

Study on the Role of Gender in Livestock Production and Its Contribution Towards Household Income Generation: A Case Study in Borena Zone, Ethiopia

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Abstract

The study was conducted in two districts of Borena zone (Yabello and Dire) with the objectives to identify the major gender role and responsibility in livestock production and to determine the level of contribution of women in pastoral household and their role in income generated by both sex. A total of 90 pastorals and agro-pastorals headed household (74 male and 16 females) were interviewed using semi-structured questionnaire and PRA tool was also employed to strength data collection. According to the study of this paper, livestock, off-farm, non-farm, transfer and renting out were the major income generation sources for the different household members. The husband has the major income control and decision makers while the wife has some income generating sources and decision makers in the household families. Even though it seems that livelihood activities are fairly distributed among household members, the study reveals that women have more workload than men. Most reproductive works were observed as purely females' works. Men are advantaged with owning, controlling, accessing and decision making over household resources. A variety of problems which are commonly identified among the communities of study areas mainly include: production, social, cultural and economic constraints. Gender-based aspirations are highly essential for the success and sustainability of development oriented technological and/or policy interventions for improving gender-based livestock production. To address these modern thoughts, operational adjustments and attitudinal change by the pastoral community is required to ensure fair and balanced share of roles, responsibilities and benefits among the household members. This could be possible by improving the level of understanding and awareness of the pastoral community through appropriate technology distribution for target groups (male and female).

Keywords: Gender, Livestock, Decision, Access, Role and contribution

INTRODUCTION

According to FAO (1997), Ethiopian women are actively involved in all aspects of their life mainly the social, political and cultural activities of their communities. However the varied and important roles they play have not always been recognized. The discriminatory political, economic and social rules and regulations prevailing in Ethiopia have barred women from enjoying the fruits of their labor. This discriminatory trend and low status of women reflected in poor female treatment and unequal share within in intra-household relation. Without equal opportunities, they have lagged behind men in all fields of self-advancement. However, Economic development is unthinkable without the participation of women. In some economic sectors women even constitute a proportionally larger group of the labor force than men. However, their participation in the economy has not been valued, Ethiopian women have not received their fair share of the nation's wealth. As indicated by Rachel (2000), in Ethiopian policy for instance, it clearly addresses women's strategic as well as practical gender needs, that is, issues related to women's subordination and their existing socially-accepted gender roles respectively. The issue of pastoral and agro-pastoral HHs were ignored and recently the government became concerned for the development of these areas. There is a wider initiation to address women's strategic gender needs. However, addressing strategic gender needs involves long-term awareness raising and attitudinal change. For this purpose, extension services have received greater responsibility to reach rural women farmers. The issue could not be an easy task, since, the country is composed of different cultures, languages and religions with dominant patriarchal system imposing sexual division of labor and limiting woman's role to that of wife and housekeeper.

From gender perspective, Senait (2000) said that gender is a cross-cutting theme which applies to almost all development issue. Every society has its own brand of gender problems and these problems are expressed in societal or economic terms, or viewed as critical or not. As a broad generalization, one can say that gender issues arise from dissatisfaction with the low socio-economic status if women reflected in, among other things, their food insecurity, poor health and nutritional status and low income. Households have different sources of income from crop, livestock and other off-farm activities. As FAO (1991) says, women and men do have different sources of income, which enable them to join to different activities. Most importantly, household have different ways for disposal of the household income. Nevertheless, income and expenditure rests more on the male particularly in the patriarchal society in which the husband controls the income and makes the decisions. The female headed

households often suffer from greater limitations than male headed households in terms of managing crop and livestock production, the latter usually benefiting from better food security. (Senait, 2000). Moreover, in rural Ethiopia women play key role in both livestock management and household activities besides farming activities. They are the household managers but their work considered as non-productive, unorganized and undocumented (Bishop-Sambook, 2004; Lemlam et al., 2010). Hence development assistance has failed to reach women in the rural areas both in absolute and relative terms compared to men. Now a days, women's role in household food security is a growing issue related to rural development. Rural women needs to be raised and improved in such a way that considering the social, cultural and economic barriers of access to and control over resources; because, they are responsible to perform triple role in both social and HH activities. In most cases, women hold greater responsibilities in all spheres of households' activities. These activities and responsibilities become more complex when we consider a household headed by females. Gender, therefore, is a cross cutting issue; for addressing food security. (Sylvia, 2004). The fact that the issue of gender relations still not clearly understood in the pastoral and agro-pastoral HHs this demands focus of further attention. Thus, all these enormous contribution of women never valued and documented in the study areas and hence, this study was undertaken to address that to identify the major gender role and responsibility in livestock production and to determine the level of contribution of women in pastoral household and their role in income generated by both sex.

METHODOLOGY

The study area

The study was conducted in two purposively selected sample districts of Borena zone, Oromia region such as Yabello and Dire and three sample PAs were selected purposely from each districts based on their proximity to livestock and dairy market and potential for production. Hododi Samaro, Madacho and Gololcha from Dire and Did yabello, Darito and Did hara from Yabello district were selected. Borana zone is one of the administration zones founds in oromia regional sate in Ethiopia . It was found at 1500-2500m a.s.l. It have around 1,071,288.26 hectares farming land, 1,871,198.18 hectares forage land, 342,036 hectares forest land and 1,443,220.51 hectares of land which was covered by bushes, water resources, residents, stoneous etc. 10%, 20% and 70% of its agro-ecology was respectively high land, mid-highland and low land. The population of the zone according to 2007 central statistical estimation was 966467 of which 489,001 (51%) male and 477,466 (49%) female. The livelihood bases of the community both on livestock and crop production. Those of low lands communities are mobile some times due to the problems of water and feed shortage.

Sampling procedure

For this study both primary and secondary data sources were used. The primary data was collected from sample farmers in the study area. Sample respondents were drawn using purposive sampling from the list of households obtained from each rural PAs administrations. A total of 90 sample respondents which is 74 male household and 16 female household head were selected and interviewed using structured questionnaire. The study also considered information from secondary sources such as research centers and districts and Zonal Agriculture and Rural Development Offices regarding livestock production and gender role or access to it.

Method of data collection

Structured questionnaire, Participatory Rural Appraisal (PRA), Focus Group Discussion (FGD), and key informants interview using checklists were employed to collect relevant data. Different session of community dialogues were held for men and women groups separately while undertaking PRA field works and FGD in order to have gender disaggregated data for the household members in line with livestock production and households' income generation.

Methods of data analysis

The collected data were managed differently both for qualitatively and quantitatively data. Data collected through questionnaires were subjected to analysis using descriptive statistic by Statistical Package for Social Science (SPSS) soft ware. Whereas those data collected through PRA and FGD were analyzed qualitatively as they are synthesis of community dialogues by them.

RESULTS AND DISCUSSION

Household socio-economic characteristics

Table 1: Household socio-economic characteristics of the study area

Variables	Mean \pm SD	Percent
Age of household head	47.0 \pm 15.5	—
Sex	Frequency	Percent
Male	74	82.20
Female	16	17.80
Education level		
Illiterate	83	93.3
Adult education	5	5.6
Junior education	1	1.1
Production system		
Pastorals	35	39.3
Agro-pastorals	54	60.7

From the total sampled households, 82.2% of the households were male household headed pastorals or agro-pastorals while the remaining 17.80% are female household headed. The average age of the household was 47.0 ± 15.5 with range of 20 and 90 years old. This refers to most of target group are found to be the working age of pastorals/agro-pastorals. About 93.3%, 5.6% and 1.1% of the respondents are illiterate, adult and junior education level status respectively. This may showed that the majority of target group were illiterate due to their movement for their livestock life style and they became limited access to infrastructure like school and health station. From the total sampled households of the target group 39.3% and 60.7% of the respondents were pure pastoralists and agro-pastoralists, respectively. The figures obtained in this particular study are disagreement with previous studies of Desta (2000) who reported, fifty eight percent (58%) of the Borana households are pure pastoralists, 31% predominantly pastoralists, and 11% farmers. Many literatures revealed that nowadays there is a growing trend of crop cultivation. Solomon and Coppock (2004) reported that a declining ratio of milking stock to people in recent decades forced pastoralists in places like southern Ethiopia to cultivate more grain, diversify their livestock holdings, and engage in more market related activity.

Gender roles and responsibilities in livestock production

Livestock seasonal activity analysis

According to PRA tools (focus group discussion) young stocks management activities were mainly carried out by females (wife and daughter). Feed collection for young stocks, fetching water, animal watering and home attendance constitute the major dry season activities for these household categories. Calve suckling and house constructions which are mostly done by early ages after birth are among those female pastoral households activities. Other activities which were undertaken year round by females include milking, home and kraal cleaning, herding, barn construction, salt supplementation and care of sick animals. On the other hand, search of pasture and water for mobility and feed collection for young stocks were the main duties of males (husband and son) during the dry season. Herding and watering of livestock, kraal cleaning, animal health care and barn construction are year round activities of males. Grazing lands management (partition of wet and dry seasons (Kalo) grazing and salt collection (digging) in wet season are also male activities which are relatively laborious works. From the seasonal activity analysis it is possible to infer that some activities are common for both sexes (male and female) but some activities were totally meant for only one sex category of household.

Task loads and responsibilities between household members

PRA tools such as activity profile and daily activity profile or clock were utilized for this session to identify the workloads or responsibilities in line with different productive, reproductive and community work activities for the different household members. Task load and responsibilities analysis was an impressing but tough filed work. This is mainly because of the fact that every member of the household likes to show the task burden up on him as if the other member of the household are free. This was observed particularly with the men group. In order to minimize these biases, the PRA work was undertake for men and women group separately. Most production works around home which probably seem very simple for the males were left aside to females (wife and daughter). Most reproductive works are observed as purely females' works (Table 2). Community works like digging ponds and deep wells (Ella), also contribute to the work burden raised.

Table 2: Activity Profile done by the Women Group (PRA)

Major Activities	Done by Women		Done by Men	
	Wife	Daughter	Husband	Son
Productive Works				
Livestock watering	✓	✓	✓	✓
Milking	✓			
Herding	✓	✓		✓
Milk churning	✓			
Cleaning and fumigating milk equipments	✓			
Dairy products processing	✓			
Calve attendance	✓			
Livestock marketing	✓			
Calve house construction	✓			
Livestock health care	✓	✓	✓	✓
Kraal cleaning	✓	✓		✓
Barn construction			✓	✓
Reproductive Work				
House cleaning	✓	✓		
Prepare food	✓	✓		
Child care	✓	✓		
Fetch water	✓	✓		
Fire wood collection	✓	✓		
Shopping food items	✓			
Feed household members	✓	✓		
House construction and maintenance	✓			
Community Work				
Road construction	✓		✓	
Digging wells (Ella) and pond			✓	✓
School construction			✓	✓
Maintenance and rehabilitation of wells (Ella) and ponds			✓	✓

Table 3: Activity profile done by men groups (PRA)

Major Activities	Done by Women		Done by Men	
	Wife	Daughter	husband	Son
Productive Works				
Livestock watering	✓	✓	✓	✓
Herding	✓	✓	✓	✓
Barn construction and maintenance			✓	✓
Calve attendance	✓			
Livestock health care	✓	✓	✓	✓
Livestock marketing			✓	
Milk processing	✓	✓		
Mobility in search of pasture and water			✓	✓
Enclosure (Kallo) establishment			✓	
Pasture land partition			✓	
Search and collect salt		✓	✓	
Milking	✓	✓		
Calf suckling	✓			
Hay collection	✓	✓		
Bull selection			✓	✓
Dairy products marketing	✓	✓		
Reproductive Work				
Child care	✓	✓		
Food preparation	✓	✓		
Fetch water	✓	✓		
Fire wood collection	✓	✓		
Shopping food items	✓	✓		
Community Work				
Road construction			✓	✓
Digging wells (Ella) and ponds			✓	✓
School construction			✓	✓

Elders, also contribute to the livestock production activities of the household which vary slightly for men and women elders. Men elders contribute to the livestock production activity by giving guidance for the young male in all aspects of livestock production, information gathering and predicting about the future prospects of climate, feed and water conditions. Further, they supervise livestock in the evenings, help in herding, interpret indicators for overall management of livestock production such as where and when to migrate, which livestock categories to migrate and whom household members to migrate with the livestock, key in conflict resolution, and participate in decision making during sale of livestock. Women elders, on their side, contribute by helping reproductive and productive works, and giving advice in care of sick animals and for the house spouse and daughters.

Power relationship pattern of household members

It was observed that the decision making power of men and women vary for key household resources. Some resources are purely entitled for men while women left to get some benefits. There are also some resources where by men and women can equally decide up (Table 4).

Table 4: Key resources accessed and controlled by women and men (PRA)

Women (wife)		Women and Men (Jointly)		
<i>Accessed Resource</i>	<i>Controlled Resource</i>	<i>Controlled Resource</i>	<i>Accessed Resource</i>	<i>Controlled Resource</i>
Licho (Alange)*	Bed	Cattle	Sorora*	Barchuma*
Ororo*	Qabe*	Shoat	Gorfa*	Ororo*
Barchuma(tesso*)	Gorfa (sorora)*	Camel	Qabe*	Licho*
Mano*	Itille*	Donkey	Food	Warana*
Cattle	Afare*	Horse	Bed	Dhagaraa*
Shoat	Milk	Mule	Itille*	Okko*
Donkey	Poultry and Egg		Milk	Knife*
Horse	Sike*			kotto*
Okole*	House equipments			Gun
	Butter			Spade
	Sorora*			Billa*
	Food			Rufa*
	hcicho*			Dannisa*
	House			Bokku*

NB: (*) Most names are given by Afan Oromo, so refer for the approximate English equivalents words in (appendix 1).

Major constraints identified in the household

PRA tool was employed order to identify the major problems of both male and female household members. Problem ranking was undertaken for men and women separately. To identify and priorities pertinent constraints, the groups were given fixed number of gravels and requested to allocated numbers for the different problems identified. Average results of PRA works at two PAs were taken to avoid biasness. The major problems identified were: production, social, cultural and economic constraints. It was noted that the degree of these problems and their importance vary between men and women. The problems which are observed with great impact on women household categories such as fetch water, fire wood collection and access to markets were some them. And also there are common problems for both sexes like which are lack of pure water and crop land expansion. The priorities given to the problems by different household members (males and females) are based up on the direct effects and intensities on these specific household classes (Table 5).

Table 5: Major constraints identified for women and men (PRA)

No.	Identified constraints	Pressure on women group (in %)	Pressure on men group (in %)
1	Long distance to fetch water	82	18
2	Long distance to collect fire wood	100	0
3	Lack of transportation to market	72	28
4	Less income to pay school fee	42	58
5	Limited access to credit services	58	42
6	Limited access to extension services	66	34
7	Shortage of food	60	40
8	Shortage of animal feed	98	2
9	Limited access to improved livestock technologies	42	52
10	Lack of pure water	50	50
11	Improper settlement	40	60
12	Bush encroachment	40	60
13	Cattle over population	40	60
14	Crop cultivation expansion	50	50
15	Lack of improved crop technologies	70	30
16	Lack of motor milling	80	20

Gender role in household income generation

Different household members of the community have their own contribution in generating income for the household. Livestock enterprise is the major source of income for the different household members, but other activities like off-farm; non-farm, transfers and renting outs are nowadays becoming important income generating activities due to various ecological, social, and economical factors. The major income sources are dominated by men while the least income sources are by women (Table 6).

Table 6: Major income sources for different household categories (PRA)

Household categories	Income generating activities
Husband	Livestock marketing, brokering in per-urban areas, house and livestock renting
Wife	Livestock product marketing (dairy products, hide and skin marketing), fire wood, charcoal, and wood sell, poultry and egg sell, pity trade, grain sell (for agro pastorals)
Son	Labor out hiring (livestock herding and crop harvesting)
Daughter	Labor out hiring (livestock herding and crop harvesting)

Annual household income generation from livestock

Livestock contributed the major income source for pastoral and agro pastoral communities of the study areas.

Table 7: Annual household income generated (birr) from livestock (N= 90)

Income source category	Mean
Estimated Net Income obtained from the sale of cattle	4648.71
Estimated Net Income obtained from sale of camel	270.91
Estimated Net Income obtained from sale of shoats	219.52
Estimated Net Income obtained from sale of equines	10.00
Estimated Net Income obtained from the sale poultry	6.79

As indicated in Table 7, cattle, camel, small ruminants, equines and poultry are the major livestock species serve as sources of income for the households. The average annual income generated from sale of livestock per household during the last one year was estimated at 5,155.93 birr. Among livestock species, income obtained from sale of cattle was higher than the other species. The least income was generated from the sale of poultry. Small ruminants play considerable role for households particularly to meet their routine cash income needs. This could be attributed to the better adaptation of goats and sheep to the changing ecology and recurrent drought. Similarly, in the past the Boran had no practice of poultry production, but currently as livelihood diversification option they started poultry production practice.

Table 8: Annual income generated (birr) by household members' from the sale of livestock enterprise (N= 90)

Source of income	Mean
Income generated by husband from livestock sale	4828.32
Income generated by husband from skin and hides sale	55.30
Income generated by husband from dairy products sale	29.78
Income generated by wife from livestock sale	191.59
Income generated by wife from skin and hides sale	10.64
Income generated by wife from honey sale	1.11
Income generated by wife from dairy products sale	300.42

NB: No income generation observed for the rest household members from the livestock enterprise (that is no income generated by young male, young female, elders and children during last year)

The total annual husband average income generated from sale of livestock and livestock products is 4,913.40birr and for wife is 503.7birr. The annual average farm income generated by husband from livestock sale is 4828.32birr while for the wife is 191.59birr. In contrast with above sentences, the annual average farm income generated by wife from dairy marketing is 300.42birr while for husband is 29.78birr. This showed that the husband has the major income control and decision makers while the wife has some income generating and decision makers in the household. In many societies, cattle and larger animals are usually owned by men, while smaller animals, such as goats and backyard poultry which are kept near the house, are more women's domain. However, ownership patterns of livestock are more complex and are strongly related to the livestock production system and to social and cultural factors. The general trend seems to be that men are the ones who control the income generated. Generally in our study we identified small stock and dairy products are, thus, an important livestock resource to women in the system due to their easy acquisition, adaptive characteristics and faster growth and easy accessibility.

Table 9: Annual household income generated (birr) from off-farm, non-farm, transfers and rental out activities during previous year (N=90)

Income source categories	Mean
Income generated from off-farm activities	98.30
Income generated from non-farm activities	736.03
Income generated from transfers	194.07
Income generated from rental out activities	39.67

The communities of the study areas have also other source of income generating activities beside to farm income generating activities like from non-farm, transfers, off-farm, and rental out activities and poultry sale. The total annual household average income generated from off-Farm, non-Farm, transfers and rental out activities per household is 1068.07birr. As the Table 9 revealed, the highest income generated activities were obtained from non-farm activities and followed by transfer and off-farm respectively. The least income sources were generated from the rental out.

Table 10: Annual household members' income generated (birr) from off-farm, non-farm, transfers and rental out activities during previous year

Income source categories	Mean
Income generated by Husband from off-farm	8.47
Income generated by Wife from off-farm	69.83
Income generated by Young male from off-farm	4.00
Income generated by Young female from off-farm	6.74
Income generated by Elders from off-farm	9.33
Income generated by Husband from non-farm	610.28
Income generated by Wife from non-farm	72.29
Income generated by young male from non-farm	240.58
Income generated by Husband from rental out of livestock	39.67
Income generated by Husband from transfers	137.07
Income generated by Wife from transfers	53.44
Income generated by young female from transfers	0.67

The most off-farm income sources were obtained by wife with annual average income of 69.83birr and followed by elders with annual average income of 9.33birr and also the least were obtained by young males with annual average income of 4.00birr per household. In contrary, the most non-farm income sources were obtained by husband with annual average income of 610.28birr and followed by young males with annual average income of 240.58birr and also the least income source were obtained by wife with annual average income of 72.29birr per household. In addition to this, the income that obtained from transfers by husband were very high with related to the wife that they obtained (Table 10). As a result, the whole family member shares their role for source income activities in the study areas.

CONCLUSION AND RECOMMENDATIONS

Different members of the household perform different functions related to the rural livelihood. As a result, most production works around home which probably might seem very simple for other members of household were left aside to women (wife and daughter). Most reproductive works are observed as purely females' works. Community works like digging and cleaning ponds and Ella, also contribute to the work burden raised. Even though it seems that livelihood activities are fairly distributed among household members, the study reveals that women have more workload than men. Men are advantaged with owning, controlling, accessing and decision making over household resources. The daily activity profiles women household members are tidied up with complicated productive and reproductive activities which are very tedious but seems simple. On the contrary male household members of the study area are relatively better off than women but face difficulties in dry period whereby they are enforced to make long journey in search of feed and water for their livestock. Furthermore, most of the activities which are under taken by women are very routine.

Generally in our study we identified dairy products, hide, skin, fire wood, charcoal, wood sell, poultry, egg, pity trade and grain sell (for agro pastorals) thus, an important livestock and non livestock resource income to women in the system. But livestock marketing, brokering in peri-urban areas, house and livestock renting are the main resource income for men. And also both men and women share an income from non-farm, off-farm, rental and transfers even if the incomes vary from men to women in the study societies. So introducing of labor saving technologies, infrastructure and targeting extension services by gender and providing training and education on gender sensitive manner, among others, will minimize the work load of women and they bring improved livelihood. And also it is an important to aware the societies to diversify their income source beside to the major income source and to intervene to improve poultry production are often seen as a way to reach poor rural women to improve their livelihood especially for those women. Generally, considering gender-based aspiration is highly essential for success and sustainable development.

Appendix 1

The approximate equivalent words for Afan Oromo (appendix 1).

Licho (alange): material made from very thick skin for riding horse and mule (used by men)

Ororo: a stick made of wood that the married man holds

Mano: material made wood that the women used to cover or put on fumigation hole

Okole: material made from tick skin (like giraffe and bull) for milking of animals.

kabe: material for milk holding while taking to market and to drink at home too.

Gorfa: material made from wood used for milk storage or container at home.

Sorora: material made from wood used for milk container at home and for marketing.

Afare: material made from hide used for ignition of fire

Sike: material made from wood held by married woman

Chicho: material made from wood used for milk container especially during preparedness to marriage and special ceremonies

Warana (ebo): weapon materials made from wood and metals

Dagara/kotto: axe

Okko: material made from wood used for fencing

Rufa: cloth wind around the head of men especially during a ceremony and ayyu Abba Gada, Qallu and retired elders

Dannisa: a stick held during ceremonies by men

Bokku: a stick for male born in the Gada system especially made when they cut-off their hair

Billaa: knife

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