

## Gendered Opportunities, Challenges and Prospects of the Dairy Value Chain in Tanzania

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### Abstract

This paper discusses the gender gaps in the dairy value chain in Tanzania and the challenges and opportunities for addressing them. A desk review was conducted to study various interventions carried out in Tanzania from colonial period to-date. Results show that there was no gender consideration during colonial period and soon after independence. Interventions by Heifer Project International from 1980s were the first to consider gender issues in the Tanzanian dairy value chain. Gender gaps such as high workload for women, lack of market information on milk and other dairy products and lack of capacity to control resources emanating from the dairy value chain were identified. Other challenges identified include lack of skills for improving dairy management owing to their limited access to training and other technologies. Further, data used for planning, monitoring, evaluation and impact assessment of the interventions was not sex disaggregated; and there was a lack of political will to integrate gender issues by the project leaders. Opportunities available for bridging the gender gaps include availability of friendly technologies to women such as preservation of feeds for use in the dry season when the price of milk is high and use of mobile phones to access market information. The study concludes that proper integration of gender in the project cycle will help to narrow the gender gaps. The study recommends project leaders to integrate / mainstream gender in projects by engaging gender specialists to guide project staff on how to systematically integrate gender as well as develop or enhance the capacity of employees on gender; and to demonstrate, with examples, the economic benefits of integrating gender in projects.

**Keywords:** Gender, Opportunity, constraints, prospects, dairy value chain

### 1.0 Introduction

Value chain analysis has been widely used by various development actors to understand the varying needs, interests and constraints of dairy value chain actors. Little attention has been paid to gender aspects of the dairy value chain during its analysis. This paper presents the findings of a gender analysis of published and gray literature on the dairy value chain in Tanzania the period just before independence (1961) to the current. For instance, in the dairy industry in Tanzania, women perform more work, but receive fewer benefits than men. Generally, gender roles and norms vary across regions and by age (Njuki *et al.*, 2011). Men are the main decision makers in livestock related matters, they are in charge of the general herd management, and oversee watering of the animals among the Maasai of Kenya and Tanzania. They dip animals and sometimes supervise the spraying of animals for disease control (Maeda Machangu *et al.*, 1995). They also inspect the health of, and count, animals returning from grazing in the evening (Sikira *et al.*, 2013). Men also perform minor veterinary procedures such as castration, which they learn from veterinary officers. With slight contextual variations; women perform significant roles in the daily management of the livestock at the household level. For example, women perform almost 75% of the livestock management activities in the intensive production system of Asia (FAO, 2010). Maasai women in the East African region retain their primary role of dairy related activities as they are responsible for milking, simple processing of milk such as fermentation and marketing of surplus milk and dairy products.

In the extensive management system, majority of women sell milk at the farm gate because they are constrained in terms of mobility (Mutua *et al.*, 2014; Waithanji *et al.*, 2013; 2015), time, finance and means of transport and communication (Waithanji *et al.*, 2013; 2015). This is true in the informal market which is characterized by seasonality. In a study on gendered participation in livestock markets, Waithanji *et al.* (2013:40) underscored that, “when the market of milk is formalized, men tend to take over”. For example, in Tanga Region, Tanzania, a milk processing plant that guarantees a reliable milk outlet exists and has led to an increased engagement of young men in the milk value chain. The young men collect the milk and deliver it to the collection centre with coolers before it can be transferred to the processing plant in the city of Tanga (Nombo and Sikira 2012; Sikira *et al.* 2013). Men appear to take over control of agricultural commodities from women once technologies are used to enhance production (Njuki *et al.* 2014); markets are relocated from near home requiring transportation of produce and when marketing activities compete for time with reproductive roles (Waithanji *et al.* 2013; Quisumbing *et al.* 2013). Additionally, the culture of seclusion of women, whereby the women themselves and other community members consider it inappropriate for women to leave their homes to

go and transact in markets undermines women's participation (Quisumbing et al 2013). Use of technologies, that are friendly to women, and integrating home based markets in the value chain, will improve women's status.

Further, women lack capacity to control resources such as land, livestock and products emanating from livestock. In parts of Tanzania, Kenya and Mozambique, women's livestock constituted a larger proportion of their asset portfolio than men's livestock, but women owned less cattle wealth in total livestock units (TLU) than men (Mburu *et al* 2013), which means that women, as individuals, owned and controlled fewer resources and, hence, a lower sustainable life enhancing livelihood impact than men. Enhancing women's asset portfolios is, therefore, likely to contribute to the narrowing of the gender benefit gap between women and men participating in the dairy value chain.

Women are constrained in terms of accessing extension services and, therefore, have limited knowledge, skills and production enhancement technologies, which can be attributed to women's constrained ability to make decisions, take risks, access production resources such as land for grazing and engage in the horizontal and vertical nodes of a value chain (Nombo and Sikira, 2012). Men have easier access to technology and training because men as household heads are not culturally restricted in terms of mobility. On the other hand, boys are encouraged to get out and mingle with other men very early in their lives. From these interactions, men learn about opportunities and are able to attend trainings offered in their localities as well as outside their home. Based on the biased mind-sets of the male extension staff, they mainly invite heads of households (predominantly men) to training sessions (SHDDP 1996). Extension workers presume that the knowledge and skills imparted to men would trickle down to women, who are the main cattle managers. Moreover, most extension programmes and educational materials are mainly designed by and oriented towards men. For example, in Tanzania, written pamphlets on availability and use of farm implements are often located in the implement shops in urban centers, which are mostly visited by men (Njuki *et al.*, 2014). If women actors in the production node were well trained, they could initiate communication with other nodes such as input suppliers and enhance relationships along the value chain.

Although gender gaps in the dairy value chain have been identified and attempts have been made to address them, gender inequalities still persist because interventions are usually *ad hoc*, addressing a specific symptom, rather than systematically addressing the root causes. In order to systematically analyze the dairy value chain in Tanzania, information gathering was an inevitable process. This paper answers two questions, "What are the gender gaps in the dairy value chain and what are the opportunities and challenges for addressing these gaps"?

## 2.0 Methodology

This paper draws information from a review of published and gray literature. The articles reviewed included 29 published reports and journal papers, 7 un-published research reports/dissertations, 3 baseline reports, 4 annual reports; 14 conference papers, 2 policy briefs and 2 project documents. A summary table on articles reviewed is given in Table 1. Data was analyzed using the content analysis method, whereby data/ information gathered from secondary sources were synthesized under thematic areas aligned the specific objectives of the assignment.

## 3.0 Results and Discussion

### 3.1 A Gendered Analysis of Previous and Ongoing Dairy Projects in Tanzania

Before independence (1961), interventions in dairy value chain carried out in Tanzania were to ensure milk production, establishment of infrastructures for milk processing and marketing to fulfill the interests of the colonialists. Soon after independence, interventions to improve the dairy value chain was geared towards increasing the country's milk production, improving milk consumption among the growing population and marketing of surplus milk. During this period there were no gender considerations in the dairy value chain. For example, through establishment of Livestock Multiplication Units (LMU's) the government had intended to use crossbreeding as a way of increasing the country's stock of improved indigenous cattle. In 1974 to 1979 the government established the livestock development authority (LIDA) whose main mandate was to improve the indigenous stock, to coordinate milk processing and to control animal diseases and nutrition. International NGO's such as Heifer Project International (HPI) initiated interventions in Tanzania in 1973. The approach used by HPI was known as pass on the gift of a heifer by HPI to enable many rural and peri-urban households to access dairy cattle.

HPI realized that majority of the farmers were women and, therefore, women involvement in the project was necessary (Msangya 2013) to enable an equitable participation and sharing of resources between men and women, and more importantly, economic empowering of the vulnerable groups through working with vulnerable households. The main objective was to improve food and nutrition security, increase income and assets of women by sharing information on and resources from livestock keeping (Msangya, 2013; Bayer and Kapunda 2006).

From mid 1980s local organizations were established including the Small Scale Dairy Development Project (SSDDP) in the southern regions of Iringa and Mbeya; Tanga Smallholder Dairy Extension Programme

(TSDEP); Tanga Smallholder Dairy Development Programme (TSDP) and the Tanga Dairy Development Project (TDDP). The Southern Highland Dairy Development Project (SHDDP) was implemented in partnership between the government of Tanzania and Switzerland 1970. The project covered three districts (Ludewa, Makete and the then Njombe) of Iringa Region, while the two districts of Mbeya region were Rungwe and Mbarali in the Southern Highlands of Tanzania (Mkenda-Mugittu, 2003). The project was initially called the Small Scale Dairy Development Project (SSDDP). Through the project, European cattle breeds were crossed with local breeds owned by small holder farmers through artificial insemination and using imported bulls in order to upgrade the local stock. To facilitate the crossbreeding, the project provided bulls that were given to communities for communal ownership. Further, smallholder farmers obtained cross-bred in-calf heifers from the project at a subsidized price and the project provided necessary inputs to farmers (SHDDP 1996). In addition, the project provided dairy cattle farmers with an extension package that included training on fodder production, shed building, animal husbandry and health. The extension packages were considered essential for achieving the production potential of exotic breeds and their crosses (Mkenda-Mugittu, 2003).

In 1996 the project changed its mandate after an evaluation report which indicated low impact of the project's activities. From June 1996 the project was renamed as Southern Highlands Dairy Development Project (SHDDP) (SHDDP, 1996) and started working with groups while responding to needs of the smallholder farmers. At the same time, the project initiated a gender integration strategy by conducting gender analysis in order to identify gender gaps both within the project and among local communities. The gender analysis revealed that participation of women in project activities was low as almost all beneficiaries were men. Most women were also not attending extension meetings, most field staff were men and provided technical support to fellow men because they were informed by the dominant discourse that men were the key decision makers and should control large capital items like cattle. Fig. 1 illustrates the sex disaggregated dairy value chain map for SHDDP.

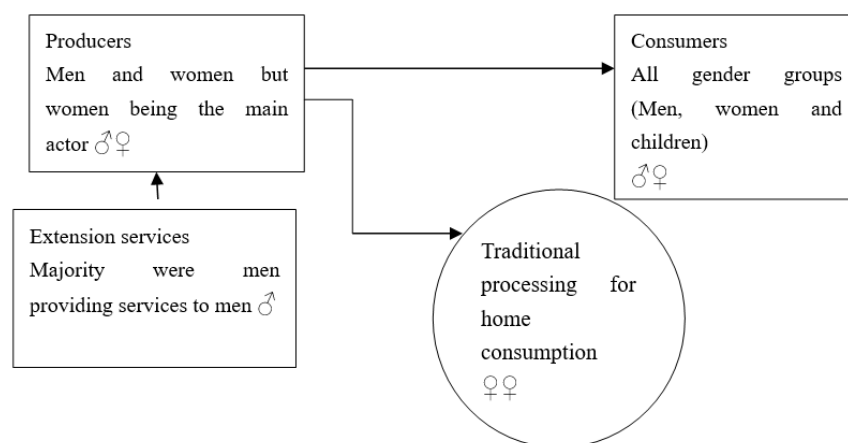


Figure 1: Dairy value chain map for SHDDP  
 (♀= female, ♂=male)

Following the above observations, the project committed itself to increase the number of women beneficiaries to be 30% (SHDDP, 1996). Women were then encouraged to sign animal ownership contracts instead of men, but in spite of women signing contracts, the project staff established that men maintained their control over animals. In spite of an increase in the number of women signing contracts, cultural gender norms inhibited women from controlling benefits from dairy cattle in their names. Other challenges to women's control over cattle included the fact that women had no control over valuable resource such as land, except through their relationships with men as fathers, brothers or husbands. Being landless, women were, therefore, not able to own a place where they could construct a shed and cultivate fodder for cattle.

In addition, dairying increased the workloads of women and girls, as they had to cultivate fodder for cattle, cut and carry fodder, feed the animals, carry extra water, and clean the cowshed. Further, difficulties in caring for the dairy cattle among polygamous households were observed by the project. This is because traditionally, dairy cattle are owned by the husband, while wives are the care givers of the cattle; the challenge was who is to care for the cattle among the co-wives? The above-mentioned gender gaps bothered project staff for some time as they lacked a clear way to address them. After a series of discussions, project staff identified the need to understand the existing gender relations among project staff, within the household and the community at large. They also established that project staff were gender biased (Mkenda –Mugittu 2003). Evidently, focusing on the cow without paying attention to the context in which it was being reared resulted in unequal distribution of benefits. Information on socio-economic characteristics such as, marital status, household type and farming system practiced by the household were recorded for central monitoring of the project activities. Clearly, after

identifying the gender gaps, the project staff did not look for ways to address them.

Msuya (2012) analyzed the dairy value chain in the Southern highlands and found that the dairy value chain in the southern highlands of Tanzania has improved after commercialization of milk which is currently sold to households by hawkers and at the collection centers (Fig. 2). From the collection centers, milk is taken to the processors then to the consumers. Actors at the collection centers were men and women while the main processors were men. The hawkers were mainly men because collecting milk from the producer is believed to be tedious as some of the producers stay far from urban or peri-urban areas where milk is sold. In addition, it becomes more complicated for married women and breastfeeding mothers, who find it difficult in terms of time and the reproductive responsibilities they undertake daily from their homesteads. Most women cannot, therefore, afford such a business.

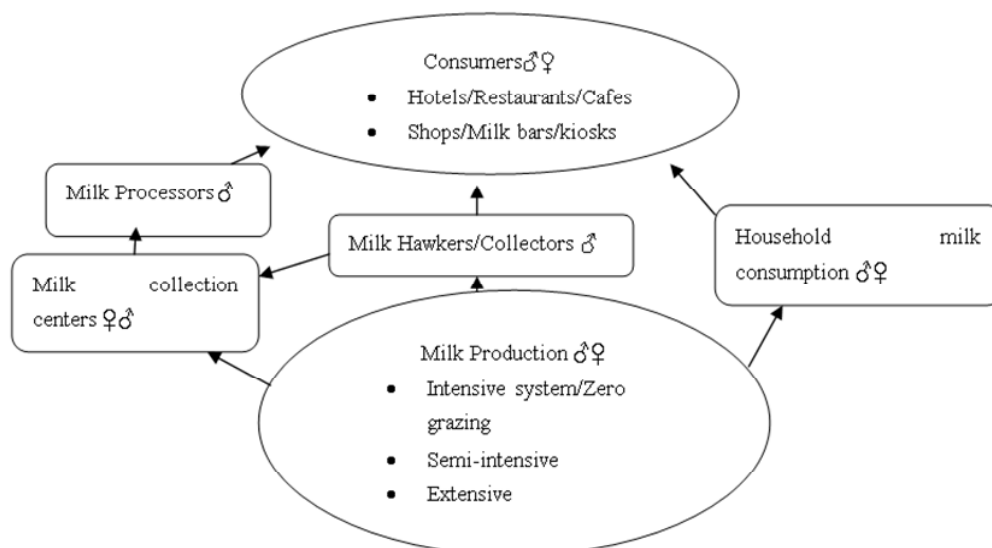


Fig. 2: Dairy value chain map for SHDDP indicating increased channels after commercialization (♀= female, ♂=male)

Other major players in Tanzania’s dairy sector include, those dealing with funding/facilitation of projects/programmes (DANIDA and USAID through a non-governmental organization, Land O’Lakes; African Development Bank; and Rural Livelihood Development Company (RLDC). Research organizations working on improvement of stock include the international Livestock Research Institute (ILRI), the International Centre for Tropical Agriculture (CIAT), the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA), Sokoine University of Agriculture (SUA), National Artificial Insemination Centre (NAIC), Livestock Multiplication Units (LMU’s), Livestock Research Institutes (LRI) (Under the Ministry of Livestock Development and Fisheries (MLDF) and, other local research institutions). Advocacy, regulatory and marketing organizations include the Tanzania Dairy Board (TDB), Tanzania Milk Processors Association (TAMPA), Tanga Dairy Platform (TDP), processors (Tanga Fresh based in Tanga, - Shambani group based in Morogoro - Tan Dairies and AZAM Dairies based in Dar es Salaam, Mara Dairies based in Mara region, Njombe milk factory based in Njombe region. The above-mentioned actors have at different times intervened in promoting Tanzania’s dairy sector mainly by increasing productivity and expanding market access. The objective of these actors is to improve the dairy value chain. Research based institutions such as ILRI, SUA and ASARECA mainstream gender in their research at different nodes of the value chain. For instance, ASARECA mainstream gender into its agriculture research agenda and institutional framework. To fulfill this objective ASARECA formulated the gender mainstreaming strategy (ASARECA, 2011). Similarly, Land O’Lakes mainstream gender throughout the project cycle (from the designing to monitoring).

### 3.2 ILRI contribution towards engendering the dairy value chain in Tanzania

The project titled “adapting dairy market hubs for pro-poor smallholder value chains in Tanzania” commonly referred to as MoreMilkIT was implemented by ILRI from 2012 to 2016.

The project aimed at ensuring inclusive growth and reducing poverty and vulnerability among rural people in Tanzania whose livelihoods were dairy dependent. Prior to its implementation, a pre-baseline study was conducted in 2012. Results from the pre-baseline study revealed that gender roles were clearly defined in the extensive cattle production system practiced in the study areas (Sikira *et al.*, 2013). On the other hand, the study by Sikira *et al* (2013) in Morogoro and Tanga regions in Tanzania indicated that decisions related to milk and milk products were made by women. Further, both men and women from intensive cattle production systems

made decisions, which provided opportunities for women to process milk into other products.

The project known as MilkIT was also implemented by ILRI and SUA from 2011 to 2014. The main aim was to enhance dairy cattle feed innovations and value chain for enhancing productivity, strengthening stakeholder's institutions and sharing of knowledge. The project established a partnership with the local government in order to strengthen extension delivery, access to inputs and marketing services, and formation of farmer groups around bundled input and service delivery (ILRI, 2014). The stakeholders' meeting report revealed that various multi-stakeholders' innovation platforms have been established at village and regional levels. In these forums, stakeholders of the innovation platform developed site specific plans so as to initiate capacity development around these plans. Gender was not considered as analytical variable and interventions to narrow the gender gaps.

Safe Food Fair Food (SFFF) was a project implemented by ILRI and SUA to respond to the problem of unsafe food sold in the informal market between 2011 and 2015. The informal market does not adhere to the stipulated regulation and inspection procedures to prevent food borne diseases among consumers. The project also determined the effect of food borne diseases on men and women. The baseline study results exposed positive cultural perceptions towards milk and meat, which were considered to be very nutritious foods highly recommended for children and adults with special needs such as pregnant women.

This literature review revealed that gender issues were not addressed in some cases, or partially addressed to different extents by the various programmes and projects. More specifically, interventions were completely gender blind during colonial period and soon after independence. The Southern Highland Dairy Development Project (SHDDP) implemented in the 1980s recognized women in the female and in male headed household and identified gender gaps during monitoring and evaluation, but did not address the gaps. Others conducted pre-baseline studies and identified gender gaps without implementations of the recommendations that could narrow the gaps, such as MoreMilkIT projects implemented by ILRI. In other projects such as MilkIT and Safe Food Project by ILRI, gender was mentioned but not really integrated.

The slow progress in gender mainstreaming was associated with main challenges of project implementers and their leadership such as: a lack of political will, whereby the leaders were not convinced that gender mainstreaming is necessary for the particular project; lack of capacity to develop indicators to rigorously measure gender differences, disaggregate data by sex during data collection and conduct gender analysis; and lack of capacity to identify the issues and come up with workable interventions (DAC 2010).

Lack of political will to integrate a gender equality perspective can range from leaders of a project judging that budgets are not enough to implement gender gaps. Further, during planning gender related budget are usually slashed away in case of budget deficit. There is also a direct resistance to gender equality by some of the politicians. Other challenges, opportunities and prospects are as presented in Table 2.

### 3.3 Challenges, opportunities and Prospects experienced by women in the dairy value chain

Despite the importance of the dairy value chain to livestock keepers' livelihoods, there are gender related challenges/gaps hindering women from improving their economic status. Table 2 indicates the gender related challenges and opportunities available to address the challenges. Future prospects of the dairy value chain such as presence of policies to address gender issues in various development projects and programmes are also indicated in Table 2

**Table 2: Opportunities and Challenges for Gender Considerations in Tanzania's dairy value chain**

| Challenges   | Opportunities   | Prospects  |
|--|---|--|
| Lack of market information as income is too low for women to make calls on their mobile phones; most of the time women's phones are used for receiving calls rather than making calls. | Use of microfinance to access loans for buying and running mobile phones that could facilitate access to market information | Wide use of technologies   |
| Limited mobility of women  | Existing institutions such as NGOs, faith based organizations and the government to empower women                           | Wide use of technologies   |
| Lack of capital  | Presence of financial institutions willing to provide loans with low interests  | Existence of microfinance organizations for provision of capital                             |
| Low milk production in the dry season resulting from lack of/poor feeds  | Willingness of farmers to improve in feeding management by establishing pastures, providing concentrates and fodder         | Use of technology for preserving animal feeds including fodder and hay for use in dry season |



| Challenges  | Opportunities  | Prospects  |
|---|--|--|
| Low level education among rural women and Lack of entrepreneurial skills  | preservation<br>Government and Non-governmental organizations to empower women   | Political will to empower women                                |
| Commercialization of milk industry leading to men's takeover  | Presence of milk collection centers operating through farmer's groups, processors, hawkers who collect and sell to processors or consumers | Establishment of milking hub                                   |
| Women shouldering all basic needs at home while income obtained from sale of live animals spent on personal interests by some men   | Ownership of milk by women<br>Building the capacity of women to form women alone groups  |  |
| Lack of decision making power over resources including cattle and land  | Presence of Government and Non-Governmental institutions to empower women  | Presence of policies supporting gender equality in the country |
| Lack of / poor implementation strategies of the Land Act No. 5 of 1999, which advocates for women owning land through purchase, but rural women have no reliable income and cannot afford buying land and cannot also inherit | Presence of the Village and Land Acts of 1999 recognizing women as land owners   | Presence of gender policy and political will to empower women  |
| Women lack of / low decision making power over milk in the dry season   | Presence of Government and Non-Governmental institutions to empower women  | Political will to implement gender related activities          |
| Few female extension workers than male in rural areas   | Presence of both men and women extension staff   | Training of both men and women extension staff                 |
| Male extension staff attends to male farmers more than women due to tradition norms   |  |  |
| Lack of skills and knowledge in processing high quality products  | Presence of milk processors to process milk and milk products (especially in the wet season when milk is abundant)                         | Political will supporting processing industries                |

#### 4.0 CONCLUSION

The study concludes that development actors leading interventions must have the capacity to integrate gender beyond having equal number of men and women participating in the projects. This will happen through gender mainstreaming of the entire project cycle (identification/planning, implementation, monitoring and evaluation and impact assessment). There is also a need for qualified gender specialists to advise projects on formulating gender sensitive indicators and type of data to collect during situational analysis as well as develop strategies to reduce the identified gender gaps. Further, there is lack of political will among project leaders especially during planning where budget for gender related activities is always at minimal.

#### 4.1 Recommendations

Development of clear gender strategies that outline systematically, the gender mainstreaming processes in the project cycle in the dairy value chain for all ongoing and future interventions in Tanzania is recommended. This means that gender should be integrated from the designing stage to implementation and development of gender sensitive indicators for monitoring and evaluation of the dairy value chain projects/programmes is recommended. Again strategies for collecting gender disaggregated data and methods of conducting gender analysis should be imparted to project/programme implementers through the gender specialist

Integration of women needs and concerns in plans, programmes, policies and civic laws that promote gender equity and equality is recommended in order to enhance political support to gender issues. This will discourage patriarchal principles legitimized through customary laws which discriminate women from ownership of large animals such as cattle and participation in training offered by project implementers and extension staff.

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