Young Women’s and Men’s Opportunity Spaces in Dairy Intensification in Kenya*

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Abstract Kenya has a high youth population coupled with high rates of unemployment. Development policies, including the National Youth Policy, emphasize the potential of agriculture as a source of youth employment. Kenya’s dairy subsector is relatively well developed and continuing to commercialize. We analyse young women and men’s current and emerging roles in dairy intensification and develop a conceptual framework that draws on opportunity space, intersectionality and agency. We collected qualitative data in Nakuru and Kiambu counties, in rural and peri-urban locations. Based on 20 interviews, 18 focus group discussions, and a validation workshop, we describe social relations and the intersection of social factors that influence young women and men’s changing roles and opportunities. We find that youth are embedded within social relations that reflect how age, ethnicity and gender intersect and interact with location to create differential access to agricultural resources and roles and practices in dairy value chains. While our data show that norms and practices of social exclusion may be reinforced through generations, we also find examples that demonstrate young women and men’s capacity as agents of change in their communities. Our research contributes to understanding young women and men’s diverse experiences in dairy and potential in agriculture.

Introduction

An estimated 88 percent of the world’s youth population live in poor and developing countries (IFAD 2019; Stecklov and Menashe-Oren 2018). In many sub-Saharan African countries, young people represent the majority of the population, popularly referred to as the “youth bulge” (Sommers 2011). Youth unemployment in sub-Saharan Africa has attracted significant attention in the last decade. The youth population is growing and so is competition for limited and often poorly remunerated work, leading to high rates of youth underemployment. Rates of unemployment and underemployment present challenges not only for the youth themselves, but also for their families and society in general (Gough, Langevang, and Owusu 2013). These concerns have led to a renewed interest in youth-specific policies and programs.

Across Africa, national youth policies (NYPs), often aligned with broader national economic agendas, emphasize the role of the agricultural sector as a potential source of employment for youth. Common
narratives suggest that youth are “turning away from agriculture” (White 2012). Because urban opportunities are also limited, many policies focus on making agriculture attractive and promoting farming as a business (GoK 2018; Sumberg et al. 2019). However, the portrayal of agriculture and the broader rural economy in Africa as a domain of opportunity for rural youth lacks theoretical and empirical support (Sumberg et al. 2012, 2019). Furthermore, popular representations of youth overlook how various social factors intersect to shape different opportunities and possibilities for young women and men (Sumberg and Okali 2013). The use of broad age categories tends to gloss over diverse youth experiences and transitions. Young, rural women, for example, often face more significant constraints than men because of norms and social relations that perpetuate gender discrimination in access to and ownership of productive assets (Fox, Senbet, and Simbanegavi 2016; IFAD 2019).

Despite Kenya’s growing economy and economic development gains since 2004, youth unemployment rates have risen (British Council 2017) and are estimated to be as high as 55 percent (GoK 2019). An estimated 30 percent of those aged between 15 and 24 in Kenya are employed\(^1\) and there is at least a 10 percent gender gap in employment that disadvantages women more than men (British Council 2017). Kenya’s Youth Development Policy, which characterizes youth as being between 18 and 34, aims to “position youth at the forefront of agriculture growth and transformation … by … boosting youth employment in agriculture and agribusiness” (GoK 2018:22). The precise mechanisms for pursuing this are not well specified, though improving youth’s access to land and their capacities to engage in agribusiness are mentioned. Specific groups are also targeted for affirmative action, including young women, whose low participation and representation in decision making and traditional gender roles limit their opportunities for self-development (GoK 2018).

The Kenyan dairy sector is undergoing steady transformation toward increasingly intensified production practices and commercial orientation among smallholders. This trend is promoted by private sector interests (i.e., commercial dairy processors), as well as by international development organizations (e.g., USAID, IFAD) who have been investing in smallholder commercialization and intensification. In addition to dynamics driven by economic development, Kenya is currently preparing a Green Climate Fund proposal focusing on the dairy sector, aspects

\(^1\)Employment-to-population ratio—ILO modeled estimates.
of which are being supported by the authors and colleagues at the International Livestock Research Institute (ILRI). If successful, this would result in tens of millions of dollars being invested to promote dairy intensification in the interest of meeting Kenya’s Nationally Determined Contributions, international commitments to reduce greenhouse gas (GHG) emissions intensities\(^2\) as agreed to under the 2016 Paris Accord. Given this convergence of commercial and environmental interests, by both national and international organizations, the dairy subsector is poised for continued and rapid intensification and commercialization in the years to come. However, it remains unclear whether these transformations will be socially inclusive and, more specifically, how they will affect youth employment opportunities in the dairy sector.

The objective of this article is to examine youth’s current and emerging roles in dairy intensification processes. We use the concept of “opportunity space” (Sumberg et al. 2012; Sumberg and Okali 2013), complemented with concepts borrowed from intersectionality and youth studies, to analyze factors that shape youth engagement in the dairy sector. These factors include geography and infrastructure, as well as social norms and social relations. Using youth in dairy as an example, we describe specific relations that mediate young women and men’s agency. We examine how social difference—specifically the intersection of age, gender, and ethnicity—influence young women and men’s changing roles and opportunities in dairy value chains. Empirical findings demonstrate that gender, age, and ethnicity intersect in ways that shape youth’s opportunities in dairy value chains. Social relations, that youth are embedded in, create combinations of opportunities and constraints for young women and men in dairy. Young rural women are often disadvantaged in dairy commercialization processes as a result of prohibitive norms and practices, drawing attention to the role of social context in shaping employment opportunities for youth.

**Conceptual Framework**

“Opportunity space” provides a dynamic conceptual lens for understanding young women and men’s livelihood options, and more specifically, the structural constraints that influence their abilities to negotiate agricultural intensification processes. Opportunity space refers to “the spatial and temporal distribution of the universe of more or less viable

\(^2\)Intensification in dairy production reduces GHG emission intensities through greater resource use efficiency, which leads to more milk being produced per unit of GHG emission.
options that a young person may exploit as she/he attempts to establish an independent life” (Sumberg et al. 2012). The concept draws on economic geography and feminist analytical concepts to better understand the roles of global, regional, and local processes in shaping the types of work that are available and how social difference, norms, and relations shape the types of work that young people pursue (Okali and Sumberg 2012). Young women and men’s abilities to navigate opportunity spaces are often a result of intersecting social factors that are articulated through dynamic and changing social relations (Rietveld, van der Burg, and Groot 2019).

### Economic Geography and Location Characteristics

The overall transformation of the rural economy affects both the level and kinds of opportunities available to youth (IFAD 2019). Global population growth and economic restructuring have restructured opportunity spaces (Sumberg et al. 2012). Locational characteristics influence the range and types of local work that are available. For many young people in the global South “widely different forms of neoliberal economic change have simultaneously undermined the opportunities for educated young people to obtain stable and well-paid work” (Jeffrey 2008:740). The rural manifestation of an economy’s broader structural transformation plays out at different rates and in different ways in regions and towns within a country and critically affects the availability of local work opportunities and types of work that youth do (IFAD 2019). Not all areas within the country will be transforming in the same way or to the same extent. The quality of natural resources, accessibility of markets, and the interaction of resource quality and market accessibility influence the kinds of economic activities that are likely to be viable in any particular location (Sumberg and Okali 2013) and spatial dimensions of social exclusion may result from the physical challenges of individuals to participate in broader socioeconomic processes (Kabeer 2014).

Research on the lives and cultures of globalized, often un(der) employed, relatively well-educated youth has largely focused on young men, and on urban youth, many of whom originate from rural areas (White 2012). Urban youth often face a worse opportunity set than their parents (Fox et al. 2016). However, most of the youth who live in rural areas and small towns also struggle to find pathways to adulthood, and especially to stable, remunerative employment that allows them to support a family (Fox et al. 2016).
Youth Studies and Understanding Social Relations

Youth studies’ primary focus is to understand young people’s lives in a variety of contexts. Over the last few decades, the field has contributed to understanding youth employment trends and experiences (Furlong 2015) and processes whereby advantage and disadvantage are reproduced (Wyn, Lantz, and Harris 2011). Young people are embedded in social relationships that influence their abilities, choices, and opportunities (Flynn et al. 2016; White 2012; White and Wyn 1998). Youth generally rely on support and advice of adults in the family, community, and their peers (Fox et al. 2016). In most instances, “social and economic processes ... have contributed to the heightening of the relevance of family for young people” (Wyn et al. 2011:6). Family relations, be they supportive or constraining, can be particularly important for young people in the early stages of building a livelihood (Sumberg and Okali 2013).

Social relations are particularly influential in shaping access to resources and livelihood pathways, or the types of work that young women and men seek and perform. Norms and practices, exercised through social relations, can pose substantial barriers to young men’s and women’s engagement in certain modes of agricultural production (Tavenner and Crane 2018, 2019) and can influence individuals’ opportunity spaces (Rietveld et al. 2019). Social relations often determine how easily and under what conditions young women and men may access key resources, such as land, labor, services, and information (Sumberg and Okali 2013). Parents are a primary source of assets, however, rapid population growth and a trend toward more densely settled areas has limited land availability (IFAD 2019). Furthermore, there are significant differences between young women and men’s access and rights to land such that women have limited rights and less access to land than men (IFAD 2019; Rietveld et al. 2019). Norms and gender roles also influence beliefs about the types of work young women and men should do, and the types of work that young people gravitate toward, or away from (Sumberg and Okali 2013). For young women the pathway into adulthood can be especially difficult because of social norms that limit their agency and their employment choices (Fox et al. 2016).

Intersectionality

Intersectionality, coined by Crenshaw (1989), drew on feminist theory as a way to understand the multidimensionality of discrimination, often based on gender and race. The approach supports a better understanding of how people are shaped by the interaction of social identities,
including race, gender, class, and age (Crenshaw 1989; Hankivsky 2014) and may be used as an analytical approach to reveal diverse social groupings and power relations that mediate farmer engagement with agriculture (Tavenner and Crane 2019). Social categorizations serve as grounds for inclusion and exclusion, and for defining what is considered normal or deviant, and what is attractive to aspire for (Kaijser and Kronsell 2014:419). Intersections of power, such as those based on gender, ethnicity, and age, may be found in all relations and often reflect underlying, implicit power that create difference and (re)produce forms of exclusion (Kabeer 2010; Massey 2005; Winker and Degele 2011) that tend to be passed on with generations (Kabeer 2014). In agricultural contexts, particular groups of youth may participate and benefit, while others may be marginalized or excluded from opportunities that support youth transitions from dependence to independence. For instance, norms that discriminate and dissuade young women from aspiring for agriculture-related occupations reveal how the intersections of age and gender together may deter, or exclude women from particular endeavors in agriculture (Elias et al. 2018). Marital status similarly intersects with age and gender and specific economic activities might not be considered appropriate for women, be they young, single, married, or widowed (Leavy and Smith 2010; Sumberg et al. 2019). Social relations within families and within the wider community interact with, and shape youth agency in ways that often reflect intersections of these social identities and norms.

Agency

Agency refers to one’s ability to define one’s goals and act upon them (Kabeer 1999) or any conscious, goal-directed activity (White and Wyn 1998). Young people’s agency is important to enabling young people to negotiate their lives, futures, and meanings in the context of specific social, political, and economic circumstances and processes (ibid). Poor infrastructure and educational systems and weak socio-political structures and institutions can impede youth’s development of agency (IFAD 2019). However, a person’s capacity for willed and voluntary action is not simply determined by social structures (Jackson 1998). Constraints at both individual and structural levels influence young people’s potential to find opportunities for employment and entrepreneurship in southern Africa, for example (Hajdu et al. 2013). Youth agency is constructed by, and interfaces with, social structures and relations such as class, gender, and ethnicity and often results in intersectional differences (White and Wyn 1998). Young rural women face additional constraints that may
hinder them from gaining the agency and thus the extent of productive engagement they need to prosper in the new economy because of prohibitive norms (IFAD 2019). For example, young women’s agency in particular has been found to be limited when it comes to developing self-employment opportunities (See Langevang and Gough 2012). Economic and technological change often outpace changes in social norms (IFAD 2019; Petesch et al. 2018). Young women and men navigate agricultural opportunity spaces, sometimes working within social norms of what is acceptable, and at other times strategically renegotiating their roles and practices within opportunity spaces.

To summarize, we draw on the concept of opportunity spaces, youth studies, and intersectionality to describe the processes of inclusion and exclusion and implications for Kenyan youths’ experiences in dairy.

**Site Description and Methodology**

This research was conducted in two Kenyan counties, Nakuru and Kiambu that differ in terms of their history of dairy development, their proximity to Nairobi, as well as their ethnic composition.

**Gendered dairy practices in Kenya**

Studies have shown that gender features in dairy intensification in important ways, however, there is very little documentation of youth in dairy. Broadly speaking, evidence regarding gender in dairy in Kenya has shown that gender differences in labor and decision making about benefit distribution often disadvantages women. Women provide a substantial amount of daily labor without concomitant decision-making power over cattle and income (McDermott et al. 2010; Mullins et al.; Njuki et al. 2016; Tavenner and Crane 2018) and women’s decision making over land, cattle, and income from milk sales is often limited (See Mullins et al.; Tavenner et al. 2018). Intensification and commercialization tend to further disenfranchise women (Njuki et al. 2016; Tavenner and Crane 2018; Tavenner et al. 2018). Dairy intensification requires adoption of certain technologies and practices that typically involve renegotiation, reassignment, or a reinforcement of roles and responsibilities within households (Ruben, Bekele, and Birhanu 2017) and women assume many of the productive responsibilities in zero-grazing production systems (Mwangi 2013). Gender also features as an important determinant of who participates in dairy value chains (Baltenweck et al. 2016; Tavenner and Crane 2018). These findings provide some insights into understanding gender trends among youth.
County-level characteristics

Dairy commercialization and the role of dairy as a source of income varies in each sub-county due to physical geography and historical political economy. Overall, more people are intensifying their milk production. Kiambu County has a history of well-organized and relatively intensive dairy sector. Nakuru’s dairy sector is less developed than in Kiambu. Specifically, dairy practices in Nakuru are less intensified and the county has lower rates of commercialization than Kiambu, in part due to infrastructural differences. Zero-grazing is widely practiced in Kiambu County, where land constraints are more prominent than in Nakuru County. In Nakuru, youth practice a mixture of zero-grazing and semi-intensive practices, also tethering cows in communal areas. The two sites permit a rich analysis of how geographic, historical, and cultural factors influence youth opportunity spaces in dairy.

Kiambu County, which is more peri-urban, is immediately north of Nairobi and the predominant ethnicity is Kikuyu. Nakuru, especially north-western Nakuru where the research was done, is majority Kalenjin, who were historically herders, but settled into sedentary mixed crop-livestock livelihoods decades ago. Rural and peri-urban counties were purposively selected to compare various ways that geography and social relations influence young women and men’s agency in dairy opportunity spaces (Figure 1).

Table 1 details county-level characteristics that include agricultural characteristics, school attendance, and youth employment rates. Nakuru has more hectares allocated to agricultural production than Kiambu and more farming households. Interestingly, more households in Kiambu rear livestock than in Nakuru, despite the county’s land constraints. Exotic cattle ownership is higher in Kiambu, while ownership of indigenous cattle is much higher in Nakuru.

The peri-urban sub-counties are more densely populated, and land use is more intensive in Kiambu than in Nakuru. The infrastructure in Nakuru is also less developed than in Kiambu, but roads and electrification have increased in the last decade. The number of households and population density is higher in Kiambu than in Nakuru. Similarly, both women and men’s school attendance and rates of university attendance are higher in Kiambu than in Nakuru. Women’s rates of university attendance are lower than men’s in both counties.

Many women and men are working or searching for work in both counties, although women’s rates of employment are lower than men and more women reported being outside the labor force than men. In Nakuru County the population has been steadily increasing over the last decade and youth, who comprise a substantial segment of the population, have been encouraged to go into agriculture though various
county-level programmes (AgriProFocus Kenya 2017). The majority of youth who are wage earners work in the private sector, mainly in the flower, tea and coffee farms, construction, academic institutions, public transport, wholesale, and retail trade (GoK 2018).³

³Government of Kenya (2018). Nakuru County Integrated Development Plan (2018–2022).
Table 1. County-level Characteristics.

|                               | Nakuru       | Kiambu       |
|-------------------------------|--------------|--------------|
| Number of households          | 616,046      | 795,241      |
| Ave. household size           | 3.5          | 3.0          |
| Land area (Sq. Km)            | 7,462.4      | 2,538.6      |
| Population density (No. per Sq. Km) | 290          | 952          |
| Population                    | 2,142,667    | 2,402,834    |

**School attendance rates**

|                               | Male         | Female        | Male         | Female        |
|-------------------------------|--------------|---------------|--------------|---------------|
| Distribution of population age 3 years and above by school attendance status | 1,077,272    | 1,084,835     | 1,187,146    | 1,230,454     |
| At school/learning institution | 429,850      | 413,397       | 388,770      | 389,788       |
| Distribution of population currently attending university | 13,325       | 9,823         | 26,785       | 22,599        |
| Distribution of population who attended university | 41,122       | 29,540        | 92,275       | 75,217        |

**Employment status**

|                               | Male         | Female        |
|-------------------------------|--------------|---------------|
| Distribution of population Working | 460,598    | 449,029       |
| Seeking work                  | 53,315       | 41,519        |
| Outside labor force           | 412,433      | 452,931       |
| Distribution of population Age 5 years and above by activity status by age group |               |               |
| Age 18–24                     |              |               |
| Working                       | 139,455      | 160,897       |
| Seeking work                  | 27,243       | 46,146        |
| Outside labor force           | 128,749      | 140,871       |
| Age 25–34                     |              |               |
| Working                       | 274,558      | 360,020       |
| Seeking work                  | 35,588       | 62,922        |
| Outside labor force           | 36,647       | 57,359        |

**Agricultural characteristics**

|                               | Male         | Female        |
|-------------------------------|--------------|---------------|
| Area of agricultural land (Ha) | 357,968      | 90,218        |
| Number of farming households  | 283,652      | 214,052       |
| Households rearing livestock  | 52,739       | 67,014        |
| Exotic cattle beef            | 6,781        | 9,559         |
| Indigenous cattle             | 67,473       | 10,511        |

*Source: KNBS (2019).*
Methods

Data Collection

This research was designed to identify key intersectional factors and dynamics that shape young women and men’s agency and abilities to engage in dairy. We did not conduct representative sampling because it was not our objective to establish generalizable patterns. Rather, our objective was to identify mechanisms that shape youth's opportunity spaces in dairy using qualitative methods.

Data collection was performed through a sequential process of key informant interviews (KIIs), focused group discussions (FGDs), semi-structured interviews, and validation. First, 12 key informants were selected at sub-county level based on projects’ prior points of contact and contacts made using snowball sampling approaches. Key informant interviews were conducted with women and men in the public sector and cooperatives. Individuals working in the public sector were, on average, over 50 years old and had been in the sector for 20 or more years. The purpose of the interviews was to draw on the breadth and depth of their experiences to describe the dairy sector in the sub-county and county levels, including technological and social changes. The focus of the interviews with cooperative coordinators and members was to better understand cooperative performance, benefits, and challenges. Data from KIIs helped to familiarize the research team with issues in dairy development and youth employment that were specific to the counties and informed the design of the FGDs (see Table S1).

In addition, nine semi-structured youth interviews were held with six young men and three young women. Climate Smart Agriculture Youth Network (CSAYN) provided the names of four youth contacts in Nakuru and Kiambu who could support identification of youth in dairy. In Nakuru we worked with a young man who works with a local NGO and coordinates youth group activities. In Kiambu, we worked with knowledgeable livestock extension agents to select youth in dairy for interviews. Youth were then purposively selected based on the criteria that the young woman or man participated in dairy value chains. The purpose of these interviews was to get an overview of youth pathways in dairy, including entry and experiences in the dairy value chain.

A total of 22 sex-disaggregated FGDs were then conducted to collect details about local job opportunities in general, positions in dairy value chains, and the roles of dairy for youth (see Tables S2 and S3). Participants were sampled through lists of youth group members in Nakuru and youth group representatives, a woman and a man from each group, were selected to attend FGDs. Kiambu does not have youth
groups that focus specifically on dairy, so extension agents identified and selected youth in the community who engaged in dairy value chains. Each FGD lasted approximately 2 hours and was conducted in a combination of languages—Kiswahili, English, or the local language of Kalenjin or Kikuyu—as is common in Kenya. Each FGD was sex-disaggregated and conducted by facilitators of the same sex. Efforts were made to select 7–10 women and men between the ages of 18 and 35, however in some cases respondents beyond this age attended despite our parameters. We omitted groups with average ages above 35. These transcripts were reviewed to ensure that those members in the FGD over the age of 35 did not bias the group discussion. A total of 18 FGDs were analyzed and a total of 169 women and men were interviewed.

A 2-day validation workshop was held with 22 youth attendees, 9 women, and 13 men. With the assistance of local contacts, two youth were randomly selected from each of the FGDs. The purpose of the workshop was to validate key findings and to co-develop youth-centered policy recommendations (Bullock and Crane 2020). Key findings were presented and discussed in four sex-disaggregated and county-specific breakout sessions of 3–5 individuals. Groups then presented their discussion points in panel sessions.

Data Analysis

Data from all sources were transcribed into English and analyzed using qualitative analysis software NVivo 12. Because the sampling was not representative, data sources were triangulated to improve analysis. Triangulation was performed through qualitative coding of the FGDs and supplemented with a review and analysis of the interview data. A coding tree was developed based on the key topics explored in the FGDs. Unique sub-themes or sub-questions were coded as child nodes. Responses in each child code were categorized to identify relevant and recurring themes. Cross tabs of mother, child nodes, and categories were run to compare sources based on location and gender. Sums and percentages were calculated for each location and, within location, by gender, to identify popular and recurring child nodes and categories therein. These values were used to guide the articulation of key topics, for example, the capital, assets, and knowledge requirements to participate in dairy. The sources and coded data were reread to assess consistency and cross-check coding and importantly, to develop a set of narratives, or unifying themes across the topics. All findings presented in the results are based on the analysis of research participants’ characterization of youth experience in the dairy sectors.
Results

The presentation of results is organized in two sub-sections that will discuss young women and men’s opportunity spaces and the social relations that support and/or constrain youth in dairy. The ways that gender, age, and ethnicity intersect and create differences in young women and men’s access to resources and different roles and practices, such as decision making over income and mobility, will be discussed. We first describe how norms and practices that are based on gender and ethnicity create differentiated youth opportunities in the dairy value chain. Then, we describe the primary social relations that influence youth’s acquisition of resources and ability to exercise agency, both of which enable them to navigate and negotiate opportunity spaces in dairy.

Formal work opportunities are few and most young women and men enter the dairy subsector as a result of limited work options. While other jobs may be preferred, youth still rely on dairy, to the extent possible, to support their transition to financial independence. For some, dairy is a temporary form of support, while for others, engaging in dairy is a purposeful choice to support longer term ambitions toward on- and off-farm livelihood diversification. However, some youth have negative perceptions of dairy. “Some of the jobs are labour intensive like dairy farming. This has made the youths shy away from keeping cattle. They see it as a lot of work for little returns” (Men’s FGD, Nakuru, #18). Also, some youth perceive dairy to be work for those with lower levels of education. “We as youth have bad attitudes because we feel we are learned thus the dairy work is not for us. Dairy is thought to be the work of unlearned people” (Women’s FGD, Kiambu, #1). However, youth with different levels of education often rely on dairy as a primary or secondary source of income. In other words, education is not necessarily a determinant of where and how a young woman or man will participate in dairy value chains, except for specialized vocational training for services, such as vet technicians. Intensification has increased the demand for more services along the dairy value chain and roles and tasks have diversified in the past decade. The demand for services such as veterinarians and artificial insemination and casual labor to construct cow sheds and to feed, water, and maintain dairy herds in these systems has increased. Additional technologies include silage production and fodder conservation. Although positions in the dairy sector have increased and demand for milk has increased with population growth, not all dairy opportunities may be equally accessed by women and men.
Opportunity Spaces in Dairy

Capital, assets, and skills are important determinants of entry into the dairy value chain. Youth’s access to resources and agency differ and result in different opportunity spaces for women and men in dairy value chains. Here, we focus on the two most common positions discussed in focus group discussions, on-farm dairy production and retailing milk in the informal sector, locally known as “hawking.” These positions differ in terms of investments required. Furthermore, gendered roles and practices within these nodes tend to limit women’s potential to earn, manage, and their performance, relative to men. We highlight important shifts and changes that have improved young women’s potential to take advantage of opportunity spaces. In addition to these positions, dairy intensification has created emerging opportunities for youth in the areas of feed and health services, which will be discussed in the final section of results.

Dairy Production

On-farm dairy production requires substantial capital and labor investments but is attractive to youth as a household enterprise because dairy farming provides a steady daily income, albeit low, as well as a source of milk for household consumption. Dairy cows are often a means to earn income that may then be invested in further diversification of on-farm production. Youth may enter this position while still living with parents, if allocated space, or in their own households, whether married or single. Intersecting social factors gender and ethnicity influence young women’s access to resources, roles, and practices such as decision making over income. Additionally, there is greater flexibility in dairy labor and management roles and practices in households than a decade ago.

Patrilineal land inheritance practices are common in both counties and largely exclude women from owning land and major agricultural assets that include dairy cows. Denial of women’s property rights is linked to expectations that women will marry and move to their husband’s homestead. “Ladies do not inherit land since their parents assume that they are going to get married, while men love land since they know they will inherit it” (Women’s FGD, Kiambu, #1). These patterns of gendered distribution of land severely limit young women’s potential to secure land needed to support dairy production.

Gender and age-based norms also influence labor in dairy production practices to a certain extent. However, traditional roles in dairy production, such as milking and management have changed in the last decade, especially in Kiambu. In prior times milking was viewed as men’s work
and, while labor patterns are slowly changing, norms about who should perform milking persist in some households. “Milking is both for men and women but mostly men since women think it is men’s task. The task only takes 30 minutes. It is mostly done by youth but even the old engage in it” (Women’s FGD, Kiambu, #4). Management roles and practices also vary more in Kiambu than in Nakuru county, often because of household income diversification strategies. Women in particular sub-counties in Kiambu have stepped in to control dairy enterprises. Men’s withdrawal from primary production to find alternative on- and off-farm income activities in Githunguri sub-county in Kiambu has created a space for women to run dairy enterprises. Women, either by choice or necessity, have assumed more responsibilities in managing, or co-managing, dairy production with their spouses. Men historically managed on-farm dairy activities, but have pursued alternative positions in the dairy chain, such as working as brokers, or, investing in land-intensive cash crops such as tea and coffee. Others commute daily to work in Nairobi. Women have joined cooperatives and may solely manage dairy incomes.

Results clearly show that women’s roles in Kiambu differ from those in Nakuru, where norms, often enforced by young Kalenjin men, have continued to restrict women in most cases. Location-specific, ethnically based cultural beliefs consequently generate different opportunities for women in Kiambu and Nakuru. Gender roles and restrictions in dairy production differ among the Kalenjin, where gendered practices often limit women’s potential to directly benefit from dairy production. Like Kikuyu women, Kalenjin women seldom inherit assets. But Kalenjin women are also prohibited from owning cows, whether living with their parents or married, due to culturally based cattle keeping norms.

Selling Milk

Many youth sell, or “hawk” milk informally in both counties. The position requires low levels of investment and thus is attractive to youth with less capital investments. Generally speaking, selling milk in retail is a temporary position. This position is commonly entered during the transition of finishing school, be it secondary or higher, while looking for a job. Because of the relatively low pay, hawking milk is usually a flexible, short-term work option that requires low levels of investments, making it easier to move on once a better opportunity comes along. For those with low levels of capital and assets, entry into this position can mark the beginning of a longer career in dairy, in which dairy activities feature as a primary livelihood activity. Gender and context-specific norms pertaining to income and mobility proscribe women’s potential to benefit from selling milk and will be discussed next.
Although women contribute substantial labor, customs about women’s control of income have persisted in both counties. Women are, by and large, prohibited from managing income of their husbands’ enterprises, dairy or otherwise. “When it comes to dairy activities like milking, feeding, selling milk, farming, most of it is done by women, but men come in when it is time to receive payment. Men are the ones who receive money from milk and it’s the women who are involved with the animals” (Women’s FGD, Kiambu, #4). Milking is generally performed twice daily, in the morning and in the evening. Women may sell evening milk, but because of the lower quantity, this fetches less income compared to the morning milk sales. “That little money gotten from evening milk is the one that the women use to buy food stuffs for the family” (Women’s FGD, Kiambu, #4). Milk sales are thus an important means for many women to secure income to purchase food for the household.

Gender norms about mobility also create differences in men and women’s potential to sell and benefit from milk sales. Milk sales are often conducted outside the home and transport is thus a key feature of this activity. Women and men collect raw milk from households located in rural areas and/or transport milk to urban centres. Motorcycle transport is typically used to collect milk in rural areas in both counties. The tendency for men to dominate transport enables men in milk sales to drive themselves, while women must hire transport. In Kiambu, women rely on public transport and, when operating in the informal trade that is unlawful, they travel at night or in early hours to avoid authorities because sales of unpasteurized milk in the informal chain are unlawful. Additionally, in married households, husbands may exert control over women’s mobility, especially influencing women’s ability to sell evening milk during peak times. “Men restrict the time a woman is allowed to stay out of the home. You are told to go out at 2pm and be back by 4pm while 4pm is the time business is at its peak, for example selling milk” (Women’s FGD, Nakuru, # 18). Such intra-household level constraints effectively limit young women’s engagement in, and profits from, milk selling activities.

Both mobility norms and married women’s household roles curtail Kalenjin women’s business potential in dairy. In Nakuru, Kalenjin norms stipulate that young women, married or otherwise, should not travel extensively, which is less the case among the Kikuyu in Kiambu County. Perceived cultural differences between Kikuyu and Kalenjin men profoundly affect young married women’s mobility, as shown in excerpts from a women’s focus group in Nakuru.
Participant 1: “Kikuyu husbands allow their wives to be free and do business even late hours. If you are a Kalenjin wife and you come home at 7 pm, you will have to explain where you were.”

Participant 2: “Kalenjin husbands just want us to stay within the compound and if we have to do business then it has to be within the compound, like a kiosk.”

Participant 3: “Kikuyu women are allowed to go to other towns to do business.”

Participant 2: “Kalenjin men do not want women to travel to far places, but to just stay home; but these same men don’t bring anything.” (Women’s FGD in Nakuru, #14)

These statements highlight the ways in which ethnically specific gender norms differ between the two counties in ways that significantly shape women’s business potential and enterprises. In addition to common positions of producing and selling milk, we will discuss dairy services that have increased as intensification have become more common.

**Emerging Opportunities in Dairy Services**

Intensification has created new opportunities and demand for dairy services that are especially relevant in Kiambu. In the last decade, intensification has led to increases in demand for services in smallholder systems. Service provision positions that require specialized skills, such as vets, artificial insemination, silage production, and technical training on fodder conservation are often attractive to youth because they are perceived to be less labor-intensive than farm production. However, acquiring necessary technical knowledge can be difficult due to capital, skills, and knowledge requirements. Service positions are typically not gendered, however, demand for services differs in the two counties, reflecting their different degrees of sectoral intensification in the two locations.

Youths’ roles in off-farm service provision are relatively recent. Intensification, particularly in land-constrained households, requires considerable investments in purchasing fodder and feed. Fodder production and conservation has become a growing area of interest for young women and men and is often carried out with support from youth groups in Nakuru. Youth provide technical training about fodder conservation and silage-making techniques. But, youth’s access to land is often a constraint, so youth groups in Nakuru both rent and generate savings to purchase land to produce fodder for sale and home use. Said one woman, “we rent land to plant fodder as a group and then harvest the seeds and share them among group members so they can
plant in their own farms” (Women’s FGD, Nakuru, #7). Youth groups thus are an important mechanism to support youth inclusive access to land and other dairy assets. “Some members had no land before joining the group, but they have now bought land using the funds they get from merry-go-round” (Women’s FGD, Nakuru, #8). Youth groups are especially helpful in assisting young women, since norms about women’s ownership and management of land do not constrain young women in youth groups.

Animal health services are also more common in peri-urban Kiambu than Nakuru, reflecting the more intensified system there. This is likely a result of the types of households in Kiambu, where zero-grazing practices and off-farm diversification has both necessitated and enabled households to allocate income to animal health services. This, in parallel with an increase in vocational training, has increased youth participation in service provision. Among research participants in Kiambu, there were nine youth working in animal health services, six of whom are women. Capital and skills requirements can be obstacles to entering this position that requires training and often a certificate to practice.

**Embedded Youth: Influential Social Relations**

Social relations influence young women and men’s abilities to acquire capital, assets, skills, and roles and responsibilities, all of which are important to participating in dairy value chains. Power that is based on gender, age, and ethnicity often intersect and is expressed through relations that may support or constrain choices in dairy. Similarly, age-based norms influence youth’s access to, and positions within, dairy cooperatives. In this section, we describe the most common relations that were parents, spouses, and formal groups, including dairy cooperatives and youth groups.

**Parents’ Relations and Assets**

Parental experience and moral support, willingness, and ability to provide dairy resources to their children significantly influences youth’s abilities to access and accumulate dairy assets. Many young women and men who engage in dairy grew up in families that practice dairy, albeit often less intensified. Sons and daughters contribute labor and learn about dairy practices as a matter of course while growing up in their parents’ homes.

In general, parents encourage youth, especially those who are more educated, to pursue work outside of agriculture. “The parents discourage youth from farming and require the child to look for other avenues of making a living and only think of farming in the context of subsistence.
There is a negative perception of farming and a preference for white collar jobs that make agriculture seem less worthwhile. Parents discourage their children from agriculture and the larger community does not want a graduate to work in the farm” (Men’s FGD, Kiambu, #10). Upon completion of schooling, parents typically encourage youth to find off-farm employment. Older generations tend to view agriculture as a difficult subsistence activity and often deemed unsuitable for educated youth. However, job opportunities are limited in the counties and many youth turn to, or rely on agriculture to some extent to support their income needs.

Parents’ willingness and ability to provide assets and start-up capital to sons and daughters is often critical to young women and men to start dairy enterprises. For young people living in their parents’ homes, access to their own resources can be especially constrained. Parents maintain ownership and control over land, and sons may only inherit land upon marriage. Too, subdivision of land over the generations has led to increasingly smaller plots. Land constraints and customary norms limit youth access to land. “The elders do not allow the youth to do any farming activities in their land, so the youth are discouraged” (Men’s FGD, Nakuru, #14). Young people who cannot access or control resources in their parents’ homes often turn to other activities in the informal sector. “Youth dependent on parents are denied use of land also, cows belong to parents therefore the youth turn to boda boda business” (Women’s FGD, Nakuru, #5), referring to motorcycle transport. Also, intergenerational tensions over land rights have increased among many land-constrained families.

Access rights and practices differ in the study locations and reflect the ways that gender and ethnicity intersect to limit young Kalenjin’s women’s abilities to engage in dairy production. In general, inheritance rates have declined because of historical subdivisions and competing land uses. However, men continue to inherit land more frequently than women, especially upon marriage, in both locations. In Kikuyu families, parents may provide space within their compound, cows and capital to young women or men. However, Kalenjin customs prohibit young women from inheriting land, and owning productive assets, such as cows.

Intra-Household Relations and Roles and Practices

Young women and men marry and establish independent households that, through intra-household relations, shape young women and men’s roles and practices. Marriage significantly influences young women and men’s responsibilities, which has important gender-related dimensions affecting dairy commercialization strategies and outcomes. Although
egalitarian relations in young households are becoming more common than in previous generations, traditional values can persist through youth’s intra-household marital relations. Young Kikuyu and Kalenjin women described their different gender roles in households, and in addition to mobility and income management limits that were described earlier, patterns of ownership and management of productive assets, such as land and cows, reflect ethnicity-based customs in the community.

Upon marriage, young women and men assume new reproductive and productive roles and activities, often perpetuating gender customs about the division of labor in the household. Often, young women relocate to their husband’s birthplace to start a household together and, in doing so, lose claims to assets in their original communities and households. In addition, married women typically perform most of the household responsibilities, such as childcare and cleaning and perform many livestock-related tasks. In Nakuru, women spoke of the burdens of these responsibilities. “Women are allocated the duties of taking care of the animal, for example, giving livestock drinking water hence limiting their time and freedom.” Another woman continued “For women, there are a lot of domestic chores and they cannot do other things unlike men” (Women’s FGD, Nakuru, # 18). Because of women’s typical household roles and time spent in the homestead, on-farm dairy production and household-based enterprises are sometimes thought to be better suited for women than men. “The change from open pasture to zero grazing led to women entering dairy due to less need to leave the homestead” (Men’s FGD, Nakuru, #17). Intensification practices, that will presumably keep women busy in the home, illustrate how technical changes in dairying practice can embed within and reinforce local norms about where women should be.

Women’s roles in dairy are relational, or dependent on the economic role of dairy in the household and economic activities more generally. If dairy is a primary source of household income, men may manage the enterprise and leave women to seek alternative work. In other cases, men pursue work outside the home and women take care of livestock since dairy work is not perceived to be labor intensive. “Some of the jobs in dairy farming can be done on a part time basis, like dehorning, fodder growing and taking care of dairy animals, which the spouse can take care of when the husband is doing other activities. Thus, a husband has more time for other activities” (Men’s FGD, Nakuru, #14). Such perceptions of women’s work as being less labor intensive undermine the value of women’s often significant labor contributions in dairy.

However, changing trends in marital relations can create new opportunities, or more flexible gender norms for Kalenjin women, depending on their husband’s ethnic group and his traditions. Research participants in
both sites indicate that ethnic intermarriage is increasing, and with these unions, Kalenjin (or women similarly restricted, such as the Maasai) may realize benefits from dairy that might not otherwise occur through marriage with Kalenjin men who retain traditional practices. Women marrying men from other ethnic groups with less prohibitive gender norms can negotiate for ownership of cows and management of income from dairy. While discussing gender norms in dairy in Nakuru, one woman described her experience and how gender norms can change in one generation.

“I am from a community of Maasai, where cows are owned by men. But then I married a man from another tribe and I own my own cow now. We are going to break this culture. My kids will then go to other tribes. This will change culture. As time goes, these things will go away, disappear, without our even knowing, they will just become history. It is just a matter of time” (Young woman interview, Nakuru, #8). This insight speaks to rapid societal change that, through household relations, can lead to broader shifts in gender norms in as little as a generation. These changes have the potential to influence the development of intensification pathways.

**Dairy Cooperatives and Intergenerational Tensions**

Social relations within dairy institutions are important for youth engagement in dairy. Cooperatives, many of which were created decades ago, are important spaces for collective action, particularly for older dairy producers. Recently, young women and men have entered dairy cooperatives as members, but also as employees. Cooperatives are a space in which age-based norms are expressed through intergenerational relations, creating a mixture of supporting and constraining factors for youth who are interested in commercializing dairy production.

An important and frequently cited benefit of cooperatives for youth is knowledge exchange. Adults and older generations are sought out for their advice and experiences, while adults may turn to youth to learn about new technologies and access new information streams. “The youth get knowledge and ideas from the adults and vice versa. The adults have knowledge related to experience, while the youths have ideas and knowledge stemming from exposure to new technology” (Men’s FGD, Kiambu, #11). While this was described as a positive intergenerational influence, cooperatives were more often described as spaces where tensions between the youth and older generations arise because of limitations on cooperative membership and biases that adults have against youth.

Cooperatives often have limits to their membership and older generations, who have been in cooperatives for decades, can view youth entry as a threat. A young woman recounted her experience of joining a cooperative with help through her family connections. “There is frustration
from parents, who are the ones who started dairy cooperatives in Githunguri. It is hard for us to be allocated chances by Fresha to supply milk to the dairy cooperatives, forcing us to sell to brokers at a lower price. This is why youths do not engage in dairy, rather they engage in bull keeping for meat, since selling of milk here as a youth is a problem. You have to have a connection to the dairy. I acquired my number through my grandfather who stopped farming. When he stopped farming, he had his number intact and the process of changing names was long” (Women’s FGD, Kiambu, # 1). For those youth who manage to join a cooperative, the experience can be discouraging because of the perception that adults do not respect or trust young people. Young members face challenges becoming leaders in the cooperative and young people in both counties complained that older people ridicule and ignore the youths’ contributions in dairy cooperatives. Low levels of trust also limit youth’s access to credit. Although cooperatives can be an important source of credit for youth, through more wealthy dairy farmers who have more capital, youth rates of borrowing are low because older people do not trust the youth in their management of finances. Young women in Githunguri explained that youths’ low levels of capital can keep them in subordinate positions in the cooperative and the wider community.

In both sites, social norms prohibiting intergenerational interactions emerged as important factors that also influencing youths’ participation in cooperatives. In some Nakuru sub-counties, Kalenjin social norms prohibit cross-generational family members from joining and being members of the dairy cooperatives and other groups. “It is hard to mix different age groups because of cultural beliefs. It is not allowed for a young man to be in constant contact with the father-in-law in the Kalenjin community. This also applies to brothers-in-law and many more” (Men’s FGD, Nakuru, #14). In rural locations, where there are fewer cooperatives and transport costs can be prohibitive, limitations about which cooperative one can join further prohibit youth engagement in collective action.

Youth Groups and Peer-to-Peer Support

Youth groups are often described as being more supportive spaces than cooperatives to acquire resources and to establish peer-to-peer networks that facilitate access to capital, material resources and knowledge. Youth groups operate in most of the sub-counties included in this study and were described as important mechanisms to support saving and access

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*Dairy cooperatives’ membership is often limited.*
to financial support, such as grants from external institutions that support business innovations. Youth groups can apply for empowerment and women’s funds that are offered by the government and available in select sub-counties, for example. “Youth groups enable easier saving and borrowing of funds to be used as capital for different business ventures, and the group enables the youth to easily borrow cash from government institutions like Biashara Fund, Youth Fund, Uwezo Fund and the Women’s Fund” (Men’s FGD, Kiambu, #11). Group members also advise, motivate, and support each other in achieving savings goals. “Groups motivate the youth to work hard because they have to work to get money in order to save. This makes the youth within the group focused and disciplined” (Men’s FGD, #17). As one woman explained, “groups support self-employment. We have our savings and share the interest among members” (Women’s FGD, Nakuru, #6). Young women’s participation and membership in youth groups supports access to and ownership of productive resources, as discussed above, and income to manage their own businesses.

Dairy-specific youth groups, however, currently exist in Nakuru County only. County and project level support has been a key driver of youth group formation and most of the youth groups in Nakuru were created recently with the inception of the Smallholder Dairy Commercialization Programme. Efforts to establish youth groups in Kiambu are ongoing and similarly influenced by project funding support and interest to build capacity through collective action mechanisms. In Nakuru, youth groups manage dairy businesses, bulk and sell milk and add value by making yogurt. Groups also realize benefits of improved access and affordability of dairy assets. “Being in a group provides better bargaining power when purchasing or selling goods because of large volumes. It is easy to negotiate better terms” (Men’s FGD, Nakuru, #13). Collective action, more specifically, “creates opportunities to exploit economies of scale, such as reducing input prices through bulk purchasing of hay, dairy meal and other inputs” (Men’s FGD, Nakuru, #17). In summary, youth groups in the rural areas have been particularly important to support young women and men’s dairy investments and access to livestock credit and information.

In this study, social relations significantly influence and mediate young women and men’s access to capital, assets, and skills. Furthermore, the intersecting ways that gender, age, and ethnicity, often practiced through

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5The programme aims to foster market-driven development of Kenya’s informal dairy industry.
the above-mentioned social relations, can result in gender differentiation of youth opportunities in the dairy value chain.

Discussion

The objective of this article was to examine youth’s current and emerging roles in dairy intensification processes. Social difference and the intersecting social factors of age, gender, and ethnicity shape young women and men’s opportunity spaces in dairy. In many youth policies youth are framed in homogenous, de-contextualized, and dis-embedded ways that do little to improve our understanding of youth and design policies to address youth unemployment (Flynn et al. 2016; Sumberg and Okali 2013). In addition, social differentiation among youth in Africa and the roles of norms and expectations related to age and gender, and how they influence youth agency, has not been widely integrated into research on young people and agriculture (Rietveld et al. 2019; Ripoll et al. 2017). Understanding how young people engage in agricultural commercialization processes, or are excluded from those processes, supports a better understanding of the role of the agriculture sector for youth to manage uncertainty through transitions from dependence to independence. Our research contributes to understanding young women and men’s diverse experiences in dairy and expands upon the concept of opportunity spaces. In the following five sections we discuss the application of these concepts, our research findings, policy implications, and study limitations.

Conceptual Contribution

Opportunity spaces provided a conceptual lens to describe both the geographic and social factors that shape and influence young women and men’s opportunities in work, in agriculture, and here, in dairy. Complemented with youth studies and an intersectional analysis, our research sought to apply the concept to better illustrate how agricultural intensification and commercialization create and reinforce processes of social exclusion that can severely curtail the agency of specific social groups of youth.

Commercialization processes can produce and deepen inequalities for certain social groups (Peters 2004), and here we find that rural women are often more disadvantaged than their peri-urban counterparts. Social cleavages that are associated with ethnicity are frequently reinforced by geography (Kabeer 2014), and our study demonstrates the ways in which age, gender, and ethnicity intersect and interact with location in ways that marginalize young, rural, Kalenjin women from opportunities in the dairy sector. Understanding the ways that geography, social factors,
and processes of rural transformation may unintentionally perpetuate exclusion of specific groups should be addressed to ensure that opportunities for youth in agriculture are enhanced and support broader youth policy and employment agendas.

**Youth, Social Relations, and Intersections of Difference in the Dairy Sector**

Young women and men face limited local opportunities to gain formal employment and turn to agriculture, including self-employment in dairy, to support their transitions from dependence to independence. The types of work available differ in rural and peri-urban locations, and age and gender often influence labor market experiences. We found that young women and men often engage in dairy in diverse and dynamic ways to meet their age-related livelihood needs, which vary over time. A 20-year-old who is seeking a career in the city approaches dairy with different priorities and needs than would a married 34-year-old expecting their second child. Youth in peri-urban locations often perceive dairy as a fallback option to manage the transition between school and employment, especially for those with higher education (see Mwaura 2017). Still others, especially in the rural areas, choose dairy as a livelihood strategy that supports longer term ambitions of increased on- and off-farm diversification. Thus, understanding youths’ engagement with dairy intensification requires an appreciation of the temporal dynamism relating to their various life transitions.

Youth are embedded within social relations that reflect how age, ethnicity, and gender intersect in ways that create not only differential access to agricultural resources, but different roles and practices in dairy value chains. Social relationships in which young people are embedded shape their actual pathways to finding work (Flynn and Sumberg 2017) and the types of activities that young women and men perform in dairy value chains. Young women and men described the ways in which relations with parents, spouses, in dairy cooperatives and in youth groups perpetuate differences that result in their differential abilities to navigate opportunity spaces, particularly through influencing access to resources, capital, and knowledge. Our findings support other research on the importance of parents and other family to facilitate access to key productive resources (IFAD 2019; White 2012). However, our findings also highlight additional relations that influence rural young women: intra-household dynamics in married households. Young married women’s abilities to secure and manage resources and engage independently in commercialization differ between rural and peri-urban locations, namely because of intersecting norms and related practices based on
age, gender and ethnicity. Specifically, young, married Kalenjin women generally do not own key productive resources, including cows, in their households. Kalenjin women also seldom control income from dairy and face mobility constraints as a result of prohibitive norms. More attention to understanding young women and men’s intra-household dynamics is needed.

Social relations in both counties demonstrate how age, ethnicity, and gender intersect and result in socially differentiated opportunity spaces that especially marginalize or exclude women from particular spaces in commercialization processes. Young Kalenjin women face more challenges than Kikuyu women in dairy, made evident through descriptions of their roles in commonly held youth positions, such as on-farm production and selling milk. Kalenjin women exercise limited agency in owning or managing cows and lower levels of mobility than Kikuyu women, both of which influence their abilities to take advantage of dairy opportunities. Such findings have implications for young women and men in dairy development pathways, specifically illuminating the ways that dairy intensification can reinforce exclusion or marginalization of rural young women by limiting their roles to provision of unpaid labor to support on-farm production (See Tavenner and Crane 2018, 2019). But dairy intensification has expanded opportunities in services for which gender norms tend to be more flexible, perhaps because these positions are more common in the peri-urban location. Nevertheless, substantial capital constraints and access to training opportunities, which rely on supportive social relations, still limit youth entry into service positions.

Youth engagement in formal agricultural associations both constrains and supports the ability of young people to access to resources, and their roles and practices. Formal dairy institutions are critical to support finance and knowledge sharing. Similarly, Hartley and Johnson (2014:56) found that cooperatives and their networks provide “an ‘expanded learning space’ for youth that enabled them to shape their personal futures and to be perceived differently and perform new roles in their communities.” However, cooperatives in the study sites were often described as being fraught with intergenerational tensions based on norms that restrict youth activity. Unfortunately, the role of gender in cooperatives was not explored in depth in this study, and more research should be undertaken to better understand how both age and gender influence relationships in cooperatives. Youth groups were cited as important sources of peer-to-peer mentorship and innovation and warrant further research and policy support.
Youth Agency and Context

While our data show that norms and practices of social exclusion may be reinforced through generations, we also find examples that demonstrate young women and men’s capacity as agents of change in their communities. Young people negotiate, contest and challenge the institutionalized processes of social division through their everyday practices (White and Wyn 1998). However, different social groups often exercise constrained agency (White 2012). Structural and social constraints shape young women’s access to resources, especially land (See Rietveld et al. 2019) often through the “persistence of historically established patterns of exclusion over the course of a lifetime, and often over generations” (Kabeer 2014:109). Women’s experience in peri-urban and rural locations differ and specifically, Kalenjin women’s restrictions are more limited than Kikuyu women in the household and in dairy value chains.

Youth—whether dependent, independent, or in transition—actively negotiate their positions and potential in their communities and households, in agriculture or otherwise. A contextualized understanding of youth experiences provides a better appreciation of how youth agency is constructed and negotiated, which is important to understanding youth in their broader life contexts (White and Wyn 1998). Young women and men are making life choices that differ from previous generations, especially when it comes to inter-ethnic marriage and decisions about how to raise children in support of greater gender equality. Such broader contexts will have implications for youth in dairy and in agriculture more generally. We found that some, albeit a minority, of young peri-urban women own land and manage dairy activities and income, demonstrating how opportunity spaces are dynamic and can change over generations. As economic change continues, some norms will persist, however societal and gender norms evolve, and, through individual and collective agency, young people will challenge social norms (Bullock and Tegbaru 2019; Petesch et al. 2018).

Practical Implications

In the coming years, intensification in the Kenyan dairy sector is likely to continue, and even accelerate, both through commercial and political dynamics. Youth underemployment—in the agricultural sector and in general—could be addressed in this process, but only through deliberate planning and prioritization of mechanisms for youth inclusivity. This is particularly true in the event of large-scale international investment in rapid intensification across the sector, as imagined under low-emission development scenarios, which often neglect social
distributional outcomes in favor of aggregate environmental and productivity outcomes.

The lack of access to land and capital to enter dairy production is a recurrent theme for both young men and women. Youth-specific self-help groups can facilitate young men and women in overcoming their constrained access to land and capital and provide a means to establishing their own independent dairy enterprises. These groups can also provide avenues for technical trainings, such as silage production or fodder farming, which can lead to employment opportunities in service provision in the dairy sector. Entrepreneurial skills training should also promote youth to manage land and capital more effectively once they gain access.

Engaging in “informal” dairy value chains was also seen as an important economic stepping-stone for young men and women interested in entering the dairy sector. There has been considerable political pressure from “formal” sector actors (i.e., dairy processors) in Kenya to actively suppress the “informal” dairy trade, ostensibly in the name of food safety, which would substantially increase barriers to entry into the dairy sector. We suggest instead that the “informal” dairy sector should be enhanced so that dairy development can be more inclusive.

Finally, policy and development interventions oriented at youth opportunities in dairy intensification should be based on the recognition that “youth” is an extremely heterogenous category. Addressing differences that come with cultural variability, gendered experience, and life stages can nuance and target interventions more effectively. That being said, the focus on youth in agriculture, while relevant, should be broadened to consider youth in context and in multiple, diverse sectors. Strategic investments to facilitate and improve dairy development for youth and broader national targets are needed but should be framed as being part of a broader national strategy to support youth.

Implementing these youth- and dairy-specific approaches through policies and development interventions has the potential to simultaneously achieve multiple national goals, such as reducing youth unemployment, supporting economic growth in the dairy sector, and enabling the Kenyan dairy sector to lower GHG emissions intensities through better on- and off-farm dairy practices.

### Study Limitations

Principle investigators of this study are not from Kenya and have a limited understanding of kiSwahili and local languages, where used. This may have limited understanding of complex social relations compared
to that of a native resident. However, as researchers we agree that “being unfamiliar with a setting provides a critical space to detect patterns that insiders might choose to ignore” (Nyantakyi-Frimpong 2020:3). Efforts to ensure accurate interpretation and analysis of qualitative data were made. We attempted to minimize bias using informed consent that explicitly stated that research participants were free to express themselves and there were not correct or incorrect responses. Also, we acquired permission from participants prior to group discussions to record discussions to ensure accuracy of documentation during transcription.

Conclusion

Youth employment is a critical and growing concern in Kenya and in SSA. The potential for dairy, and agriculture in general, to be a sector that supports youth in their transitions and livelihoods is paramount. Our study analyses young women and men’s current and emerging roles in dairy intensification processes using the concept of “opportunity spaces,” complemented with the concepts from intersectionality and youth studies. This approach facilitates a better understanding of how both geographic and social factors shape youth opportunity spaces. Furthermore, it highlights how age, ethnicity, and gender intersect in locations in ways that can socially exclude young rural women from specific dairy opportunities. It will be important to recognize how dairy, and agricultural commercialization processes can perpetuate different combinations of disadvantage and opportunity, often on the basis of social factors that ascribe significance to age, gender, and ethnicity. What this means for youth employment and opportunities in agriculture warrant closer scrutiny and attention.

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