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***THE ROLE OF WOMEN IN COFFEE PRODUCTION ACTIVITIES IN
LIHU VILLAGE, RAILACO SUB-DISTRICT, TIMOR-LESTE***

¹ Dionata Moreira Soares, ²Xisto Martins, ³Claudino Ninas Nabais

Corresponding Author: natavilar46@gmail.com

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ABSTRACT

This study explores the multifaceted roles of women in coffee production in Lihu Village, Railaco Sub-District, Timor-Leste, from planting to marketing. Using a qualitative approach with semi-structured interviews involving 82 women, the research highlights their demographic profiles, engagement in different production stages, and the socio-economic impacts of their contributions. Findings show that women are actively involved across the coffee value chain and play roles as significant as men. While many are unpaid, most exercise control over coffee-related income and participate in household decision-making. However, challenges persist, including limited access to training, credit, and land ownership. Despite these barriers, community perceptions of women's contributions are positive, and their involvement is seen as improving family well-being. The study underscores the need for gender-sensitive policies to enhance women's access to education, training, financial resources, and cooperative networks, thereby fostering more equitable and sustainable coffee production in Timor-Leste.

INTRODUCTION

Coffee is one of Timor-Leste's most important export commodities, and Lihu Village in Railaco is renowned for producing high-quality Arabica beans. Women's contributions are indispensable throughout the coffee value chain, particularly in labour-intensive tasks such as planting, harvesting, sorting, and processing. Despite this, women's roles often remain undervalued or invisible in economic statistics and policy frameworks

Previous studies (ICO, 2018; Asian Development Bank, 2019) emphasize men's dominance in decision-making and land management, overlooking women's involvement in both production and household economic decisions. This research fills that gap by focusing on women's participation in coffee production and its social and economic implications. By recognising women's contributions, this study aims to provide evidence for more inclusive agricultural policies that can empower women, improve productivity, and enhance community welfare.

METHODS

This research employed a qualitative descriptive approach, supported by thematic and descriptive statistical analysis. Study site: Lihu Village, Railaco Sub-District, Ermera District, Timor-Leste.

Participants: 82 women respondents selected using the Slovin formula with a 10% margin of error from a total female population

of 456. Data collection: Semi-structured interviews, surveys, and participatory observation during coffee production activities.

Analysis: Thematic analysis (Braun & Clarke, 2006) was used to identify key themes, while descriptive statistics (frequency, percentage, cross-tabulation) were applied to demographic and perception data. Data validation was performed through triangulation and member checking.

RESULTS AND DISCUSSION

1) Results

The results of the descriptive analysis provide important insights into women's roles in coffee production activities in Lihu Village, which directly answer the research questions regarding women's roles in coffee activities and their impact on the family and community economy.

2) Women's Role in Coffee Production

The majority of respondents were aged between 20-30 years, followed by the 31-40 years and >50 years age groups. This indicates that the majority of participants involved in coffee production activities are in middle age, which may indicate a wealth of experience in the industry.

Respondents' education level is dominated by senior high school graduates, with a smaller proportion completing junior high school or higher education.

Nonetheless, most respondents are actively involved in coffee farming activities, indicating that women play an important role in every stage of coffee production. This data suggests that women play a crucial role in coffee production.

3) Social and Economic Impact

The majority of respondents believe that women play an equally important role as men in the coffee industry. This positive perception indicates recognition of women's contributions, which can have a positive impact on the family and community economy.

Marital status, which is dominated by married respondents, indicates that family dynamics play an important role in coffee production activities, which can affect family income and welfare. The implication of these findings is that supporting women in coffee production can strengthen family and community economies in Lihu Village.

4) Women experience in coffee industry

First, the 'group of respondents with 6–10 years of experience' was the largest, totalling 32 people. This indicates that most participants are sufficiently mature in understanding the dynamics and practices of the coffee industry, but are not yet considered long-term veterans.

Second, 'respondents with 1–5 years of experience' came in second, totalling 27 people. This reflects a generation of coffee professionals still in the early to mid-stage stages, who have the potential to bring innovative perspectives and require further mentoring in mastering technical and managerial skills.

Third, 'respondents with more than 10 years of experience' numbered 23, indicating the presence of a small group of highly experienced coffee industry experts. Although the smallest in number, this group plays a crucial role as guardians of tradition, mentors, and sources of in-depth knowledge regarding classic coffee practices and market evolution.

5) Position in the household

The chart illustrates the distribution of respondents' positions within their households in the surveyed population, revealing several noteworthy trends.

- Wife is the most prevalent household role, accounting for 43 respondents. This suggests that the majority of participants self-identify as wives, which may reflect cultural norms or targeted sampling among adult women in married families.
- The second largest group is Child, with 28 respondents. This indicates significant representation of younger household members, potentially contributing perspectives from the next generation and reflecting multi-generational household structures.
- Housewife makes up a smaller portion, totalling 7 respondents. The term "housewife" is distinct from "wife," possibly indicating those whose primary role is domestic management without additional employment or external responsibilities.
- The group Head of household is the smallest, with only 4 respondents. This may point to an underrepresentation of primary decision-makers or breadwinners, or it may reflect traditional role assignments within the surveyed sample.

6) Wages for women working in the coffee industry

The chart depicts the respondents' answers to whether they receive wages for their work in the coffee industry, revealing a notable disparity between paid and unpaid labour among participants.

The majority of respondents, totalling 54 individuals, answered "No," indicating that they do not receive wages for their work in the coffee industry. This finding suggests that a substantial proportion of those involved in coffee-related activities are either unpaid family workers, volunteers, or possibly self-employed individuals where income is not structured as a wage.

In contrast, 28 respondents reported "Yes," meaning they do receive wages for their work. This group most likely includes formal employees or laborers within the coffee sector whose contributions are compensated through structured payments.

7) Control over the income earned from coffee

The majority of respondents, 56 in total, answered "Yes," indicating they do have control over the income generated from coffee activities. This suggests that most participants have decision-making authority regarding how coffee earnings are managed, which could reflect either individual or household-level financial empowerment.

In contrast, 26 respondents answered "No," meaning they do not have control over the coffee income. This group likely includes individuals whose earnings are managed by other household members or external authorities, pointing to potential limitations in economic agency within certain family or social structures.

8) Making decisions regarding coffee sales in households

The clear majority, with 60 respondents, indicated that the Head of household is responsible for making decisions related to the sale of coffee. This suggests that the dominant decision-making structure is hierarchical, with authority typically residing with a primary family figure—often assumed to be the main economic or social leader in the household.

Female decision-makers were cited by 17 respondents, showing that in a notable portion of households, women hold authority over coffee sales decisions. This points to an element of female empowerment within some family units, especially where women may manage or control key agricultural outcomes.

Male decision-makers were identified by only 5 respondents, making this the smallest group in the data. This may indicate that when the term "head of household" is used, it usually refers to a male, or that explicit gendered identification for this role is less common in respondents' answers.

9) Land ownership for coffee cultivation

The majority of respondents, 56 in total, answered "Yes," indicating that they own land specifically used for coffee farming. This suggests that personal or family ownership of agricultural land is prevalent within the surveyed group, which may enhance economic security, autonomy, and the ability to make independent farming decisions.

In contrast, 26 respondents answered "No," meaning they do not own land for coffee farming. This group could include sharecroppers, landless laborers, tenants, or individuals working on

communal or borrowed land, highlighting the existence of less secure or subordinate arrangements in coffee production.

10) Access to training in agriculture or coffee management

A larger proportion of respondents, 48 individuals, answered "No," indicating they do not have access to relevant training in farming or coffee management. This finding points to significant gaps in education, extension services, or outreach that could hinder the adoption of best practices and limit farming efficiency within the community.

In comparison, 34 respondents stated "Yes," showing they do have training opportunities. This group benefits from educational resources or programs that can improve productivity, crop quality, and industry knowledge, though they represent the minority among those surveyed.

11) Access to credit or loans for coffee-related businesses

A substantial majority, 63 respondents, answered "No," indicating they do not have access to credit or loan facilities for coffee-related enterprises. This highlights major barriers to capital, which can restrict opportunities for farm investment, expansion, and resilience to financial shocks.

Only 19 respondents reported "Yes," showing they have access to such financial mechanisms. This minority may benefit from greater business flexibility and growth potential, though it reflects a notably limited reach of financial services within the broader coffee farming population.

12) Women play an equally important role as men in the coffee industry

An overwhelming majority, 75 respondents, answered "Yes," expressing the belief that women hold roles in the coffee industry that are just as important as those held by men. This demonstrates a strong, positive recognition of gender equality and the significant contributions of women in various aspects of coffee production and business.

In contrast, only 7 respondents answered "No," indicating they do not perceive women's roles as being on par with those of men in the industry. This minority viewpoint suggests that traditional or gendered biases still exist, but are not widely shared in the surveyed community.

13) Have the same opportunities as men for training or education in coffee production

A significant majority, with 57 respondents, answered "Yes," indicating they believe women have equal opportunities as men to participate in training or educational activities related to coffee farming. This suggests a broadly positive view regarding gender parity in access to skills development and sector-specific learning within the community.

In contrast, 25 respondents answered "No," signifying that a notable minority perceives persistent barriers or inequalities that limit women's access to such opportunities. These differences could be due to cultural norms, logistical challenges, or institutional limitations faced by women in certain contexts.

14) Decision making regarding coffee-related matters

The majority, with 50 respondents, answered "Yes," indicating that women do participate in decision-making processes concerning coffee-related activities in their community. This outcome reflects substantial female involvement in leadership or collective choices regarding coffee production, marketing, or resource allocation.

In contrast, 32 respondents answered "No," suggesting that a significant minority still perceive a lack of female participation or influence in these decisions. Such perspectives may stem from persistent traditional norms, structural barriers, or limited empowerment opportunities for women in certain settings.

15) Role valued in coffee production

The most frequent response, with 36 participants, was "Some Times," suggesting that appreciation is felt inconsistently and may depend on specific contexts or relationships within the community or workplace.

"Yes" was selected by 26 respondents, indicating that a substantial portion regularly feels recognized and appreciated for their contributions to coffee production.

"Not at all" garnered 17 responses, showing that a noticeable minority experiences a lack of appreciation, highlighting potential issues of undervaluation or marginalization for certain roles or individuals.

The least selected was "No," with just 3 respondents, further emphasizing that consistent feelings of being unappreciated are comparatively rare, though still present in the surveyed group.

16) Working in the coffee industry helps improve family well-being

A very large majority 67 respondents answered "Yes," stating that working in the coffee industry has led to improvements in their family's well-being. This suggests substantial positive impacts from industry employment or engagement, potentially manifested as increased income, better living standards, greater security, or improved access to necessities for most families involved.

Meanwhile, 15 respondents selected "No," reflecting a minority for whom participation in the coffee sector has not translated into enhanced family welfare. These cases may result from unstable earnings, high costs of production, or other limiting factors that reduce the positive effects of industry work.

17) Women have enough free time after working in the coffee sector

A majority of respondents, 54, answered "Yes," indicating that women generally perceive themselves as having sufficient leisure time after their work in the coffee sector. This suggests that for most, workloads are manageable enough to allow for rest, recreation, or personal time outside professional commitments.

Meanwhile, 28 respondents selected "No," demonstrating that a significant minority experience insufficient leisure time, possibly facing extended working hours, dual responsibilities at home, or other demands that limit their downtime.

18) Working in the coffee industry affects household responsibilities

The vast majority, with 65 respondents, answered "Yes," acknowledging that their involvement in coffee work has an impact

on their household responsibilities. This suggests that employment or daily activities in the coffee sector often influence how individuals manage or fulfil their duties at home, possibly creating challenges in balancing the two spheres or requiring adjustments in family routines.

Meanwhile, 16 respondents selected "No," indicating that a smaller segment feels their household responsibilities remain unaffected by their professional commitments in coffee work.

19) Family supports role in coffee industry

The largest group of respondents, 58 in total, selected "Supportive," indicating that most individuals perceive their families as generally encouraging and helpful regarding their participation in the coffee industry.

"Very supportive" was chosen by 19 respondents, reflecting a significant subset who experience enthusiastic backing, potentially including active assistance, affirmation, or shared responsibilities within the family to facilitate coffee-related activities.

A much smaller group, 5 respondents, reported "Neutral" family support, suggesting the presence of either indifference or a lack of clear encouragement or discouragement for their roles in the coffee sector.

20) Work in the coffee sector has an impact on the family economy

The majority, 61 respondents, chose "Support but not significant," indicating that while their work in the coffee sector provides some economic support for their families, the impact is generally modest or supplementary rather than transformative.

"Very Support" was selected by 18 respondents, reflecting a group who believe that coffee sector employment offers major or decisive economic benefit to their family finances.

Only 3 respondents chose "No Effect," demonstrating that a small minority does not perceive any direct economic benefit from their role in the coffee sector.

21) There needs to be more policies to support women in the coffee industry

A striking majority 74 respondents answered "Yes," indicating a strong consensus that additional policies are necessary to further support women working in the coffee industry. This response underscores broad awareness of persistent gender challenges and recognition of the importance of creating policy frameworks that promote equality, empowerment, and improved working conditions for women in this industry.

Only 8 respondents selected "No," suggesting that a very small minority perceive existing support as sufficient or do not see the need for specific women-focused policies at all.

22) Distribution of hours worked per day in coffee sector

The highest concentration is at 5 hours per day, with 40 respondents reporting this as their typical daily working duration. This indicates that the standard workday for most individuals in the sample is moderate rather than extreme, reflecting a common practice of part-time or balanced work schedules in the coffee sector.

2 hours per day is the next most frequent, with 25 respondents, suggesting a significant group engages in minimal or supplementary coffee work, possibly alongside other responsibilities.

8 hours per day is reported by 17 respondents, representing those who work the equivalent of a full standard shift, likely indicating the presence of both casual and full-time laborers in the sector.

The smooth curve overlay implies a bimodal distribution, with two peaks at 5 and 2 hours, and a smaller but notable peak at 8 hours.

23) Stage of involvement in coffee industry

The most common response is involvement in all four stages a. Planting, b. Maintenance, c. Processing, and d. Marketing with 14 respondents indicating participation across the entire coffee value chain.

This is closely followed by those engaged in Maintenance, Processing, and Marketing (12 respondents) and in Planting and Processing (10 respondents), showing that multi-stage participation, particularly in middle and end-chain processes, is prevalent.

Other frequent combinations include Planting, Maintenance, and Processing as well as Planting, Maintenance, and Marketing, with each pattern representing a notable number of respondents (7 and 6 respectively).

Less frequent, but still present, are those who focus on combinations such as Processing and Marketing, Planting and Marketing, and other three-stage or partial involvements within the coffee sector.

The chart clearly demonstrates that single-stage-only involvement is rare, indicating that most individuals or households perform multiple roles from cultivation to sale.

24) Discussion

The findings of this study reveal significant insights into the demographic characteristics, social perceptions, and economic contributions of women involved in coffee production in Lihu Village, Railaco Sub-District. The age distribution of respondents, predominantly between 20-40 years, shows that the coffee sector relies heavily on women who are in their productive middle age, likely possessing sufficient experience and energy to engage actively in coffee farming. This reflects the crucial presence of women as an economic workforce in agriculture, supporting previous findings by FAO (2023) regarding women's vital roles in agricultural development.

Education levels are primarily concentrated at the senior high school level, indicating moderate educational attainment which could influence involvement in coffee farming activities and the ability to access training or new technologies. Despite varying education, most women actively participate in multiple stages of coffee production from planting to marketing underscoring their integral roles throughout the coffee value chain. This aligns with Oxfam's (2020) assertion that women's contributions span diverse agricultural activities yet remain underrecognized.

Economically, the data shows a pervasive issue where most women (54 out of 82 respondents) do not receive wages for their coffee-related work, highlighting the common challenge of unpaid labour

in agriculture, often categorized as family support or volunteer work. This situation limits women's financial independence and reinforces the gender disparity in remuneration (World Bank, 2021). However, a majority (56 respondents) reported having control over the income earned from coffee farming, a positive indication of women's financial agency despite the wage gap. This control is crucial for empowering women within household economic decision-making, contributing to the family's well-being (UN Women, 2022).

Decision-making patterns show a hierarchical structure with the head of household, usually a primary family, making most coffee sale decisions. Nevertheless, women's direct involvement as decision-makers in a significant number of households (17 respondents) suggests emerging female empowerment and a gradual shift in traditional gender roles within coffee production.

Land ownership is another important aspect where most women hold or share ownership over coffee cultivation land, providing them with economic security and autonomy. This ownership can further enable access to credit or loans; however, the data reveals limited financial access, with only 19 respondents having credit facilities. Restricted capital access impedes the ability to invest in farm improvements and scale operations, a common barrier in rural agricultural economies (FAO, 2019).

Training access is unequally distributed, as more than half of the participants lack opportunities for agricultural education or coffee management training. This gap restricts knowledge transfer and adoption of improved farming practices, which could otherwise enhance productivity and income generation (Oxfam, 2020).

Social perceptions towards gender equality in coffee production are encouraging: an overwhelming majority view women's roles as equally important to men's. This reflects a community-level recognition of women's substantial contributions, reinforcing the need for gender-sensitive policies. Indeed, most respondents strongly agree that more policies are needed to support women in the coffee industry to address persistent gender inequities and improve working conditions.

Regarding work-life balance, most women feel they have sufficient free time after their coffee-related work, yet many acknowledge that their coffee duties affect household responsibilities. This reflects the double burden women face in balancing productive and reproductive roles, an issue well-documented in gender and agricultural studies (FAO, 2023).

Family support for women's roles in coffee production is generally positive, which can enhance women's confidence and effectiveness in their work. Furthermore, the majority perceive their coffee work as enhancing family welfare, indicating that women's engagement in coffee production contributes directly to economic and social upliftment in their communities.

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