Trends and drivers of women's leadership in dairy cooperatives: Evidence from the Tanga Region of Tanzania

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https://doi.org/10.51867/ajernet.7.3.145

ABSTRACT

Women contribute over 70% of labor in Tanzania's dairy value chain, yet they remain significantly underrepresented in leadership positions within dairy cooperatives, occupying less than 25% of leadership roles. This imbalance reflects structural barriers such as limited access to productive resources, lower education levels and entrenched socio-cultural norms that prioritize male authority. These constraints undermine cooperative principles of democratic participation and inclusive development. This study analyzed trends and drivers of women's leadership participation in dairy cooperatives in Tanga City Council and Muheza District from 2014 to 2023. Guided by Intersectionality Theory, this study analyzed trends and drivers of women's leadership participation in dairy cooperatives in Tanga City Council and Muheza District from 2014 to 2023. A mixed-methods approach combined quantitative data from cooperative records and surveys of 296 members across eight cooperatives with qualitative evidence from 40 key informant interviews and 16 gender-segregated focus group discussions. Findings reveal persistent gender disparities in leadership. Women were mostly represented as board members, while their presence in executive positions declined. Women chairpersons dropped from one in 2014 to none between 2015 and 2022 and no woman has served as treasurer since 2015. Vice chairperson's roles slightly improved, reaching three by 2023. District-level differences were significant ($\chi^2 = 19.67$, $p = 0.001$). Tanga City Council performed better, with women holding all treasurer roles and most vice chairperson positions, while Muheza District showed declining executive participation, with women concentrated in board member roles. Only UWAMLI had a female chairperson, while UWATA led in vice chairperson positions. Barriers were linked to patriarchal norms, religious teachings, limited asset ownership, financial dependence, household workloads, low confidence, limited education and weak institutional support. Cooperatives offering training and mentorship showed stronger female leadership outcomes. The study concludes that a persistent glass ceiling restricts women's advancement, calling for gender-responsive training, policy reforms and structural transformation to promote equitable participation.

Keywords: Cooperative Governance, Dairy Cooperatives, Gender Norms, Patriarchy, Women's Leadership

I. INTRODUCTION

Dairy cooperatives have appeared as transformative institutions that promote collective bargaining, knowledge transfer, and local innovation. They ease resource sharing, enhance access to formal markets, and support the adoption of modern technologies, thereby boosting productivity, improving rural incomes and strengthening resilience among smallholder producers (Chaddad & Cook, 2004). Success stories from India's Amul and New Zealand's Fonterra dairy cooperatives illustrate how cooperatives can evolve into globally competitive enterprises through strong member engagement, transparent governance and deliberate inclusion of women in decision-making processes (Kurien, 2005; Wadsworth et al., 2021).

However, in Sub-Saharan Africa, dairy cooperatives, like other rural cooperatives, have been criticized for their underrepresentation of women in decision-making and leadership positions, even though women contribute the majority of labour to dairy activities such as milking, feeding, cleaning and milk marketing (Njuki et al., 2016; World Bank, 2019; Huot et al., 2023). For example, in Kenya, Koech (2014) documented that although women are approximately 60% of dairy farmers, they hold less than 20% of cooperative leadership positions, with the concentration primarily in lower-level positions, such as committee members, rather than executive roles. Similarly, studies in Rwanda and Uganda have revealed patterns of women's leadership constrained by factors including limited land ownership, lack of formal

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education, household time burdens, and cultural norms that associate leadership with masculinity (Torrance et al., 2023). Such underrepresentation reflects deeper structural constraints, including limited access to and control over productive resources, lower educational attainment, and deeply embedded socio-cultural norms that prioritize male authority and limit women's public participation (Agarwal, 2018; Doss et al., 2015). Moreover, research outside the Sub-Saharan region also demonstrated that women's underrepresentation in cooperative leadership is not due to lack of contribution, interest, or capability, but rather stems from structural and systemic constraints that limit their participation (Dohmwirth & Hanisch, 2019), suggesting that gender inequality in leadership within cooperatives is a global issue. However, the contributing factors can be contextual, as gender relations are socially constructed. For example, a study conducted in Spain shows that, even in women-led cooperatives, women leaders continue to face challenges of balancing family responsibilities, accessing networks and overcoming stereotypes about women's leadership capabilities (Martínez-León et al., 2020).

Moreover, some countries have implemented deliberate reforms to increase women's representation in cooperative leadership, however, these stay isolated examples. In India, the National Dairy Development Board's Women's Dairy Program successfully elevated women's leadership in cooperatives from a mere 3% in 1970 to over 30% by 2020 through focused interventions including leadership training, financial literacy programs, establishment of women-only cooperatives and policy reforms that mandated minimum female representation on boards (Ravichandran et al., 2021). Similarly, in Kenya, the Dairy Board's gender mainstreaming efforts combined with support from organizations such as the Women in Dairy Program provided training to over 5,000 women, created mentorship networks, and advocated for policy changes that resulted in measurable increases in female leadership (Koech, 2014). In Ethiopia, sustained training and inclusion initiatives under agricultural development programs, including the Agricultural Growth Program, have contributed to improvements in women's participation in cooperative leadership. These initiatives focused on capacity-building activities, access to productive assets and community mobilization strategies, which helped increase women's visibility and engagement in cooperative decision-making, although women remain underrepresented in leadership positions (Wold et al, 2013). These cases highlight the potential of targeted interventions focused on women's empowerment, financial inclusion and institutional support to bridge gender gaps in cooperative governance.

In Tanzania, women account for more than 70% of the labour force in the dairy sector, performing tasks including milking, feeding animals, processing milk and marketing dairy products; however, they hold fewer than 25% of leadership positions within dairy cooperatives (Ogutu et al., 2014; Makundi & Thomas, 2023). Scholars have identified multiple barriers to women's leadership, including cultural perceptions that associate leadership with male authority, minimal ownership of productive assets such as cows and land, limited educational attainment, restricted access to leadership training opportunities and household responsibilities that limit women's time for cooperative activities (Achandi et al., 2023; Kurwijila et al., 2012). Nevertheless, existing studies show that cultural norms that discourage women from speaking in public forums or challenging men's authority constrain their participation in cooperative meetings and the decision-making process (Ogutu et al., 2014). Additionally, women's limited ownership of productive assets creates structural barriers to membership itself, as many cooperatives require members to own a minimum number of dairy cows and only 5% of Tanzanian women own formal land titles compared to 25% of men (Moyo, 2017). Moreover, earlier studies in the country show that the absence of gender-sensitive policies in most cooperatives has contributed to the existing barriers to women's leadership (Kurwijila et al., 2012).

While existing studies offer insights into women's participation in cooperatives and related challenges, particularly women's production roles or general membership patterns (e.g., Njuki et al., 2016; Ogutu et al., 2014), women's leadership trajectories over time to understand trends, patterns and changes in representation remain underexplored. Additionally, limited research has examined how women's leadership experiences may differ according to intersecting social, economic, personal and institutional circumstances. The available literature suggests that women have been studied as a homogeneous group, without accounting for intersectional factors such as age, education level, marital status, socioeconomic class and ethnic identity and how these factors intersect with gender to create different experiences of inclusion or exclusion.

Against this backdrop, this study examines the trends and drivers of women's participation in leadership positions within Tanzania's dairy cooperatives, specifically in the Tanga Region. The study addresses two research questions: (i) What are the trends in women's leadership representation in dairy cooperatives in Tanga Region between 2014 and 2023? and (ii) What social, economic, personal and institutional factors influence women's participation in leadership roles within dairy cooperatives?

1.1 Research Objectives

Accordingly, the study pursued the following objectives: (i) To examine trends in women's representation across different leadership positions in dairy cooperatives in Tanga Region between 2014 and 2023. (ii) To analyse the social, economic, personal and institutional factors influencing women's participation in leadership roles within dairy cooperatives.

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II. LITERATURE REVIEW

2.1 Theoretical Framework

This study is grounded in Intersectionality Theory, originally conceptualized by Crenshaw (1989) and further developed by scholars across multiple disciplines, to frame its analysis of women's leadership in dairy cooperatives. Intersectionality Theory provides an analytical lens for understanding how gender intersects with other social identities, including age, education level, marital status, socioeconomic class, religious affiliation and ethnic identity, to create differentiated experiences of inclusion or exclusion (Crenshaw, 1989). Rather than treating gender as an isolated variable, Intersectionality Theory recognizes that women's experiences of marginalization in cooperative leadership are shaped by the simultaneous interaction of multiple social categories and power structures (Collins, 2015).

In the context of dairy cooperatives, Intersectionality Theory is particularly relevant because women members are not a homogeneous group. A young, unmarried woman with limited education in a rural cooperative faces qualitatively different barriers than an older, educated, economically independent woman in a semi-urban setting. The theory enables examination of how patriarchal norms interact with economic status (asset ownership, income control), educational attainment, age-based hierarchies, religious beliefs and geographic context (urban versus rural) to produce varied patterns of exclusion from or access to leadership positions. This multi-dimensional approach moves beyond single-factor explanations of gender inequality and reveals how intersecting identities create layered disadvantages that compound to restrict women's leadership participation (Hankivsky, 2014).

By adopting Intersectionality Theory, this study examines patterns of women's representation in cooperative leadership and interprets how intersecting social, economic, personal and institutional circumstances shape women's experiences and opportunities for leadership participation. The theory therefore provides a lens for understanding differences in women's leadership experiences across age, marital status, education, economic position and geographical context.

2.2 Cooperative Governance and Gender Dynamics

Cooperatives are member-owned and democratically governed organizations founded on principles of equity, mutual self-help and democratic participation (Chaddad & Cook, 2004). The International Cooperative Alliance's principles emphasize open membership and democratic control; however, empirical research consistently shows that women remain marginalized in cooperative governance structures globally (Dohmwirth & Hanisch, 2019; Huot et al., 2023). In Sub-Saharan Africa, dairy cooperatives have been particularly criticized for underrepresentation of women in decision-making positions despite women constituting the majority of dairy labour (Njuki et al., 2016; World Bank, 2019).

Research from diverse contexts demonstrates that gender inequality in cooperative leadership stems from structural and systemic constraints rather than women's lack of contribution, interest, or capability (Dohmwirth and Hanisch, 2019). Even in contexts such as Spain, women leaders continue to face challenges of balancing family responsibilities, accessing networks and overcoming stereotypes (Martínez-León et al., 2020). Périlleux and Szafarz (2015) demonstrated that local gender norms interact with institutional structures in shaping women's actual engagement in leadership, indicating that even when formal opportunities exist, women's participation is mediated by societal expectations and intra-household dynamics.

2.3 Barriers to Women's Leadership in Cooperatives

The literature identifies multiple intersecting barriers to women's leadership in cooperatives. Social and cultural barriers include patriarchal norms that associate leadership with masculinity, religious teachings emphasizing women's subordination, and community expectations that penalize women who challenge traditional gender boundaries (Achandi et al., 2023; Agarwal, 2018). Economic barriers centre on women's limited access to and control over productive resources, including land and livestock ownership, which often serve as prerequisites for cooperative membership (Doss et al., 2015; Moyo, 2017). Agarwal (1994) established that control over income, not merely income generation, constitutes the critical dimension of economic empowerment relevant to leadership capacity.

Similarly, Kahamba and Xiuli (2021) found that women dairy cooperative members in Tanzania's Kilimanjaro Region generated income but lacked control over its allocation. Personal barriers include limited educational attainment, lack of self-confidence and fear of public speaking, which are rooted in lifelong socialization processes (Torrance et al., 2023). Institutional barriers encompass the absence of gender-sensitive policies within cooperatives, membership requirements tied to asset ownership, and training programs that target existing (predominantly male) leaders rather than aspiring women leaders (Huot et al., 2023; Kurwijila et al., 2012).

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2.4 Enabling Factors and Interventions

Despite persistent barriers, the literature documents several enabling factors for women's leadership in cooperatives. Targeted interventions including leadership training, financial literacy programs, mentorship networks and policy reforms mandating minimum female representation on boards have demonstrated measurable impact (Koech, 2014; Ravichandran et al., 2021). Post (2015) highlighted the transformative potential of women leaders in enabling environments, emphasizing that organizational support and targeted training serve as catalysts for women's transformative leadership.

Farhan (2022) similarly emphasized the importance of dismantling hidden institutional biases to achieve equitable representation. Nekhili et al. (2018) further documented that when women are present in organizations but excluded from senior leadership, their concerns and priorities tend to be marginalized, decisions reflect male perspectives and organizational cultures remain masculine. In Tanzania, studies have examined women's roles in dairy cooperatives primarily from the perspective of production contributions and general membership patterns (Njuki et al., 2016; Ogutu et al., 2014; Kahamba & Xiuli, 2021). However, systematic documentation of women's leadership trajectories over time and the intersection of gender with other social identities remain underexplored, creating the gap that the present study addresses.

III. METHODOLOGY

3.1 Research Design

The study adopted a cross-sectional mixed-methods design, combining quantitative and qualitative approaches with secondary data from cooperative records. The cross-sectional design was used to collect primary data from dairy cooperative members, women leaders and other participants at a single point in time to examine women's participation in leadership and the factors influencing their leadership experiences. In addition, secondary data were collected from cooperative records covering the period from 2014 to 2023 to examine trends in women's participation across different leadership positions over the ten-year period. The mixed-methods design integrated quantitative and qualitative approaches, enabling the study to measure patterns of women's representation in leadership and explore the social, economic, personal and institutional factors shaping their leadership participation and experiences. Quantitative data provided information on the distribution and trends of women's leadership representation, while qualitative data provided in-depth insights into women's experiences, perceptions and the contextual factors underlying the observed patterns. The use of secondary records alongside primary quantitative and qualitative data also enabled triangulation of findings and provided a broader understanding of women's participation in leadership in dairy cooperatives.

3.2 Study Area

This study was conducted in the Tanga Region, one of Tanzania's leading areas in dairy cooperative development. The region has 28 active primary dairy cooperatives under the Tanga Dairy Cooperative Union (TDCU). These cooperatives support milk collection, processing and marketing. These cooperatives serve as critical entry points for promoting gender inclusivity in leadership (Kurwijila et al., 2012). The Region forms both rural and semi-urban districts, making it ideal for studying variations in women's leadership dynamics. Two districts were purposively selected for this study: Muheza District and Tanga City Council. Muheza District is rural, characterized by smallholder farming systems, lower levels of formal education, greater adherence to traditional cultural practices and limited access to services and infrastructure. Tanga City Council, in contrast, is a semi-urban context with greater access to education, health services, markets and information, more diverse livelihood opportunities beyond agriculture and potentially more exposure to alternative gender norms through urban influences. This urban-rural comparison enables examination of how context shapes women's leadership opportunities and experiences.

The study adopted a cross-sectional mixed-methods design to provide a comprehensive snapshot of leadership participation over 10 years (2014-2023). The cross-sectional approach was selected for its suitability for finding trends and setting up associations among multiple variables within a defined time limit (Babbie, 2020). The mixed-methods design integrates quantitative and qualitative approaches, enabling both measurement of the size of gender disparities in leadership and in-depth exploration of the factors and experiences underlying these patterns (Creswell, 2003). Quantitative data provide breadth, documenting trends across multiple cooperatives and years, while qualitative data provide depth, capturing the lived experiences, perspectives and contextual factors that explain quantitative patterns.

3.3 Target Population

The study targeted dairy cooperative members in the two purposefully selected districts: Tanga City Council and Muheza District. Four cooperatives, including UWAKAKI, UVIWAPI, UWAMABO and UWATA in Tanga City Council, and UWAMIZI, UWAMA, UWAMLI, and UWAMKI in Muheza District were purposively selected based on criteria including membership size (selecting larger cooperatives with sufficient members for analysis), presence of

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women in leadership (selecting cooperatives with varying levels of female representation to enable comparison) and accessibility for research purposes.

3.4 Sampling and sample size

The sample size of cooperative members engaged in the study was determined using Yamane's (1967) formula for sample size calculation, as shown below:

$$n = \frac{N}{1 + N(e)^2}$$

The total membership across these eight cooperatives was 1,152. Using Yamane's formula, a sample size of 296 respondents was derived at a 95% confidence level and 5% margin of error. The sample was distributed proportionally across the eight cooperatives based on their membership size, with approximately 37 members per cooperative. Within each cooperative, stratified random sampling was employed to ensure representation of both women and men and distinct categories of members (ordinary members, current leaders and former leaders). A structured questionnaire with closed-ended questions for quantitative analysis and open-ended questions to capture detailed perspectives, was administered to the 296 sampled cooperative members to collect quantitative data on demographic characteristics, cooperative involvement, resources, time allocation, and perceptions of women's leadership. The questionnaire was organized into four sections: background information, women's participation in leadership, factors influencing leadership participation, and perceptions of women's leadership.

3.5 Data Collection Methods and Instruments

For qualitative data collection, purposive sampling was used to select information-rich cases. From each cooperative, five women leaders occupying various positions (chairperson, vice chairperson, secretary, treasurer, or board member) were selected for key informant interviews, yielding a total of 40 across the eight cooperatives. The interviews were conducted to gain in-depth insights into their leadership experiences, trajectories into leadership, challenges faced, strategies for overcoming barriers and recommendations for promoting women's leadership. Additionally, Focus Group Discussions (FGDs) participants were purposively selected to ensure homogeneity within groups (to encourage open discussion) while capturing diversity across groups. Separate FGDs were conducted with people in Kiswahili to enable participants to speak freely about gender-sensitive topics without concern about judgment from a different sex. Sixteen (16) FGDs were conducted: eight in Tanga City Council (four with women, four with men) and eight in Muheza District (four with women, four with men). Each FGD comprised 8-12 participants, following recommended practices for a manageable group size that enables all participants to contribute (Creswell, 2003). FGDs were conducted to explore collective feelings, shared experiences and social norms about women's participation in leadership. Each FGD lasted 60-90 minutes. All key informant interviews and focus group discussions were conducted between March and April 2024 in Tanga City Council and Muheza District. To protect participants' confidentiality, direct quotations presented in the findings are anonymised and identified only by the participant's role, cooperative affiliation, study area and the month and year of the interview.

Moreover, the study used secondary data from cooperative records, primarily documenting women's participation in leadership over the ten-year period (2014-2023). These included membership registers documenting total membership and gender composition, lists of executive committee members showing positions and gender composition in each year, attendance registers for general meetings and annual reports documenting cooperative activities and leadership changes. These secondary data provided the foundation for quantitative analysis of trends in women's leadership representation.

3.6 Data Analysis

Secondary data from cooperative records (2014-2023) were compiled in Excel spreadsheets and then transferred to STATA version 18 for analysis. Descriptive statistics were calculated to assess trends in women's leadership representation, including frequencies and percentages of women in each leadership position (chairperson, vice chairperson, treasurer, secretary, board member) for each year, average number of women leaders per cooperative and per district, and growth rates in women's representation over the ten-year period. Time-series analysis examined changes over time, finding periods of increase, decrease, or stagnation in women's representation. Cross-tabulation and chi-square tests analysed associations between leadership roles and location (district, cooperative), assessing whether patterns of women's representation differed significantly across contexts.

Survey data from the 296 questionnaires were entered into STATA and cleaned to find and correct errors. Descriptive statistics characterized the sample in terms of demographic characteristics, cooperative involvement and resource access. Frequency distributions, means and percentages summarized key variables. Visual representations including bar charts and tables were generated to present trends and comparisons clearly. Statistical significance was assessed at $p<0.05$ level.

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Intersectionality Theory guided the interpretation of differences in women's leadership experiences across social, economic and contextual characteristics. Quantitative data were analysed using descriptive statistics, cross-tabulations and chi-square tests to establish patterns of women's leadership representation across cooperatives and districts. These analyses were not intended to statistically test interaction effects among social identities. Instead, qualitative data from key informant interviews and focus group discussions were used to explore how gender interacted with age, marital status, education, economic position, religious beliefs and geographical context to shape women's experiences of leadership participation. The qualitative findings were therefore interpreted through an intersectional lens to complement the quantitative patterns.

All interviews and FGDs were audio-recorded and transcribed verbatim. Transcripts were produced in the language used during data collection (primarily Kiswahili with some English) and then translated into English for analysis. A subsample of transcripts was back translated to verify translation accuracy. Transcripts were imported into ATLAS.ti 25 qualitative data analysis software for systematic coding and analysis.

Thematic analysis (Braun & Clarke, 2019) followed an iterative process. First, the research team reviewed all transcripts to gain general familiarity with the data. Second, an initial coding framework was developed deductively from the research questions, focusing on key issues related to women's participation, leadership experiences and constraints within dairy cooperatives. Third, transcripts were systematically coded, with additional codes developed inductively as new themes emerged from the data. Fourth, coded segments were reviewed to identify patterns, contradictions and variations across participants' experiences. Fifth, themes were refined and organized into coherent categories reflecting major influencing factors, including social factors (patriarchal norms, religious teachings and community expectations), economic factors (asset ownership, income control and financial dependence), personal factors (education, confidence, aspirations and household responsibilities) and institutional factors (cooperative policies, training availability and membership structures). Areas of convergence between quantitative and qualitative findings strengthened confidence in the conclusions, while areas of divergence prompted further examination to understand underlying differences. This triangulation of methods and data sources enhanced the validity and depth of the study's findings (Donkoh & Mensah, 2023).

3.7 Ethical Considerations

Ethical clearance was obtained prior to data collection. Informed consent was secured from all participants before their involvement in surveys, interviews and focus group discussions. Participants were assured of confidentiality and the voluntary nature of participation. All data were anonymised during transcription and analysis to protect participants' identities. Quotations presented in the findings are identified only by role, cooperative affiliation, district and interview date.

IV. FINDINGS & DISCUSSION

4.1 Socio-demographic Characteristics of Respondents

The results in Table 1 show that male respondents constituted the majority of cooperative members across all eight cooperatives, ranging from 59.5% in UWAMKI to 83.8% in UWAMA. Female representation ranged from 16.2% in UWAMA to 40.5% in UWAMKI, indicating that women were numerically underrepresented in cooperative membership. Such differences in membership composition may affect women's prospects for leadership, particularly where leadership positions are determined through member voting. Most respondents were aged 36–60 years, accounting for more than 67% in all cooperatives and reaching 100% in UWAKAKI, UWAMABO and UWATA. Younger members (18-35 years) were fewer, though notable in UWAMIZI (32.4%) and UWAMA (21.6%). The underrepresentation of younger women raises concerns for leadership succession.

Most respondents were ordinary cooperative members, ranging from 73.0% in UWATA to 89.2% in UWAKAKI. Current leaders or executives accounted for 2.7%–16.2% of respondents, while former leaders accounted for 2.7%–13.5%. Thus, the survey largely captured the views of ordinary cooperative members rather than those currently occupying leadership positions. Regarding membership duration, members with 5–10 years of experience accounted for 27.0%–48.6% across the cooperatives, while those with more than 10 years ranged from 37.8% to 56.8%. The relatively long membership duration indicates that many respondents had substantial experience with cooperative activities. Overall, the sample was predominantly male, middle-aged and composed of ordinary members with relatively long periods of cooperative membership.

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Table 1

Socio-demographic characteristics of respondents (n=296)

Variable	Category	Cooperatives							
		UVIWAPI	UWAKAKI	UWAMA	UWAMABO	UWAMIZI	UWAMKI	UWAMLI	UWATA
Gender	Female	10 (27%)	7 (18.9%)	6 (16.2%)	7 (18.9%)	10 (27%)	15 (40.5%)	8 (21.6%)	9 (24.3%)
	Male	27 (73%)	30 (81.1%)	31 (83.8%)	30 (81.1%)	27 (73%)	22 (59.5%)	29 (78.4%)	28 (75.7%)
Age	18 - 35	4 (10.8%)	0 (0%)	8 (21.6%)	0 (0%)	12 (32.4%)	8 (21.6%)	6 (16.2%)	0 (0%)
	36 - 60	33 (89.2%)	37 (100%)	28 (75.6%)	37 (100%)	25 (67.5%)	29 (78.3%)	31 (83.7%)	37 (100%)
	Above 60	0 (0%)	0 (0%)	1 (2.7%)	0 (0%)	0 0%)	0 (0%)	0 (0%)	0 (0%)
Membership	Former leader	4 (10.8%)	3 (8.1%)	1 (2.7%)	5 (13.5%)	3 (8.1%)	3 (8.1%)	3 (8.1%)	4 (10.8%)
	Leader/Executive	4 (10.8%)	1 (2.7%)	4 (10.8%)	3 (8.1%)	2 (5.4%)	2 (5.4%)	5 (13.5%)	6 (16.2%)
	Ordinary member	29 (78.4%)	33 (89.2%)	32 (86.5%)	29 (78.4%)	32 (86.5%)	32 (86.5%)	29 (78.4%)	27 (73%)
Years in Cooperative	Less than 5 years	2 (5.4%)	5 (13.5%)	8 (21.6%)	4 (10.8%)	10 (27%)	6 (16.2%)	5 (13.5%)	1 (2.7%)
	5 - 10 years	18 (48.6%)	18 (48.6%)	15 (40.5%)	13 (35.1%)	10 (27%)	14 (37.8%)	18 (48.6%)	15 (40.5%)
	More than 10 years	17 (45.9%)	14 (37.8%)	14 (37.8%)	20 (54.1%)	17 (45.9%)	17 (45.9%)	14 (37.8%)	21 (56.8%)

4.2 Women's Representation Across Leadership Roles

Table 2 shows that women's leadership representation was concentrated mainly in Board Member and Secretary positions, while their representation in senior executive positions was limited. Across the 2014–2023 period, women occupied 82 Board Member positions and 19 Secretary positions. In contrast, women held only 16 Vice Chairperson positions, 2 Treasurer positions and 2 Chairperson positions. The Chairperson position had the lowest representation, with women occupying the position only in 2014 and 2023. Similarly, women held Treasurer positions only in 2014 and 2015, with no female Treasurer recorded from 2016 to 2023. These results indicate that women's representation varied substantially according to the type of leadership position. During the interview, fear was mentioned as one of the factors hindering women from taking up the higher positions. As one key informant from UWAMLI Dairy Cooperative, Muheza District, 6th April 2025, said, "*Most women get the position of board members, not other positions like chairperson; they are afraid to lead in male-dominated cooperatives."* This statement captures both external barriers (male-dominated environments that discourage women) and internalized barriers (women's fear and lack of confidence resulting from repeated messages that leadership is inappropriate for women). Thus, the reemergence of a female chairperson in 2023 reflects a combination of supportive institutional conditions and individual capability. The presence of the "*Maziwa Faida"* project enhanced women's engagement in livestock keeping and leadership by building skills, confidence and visibility within the cooperative. In addition, the elected chairperson's personal attributes were critical to her selection: as a retired teacher, she was relatively well educated, confident and effective in communication and decision-making. Her creativity and entrepreneurial thinking, demonstrated through proposals to diversify cooperative income by selling agricultural inputs such as animal drugs, animal feeds and flour, further strengthened members' trust in her leadership and contributed to her emergence as chairperson.

The Vice Chairperson position shows modest but notable improvement over time, growing from 1 position (6.25%) in 2014-2020 to 3 positions (18.75%) in 2021-2023. This threefold increase is meaningful progress, suggesting that this position may serve as an entry point for women into senior leadership roles. The Vice Chairperson role, while still at the executive level, may be perceived as less threatening to male authority than the Chairperson position; however, it offers opportunities to prove leadership for future advancement.

The Treasurer role, key to financial oversight, was held by women only in 2014-2015 (1 position) and was absent from 2016 onward. This loss of women from financial leadership is concerning since managing contributions,

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payments and loans is vital to cooperatives. Women's exclusion reflects societal views linking financial tasks to men and assumptions that women lack numeracy or business skills, despite evidence of their strong financial abilities.

Secretary positions showed more consistent representation, with women holding 1-2 positions (5.26%-10.53%) across most years. The Secretary role involves record-keeping, correspondence and administrative support rather than strategic decision-making or financial control, aligning with gendered divisions of labour that associate women with supportive and administrative functions rather than executive authority. The relative stability of women in Secretary positions, compared with fluctuations in other roles, suggests that cooperatives may perceive this as a proper "feminine" role that does not challenge male dominance in strategic leadership.

These leadership patterns highlight a glass ceiling, where women are visible but lack access to strategic roles. Within the glass ceiling concept, Connell (2006) describes the invisible barriers that hinder women's rise to senior positions despite equal opportunity policies. Women's prevalence in board and secretary roles suggests inclusion but preserves male dominance in strategic and financial decisions by Chairpersons and Treasurers. The patterns also reflect Jeong and Compion (2021)'s tokenism in women's leadership: symbolic inclusion without real influence, serving organizational legitimacy externally but keeping male power internally. Women on boards appear to promote gender equity, but decision-making stays with men. We argue that women's exclusion from these positions diminishes their ability to influence the structural and economic direction of cooperatives, even when they hold lower-tier roles. Unarguably, this imbalance perpetuates gendered power dynamics that limit women's strategic influence. These findings align with previous research that has highlighted that when women are present in organizations but excluded from senior leadership, their concerns and priorities tend to be marginalized, that decisions reflect male perspectives and interests and that organizational cultures remain masculine (Farhan, 2022; Nekhili et al., 2018).

Table 2

Types of Leadership Roles Held by Women in Dairy Cooperatives (2014–2023)

Year	Chairperson	Vice Chairperson	Treasurer	Secretary	Board Member
2014	1 (50%)	1 (6.25%)	1 (50%)	2 (10.53%)	10 (12.2%)
2015	0 (0%)	1 (6.25%)	1 (50%)	2 (10.53%)	8 (9.76%)
2016	0 (0%)	1 (6.25%)	0 (0%)	2 (10.53%)	9 (10.98%)
2017	0 (0%)	1 (6.25%)	0 (0%)	1 (5.26%)	10 (12.2%)
2018	0 (0%)	1 (6.25%)	0 (0%)	2 (10.53%)	7 (8.54%)
2019	0 (0%)	1 (6.25%)	0 (0%)	2 (10.53%)	7 (8.54%)
2020	0 (0%)	1 (6.25%)	0 (0%)	2 (10.53%)	7 (8.54%)
2021	0 (0%)	3 (18.75%)	0 (0%)	2 (10.53%)	8 (9.76%)
2022	0 (0%)	3 (18.75%)	0 (0%)	2 (10.53%)	9 (10.98%)
2023	1 (50%)	3 (18.75%)	0 (0%)	2 (10.53%)	7 (8.54%)
Total	**2 (100%)**	**16 (100%)**	**2 (100%)**	**19 (100%)**	**82 (100%)**

4.3 Women's Representation and Leadership Trends

The analysis of women's participation in leadership roles within dairy cooperatives in Muheza District and Tanga City Council from 2014 to 2023 shows that women's involvement has been predominantly concentrated in board member positions, while higher-ranking executive posts such as Chairperson, Treasurer, Vice Chairperson, and Secretary remain largely male-dominated. Board member positions represented the most stable area of participation, fluctuating between a high of 10 positions in 2014 and 2017 and lows of 7 positions in 2018–2020 (Figure 2). Chairperson roles exhibited the most dramatic decline, dropping from 2 position in 2014 and 2023 to complete absence between 2015 and 2022. Treasurer positions similarly disappeared after 2015, indicating retreat from financial leadership roles. In contrast, Vice Chairperson positions showed a positive trajectory, tripling from 1 to 3 positions by 2023, while Secretary positions remained relatively stable, fluctuating between 1 and 2 positions annually. This clustering of women in less strategic positions reflects a persistent glass ceiling, limiting advancement to decision-making roles.

Qualitative evidence highlights the role of training and mentorship programs in enabling women to enter higher leadership roles. Leaders from cooperatives such as UWAKAKI emphasized that leadership training improves confidence and awareness, helping women occupy Vice Chairperson and Secretary positions. Cooperatives with structured capacity-building initiatives demonstrated relatively higher women representation in these roles, while those without such programs showed stagnation or decline, echoing Jeong and Compion (2021) on the limits of tokenism. Socio-cultural constraints, including patriarchal norms and family responsibilities, also restrict women's participation in leadership. As a UWAMKI board member noted, growing cooperative responsibilities increase the challenges and fear of leadership among women. Conversely, when supportive systems exist such as gender-sensitive training, policy inclusion, and male allyship women's participation expands. These findings align with Post (2015), highlighting the transformative potential of women leaders in enabling environments, and with Farhan (2022), emphasizing the importance of dismantling hidden institutional biases to achieve equitable representation.

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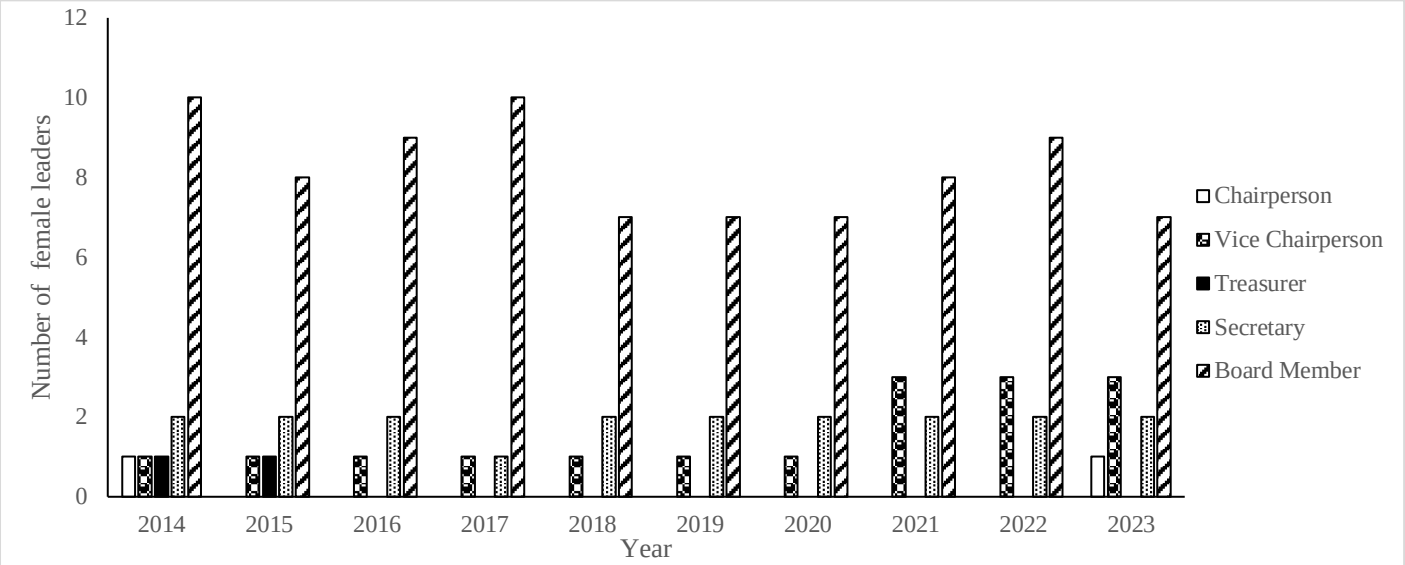


Figure 2
Trend of women leaders across leadership roles

4.4 Women leadership roles across districts

The results in Table 3 show contrasting patterns between the two districts. Tanga City Council proves stronger female leadership representation across multiple roles, particularly at higher levels. The district accounts for all Treasurer positions (2 positions, 100%) and most Secretary positions (13 positions, 68.42%). Most notably, Tanga City Council dominates Vice Chairperson representation with 13 positions (81.25%) compared to Muheza's 3 positions (18.75%).

In contrast, Muheza District shows concentration in Chairperson roles (2 positions, 100%) and Board Member positions (46 positions, 56.10%). However, Muheza completely lacks representation in Treasurer roles and shows significantly lower participation in Secretary and Vice Chairperson positions. The chi-square analysis reveals a statistically significant association ($\chi^2 = 19.67$, df = 4, p = 0.001) between leadership roles and district location, showing that district-level factors significantly influence women's leadership opportunities. These contrasting patterns align with qualitative insights suggesting greater investment in inclusive governance and leadership training in the Tanga City Council. The dominance of Tanga City Council in executive positions specifically Vice Chairperson, Treasurer, and Secretary suggests the presence of urban-based enabling conditions that favor women's leadership. Urban socio-cultural contexts tend to be more progressive, fostering greater social acceptance of women in decision-making roles. Additionally, women in Tanga City have improved access to information, professional networks, and mentorship opportunities, which enhance their exposure to cooperative governance processes.

The marked disparity in women's leadership participation in Muheza reflects a combination of structural and socio-cultural challenges. Key informants highlighted limited access to regular leadership training, the predominance of male membership within cooperatives, and deeply entrenched patriarchal norms that restrict women's ability to attend meetings or stand for election. Collectively, these constraints diminish women's visibility, confidence and opportunities to engage effectively in cooperative governance. These findings align with the argument of Périlleux and Szafarz (2015), who assert that local gender norms interact with conceptualizations of empowerment, indicating that even when formal opportunities exist, women's actual engagement in leadership is mediated by societal expectations, intra-household dynamics and their own sense of self-efficacy.

Table 3
Association between Leadership Roles in Dairy Cooperatives (2014–2023) and districts

Leadership Role	Location		Chi-square	df	sig
	Muheza District	Tanga City Council			
Chairperson	2 (100%)	0 (0%)	19.67	4	0.001*
Vice Chairperson	3 (18.75)	13 (81.25)			
Treasurer	0 (0%)	2 (100%)			
Secretary	6 (31.58%)	13 (68.42)			
Board Member	46 (56.10%)	36 (43.90%)			

** Indicate significant relationship (p<0.05)*

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4.5 Cooperative-Level Patterns in Women's Leadership

Figure 3 highlights significant variation in women's leadership across individual cooperatives, showing that cooperative-specific factors strongly influence gender equity outcomes. While district-level context matters, leadership culture, internal policies and targeted interventions play a critical role in shaping women's participation in governance. UWAMLI is the only cooperative where women attained Chairperson positions, achieving two over the study period. This shows that structural barriers to top leadership can be overcome, though the cooperative has lower representation in other roles, with only six Secretary and seven Board Member positions held by women. This may reflect a focused effort on supporting women at the top or indicate that the exceptional Chairpersons have not yet generated broader participation. Qualitative data attribute this success to intensive support from the NGO program and MAZIWA FAIDA PROJECT, which offered training, mentorship, engagement with religious and traditional leaders to challenge gender norms and access to dairy cows through loans. As the chairperson noted, these interventions increased confidence and family and community support, creating conditions for breakthrough leadership.

UWATA demonstrates the strongest overall women's leadership, particularly in Vice Chairperson roles (10 positions) and Board Member positions (11). However, it lacks women in Chairperson, Treasurer, and Secretary roles, indicating support for deputy leadership while maintaining male dominance in executive and financial positions. Interviews revealed an informal practice of appointing women as Vice Chairpersons to ensure representation while keeping male Chairpersons. This raises questions about whether this reflects meaningful power-sharing or tokenism. The pattern suggests that while women are visible, real decision-making authority remains male-dominated. UWAMABO and UWAMKI show similar patterns, with UWAMABO holding three Vice Chairperson and ten Board Member positions, and UWAMKI holding three Vice Chairperson and 15 Board Member positions, the highest Board Member representation. Both have no women in Chairperson, Treasurer, or Secretary roles, reflecting partial integration of women in governance but persistent barriers to top leadership and financial oversight.

UWAKAKI shows a distinctive pattern with women holding two Treasurer positions and moderate representation in Secretary (5) and Board Member (9) roles. This success is linked to financial literacy training from a microfinance institution and the cooperative's location in Tanga City Council, where women have higher education levels. Supportive spouses and education were cited as key enablers, highlighting the importance of skills and social support in advancing women's leadership. UVIWAPI concentrates women in Secretary positions (8, the highest among cooperatives) and moderate Board Member representation (8), but no executive roles. This reflects traditional gendered divisions of labor, with women managing administrative tasks while men retain strategic authority.

UWAMA and UWAMIZI show the weakest representation. UWAMA has ten Board Member with no executive roles and UWAMIZI has nine Board Member positions only. Challenges include limited leadership training, strong patriarchal norms, male-dominated membership, and family discouragement, collectively hindering women's leadership prospects. Overall, these variations indicate that women's leadership outcomes depend more on cooperative-specific factors than regional context. Cooperative culture, training opportunities, mentorship programs, explicit gender policies and partnerships promoting women's empowerment are critical. Cooperatives with at least 24% female membership show stronger leadership outcomes, suggesting that numerical presence enhances electoral viability and support.

The successes of UWAMLI and UWATA demonstrate that transformative change is possible when cooperatives foster enabling environments. These findings align with Martínez-León et al. (2020), showing that addressing formal and informal barriers is necessary to overcome male dominance and with Post (2015), emphasizing organizational support and targeted training as catalysts for women's transformative leadership. Comparisons between cooperatives with and without interventions underscore the pivotal role of targeted support in achieving gender equity in leadership.

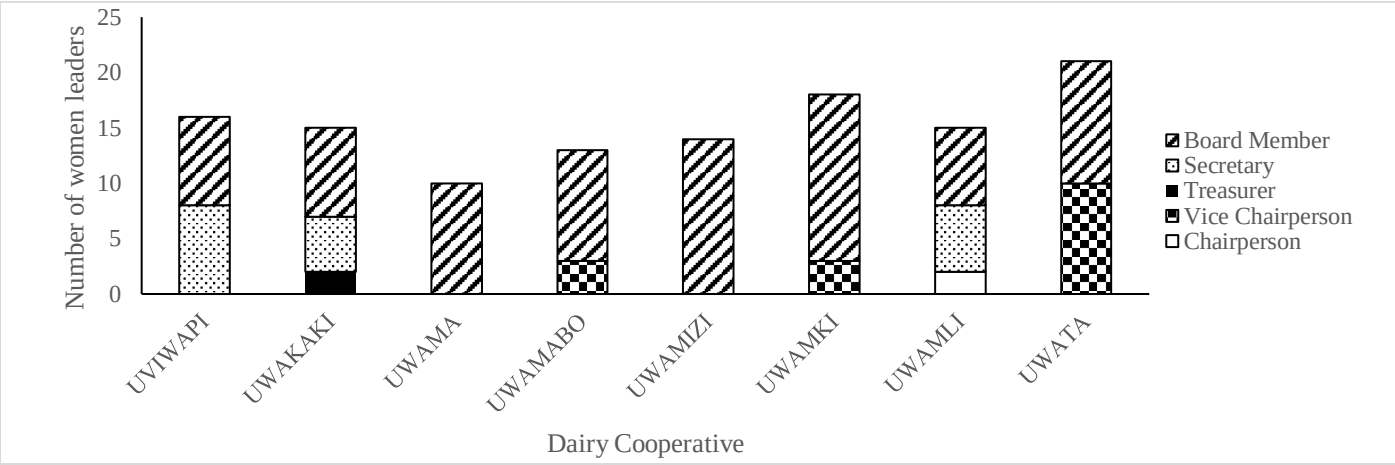


Figure 3

Pattern of Leadership Roles in Dairy Cooperatives

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4.6 Factors Influencing Women's Leadership Participation

4.6.1 Social and cultural norms factors

Different social factors and patriarchal gender norms appeared as primary barriers limiting women's leadership in dairy cooperatives. These factors run at ideological and cultural levels, shaping beliefs about proper roles for people, creating social sanctions against women who challenge traditional gender boundaries, and constraining women's aspirations and self-confidence about leadership. First, the patriarchal Norms and Male Authority. Women across cooperatives consistently described patriarchal norms as restricting their leadership participation. For example, one of the board members UWAMIZI Dairy Cooperative, Muheza District, 7th April 2025 explained,

> "*Some men feel threatened when women hold leadership, so they prevent their wives from participating. They say a woman's place is at home, not in cooperative meetings."*

The reference to men preventing wives' participation highlights how patriarchal power runs through husbands' control over wives' mobility and time allocation. Most women mentioned needing explicit permission from their husbands to attend meetings, stressing that there were negative consequences for those who took part without their husbands' approval. As a board member UWAMIZI dairy cooperative, Muheza District, 8th April 2025 added,

> "*We are not allowed by our husbands to even attend meetings. If we go without permission, there is trouble at home. The husband may refuse to give money for food or may threaten divorce*."

These findings indicate that gender interacted with marital status and household power relations to shape women's participation in cooperative leadership. Married women experienced particular constraints associated with marital and household responsibilities that were less directly applicable to unmarried women. From an Intersectionality Theory perspective, marital status does not operate independently of gender; rather, being a woman and being married can combine to create particular forms of constraint on participation.

This testimony reveals how patriarchal power runs through economic control and threat of marriage dissolution, with women's basic household security contingent on conformity to husbands' wishes, and how mobility control affect women's engagement in cooperative activities and so taking up leadership roles. Mothers-in-law and older women in husbands' families appeared as important enforcers of patriarchal norms. Several young married women described how their mothers-in-law actively discouraged their participation in leadership and punished perceived disobedience. As one of the board members UWAMKI Dairy Cooperative, Muheza District, 9th April 2025 explained,

> *"Elderly women in the husband's family enforce male dominance on younger women in order to ensure that they obey their husbands. If I participate in leadership without my husband's blessing, his mother will cause problems, saying I'm disrespectful and not a proper wife."*

The findings further suggest that women's experiences varied according to age and family position. Younger married women may face expectations concerning obedience and domestic responsibilities, while older women may occupy different positions within household and community structures. Thus, gender interacted with age, marital status and family relationships to shape how women experienced expectations concerning leadership.

This enforcement by older women proves how patriarchal systems are kept not only by men but also by women who have internalized gender hierarchies and gained limited power through age and conformity to patriarchal expectations. The findings further reveal that patriarchal norms operate through both internalized beliefs and external enforcement mechanisms. Most women described having internalized beliefs that leadership was inappropriate for women, resulting in self-exclusion even when formal opportunities existed. As one of the board members UWAMLI Dairy Cooperative, Muheza District, 9th April 2025 said,

> "*Most women get the position of board members, not other positions like chairperson they are afraid to lead in male-dominated cooperatives.*"

The emphasis on fear suggests that repeated experiences of gender-based resistance may discourage some women from aspiring to senior leadership positions. From an Intersectionality Theory perspective, these experiences were not uniform among women. Younger married women described stronger expectations concerning obedience and domestic responsibilities, while some educated women reported resistance when their knowledge and confidence challenged established gender expectations. Thus, gender intersected with age, marital status and education to produce different experiences of constraint and opportunity. Second is religious teachings' subordination of women. The interviews revealed that religious beliefs serve as external constraints and bring internal conflicts, with women experiencing genuine religious dilemmas about whether leadership participation is disobedience to divine will. Women described experiencing conflict between religious teachings and leadership aspirations. As one secretary UWAMKI Dairy Cooperative, Muheza District, April 2025 explained, said:

> "*Religious teachings do not help matters; instead, they perpetually preach doctrines that erode women's autonomy. We are constantly taught to give to men. So as not to disobey God's command, I must seek my husband's consent to participate in research or leadership activities."*

Some respondents perceived particular interpretations of religious expectations as reinforcing women's responsibilities to husbands and families. These experiences should be understood within the wider social context in which gender, marital status and family responsibilities intersect. The findings therefore suggest that religious

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interpretations may interact with existing social and household expectations rather than affecting all women in the same way.

Some educated women were aware how male religious leaders' emphasis on women's subordination contrasted with religious teachings about equality and justice that could support women's participation. One educated woman, UWAKAKI Dairy Cooperative, Tanga City Council, 19th March 2025 explained,

> "*Religious leaders quote verses about women obeying husbands, but they never mention verses about justice, about how God values all people equally, about how the Prophet consulted with women. They choose interpretations that keep men in power."*

The experiences of educated women also demonstrate that women do not experience gender-based constraints in the same way. Education may provide women with knowledge and confidence to participate in cooperative decision-making, while at the same time increasing their visibility when they challenge established expectations. This suggests an intersection between gender and educational background, whereby education may create opportunities for leadership while also exposing some women to resistance from existing social structures.

However, our findings suggest that, even if women are aware of the religious beliefs that constrain their full participation in cooperative leadership and governance, their agency stays weak, due to the internal conflicts these beliefs create. Another is community expectations and social Sanctions. The community expectations and social sanctions offered concrete enforcement mechanisms that punished women who challenged gender boundaries. These mechanisms included gossip and reputation damage, social exclusion, questioning of moral character, and concerns about marriage prospects for daughters of "disobedient" women, which discouraged women from taking up leadership positions. As one young single woman from UWAMA Dairy Cooperative, Muheza District, 7th April 2025 explained,

> *"If a woman is too visible in public, too confident in meetings, people start talking. They say she is forgetting her place, becoming too proud, not respectful. This kind of talk damages a woman's reputation. It can make it hard to find a husband or keep a husband."*

The linkage between women's leadership participation and concerns about marriage prospects appeared particularly strong for unmarried women, who expressed fear of being perceived as "too independent" or "not obedient" as some respondents perceived that men preferred wives who were submissive and focused on domestic responsibilities. As one young single woman from UWATA Dairy Cooperative, Tanga City Council, 6th March 2025 said,

> "*My father worries that if I am too involved in cooperative leadership, men will think I am stubborn and will not want to marry me. A woman's reputation must be guarded carefully because marriage depends on it.*"

For married women, social sanctions often took the form of accusations of neglecting household responsibilities and failing as wives and mothers. Several married women described being criticized by neighbours, relatives and even other cooperative members for attending meetings or training instead of being at home. As one board member UWAMABO Dairy Cooperative, Tanga City Council, 7th March 2025 explained,

> *"When I attend cooperative meetings, people say I'm neglecting my children, that I care more about cooperatives than my family. They imply I am not a good mother. These accusations hurt, and they make me question whether leadership is worth the social cost."*

Overall, the findings indicate that social and cultural barriers to women's leadership were interconnected rather than operating independently. Gender interacted with age, marital status, education, family relationships and community expectations to shape women's experiences of participation and leadership. This finding is consistent with Achandi et al. (2023), who highlighted the importance of local gender norms in shaping women's opportunities within agricultural and cooperative settings.

4.6.2 Economic Factors

The first factor is ownership of dairy cows and other productive assets. Most women described that the lack of cow ownership excluded them from membership. As one of the board members UWAMA Dairy Cooperative, Muheza District, 8th March 2025 explained, said,

> "*Few women own cows that's why it becomes difficult for them to join. Without cows, you cannot be a member, and without membership, you cannot lead.*"

This finding illustrates how gender and economic position intersect to shape access to cooperative leadership. Women who performed dairy work but lacked ownership or control of cattle could face a disadvantage at the membership stage, which subsequently limited their opportunity to compete for leadership positions. The disadvantage therefore operated through several connected levels: gendered access to productive assets, cooperative membership and leadership opportunities.

Another board members UWAMIZI Dairy Cooperative, Muheza District, 7th April 2025 explained,

> "*Women lack cow ownership; they're not even eligible to join the cooperative. We care for the cows, we do the milking and feeding, but the cows belong to our husbands*."

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This disconnection between labour and asset ownership mirrors Doss et al. (2015), who found that women's agricultural work often lacks control over assets. Women reported performing substantial dairy labour, including milking, feeding, cleaning and milk processing, while ownership of cattle often remained with men. Land ownership presented similar barriers. Many cooperatives required members to own land for grazing and fodder production, with minimum land holdings specified in membership criteria. As one of the board members UWATA Dairy Cooperative, Tanga City Council, 7th March 2025 explained,

> "*Women lack land and cows, so we're disqualified automatically from membership. Even when we contribute labour, even when milk comes from cows we care for, we're not recognized as legitimate members because we don't own the assets*."

Most women got membership through exceptional circumstances such as inheriting property from deceased fathers or husbands. Women leaders attributed their capacity to assume leadership roles partly to asset ownership. As one chairperson UWAMKI Dairy Cooperative, Muheza District, 9th April 2025 explained, explained:

> *"I own three cows that I inherited from my father. This ownership gives me confidence to speak in meetings because I'm not dependent on my husband for cooperative participation*."

These findings suggest that ownership of productive assets may strengthen women's perceived stake in cooperative activities and their confidence to participate in leadership. Thus, women without independent assets may face both formal and informal barriers to membership and leadership, while women who control productive assets may have greater opportunities to establish credibility within the cooperative. As one board member UWAMIZI Dairy Cooperative, Muheza District, 9th April 2025, described:

> *"I try to attend meetings, but if household needs are high, my husband expects me to focus on those first. It's not that he refuses to support me it's the pressure of managing everything that limits my participation."*

A clear contrast emerged between women with independent income and those whose livelihoods were tied to joint household resources. Women who earned their own income through employment, businesses, or remittances expressed greater autonomy and confidence in taking on leadership responsibilities. As one board member UWATA Dairy Cooperative, Tanga City Council, 6th March 2024 who operated a small shop stated:

> *"Having my own income changes everything. I can budget for transport and make decisions about attending meetings without waiting for someone else to agree."*

However, even women with stable incomes described challenges related to cultural expectations about household roles. Some women noted that while they earned money, much of it was expected to support household needs, leaving little for cooperative engagement. One educated woman UWAMLI Dairy Cooperative, Muheza District, 8th April 2025, employed as a teacher explained:

> *"I earn a salary, but much of it goes to household needs food, clothes, school supplies. My husband also contributes, but he retains more control over how he uses his income. Even though I work, it doesn't always translate into having money specifically for cooperative activities."*

The qualitative accounts further indicate that economic independence interacted with gender and household relationships to influence women's participation. Women with independent sources of income could have greater flexibility to meet participation-related costs and attend cooperative activities, whereas women with limited control over household resources faced additional constraints. Thus, economic position did not operate separately from gender and marital or household circumstances; these conditions combined to shape women's ability to participate in leadership.

This pattern aligns with Agarwal's (1994) research, which shows that control over income, not merely income generation, constitutes the critical dimension of economic empowerment relevant to leadership capacity. The findings echo Kahamba and Xiuli's (2021) finding that women dairy cooperative members generated income but lacked control over its allocation, and remained economically subordinated, with limited capacity for autonomous decision-making about cooperative participation.

Overall, the findings show that women's economic circumstances influenced leadership opportunities through multiple pathways. Cattle and land ownership affected access to cooperative membership, while control over income influenced women's capacity to participate in cooperative activities. These findings demonstrate that gender inequality in leadership was closely connected to women's economic position and control over productive resources.

4.6.3 Personal Factors

Two major factors were found, the lack of education and limited self-confidence. Education appeared as a critical enabler of women's leadership. Women with secondary or higher education appeared to have greater confidence in public speaking, better understanding of cooperative financial reports and governance procedures and stronger capacity to challenge gender-based exclusion. As one board member UWAMABO Dairy Cooperative, Tanga City Council, 5th March 2025, pointed out,

> "*Many women here did not complete secondary education; that limits us. We feel inadequate when discussions involve financial statements or legal documents*."

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Most women members had only primary education or less, while male leaders typically had secondary or higher education. This education gap created practical barriers (difficulty understanding technical documents) and psychological barriers (feeling inadequate or intimidated in leadership settings). The findings suggest that educational background intersected with gender to influence women's leadership experiences. Women with higher levels of education appeared to have greater access to knowledge and confidence in engaging with cooperative governance, while women with limited education experienced greater difficulties in financial, legal and administrative discussions. However, education did not automatically translate into leadership because its benefits depended on other conditions, including experience, social support and opportunities to participate.

Limited self-confidence and fear of public speaking were also identified as barriers to women's leadership participation. As one board member UWAMKI Dairy Cooperative, Muheza District, 9th April 2025, said,

> "*We fear campaigning because of low support and confidence. Even when we have ideas, we're afraid to voice them because men might laugh at us or dismiss our views*."

Women's confidence in seeking leadership was also shaped by their broader social circumstances. Fear of campaigning or speaking publicly may be more difficult to overcome for women who have limited education, little leadership experience, restricted social support or strong expectations concerning appropriate behaviour for women. This suggests that confidence should not be treated only as an individual characteristic but also as an outcome of women's social and institutional environments. These experiences may also reflect the cumulative effects of gender norms and previous experiences of exclusion or ridicule in public settings.

4.6.4 Institutional Factors Influencing Women's Leadership Participation

First, the study found that most cooperatives still lacked explicit gender policies to address women's underrepresentation. Membership requirements (cow ownership), leadership selection procedures (majority voting in male-dominated memberships), and meeting schedules (times conflicting with women's household responsibilities) created structural barriers without deliberate mechanisms to counteract these disadvantages. As one board member UWAMA Dairy Cooperative, Muheza District, 7th April 2025, claimed,

> "*There is no gender policy guiding us on women's involvement. Everything is supposedly equal, but in practice, rules favour men who own assets, have free time and control voting*."

Meeting arrangements also affected women differently according to their household responsibilities. Women with substantial childcare and domestic responsibilities could face greater difficulty attending meetings scheduled at times that conflicted with household duties. The effect of meeting arrangements therefore intersected with gender, marital status and household responsibilities, rather than affecting all cooperative members equally.

Second, there is limited leadership training for women and no women's mentorship programs. Most leadership training targeted existing leaders (male) rather than aspiring leaders, perpetuating male dominance. As one UWAMKI board member said,

> "*There's no mentorship system to guide women leaders. Trainings are given to leaders only, not to aspiring women who want to learn leadership skills*." (Female Board Member, UWAMKI Dairy Cooperative, Muheza District, 9th April 2025).

The unequal access to training and mentorship further demonstrates the importance of considering intersecting conditions. Women who already have leadership experience may be better positioned to access training, while women with limited education, fewer networks or little previous leadership experience may remain excluded from these opportunities. Consequently, institutional support can either reduce or reinforce existing inequalities depending on which groups of women are able to access it.

The study revealed that when gender-specific training was available, supported by NGO programs, women reported substantial benefits. As one leader UWAKAKI Dairy Cooperative, Tanga City Council, 10th March 2025, explained:

> *"Leadership trainings help women gain confidence and awareness. We learned fiscal management, public speaking, and how to manage challenges. This training transformed me from someone who couldn't speak in meetings to someone who can lead discussions*."

Overall, the findings suggest that institutional arrangements may reinforce existing gender inequalities even where formal rules do not explicitly discriminate against women. Membership requirements, meeting arrangements, voting practices and unequal access to training and mentorship may affect women differently depending on their economic resources, household responsibilities, education and leadership experience. This finding is consistent with Huot et al. (2023), who showed that apparently neutral organisational practices can reproduce gender inequalities when they fail to account for differences in women's circumstances. From an Intersectionality Theory perspective, institutional change therefore requires attention to the different conditions that shape women's ability to access and benefit from cooperative leadership opportunities.

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V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This study examined trends and drivers of women's participation in leadership within dairy cooperatives in Tanga City Council and Muheza District from 2014 to 2023. The aim was to assess (i) the extent and patterns of women's leadership in cooperatives and (ii) the key factors enabling or constraining their participation. The findings reveal persistent gender disparities despite women's dominant role in dairy labor. While women were numerically present in board membership, executive positions particularly chairperson and treasurer remained overwhelmingly male-dominated, with modest representation in vice chairperson roles. Significant district-level differences emerged: urban cooperatives in Tanga City Council exhibited stronger female executive leadership than rural cooperatives in Muheza District, highlighting the influence of contextual factors. Cooperative-level variation further showed that deliberate interventions such as mentorship programs, gender-specific training and partnerships with women's empowerment organizations can produce breakthrough achievements, as evidenced by UWAMLI's success in female chairperson representation.

The study demonstrates that women's leadership is shaped by multiple intersecting social, economic, personal, and institutional factors. Patriarchal norms operate not only through explicit restrictions but also via internalized beliefs, religious justifications, economic dependency and community expectations, limiting women's aspirations. The research highlights the inadequacy of single-dimensional interventions and shows that meaningful change requires addressing multiple barriers simultaneously.

Overall, the evidence demonstrates that women's underrepresentation in cooperative leadership is neither natural nor inevitable. Differences between cooperatives and districts illustrate that targeted, systemic interventions can effectively enhance women's leadership, providing a practical basis for evidence-informed strategies. This study contributes to the broader literature by offering the first systematic documentation of women's leadership trajectories in Tanzanian dairy cooperatives, highlighting how contextual and cooperative-level factors interact to shape opportunities for women, and identifying practical avenues for promoting gender equity in governance.

5.2 Recommendations

Based on these findings, several recommendations appear for cooperative policies, government programs, and development interventions: Cooperatives should adopt explicit gender policies including minimum representation thresholds (e.g., 30% of leadership positions), affirmative action in leadership selection ensuring women's advancement beyond token board membership, rotation systems enabling different women to gain leadership experience and regular gender audits monitoring women's participation and identifying barriers. Also, reform institutional practices, such as meeting schedules and locations, to favour women's triple roles. Implement comprehensive leadership training programs specifically designed for women, addressing technical skills (fiscal management, cooperative governance), confidence building and public speaking, strategies for navigating male-dominated environments and balancing leadership with household responsibilities. Establish mentorship programs pairing emerging women leaders with experienced female leaders from successful cooperatives. Provide training not only to women but also to male leaders, husbands, and community members addressing gender stereotypes and benefits of women's leadership.

Facilitate women's access to productive assets through preferential credit programs enabling women to buy dairy cows, support for women's land ownership including inheritance reform advocacy and asset transfer programs directly providing productive resources to women. Modify membership requirements to recognize women's labour contributions even without asset ownership, enabling membership based on labour input rather than solely asset ownership, this will allow wives of male members to become members directly. Engage religious leaders in dialogue about gender-equitable interpretations of religious teachings, challenging selective emphasis on women's subordination while neglecting messages about justice and equality. Implement community awareness programs using community dialogues, media campaigns, and role model highlighting to challenge restrictive gender norms. Support men as allies through programs engaging husbands and male leaders as champions of women's empowerment, proving benefits of shared decision-making.

Declaration of Interest

The authors declare that they do not have any known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Funding Declaration

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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