



Gender Roles in *Enset* Product Marketing: The Case of Wonchi District, South West Shoa Zone, Oromia National Regional State, Ethiopia

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Abstract: In Ethiopia, *enset* is one of the indigenous root crops widely cultivated in the south and south western parts, particularly in Wonchi district. *Enset* product specifically *kocho* is a major source of food and cash income for majority of smallholder farmers. *Enset* processing and its product marketing is left for women regardless of the tediousness of the process. Though, it is considered as female's work by the community, concrete evidence about the gender role in *enset* product marketing is not well documented. This study aimed to identify gender role *enset* product marketing in Wonchi District. Both primary and secondary data were used for the study. Primary data were collected from randomly selected 184 sample *enset* producers through two stages sampling technique. The data were analyzed by descriptive methods. The results indicated that both genders participated at different activities in *kocho* marketing. The production stage is practiced mainly by males while *enset* processing, *kocho* marketing and controlling generated income from *kocho* marketing are dominantly performed by females. The study recommends provision of awareness creation to change the work division culture and perception difference between men and females in *kocho* marketing and rising experience producers through experience sharing on the *enset* production.

Keywords: Gender, *Kocho*, Marketing, Wonchi

1. Introduction

In Ethiopia there are different farming systems depending on different agro ecologies found in the country. The two dominant farming systems in Ethiopia are mixed agriculture of the highlands, where both crops and livestock production are integrated, and pastoralist in the lowlands. Highland mixed farming systems were found in cool highland areas above 1600 meter above sea level (m. a. s. l). This farming system includes *enset*, wheat, barley, *teff*, peas, lentils, beans, potatoes, sheep, goats, livestock, and poultry. Pastoral farming systems were found in arid areas, dominated by livestock such as cattle, camels, sheep, goats, some cereal crops [5].

In Ethiopia, root and tuber crops are the second largest crops, after cereal crops in terms of quantity of production [3]. Those crops contribute a major share in traditional food system of many people. They play a vital role in food security especially in south and south western part of Ethiopia. *Enset*, anchote, potato, onion, carrot, yams, taro and cassava are the major root

and tube crops grown in the country [13].

Enset (*Enset ventricosum*) is considered as a food security crop in different parts of Ethiopia as it can withstand long periods of drought, heavy rains, and flooding, which devastate other crops [4]. It is grown largely for food security reasons, if cereal crops fail and eaten in the form of *kocho* and *amicho*. Therefore, *enset* is called "The tree against hunger" in Ethiopia [10]. It is a major crop where more than 20% of the people in Ethiopia depend on this crop mainly in the southern and south western parts [2]. The crop has also used as farmers' adaptation strategy to climate change [8]. *kocho*¹, *bulla* and *amicho*² as the major food products obtained from the *enset* [9]. From the three food products of the *enset*, *kocho* and *bulla* were supplied to different markets from production site. Due to its perishable nature, *amicho* is

1 *Kocho* is the bulk of the fermented starch obtained from a mixture of the decorticated leaf sheaths and pulverized corm.

2 *Amicho* is the fleshy inner portion of the *enset* corm, which is eaten as a root and tuber crop after being boiled

not delivered to markets. According to Abebe Uma et al. [1] the largest proportion of *kocho* and *bulla* were supplied to the market rather than consumption but in most cases producers supplied *kocho* to market due to the fact that *enset* produce large amount of *kocho* as compared to *bulla* as well as *bulla* processing is more tedious work. Therefore, in this study *enset* product refers to only *kocho*; other *enset* products such as *bulla* and fiber are not considered.

Men and women are involved in agricultural sector in different ways and they face different constraints [14]. According to Haussmann, R. et al. [6] gender-based inequality is a phenomenon that transcends from the culture and, the differences and inequalities are clearly manifest in the responsibilities each are assigned, in the activities they undertake, in their access to and control over resources and in decision-making opportunities.

Men and women are participated in *enset* crop production, processing and its product marketing. Although, *enset* products' processing and marketing activities have clear demarcations between men and women in relation to pseudo stem processing, storing processed product and selling the product. Women use manual tools to process the product since it is culturally not allowed for male group. *Enset* products processing and storing are exclusively left for women but rarely men are participated in transporting to market and selling the product. *Enset* production, processing and marketing role of male and female is not scientifically investigated so far. Therefore, the objective the study was to identify gender roles in *enset* product marketing.

2. Research Methodology

2.1. Description of the Study Area

Wonchi district is located in Oromia regional state of South West Shewa Zone, Ethiopia. It is one of the eleven districts in south west shoa zone and about 9 kilometer and 123kilometer from Waliso town and Addis abeba respectively. The districts approximately found between 1600 and 3576 meter above sea level. Wonchi district is bordered on the south west by Goro, on the west by Ameya, on the north by Ambo, and on the east by Waliso districts. The district has 23 rural kebeles [10].

The district has two agro-ecologies; highland (40%) and midland (60%). The mixed farming system of both crops and livestock are common economic activity in the district. The important crops grown in the district are maize, *teff*, wheat,

barley, *enset*, and onion. According to WDTMDO [11] in 2017/2018 production year 835352 quintals of cereal grain, 8078 quintals of pulse grain, 281723 quintals of horticultural crops, 31764 of live-animals, 5253 tones of hide and skin were supplied to the market. Moreover, 39936 quintals of *enset* products (*kocho* and *bulla*) were supplied to the market. In general, Wonchi district is the major producer of *enset* from south west shewa zone and *enset* production is considerable sources of cash in the district [12].

2.2. Data Types, Sources and Methods of Data Collection

This study used household survey data collected from Wonchi District. In order to generate sufficient information both quantitative and qualitative data from primary and secondary data sources were used. Primary data were collected from randomly selected *enset* producers. To collect primary data semi- structured questionnaire were prepared and pre tested on sampled *kebeles* was made to evaluate the appropriateness of the design, clarity and amended based on feedback. The data was collected using developed questionnaires one for producers. In addition, checklist was used to generate data through focus group discussion and key informant interview.

2.3. Sampling Techniques and Sample Size

Two stages random sampling method was used to select the sample household heads. In the first stage out of twenty three kebeles, five kebeles were selected randomly from the district. Accordingly, 184 *enset* producers were selected randomly from the district. In second stage, from list of *enset* producer households in the sampled *kebeles*, 184householdswere selected randomly. The total number of households taken from each *kebeles* was based on [7] proportional sample allocation formula and given by equation (1) below;

$$n_i = \frac{nN_i}{N} \quad (1)$$

Where: n_i = Sampled households from i^{th} kebele

n = Sample size

N_i = The total households in i^{th} kebele

N = Total households in selected *kebele* (sum total of households in five *kebele*)

Table 1. Sample distribution of *enset* producer households in selected kebeles.

No	Kebeles	kebele's total households	Sample households	Sample household based on gender	
				Female	Male
1	Haro wonchi	1068	46	24	22
2	Weldo talfem	1010	44	28	16
3	Worabu masse	516	25	14	11
4	Haro basaka	646	30	15	15
5	Sonkole kake	904	39	24	15
Total		4144	184	105	79

Source: WDANRO, 2018 and own computation result

2.4. Methods of Data Analysis

To describe the demographic of sample *enset* producers in the study area, the descriptive statistics were used.

3. Results and Discussion

3.1. Demographic and Socio-Economic Characteristics of Sample Enset Producer Households

From total of 184 sampled *enset* producers 118 (64.13%) were participants in *kocho* market while the remaining 66 (35.87%) were non- participants during 2017/18 production year. From total sample producers 105 (57.07%) were female headed including female spouse in male headed and the remaining 79 (42.93%) were male headed households. Bear in mind here, household is one who made decision about *kocho* marketing in context of this study. Among *kocho* market participants, female and male headed households constitute 70 (59.32%) and 48 (40.68%) respectively. Out of non-participants, 35 (53.03%) were female headed while the remaining 31 (46.97%) were male headed households. Regarding agro ecologies where respondents are found, 94 (51.08%) found in midland agro ecology and about 90 (48.92%) found in highland agro- ecology.

3.2. Land Ownership and Its Utilization by Sampled Enset Producer Households

One of the most important factors that influence crop production is availability of land. The sources of total land operated by the sampled households during survey period was divided as owned land, rent in and share in farm land. The analysis of survey data show that the average total land sizes allocated for *enset* production by sampled respondents about 0.27 hectares and owned by the sample respondents was 1.55 hectare. This average land holding size by sample respondents is lower than 1.7 hectare in Oromia and higher than 1.4 hectare per household at national (CSA and WB, 2013). Out of the total sample households 20 (10.87%) owned less than a hectare of land whereas 23 (12.5%), and 141 (76.63%) owned one hectare and above one hectare respectively. The average size of land size owned by market participants was 1.49 hectares while it is 1.67 hectares for non-participants.

Table 2. Land ownership and its utilization by sampled respondents.

Total land and its source	N	Minimum	Maximum	Mean
Total land (ha)	184	0.750	4.125	1.700
Owned land (ha)	184	0.500	4.125	1.550
Rent in (ha)	40	0.250	1.500	0.450
Share in (ha)	15	0.250	1.000	0.530
Land utilization				
Cereal crops (ha)	180	0.250	3.000	1.030
<i>Enset</i> crops (ha)	184	0.063	0.500	0.270
Pulse crops (ha)	68	0.013	0.500	0.220
Grazing land (ha)	176	0.063	0.750	0.280
Others crops (ha)	31	0.063	0.500	0.270
Rent out (ha)	7	0.250	0.500	0.320

Source: Own survey result (2018).

3.3. Income Sources of Sampled Enset Producer Households

The major cash income sources of sample respondents in the study area were farm income and off/ none-farm income. Farm income sources include sale of *enset* product and by-product, sale of crops, livestock and livestock products. Survey result show that about 74 (40.2%) depend on *enset* product and by- products and, selling crops such as, maize, wheat, barley, *teff*, feba bean, onion and potato as source farm income, about 44 (23.9%) depend on *enset* product and by- products, selling crops and livestock as source of farm income and about 66 (35.9%) depend on sale of crops and livestock as source farm income.

The average cash income from *enset* products and by-products is found to be 7206.780 ETB, from sale of crops is 6883.898 ETB, from livestock and its product's sale had the mean of 1913.559 ETB for market participants. This indicate that selling *enset* products is the major income sources of households in the study area, *enset* producers in area heavily rely on *enset* product as main sources of income and it contributed 31% to the total income for pooled sample³

Table 3. Farm income sources for sampled respondents (in ETB).

Farm income sources	Participants		Non-participants	Total sample
	N	Mean	Mean	Mean
<i>Enset</i> product and by-product's sale (birr)	118	7206.780	-	4621.739
Income from all crop sale (birr)	184	6883.898	6890.909	6886.413
Livestock and Livestock product's sale (birr)	103	1913.559	5630.303	3246.739
Total average income (birr)		16004.234	12521.212	14754.891

Source: Own survey result (2018).

3.4. Gender Roles In Kocho Marketing

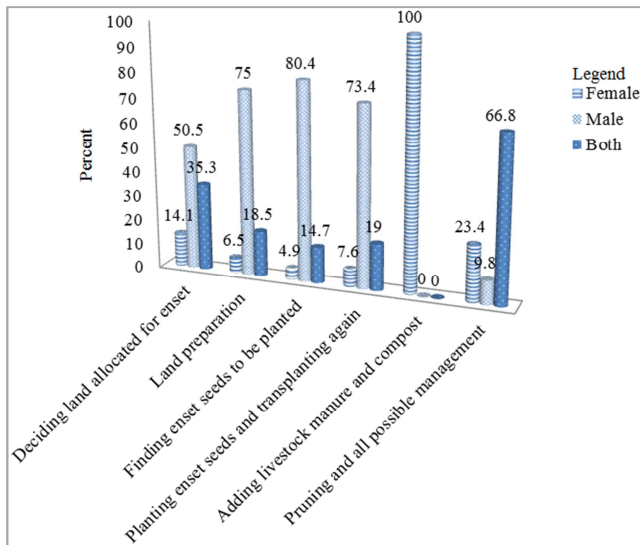
3.4.1. Gender Roles at Production Stage

Production of *enset* is labor intensive enterprise, it involves a various procedures such as deciding land allocated for *enset*, land clearing, land preparation, finding *enset* seeds to be planted, planting *enset* seeds and transplanting again, adding livestock manure, compost and fertilizers, pruning, identifying matured *enset*, removal of matured *enset*, making it ready for processing, scratching its pseudo stem, pulverization its corm, digging pit and storing the processed *enset*, monitoring fermentation process on average for two months, packing the product, deciding the amount of product to be marketed, loading the product, transporting before sale.

Men and female are involved in different *enset* production activities. Some activities like deciding land allocated for *enset* crop, selecting *enset* seeds to be planted and planting *enset* seed and transplanting it are mostly done by men while

³ As of July, 2019, the official exchange rate is one USD to 28.89 ETB.

others activities are done by both male and female but almost all activities are referred to females' activities because some duties like adding livestock manure, scratching its pseudo stem, pulverization its corm and monitoring fermentation process are not allowed to men. Current study revealed that about 50.5% of deciding land allocating *enset* crop is mostly done by men and 14.1% was done by female and 35.3% was done by negotiation between husband and wife. 80.4% of finding *enset* seeds to be planted is done by men and 14.7% was done by female and 4.9% was done by negotiation between husband and wife. 73.4% of adding livestock manure and compost to planted *enset* done by female only (Figure 1).



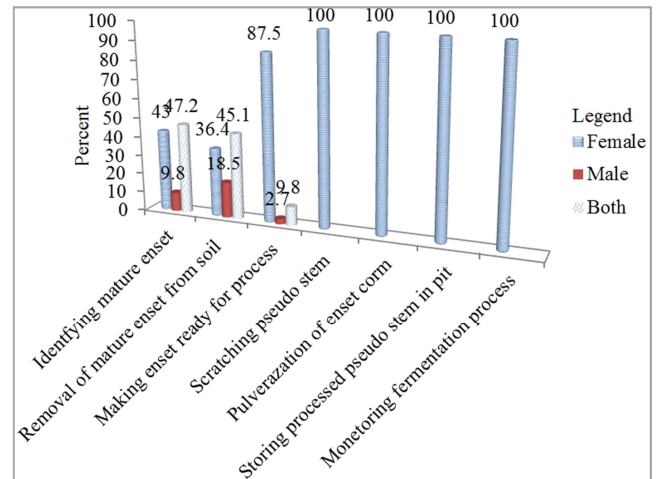
Source: Own survey result (2018).

Figure 1. Gender roles at production stage.

3.4.2. Gender Roles at Kocho Processing

Enset needs to be processed to get *kocho* product before supplied to the market. Most of its processing starts from identifying matured *en set* plant that is ready for harvesting to separation of fiber and *kocho*. Identifying matured *enset*, removal of it from soil, making it ready for process, cutting of leaves and grading into different sizes and shapes is mostly done by female. The activities like scratching *enset* pseudo stem, pulverization *enset* corm, storing processed fresh pseudo stem into pit, monitoring fermentation process and separation of fiber from *kocho* done by female alone (Figure 2).

The study shows that greater workload was left for female family members or neighboring women who traditionally cooperated in what they called *debo* or *wenfel* during processing *enset*, they process only by traditional equipment mostly like *watani*, it used for placing pseudo stem to be decorticated and fixed at middle of *watani* by legs of decorticated female. The other traditional equipment used for *enset* processing was *javga* and *sibissa*. *Javga* used for pulverization of *enset* corm and *sibissa* is split bamboo used for scraping the fresh of pseudo stem (Female FGD in haro wonchi kebele and physical observation)⁴.



Source: Own survey result (2018).

Figure 2. Gender roles at kocho processing.

3.4.3. Gender Roles at Kocho Transportation and Selling

Kocho in study area was traded into two market types namely to village markets and walisso *kocho* baranda market. Amount of *kocho* to be traded to different market decided by female mostly. Rarely it decided by negation between female and her husband (FGD). Market participants, who sold to wholesalers 50.68% of them sold *kocho* at village market and 49.32% of them sold at walisso market. Similarly, producers who sold to retailer, 89.39% of them sold *kocho* at village markets and 10.61% of them sold at walisso market and who sold to village collectors, 30.98% sold at home and 69.02% sold at village market. The current study reveals that 60.16%, 6.78% and 33.06% *kocho* market participants reported as *kocho* transportation to market is done by female only, male only and by both female and male respectively.

In *kocho* selling both men and women are involved, but it is important to note that gender biases remain prevalent. About 72.02%, 8.47% and 19.49% of *kocho* selling in market is by female only, male only and both female and male respectively.

3.4.4. Decision Making on Kocho Income Utilization

According to survey result, 30.5% of market participants how to use and for which to use the income of *kocho* sale is decided jointly by female and her husband while about 69.5% of market participants income utilization of *kocho* sale only decided by female as income from *kocho* sale is the most important source income for women. About 22.88% market participants used income obtained from *kocho* selling for buying necessary commodity for consumption (coffee, salt, oil, onion, red pepper, etc) and 77.22% buying necessary commodity, yearly land rent, paying labor wage saving and social contribution. The study also shows that yearly family expenditure was partially covered by *enset* product selling in the study area.

Generally, in *kocho* market chain both female and male are

without payment.

⁵Wenfel means a labor lending when a women work together one day on one person's and the other day on other person's job.

⁴Debo means individual women come together and contribute labour and skills

likely involved at different stage of the chain as producers and traders where female are involved more after production stage. Men play very little role in *kocho* marketing it mean that marketing of *kocho* is almost entirely done by women. Men solely supply inputs (68.6%) and production (41.6%).

Women cover the activity such as processing (80.98%), packaging (100%), transporting (60.16%), selling in market (72.02%), *kocho* income utilization decision (69.5%) and trading (87.87%). Women's including women in male headed play a major role in making decision of *kocho* (85.5%) on how much to consume in family and sale. Women play a core in *kocho* marketing and there was difference in workload and decision making power between women and men in households.

4. Conclusion and Recommendation

Enset (*Enset ventricosum*) is one of the indigenous root crops widely cultivated in the south and south western parts of Ethiopia. Its product specifically *kocho* has a significant contribution to the livelihood of producers as source of food and income as well as ensuring of food security in wonchi district.

Men and women are participated in *enset* crop production, processing and its product marketing. Although, *enset* products' processing and marketing activities have clear demarcations between men and women in relation to pseudo stem processing, storing processed product and selling the product. *Enset* production, processing and marketing role of male and female is not scientifically investigated so far. Therefore, the study was initiated with objective to identify gender roles in *enset* product marketing.

In *kocho* marketing both females and males are likely involved at different stage as producers and traders where female are involved more after production stage. However, at processing stage greater work load was left for female family members or neighboring women who traditionally cooperated in what they called *debo* or *wenfel* during processing *enset*, they process only by traditional equipment. Men play very little role in *kocho* marketing, almost it is done by the women. The analysis on who makes decisions on utilization of income generated from *kocho* in the family indicates that 30.5% husband and wife consult each other on how to distribute and use proceeds and 69.5% decided solely by female for the family needs. Therefore, the greater work load in *kocho* marketing in the study area mainly performed by females indicating that gender roles in the *kocho* marketing is varied out as *enset*-crops are associated with females. Therefore, awareness creation activity in the society should be given to change the work division culture and perception difference between men and female in *kocho* marketing. Policies and strategies should be focus on female to enhance *kocho* marketing efficiency.

Authors' Contributions

I am only sole author in conceptualization; preparing a

methodology; data analysis; data organization; first draft, final manuscript preparation and editing.

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Availability of Data and Materials

The data used to support the findings of this study are available on corresponding author.

Declarations

Consent for Publication

I, give my consent for the publication of a manuscript entitled "Enset Product Market Chain Analysis: The case of Wonchi District, South West Shoa Zone, Oromia National Regional State", Ethiopia, to be published in the above Journal.

Competing Interests

The authors declare that they have no competing interests.

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