

# Analysis of Women Empowerment in Agriculture in East Shewa and West Arsi zones of Oromia, Ethiopia

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## Abstract

This paper presents the women empowerment level in agriculture using an Index in two zones of Oromia, regional state, Ethiopia. Eight representative districts were considered in West Arsi and East Shewa zones for empowerment analysis. The overall result of five domains of empowerment (5DE) for both (East Shewa and West Arsi) zone shows that 10 percent of women are empowered. The GPI shows that 67.5 percent of women have gender parity with the primary male in their households. Of the 32.5 percent of women who are less empowered, the average empowerment gap between them and the males in their households was found as low as less than 5 percent. Thus, the overall and Average gender parity index (GPI) of East Shewa and west Arsi was found to be 95 percent. In terms of the disempowerment measures as decomposed by the five dimensions and the ten indicators (M0) for women (0.184) and men (0.154) the domains in the two zone sample areas that contribute most to women's disempowerment were lack of adequate time to be involved in agricultural activities (32%) lack of control over resources (27 percent), and little decision-making power in agricultural production (27 percent). Over One third (34%) percent of women in the study are not yet empowered and lack time. Furthermore, women are work loaded to participate in agricultural activities, and more than one fourth are not yet empowered and have little leisure or free time (26 percent). More than a half of women are not yet empowered and lack adequate access to and decision on credit (56% percent), and 41 percent have little input in decision in production and so that they have less autonomy in production decision.

**Keywords:** Women Empowerment, Gender, WEAI Index, Agriculture

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## 1. Background and Justification

Comparable to most developing countries, the projection of women in Ethiopia account for more than fifty percent of the total population (CSA, 2021). Eighty percent of the country's women live in rural areas, nearly 85 percent of their labor spent on agricultural activities such as food processing, storage, weeding, harvesting, and marketing of produce, preparing trashing field and caring for animals (Bogalech, 2000). In rural Ethiopia women working time is twice as many hours per day compared to men, since they are primarily responsible for their households, including gathering firewood and fetching water, cooking, cleaning, and providing child care (Frank, 1999). In addition, the role of women is critical within the household and outside of the household and in the development context. However, women suffer from socio-cultural discrimination and have fewer opportunities compared to men for personal growth, education, and employment.

Empowering women and reducing gender inequalities are two key objectives of development policy. The Sustainable Development Goal (SDG), adopted as part of the United Nations Declaration, explicitly aims to achieve gender equality and empower all women and girls. According to FAO (2011) closing the gender gap in agriculture is essential to increasing agricultural productivity, achieving food security, and reducing hunger. The World Development Report (2012) also indicates that Gender Equality and Development reinforces this message and identifies the significant effects of women's empowerment on the efficiency and welfare outcomes of project or policy interventions.

Women are more likely to be engaged in work and also work for longer hours than men. For instance, in 18 of the 25 countries in Sub Saharan Africa, greater than 50% of women were employed and even in six of these countries the percentage of employed women was greater than 75% (Mukuria et al., 2005). However, as most of the employed women work in agricultural and other activities, their employment does not recognize as it contributes much to their status and empowerment. Thus, women in those countries have no or little autonomy and they are dependent on their partners in most aspects of their life. Women play a fundamental role in all the stages of the food cycle in all regions, but these roles are differing by region and location. Ethiopian women in general and Oromia women specifically bear the greatest burdens of food insecurity, since they play a significant role in livestock maintenance, crop production and marketing of rural produce (Ethiopian women Affairs, 2010).

Despite these critical roles, women farmers still face several gender inequalities, including difficulty in obtaining credit, land, extension services and other productive resources (Frank, 1999; UN, 2004).

Ethiopian government has drafted and declared the National Policy on Women (NPW) in 1993, and the Constitution in effective in 1995 has promulgated mainstreaming women's rights (AfDB, 2004). The aim of the policy is to "institutionalize the political and socio-economic rights of women by creating appropriate structures in government institutions". The policy focuses on gender equality and women's empowerment as follows: 1) "addressing discriminatory practices and mainstreaming women's issues in existing laws, regulations, customary practices, and enabling a conducive environment for women to participate in decision-making structures"; 2) coordinating and incorporating women's issues in all government programmes and policies as well as at institutional levels; 3) working towards changing discriminatory attitudes in society against women and girls; and 4) promoting research and awareness raising in all areas concerning women's development and gender equity.

According to (FRG, 2006) gender profiling in Ethiopia, Women tends to be engaged in triple work, such as productive, reproductive and community work. The hours of women work are much more than those of men. Moreover, a critical issue is an access to and control over resources (FRG, 2006). It also suggests an in-depth analysis to reveals different roles, responsibilities, and needs by (intra-) gender in the household. The Women's Empowerment in Agriculture Index (WEAI) is a new survey-based index designed to measure the empowerment, agency, and inclusion of women in the agricultural sector. It is helpful to assess the state of empowerment and gender parity in agriculture, to identify key areas in which empowerment needs to be strengthened, and to track progress over time. It builds on recent research to develop indicators of agency and empowerment that propose domain-specific measures of empowerment obtained using questions that can be fielded in individual or household surveys. Based on the Alkire-Foster (Alkire and Foster 2011) methodology for the multi-dimensional poverty index, it comprises two subindexes. The first assesses the degree to which women are empowered in five domains of empowerment (SDE) in agriculture. It also takes into account the percentage of individual domains in which women are empowered among those who do not meet the combined empowerment threshold.

These domains are:-

- Decisions about agricultural production,
- Access to and decision-making power about productive resources,
- Control of use of income,
- Leadership in the community, and
- Time allocation.

The second sub index (the Gender Parity Index GPI) measures gender parity within surveyed households. GPI reflects the percentage of women who are equally empowered as the men in their households. For those households that have not achieved gender parity, GPI shows the empowerment gap that needs to be closed for women to reach the same level of empowerment as men. A key innovation of the Index is that it is able to show in how many domains women are empowered and at the same time reveal the connections among areas of disempowerment. This enables decision makers to focus on improving the situation of the most disempowered women. In addition to tracking the nature of empowerment in five domains, the WEAI measures how empowered women are relative to men in the same household, which is critical to understand the gender empowerment, gap (Feed the Future, 2012). Therefore, The WEAI is initiated to assess the state of empowerment and gender parity in agriculture, to identify key areas in which empowerment needs to be strengthened, and to track progress over time.

## 2. Objective

- To identify the level of women empowerment in agriculture in the study area.
- To develop frame work to track the change in women's empowerment levels that occurs as a direct or indirect result of research interventions
- To examine the extent of the gender gap in terms of some socio-economic and demographic profile indicators.

## 3. Methodology

The study was survey based, and followed general household survey principle. It purposively focused on the household with primary male and female. Therefore, household with primary male and female were the study unit.

### 3.1. Description of the study area

East Shewa is found in the central rift valley of Ethiopia; in the zone different districts found comprising different farming system and agro ecologies. West Arsi zone is one of the seventeen zones of Oromia, located in the south Oromia. The capital city of west Arsi is Shashemene which is found on the way from Addis Ababa to Hawasa. This study involves the selection of representative districts from both zones following sampling procedure as discussed below.

### 3.2. Sampling procedure

Household with primary male and female (husband and wife or any member act as a primary in the household) were purposively considered. Since the concept of gender involves difference over time and location representative districts were selected from each zone. From each district, representative kebele with ease of access, weather road and other relevant parameters were selected. Finally, after identification of the target population, sample household were selected randomly. The number of samples used in the study were determined by (Yamane, 1967) with 95% confidence interval. The formula is stated as:

$$n = \frac{N}{1 + Ne^2}$$

Where: n= is number of sample district and HH  
 N= is total number of districts and HH in the study area  
 e= is the level of sampling error to be tolerated

### 3.3. Data collection

Data collection follows the collection of necessary data for analysis. Both primary and secondary data were collected from published and unpublished as well as from district office of agriculture, DAs record and kebele administration using checklist. The collection of primary data involved FGD and household interview schedule on the five dimensions of empowerment and the ten indicators of empowerment. It was collected by the structured interview schedule. Necessary pre-test was undertaken to check for reliability and compatibility of the instrumentation.

### 3.4. Data analysis

The collected primary data was analysed using STATA. WEAI was analysed following the latest multidimensional analysis index developed by (Alkire et al, 2013). The analytical procedure followed the multidimensional poverty, and well-being index.

Table 1. The domains, indicators, and weights in the Women's Empowerment in Agriculture Index (5DE)

Domain	Indicator	Weight of each indicator
Production	Input in productive decisions	1/10
	Autonomy in production	1/10
Resources	Ownership of assets	1/15
	Purchase, sale, or transfer of assets	1/15
	Access to and decisions about credit	1/15
Income	Control over use of income	1/5
Leadership	Group member	1/10
	Speaking in public	1/10
Time	Workload	1/10
	Leisure	1/10

### 3.5. Conceptual framework

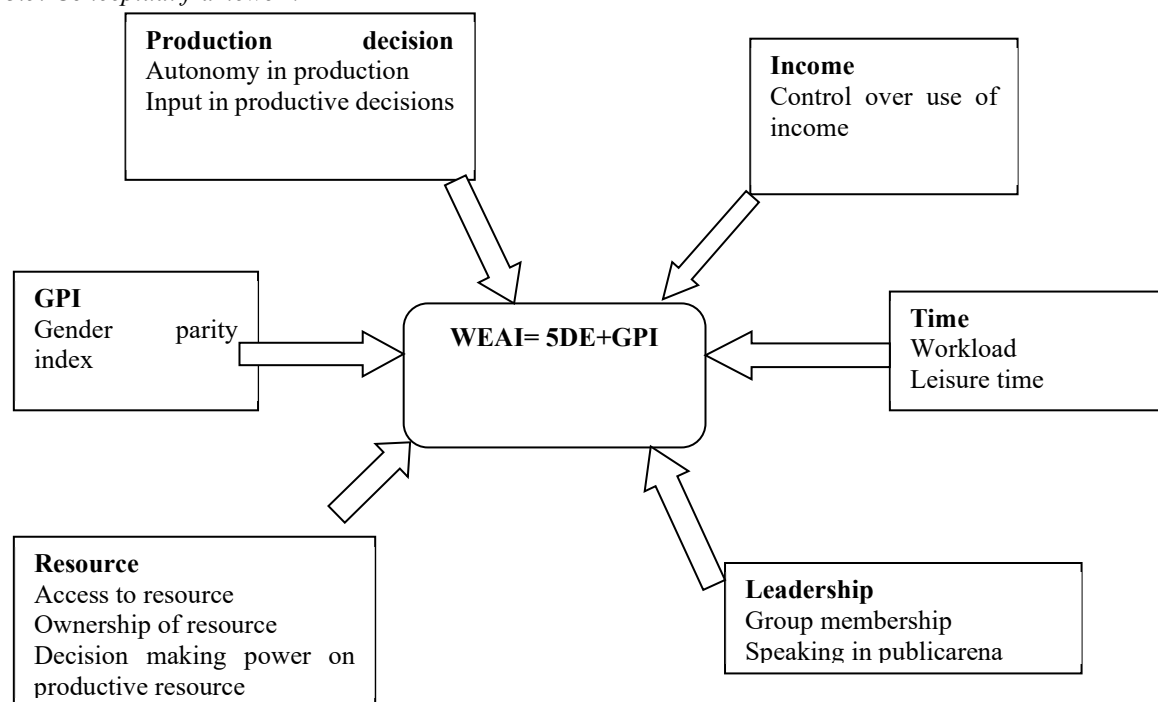


Figure 1: Conceptual framework  
 Source: own sketch

## 4. RESULT AND DISCUSSION

### 4.1. Women Empowerment in Agriculture in the study area for Men and Women

The overall result of 5DE for both (East Shewa and West Arsi) zone shows that 10 percent of women are empowered. In the study zones, 90 percent of women who are not yet empowered have, on average, inadequate achievements in 20.6 percent of domains. Thus, the women's disempowerment index (M0) is 18.4 percent and 5DE is  $1 - 0.184$  which is 81.6. In the study area, 89 percent of men are not yet empowered, and the average inadequacy score among these men is 17.2 percent. So, the men's disempowerment index (M0) is  $89 \text{ percent} \times 17.2 \text{ percent} = 15.4$ , and men's 5DE is  $1 - 0.154$ , which is equal to 0.846 (84.6) percent.

The GPI shows that 67.5 percent of women have gender parity with the primary male in their households (Table WEAI). Of the 32.5 percent of women who are less empowered, the average empowerment gap between them and the males in their households is as low as less than 5 percent. Thus, the overall and Average GPI (gender parity index) of East Shewa and west Arsi is 95 percent

Table 2: WEAI, of the study area for men and women

Indexes	Overall Study Area	
	Women	Men
Disempowered Headcount (H)	90	89
Empowered Headcount (1-H)	10	11
Average Inadequacy Score (A)	20.6	17.2
Average Adequacy Score (1-A)	79.4	82.8
Disempowerment Index ( $M0 = H \times A$ )	18.4	15.4
5DE Index ( $1 - M0$ )	81.6	84.6
No of observations used	219	198
Total observation	259	219
% data used	81%	90%
% of women without gender parity (HGPI)	32.5	
% of women with gender parity ( $1 - HGPI$ )	67.5	
Average Empowerment Gap (IGPI)	4.47	
GPI ( $1 - HGPI \times IGPI$ )	95.5	
No observations used	276	
Total number of dual HH	372	
% data used	74.1%	
WEAI ( $0.9 \times 5DE + 0.1 \times GPI$ )	82.9%	

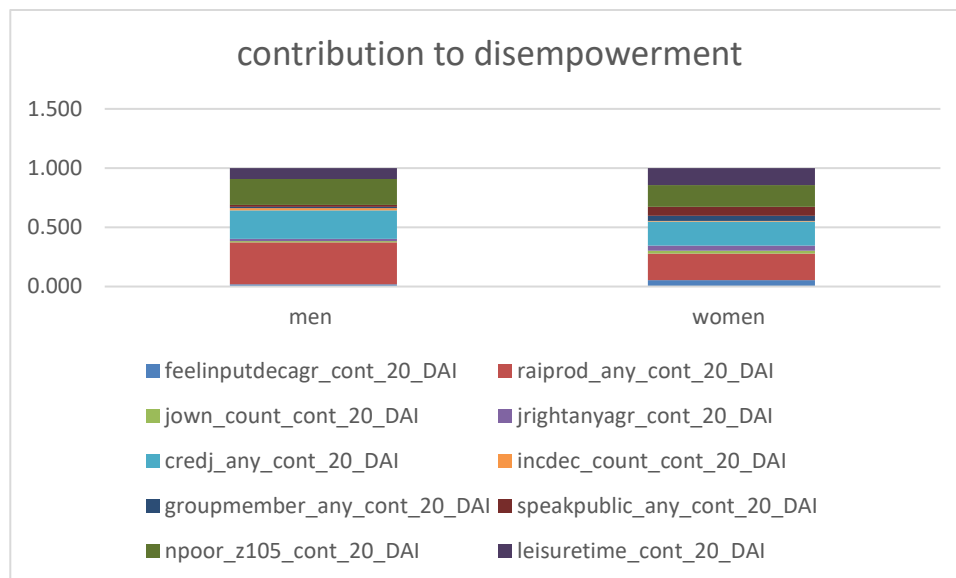
**4.2. Disempowerment Indicators decomposed by dimension and indicators for men and women in the study area**  
The disempowerment measures as decomposed by the five dimensions and the ten indicators (M0) for women (0.184) and men (0.154) is presented in Table and Figure below. Based on the decomposition of M0 in Table below, the domains in the two zone sample areas that contribute most to women’s disempowerment are lack of adequate time to be involved in agricultural activities (32%) lack of control over resources (27 percent), and little decision-making power in agricultural production (27 percent). Over One third (34%) percent of women in the study are not yet empowered and lack a time and are work loaded to participate in agricultural activities, and more than one fourth are not yet empowered and have little leisure or free time (26 percent). More than a half of women are not yet empowered and lack adequate access to and decision on credit (56% percent), and 41 percent have little input in decision in production and so that they have less autonomy in production decision.

Moreover, the contribution of lack of adequate leisure time, inadequacy in public speaking, inadequacy in purchase, sale and transfer of resource followed by input in productive decision are among the factors contributing to women disempowerment respectively based on their order of importance and next to the major discussed above. While, Control over use of income or income dimension is found to be the only non-contributing factor to women disempowerment.

Similarly, the domains that contribute most to men disempowerment are lack of little decision making in agricultural production (37 percent), inadequate time availability for production (31 percent), and little control over and decision of agricultural resource (27 percent). More than half men in the survey are not yet empowered and less autonomously able to decide in production (55%) percent, above one third are not yet empowered and have no adequate time or are work loaded (34%) percent. Nearly above half of men are not yet empowered and have little access to and decision on credit resource (56%) percent. Unlike to the discussed, lack of adequate leisure time is also contributing to men disempowerment.

Table 3: The 5DE Indicators decomposed by dimension and indicators for men and women

Statistics	Production		Resource			Income	Leadership		Time	
	Input in productive decisions	Autonomy in production	Ownership of asset	Purchase, sale or transfer	Access to and decision on credit	Control over use of income	Group member	Speaking in public	Workload	Leisure
Indicator weight	0.1	0.1	0.0667	0.0667	0.0667	0.2	0.1	0.1	0.1	0.1
<b>Men</b>										
Censored head count	0.03	0.55	0.02	0.05	0.56	0.02	0.02	0.03	0.34	0.14
% contribution	2%	35%	1%	2%	24%	2%	1%	2%	22%	9%
Contribution	0.003	0.025	0.001	0.003	0.020	0.003	0.002	0.003	0.020	0.014
% Contr. By dimension	37%		27%			2%	3%		31%	
<b>Women</b>										
Censored head count	0.10	0.41	0.07	0.12	0.56	0.00	0.08	0.14	0.34	0.26
% contribution	5%	22%	3%	4%	20%	1%	4%	8%	18%	14%
Contribution	0.010	0.041	0.005	0.008	0.037	0.001	0.008	0.014	0.034	0.026
% Contr. By dimension	27%		27%			1%	12%		32%	



## 5. CONCLUSION

WEAI is multidimensional, multiple indicator tool to measure women empowerment recently developed and used by the international development and research community. It helps to measure the contribution of project and programs towards women empowerment and gender equality. Many of the dimensions of the index are culturally defined or culturally influenced while others can be targeted through public policy. This paper presented the WEAI study result of two zones of Oromia, West Arsi and East Shewa. A number of representative districts were used in the study and accordingly, eight districts four from each were considered and used for analysis.

Any operating research and development actor in the study area can use the result of this report as current and planned intervention baseline indicators or a frame of reference to assess and evaluate the impact of their outcomes and their contributions to achieving gender equality objective of their intervention. Providing these raw results also allow implementing partners to focus on discovering the factors that may contribute to these results and should contribute to effective execution of the planned and ongoing interventions. The result will also help contribute to effective evaluation of performance in ongoing and future research and development interventions. Accordingly, based on the result and discussions made the following conclusion can be made:

Of the disempowered women and men average inadequacy of the domains of empowerment is higher for women than men. For the total dual household interviewed more than 90 percent achieved gender parity within household.

Among the five dimensions of empowerment, time, control over resource and production decisions are the first three most important factors that contributed to women disempowerment respectively. Within these domains that largely contributed to disempowerment of women, both workload and lack of adequate leisure time (time domain) had contributed large to women disempowerment. Among the domain of resource, lack of adequate access to and participation in decision making over credit is largely contributing to women disempowerment. Further, it is lack of autonomy to decide on agricultural production as reflected by less input to deciding on (what crops to grow, type and amount of inputs to purchase and use, types of livestock to raise) that has found to contribute to women disempowerment. Besides this, lack of adequate leisure time, inadequacy in public speaking, inadequacy in purchase, sale and transfer of resource followed by input in productive decision are among the factors contributing to women disempowerment respectively based on their order of importance relatively with less magnitude but not ignored.

Similarly, input to production decision as reflected by (less adequacy in sole or joint decision making on food, cash crops grown and livestock raised), inadequacy for large time allocated for productive and reproductive tasks and inadequate decision making on resources as indicated by (less access to and decision making over credit) are found to be contributing factors to men disempowerment in agriculture.

## 6. RECOMMENDATION

As both women and men reported lack of adequate time as contributing factors of disempowerment. Future works should be done to increase time availability priorly for women and men needs to be done. This can be possible with focusing on labor saving technologies, introducing improved mechanized farm implements to reduce time used, and some energy saving technologies that will help reduce women time to search for firewood collection is essential. Further, since agricultural activities are seasonal, subsequent community conversation, sensitization and

awareness creation on gender division of labor and daily activity helps to get know of women workload and change mind set of men farmers to be ready for responsibility sharing.

Both men and women reported access to and participation on decision making concerning credit is found to be priority determinant of disempowerment in agricultural production. This imply that there is greater need and urgency to improve both women and men access to credit service either formally or informally to satisfy capital shortage for agricultural investment. Beside to this it is also pertinent to focus on improving farming boo kipping and accounting as well as practicing consultative decision making on credit. It shall be great to work with both development and financial institutions to enhance farmers' access to credit. Practicing household or couples' approach in crop and livestock research and extension along with farm planning helps improve gender relationship and joint decision-making practice.

Enhancing women autonomy to equally decide on types of crop to grow, inputs to buy and type of livestock to raise to raise the extent of women motivation to decision to reflect women value through subsequent efforts to gender balanced decision making practice should be the core work of future research and development extension intervention.

Although different studies revealed that men are the most ultimate decisive to agricultural production activities, this study result found that men are inadequate in input decision to production. This needs to be substantiated with further study, and more awareness or attitude changing works should be done to change the available outlook. And improve the situation.

Improving availability of leisure time, public speaking behavior, purchase, sale and transfer of resource and input in productive decision are among the factors contributing to women disempowerment respectively based on their order of importance relatively with less magnitude but not ignored. Therefore, under possible conditions, planning women's position of those variables should also be given attention in each and every research and extension efforts to improve the status and position of women in the short and long term.

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