperative sector will receive less (or less effective) advocacy support from their NGO partners at the county level. This point again emphasizes the need for cooperatives to strengthen their own lobbying and advocacy capacities and skill sets.

- 4) There was general agreement from respondents across the interview groups that the dairy processing sector is becoming more concentrated and more powerful in its market bargaining power and in setting milk prices. It should be noted that many dairy cooperatives also process the raw milk of their members (and sometimes the raw milk of non-members too), but all respondents made clear that the rising power of dairy processors (i.e. not including dairy cooperatives that also process milk) was primarily impacting cooperatives that did not do their own milk processing (because these cooperatives were more reliant on dairy processor services) but also impacting dairy cooperatives that processed their own milk (in-terms of the ability of these cooperatives to compete in the market). Many respondents mentioned political characteristics of this growing power dairy processors, including political lobbying efforts by dairy processors at the county and national levels, and that the political devolution process was in-part fostering this rise of dairy processor economic and political power. Furthermore most cooperative leader respondents and many policy and cooperative stakeholder respondents felt that this rising power of dairy processors was having direct negative impacts on dairy cooperatives in-terms of their ability to compete with dairy processor farmer services,

transfer competitive milk prices to cooperative members, and invest in cooperative dairy processing infrastructure for value addition. But on the other-hand, some stakeholders see cooperatives as an important political-economic counterweight to the dairy processing sector, as demonstrated by the following respondent statement:

“Some of the cooperatives are having to re-invent themselves, to compete with the monopoly of the processing sector. They are having to process the milk themselves, and then they can get a higher price for this milk than when they are selling to the processors. The cooperatives can fight these monopolies because they have a lot of people.” – Kenyan Market Trust

Thus in this instance, an evaluation of this perspective through the characterization of cooperatives (i.e. their functions and services) from this paper’s theoretical framework suggests that cooperative collective action also has the potential to overcome market failures (such as monopolies) as well as promote cooperative member interest in political systems through lobbying.

- 5) There was an acknowledgement by several policy and cooperative stakeholder respondents that the increasingly liberalized dairy sector in Kenya was contributing to the slow growth of private sector dairy bulking associations which were competing directly with dairy cooperatives. The growth of these private sector dairy bulking associations, such as the hub model associations promoted by the East African Dairy Development program, pose a particular challenge to dairy cooperatives and their farmer members for two reasons:
- East African Dairy Development program hub model associations, although providing few social services compared to their dairy cooperative rivals, function as milk bulking organizations in very similar ways to dairy cooperatives. This means that these associations are likely to provide similar (or perhaps even better) economic services to dairy farmers, which will economically undercut cooperatives.
 - Many hub model associations, such as those promoted by the East African Dairy Development program are donor funded (also with support of the Kenya government), giving these associations a distinct advantage in-terms of accessing start-up capital and financial services for investment in new technologies and infrastructure.

The downside of this private sector approach through dairy bulking associations is that they delink the farmer agency (i.e. the principle of farmers democratically voting for their organizational leadership) component of the cooperative model in favor of becoming more commercially orientated. From the social economy perspective of this paper’s theoretical framework it is clear that by forcing farmer members to pay for voting rights within the organization will inevitably result in the election of association leaders sympathetic to the (different) needs of these more economically successful members, and in-turn the management and services of the associations will function primarily to serve those more commercialized farmers. This ultimately will steer these organizations away from their stated purpose as a “thoughtful, and holistic hub development model that is driven by farmers’ needs” (EADD, 2013, 70). And in-fact, this result has occurred in Kenya and led to exacerbating social tensions among dairy producers, as highlighted by Kilelu et al. (2016, 10-14):

“In terms of exercising horizontal coordination through the hub, a dilemma is presented by the double identity of a farmer organisation as an honest broker between farmers with the intent of enhancing collective action and as a business-oriented entity.... Interviews with board members revealed another emerging tension: that of the board trying to balance interest in growing a profitable enterprise and being inclusive and supportive of all farmers. This relates particularly to the poorer dairy households whose productivity was generally lower and who required considerably more support.”

This dynamic highlights an important farmer livelihood implication of this agricultural development approach that is not based on promoting the principle of equal farmer agency within the supporting farmer organization: the farmers most in-need of supportive services become further marginalized in this hub development strategy that shifts from a democratic approach to farmer socio-political agency (the ability to vote for the leadership of the farmer organization) to a privatized internal organizational structure orientated toward profit-seeking commercialization. Thus it is through this approach that the subsistence farmer gets pitted, politically (in-terms of the hierarchy within the farmer organization) and economically, against farmers only relatively more developed (such as small-scale producers). And this point is summarized well by Kilelu et al. (2016) who emphasizes that “[t]hese tensions point to broader debates surrounding efforts to commercialise smallholder farming, whereby some scholars note the need to pay more attention to rural differentiation, in terms of assets, capabilities and aspirations, which determines how households engage and benefit from such interventions (Dawson et al., 2016; Poole et al., 2013)” (Kilelu et al. 2016, 15).

- 6) Finally it should be noted that most respondents mentioned that corruption is rampant in most facets of daily life in Kenya. The impacts of corruption were not a focus of this research project, but it is worth highlighting that most respondents cited corruption as a challenge for the economic success of cooperatives and their members. According to Wanyama (2009), corruption and nepotism among cooperative board leaders and managers, particularly during the period of liberalization of the cooperative sector, led to the failure of a number of cooperatives and cooperative apex organizations such as the now-defunct Kenya National Federation of Cooperatives (today re-established as the Cooperative Alliance of Kenya). Regardless of how or if corruption impacts cooperatives and their members more than other stakeholders in the agriculture system, it is important to recognize with the perspective of the agricultural governance component of this paper’s theoretical framework, that according to many of the interviewees, the perception of corruption weakening (in particular) cooperatives has been used as a justification for the Kenyan government and agricultural development stakeholders to support alternative business models that directly compete with cooperatives.

7. Conclusion and Recommendations

Considering the above observations from the research project's data collection and analysis, this paper concludes by presenting five recommendations for supporting cooperative development as a means to strengthen small-scale farmer agency and socio-economic sustainability of rural agricultural communities in Kenya.

The main recommendation of this paper, considering aspects of all three (cooperative theory, agricultural governance, and social economy) components of this paper's theoretical framework, is for government, agricultural development, and cooperative stakeholders to realize and support the strategic opportunity of cooperatives to broker farmer access to a broad and important range of both social and economic services for agricultural production, innovation, and social development. Given the prevalence of cooperatives in Kenya, and the wide-spread farmer trust in these organizations to deliver fair benefits and services to their members (in-part because these organizations are democratic and not profit-orientated), cooperatives can be a critical facilitating entity for linking farmers to service organizations through coordinated and inclusive collective action. In particular, this service broker role could be important for improving farmer access to agricultural knowledge (as a social service), such as agricultural extension services, which according to the field data analysis is a primary need for farmers. This point on the role of cooperatives (or more generally farmer organizations) acting as service brokers corresponds with writings of Ragasa and Golan (2014, 14) who state that "the greater the interaction of RPOs with other organizations (including other RPOs, NGOs, government agencies, extension agents, research institutes, and others), the greater is the likelihood of agricultural support services' being provided to RPO members." Finally this facilitation of farmer access to a greater range of both improved social and economic services offered by cooperatives again will help them differentiate themselves from their private sector competitors. But in promoting this cooperative broker approach, particularly in relation to knowledge transfer, the role and responsibility of government should not be overlooked. Government does have a responsibility to promote the common good and interests of its citizenry. And access to basic, but critical, agricultural services in a predominantly agricultural-based rural country is essential. Therefore the Kenyan government should be proactive in supporting cooperatives in this service broker role. This support can take many forms but could include public funding to cooperatives to provide (or broker) agricultural extension services to farmers, with oversight measures for service delivery quality, prevention of corruption of funds, and ensuring inclusive access.

A second recommendation, utilizing the paper's agricultural governance component of the theoretical framework, is that cooperatives should find ways to increase their political and lobbying capacities as a social service for their members, particularly at the county government level, to effectively adapt to the changing agricultural governance landscape and compete with both private sector dairy bulking organizations and dairy processors (both of whom are also lobbying government to try to gain a competitive advantage through policy reform). Failure to strengthen cooperative advocacy and lobby capacity misses an important facet of cooperative collective action. As stated by Wanyama (2009, 28) "perhaps this is the time to transform and build capacity of the cooperative unions so that they can effectively represent, lobby and advocate for the members." This point was emphasized by a number of interviewee responses, as well as the writings of Bienabe and Sautier (2005, 7) who state that "the need for negotiation strategies to re-equilibrate the relations of power [between farmer organizations such as cooperatives] with downstream actors and favour mutual trust and more transparency in the exchanges is real, and calls for the reinforcement of the advocacy function of POs." But it is critical that this advocacy and lobbying function of cooperatives be both

accountable and transparent to cooperative farmer members, who should be empowered to guide this socio-political service through democratic consultation.

A third recommendation, utilizing the social economy component of the paper's theoretical framework, is that there is a clear indication from the research project's data analysis that economic services (i.e. effectively bulking and marketing milk for cooperative members so that members receive milk payments at competitive prices) are critical to the functioning of the cooperative. Therefore to be competitive in an increasingly concentrated dairy (particularly dairy processing) sector dairy, cooperatives should consider ways to develop their dairy processing capacity (in-terms of milk pasteurization and creation of value-add products like cheese and butter) both to capitalize on the better economic value of these processed products and also to counter the power of dairy processors, who will likely have the opportunity to set raw milk prices in a monopolized dairy processing market. This point was emphasized by many of the interview respondents. But the goal of investing in processing infrastructure to maintain competitiveness in the market is a classic challenge for traditional agricultural cooperatives with members who are primarily economically small-scale farmers with little financial capital. This is because the traditional cooperative model usually draws on the economic capital of their members for investments and is usually not orientated toward attracting significant outside capital. This challenge becomes more apparent when considering the increase in foreign investment in profit-orientated agricultural businesses as well as foreign donor-supported alternative business models that are competing directly with cooperatives for farmer loyalty and market-share.

A fourth recommendation, utilizing the cooperative theory component of the paper's theoretical framework, is that dairy cooperatives should adapt to retain a diversity of different kinds of farmers with different levels of production (i.e. small-scale and large scale producers). Despite being limited in their ability to raise capital for investment in infrastructure, the strength of cooperatives is their ability to act through democratic collective action, which is strengthened when those farmer members acting in coordination can offer different levels and kinds of economic and socio-political assets and skills, particularly when needing to raise economic capital for infrastructure investments or adapt socio-political changes. But how to incentivize larger-scale farmers with more economic capital to collaborate with subsistence producers in the same cooperative is a classic challenge that can be overcome through cooperative innovation, including innovative social service delivery. Examples of such social service delivery can be offering different tiers of non-production orientated social services (such as different levels of medical coverage) to be made available to farmers who contribute higher levels of financial capital to the common infrastructure needs of the cooperative. Alternatively, the cooperative could also allow farmers to invest financial capital in common infrastructure needs of the cooperative in return for higher dividends if the cooperative makes a profit at the end of the year. But it is important that economic contributions of farmer members not be tied to the cooperative farmer voting rights in the organization, as this kind of fundamental shift in the cooperative organizational structure will lead to the marginalization of the cooperatives least privileged members.

A fifth recommendation, again utilizing the cooperative theory component of the paper's theoretical framework, is for cooperatives, in order to remain competitive with the foreign-backed private-sector organizations, should differentiate themselves from private sector dairy bulking businesses. This can be achieved by orientating the cooperative toward a hub broker model in-which cooperatives offer, or broker access to a range of social services that are not available through the private sector dairy bulking associations. This approach will require strong cooperative leadership that is accountable to the democratic will of the cooperative membership to provide social services requested by members (obviously only

providing services at are economically feasible for the cooperative to provide). This point was specifically emphasized by one cooperative leader respondent who stated that:

I think the cooperatives need to change their internal polices to get the farmer members more involved in the cooperative, and feel more ownership in the cooperative. Right now we elect the board and then a lot of farmers don't want to be involved in decision-making, they say "that's what we elected the board to do." But there is too much trust in the board, we need to have more farmer involvement, because this will make the cooperative function better." - Mumberes Dairy Farmers Cooperative Society

Finally, a recommendation on Kenya's development approach utilizing the social economy and agricultural governance components of the paper's theoretical framework: dairy production in Kenya is both a farmer livelihood and commercial activity that continues to be a vital income generating activity as well as source of rural identity and social cohesion for the majority of dairy producers who are subsistence and small-scale producers. Therefore agricultural development approaches, particularly in regards to agricultural and cooperative policy development, should find truly participatory ways to support the specificities of this stakeholder group to meet their needs and interests, rather than chasing the 'meta-narrative' of agricultural development and commercialization. This means deviating from the current approach of many local NGOs and other cooperative stakeholders in Kenya to try to push subsistence and marginalized dairy producers from the sector, which will likely have significant poverty implications and social conflict. Rather farmer advocates and stakeholders should development policy approaches that are farm size scale-sensitive (i.e. polices that recognize different regulations are more appropriate for large versus small farms), support incentives and opportunities that prioritize social inclusion and agricultural innovation, and promote public services for common local community interests (such as protecting agricultural biodiversity and access to public agricultural infrastructure).

Thus considering these points on the dairy cooperative sector in Kenya and the paper's theoretical and conceptual frameworks, this paper concludes that dairy cooperatives are critically important farmer organizations because of their capacity to support farmer agency, and in turn strengthen rural agricultural communities, through their core democratic organizational structure. Furthermore this organizational structure allows these organizations to both adapt to political and economic change, as well as be inclusive drivers of agricultural development, as has been demonstrated by the resiliency of Kenya's agricultural cooperative sector over the past two decades of significant agricultural governance change in the country. Having bounced back from Kenya's liberalization of the agriculture sector, cooperatives continue to face new and significant political and economic challenges related to political decentralization and the increasing globalization of the country's dairy sector. But through innovation, adaptation, collective action, and political strategy there are also important opportunities to support Kenyan farmer livelihoods through the cooperative model.

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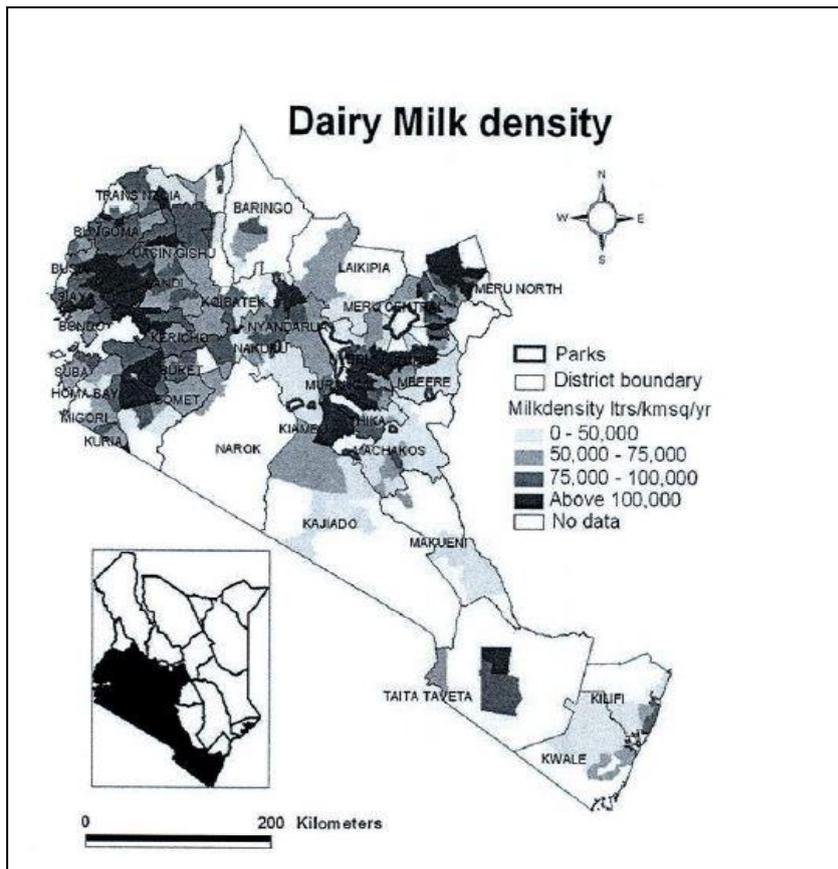
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Appendix I:



Appendix II:

Policy Stakeholder Interview Questions

Background information

Name (optional): _____

Political Title: _____

Semi-structured interview questions

1.1 Research Question:

Why are cooperatives' social services important for their members?

Specific interview questions

- i. What social services do cooperatives provide their members, and how do these services support their members?
- ii. Are any of these social services specific to a particular agricultural sector?
- iii. Which of these social services do you consider most important, and why?
- iv. Does the Kenyan government (county or national) support the cooperative in providing these services?
 - a. If so, how?

1.2 Research Question:

How are agricultural governance changes (recent or expected, at national or local level) shaping the social services that cooperatives are offering its members?

Specific interview questions:

- i. Is the agricultural governance devolution process impacting cooperatives?
 - a. If so, in what way?
 - b. How are cooperative reacting to these changes?
- ii. Are there other policy changes that are having significant impact on cooperatives?
 - a. If so, what are they and in what way?
 - b. How are cooperative reacting to these changes?
- iii. Does the government support cooperatives in adapting to these policy changes?
 - a. If so, in what way?
- iv. Does the government (local or national) engage with non-governmental organizations in agricultural policy formulation?
 - a. If so, how?
- v. Do cooperatives help shape agricultural policy?
 - a. If so, what are the main issues that cooperatives advocate for?
- vi. What specific regulation is most important for cooperative development?
- vii. If there was one specific regulation that you could change to support cooperative development more, which regulation would it be?

1.3 Research Question:

What additional social services could cooperatives provide to their members?

Specific interview questions:

- i. What additional social service should cooperatives provide to their membership?
- ii. Why would this additional service be important for the cooperatives' membership?

- iii. Do you believe the Kenyan government should support the cooperative in providing this additional service?
 - a. If so, how?

2. Concluding questions

- 2.1 If there were one specific thing (a service, a piece of infrastructure, a new policy etc.) that would make cooperatives more successful, what would it be?
- 2.2 Is the Kenyan government helping cooperatives to realize this goal?
 - i. If so, how?
- 2.3 What is the most significant external challenge facing cooperatives?
- 2.4 Is the Kenyan government helping to overcome this challenge?
 - i. If so, how?

Policy Stakeholder Interview Questions

Name (optional): _____

Political Title: _____

Semi-structured interview sub-questions:

1.1 Research Question:

Why are cooperatives' social services important for their members?

Specific interview questions

- i. What social services do cooperatives provide their members, and how do these services support their members?
- ii. Are any of these social services specific to a particular agricultural sector?
- iii. Which of these social services do you consider most important, and why?
- iv. Does the Kenyan government (county or national) support the cooperative in providing these services?
- v. If so, how?

1.2 Research Question:

How are agricultural governance changes (recent or expected, at national or local level) shaping the social services that cooperatives are offering its members?

Specific interview questions:

- i. Is the agricultural governance devolution process impacting cooperatives?
 - a. If so, in what way?
 - b. How are cooperative reacting to these changes?
- ii. Are there other policy changes that are having significant impact on cooperatives?
 - a. If so, what are they and in what way?
 - b. How are cooperative reacting to these changes?
- iii. Does the government support cooperatives in adapting to these policy changes?
 - a. If so, in what way?
- iv. Does the government (local or national) engage with non-governmental organizations in agricultural policy formulation?
 - a. If so, how?
- v. Do cooperatives help shape agricultural policy?
 - a. If so, what are the main issues that cooperatives advocate for?

- vi. What specific regulation is most important for cooperative development?
- vii. If there was one specific regulation that you could change to support cooperative development more, which regulation would it be?

1.3 Research Question:

What additional social services could cooperatives provide to their members?

Specific interview questions:

- i. What additional social service should cooperatives provide to their membership?
- ii. Why would this additional service be important for the cooperatives' membership?
- iii. Do you believe the Kenyan government should support the cooperative in providing this additional service?
 - a. If so, how?

2. Concluding questions

- 2.1 If there were one specific thing (a service, a piece of infrastructure, a new policy etc.) that would make cooperatives more successful, what would it be?
- 2.2 Is the Kenyan government helping cooperatives to realize this goal?
 - i. If so, how?
- 2.3 What is the most significant external challenge facing cooperatives?
- 2.4 Is the Kenyan government helping to overcome this challenge?
 - i. If so, how?

Cooperative Leadership Interview Questions

Background information

Name (optional): _____

Name of the cooperative: _____

Semi-structured interview questions

General information

Please speak about your role in the cooperative:

- How and why did you join the cooperative?
- What is your position in the cooperative?
- How often and in what way do you interact with members of the cooperative? (i.e. organizational meetings, farm visits, etc.?)

Please speak about the cooperative:

- How many members are in the cooperative?
- What is the product(s) traded?
- What is the amount of product traded on a monthly basis?
- Does the cooperative only trade the product or also involved in processing?
- Where does the cooperative market the majority of its product?
- How many members leave and join the cooperative every year?

1.1 Research Question:

Why are cooperatives' social services important for the farmer members?

Specific interview questions

- i. What social services does your cooperative currently provide its members, and how do these services support the members?
- ii. Are any of these social services specific to your sector?

- iii. Which of these social services do you consider most important, and why?
- iv. Does the Kenyan government (county or national) support the cooperative in providing these services?
 - a. If so, how?

1.2 Research Question:

How are agricultural governance changes (recent or expected, at national or local level) shaping the social services the cooperative is offering its members?

Specific interview questions:

- i. Is the agricultural governance devolution process impacting your cooperative?
 - a. If so, in what way?
 - b. How is your cooperative reacting to these changes?
- ii. Are there other policy changes that are having significant impact on your cooperative?
 - a. If so, what are they and in what way?
 - b. How is your cooperative reacting to these changes?
- iii. Does the government support your cooperative in adapting to these policy changes?
 - a. If so, in what way?
- iv. Does your cooperative help shape agricultural policy?
 - a. If so, is this done individually or through another organization? (if so, which organization)?
 - b. If so, how does the cooperative conduct this advocacy? (through a formal government mechanism or informally through contacts)
 - c. If so, what are the main issues that the cooperative advocates for?
 - d. If so, how does the cooperative decide which issues to advocate for?
- v. What specific regulation is most important for cooperative development?
- vi. If there was one specific regulation that you could change to support cooperative development more, which regulation would it be?

1.3 Research Question:

What additional social services could the cooperative provide to their members?

Specific interview questions:

- i. What additional social service should your cooperative provide its membership?
- ii. Why would this additional service be important for the cooperative's membership?
- iii. Do you believe the Kenyan government should support the cooperative in providing this additional service?
 - a. If so, how?

2. Concluding questions

- 2.1 If there were one specific thing (a service, a piece of infrastructure, a policy change etc.) that would make your cooperative more successful, what would it be?
- 2.2 Is the Kenyan government helping your cooperative to realize this goal?
 - ii. If so, how?
- 2.3 What is the most significant external challenge facing your cooperative?
- 2.4 Is the Kenyan government helping your cooperative to overcome this challenge?
 - ii. If so, how?