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RESEARCH ARTICLE

FACTORS AFFECTING FEMALE-HEADED HOUSEHOLDS' LIVELIHOOD DIVERSIFICATION STRATEGIES CHOICE IN AMBO DISTRICT, ETHIOPIA

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ABSTRACT

Ethiopia, as compared to the rest of the world, is a region most grounded in poverty due to periodic drought and extreme variable environment making agriculture a risky economic activity. As a consequence, agricultural production has been deteriorating over time, and forces rural people in the region to look for alternative employment option other than agriculture. Ethiopian rural female-headed households (FHH) are not exceptional to this scenario. Therefore a study was conducted on livelihood diversification strategies choice of female-headed households in Ambo district, Central highland of Oromia region, Ethiopia. The study was carried out in five Kebeles with 104 households to characterize livelihood options being practiced by FHHs and to examine the constraints that hinder FHHs participation in different livelihood options. Multi-stage sampling procedure was employed. Structured interview schedule and check list were employed to gather the data. The study used descriptive statistics, like mean, percentage and multinomial logit regression model for data analysis. The study has concluded that diverse livelihood options were available and thus, FHHs pursued diverse range of activities that draw on their labor and time. However, the participation levels varied within FHHs. The variation was mainly in terms of the activity they diversify into and conditions under which diversifications are made. Generally, FHHs participated in low-return and high risk and last resort activities. The study concluded that livelihood diversification strategies choice of FHHs was determined by a number of factors. Hence, it is recommended that the livelihood of FHHs needs to be recognized and policy intervention should concentrate on improving access to assets within the aim of expanding livelihood options rather than assuming households as spatial homogenous and individual engaged in one type of activity only.

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INTRODUCTION

Ethiopia, as compared to the rest of the world, is a region most grounded in poverty due to periodic drought and extreme variable environment making agriculture a risky economic activity. Like other Sub-Saharan African countries, the country is characterized by a complex, diverse and risk-prone production environment (Chant, 2010 and Degefa, 2005). As a consequence, agricultural production has been deteriorating over time, and forces rural people in the region to look for alternative employment option other than agriculture. Ethiopian rural female-headed households (FHHs) are not exceptional to this scenario. Various empirical studies shows that different livelihood diversification strategies exist in Ethiopia, even though the forms and people's participation level may vary which is not an exception for FHHs.

It is also noticed that female headship has been linked to unfavorable circumstances, such as family dissolutions, single parenthood, or facing socio-cultural constraints (Metasebia, 2009). As a consequence, FHHs have been largely considered as vulnerable and at risk of poverty group, both among the academic and policy making spheres.

The existing literature has pointed out that FHHs in developing countries tend to be poorer than the male, and are in situations where general insecurity and vulnerability prevail, and a similar conclusion was made in the case of Ethiopia (Tizita, 2013 and Metasebia, 2009). It has also generally been observed that female-headed households are more food-insecure than male-headed households. This may be due to "triple burden". A research has highlighted particular constraints affecting FHHs in pursuing remunerative livelihoods, especially in the rural areas. On the other hand 'feminization of poverty' has been much in discussion, in both the academic and development policy circles of the

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phenomena. However, there is little clarity about what the feminization of poverty means, or about whether such a trend can be empirically verified. Nevertheless, as several scholars have pointed out, we need to go beyond the simple equation FHHs pursue last resort livelihood options.

In addition, a substantial body of literature now exists to show that men and women in Ethiopia experience diversification of livelihood differently (Tizita, 2013). But what is less clear is a disparity within FHHs using different parameters. It is well-documented that women almost everywhere are disadvantaged in relation to men in their access to the different livelihood assets (Chant, 2010 and Metasebia, 2009). However, research work on FHHs livelihood diversification strategies and nature of activities under condition of resource scarcity in study area is limited. The study, therefore, aims at identifying the existing livelihood diversification strategies and assesses factors that determine the FHHs choice of livelihood diversification strategies in the given district.

## MATERIALS AND METHODS

The study region is located in West Shoa Zone, Oromia Regional State, Ethiopia. Ambo District is located in central part of Ethiopia and lies within altitude of 1380m to 3300 masl. Agro-climatically, the district is divided into, highland, mid-highland and low land which account 35%, 50 % and 5% respectively. The mean annual rainfall of the area ranges from 1300mm to 1700mm. The mean annual temperature ranges from 23-28°C having an average temperature of 22° C. The major economic activities are agriculture. Crop production is mostly dependent on rain-fed and major crops produced in the area are wheat, maize, teff, barely, sorghum and enset. Livestock rearing is common in most parts of the district. Multi-stage sampling technique was used to select the respondents.

First, the area is stratified into relatively higher-potential and relatively low-potential using agro-ecology and nearness to market as criteria to capture the different farming systems. Three kebeles from relatively high potential and two kebeles from low potential were selected using simple random sampling technique. Then stratified into male and female-headed households and finally 104 FHHs were selected by using random sampling method. Standard tools of structured household survey interview schedule and checklist were designed. Descriptive statistics such as mean, percentage, frequency and along with multinomial logit model were used and results were transcribed, interpreted and analyzed accordingly.

## RESULTS AND DISCUSSION

Age of household head affects labor availability, fertility behaviors and dependency ratio of household members which in turn affect the nature and degree of households' participation in different livelihood activities. It is statistically significant at 5% level of probability among different groups of diversification options. The total family size (TFS) of the study shows that the average family size is 3 and it is lower than the national average family size of 5 people per household and is consistent with previous research on Ethiopia. In a similar manner, labor availability which is mainly explained by Total Family Size is one of the potential factors that affect FHHs participation in different income generation activities. Generally, FHHs on an average had fewer economically-active household members and were in a disadvantaged position in deploying family labour for own farm production. Hence, they face labour constraints which subject them to hire labor. In the same token, lacking an adult male as 'breadwinner', lone mother units not only has to do without men's earnings, but also be disadvantaged by higher dependency ratio than households which comprise two working parents (Chant, 2010 and Metasebia, 2009).

The study revealed that land has been and is still transferred from generation to generation through male and the daughter would start a life with her husband after marriage while the son follows the footsteps of his father and can manage the whole family. Inheritance rules of patrilineal society in principle exclude women from having access to land rights. However, the result indicates that if the marriage is legitimate, a widowed wife may remain in the late husband's village with her children and continue cultivating the husband's land. Mohammed (2013) confirmed that rural women of Ethiopia mainly have access to land through marriage. Regarding farm size, the result of the study indicates that the mean land holding size is 2.28 ha and it is higher than the national land holding size (1.24 ha) per household and lower than the land holding size (3.6 ha) as reported by Mohammed (2013). The current study focuses on de facto and de jure FHHs not on women gendered aspects. Land markets in Ethiopia are fairly inflexible as compared to other parts of the world.

The usufruct right continues as long as at least one member of the family is farming the land. The study found that mostly poor farmers in general and FHHs in particular rent out land while the better-off rent in land. Studies conducted by Start *et al.* (2005), Mossa (2013) and Degefa (2005) stated that those who rent-in land are the male-headed in the category of relatively rich and /or of better off-farmers.

**Table 1. Livelihood Diversification Strategy of FHHs**

Variables	Farm	Farm +non-farm	Farm +off-farm	Farm + non-farm +off-farm	Total	F-value
	Mean	Mean	Mean	Mean	Mean	
Age	42.5000	40.8000	37.2222	41.7778	41.1635	4.188**
Dependency ratio	1.1264	1.5840	2.3278	1.2889	1.4644	3.187***
Total Family Size	3.3889	4.0800	4.7778	3.5556	3.8558	2.564
Land Size	2.7896	1.9763	1.9333	2.2878	2.2811	7.504**
Total Livestock Unit	3.5693	2.9846	1.3778	2.4244	2.9995	.014**
Number of Oxen's owned	1.6111	1.2800	1.6667	.4444	1.3558	.101***

\*\*\* and \*\* significant at 1 and 5% respectively. Source: own survey

The result indicates that despite low holding size, FHHs shared-out and rented-out their land because they face labor shortage, gender division of labor and lack of oxen. Livestock production plays the central role to the households' economy and is important in farming system. It is considered as the main source of cash income and food as well as the foundation of prestige and power.

The mean number of livestock in TLU (Total Livestock Unit) is found to be 2.99 and is 3.567 for farm based livelihood diversification which also varies across different livelihood options. Oxen are key assets in the study areas where farming system is characterized by draught power. The mean number of oxen owned is 1.35 and it varied across different livelihood options. This indicates that FHHs face oxen shortage and hence they depend on pairing oxen with others, borrowing oxen from relatives, hiring oxen and engaged in share-cropping and these were the options being used by the respondents. In addition, exchange of labor force with oxen was a usual practice and is similar with the findings of Mossa (2013) and Degefa (2005). The study has shown that only 15 per cent of the respondents had access to irrigation. Diversion of river is a common source of water for irrigation purpose in which access to and distribution is controlled through traditional water user committee.

But access to such water source is determined through how far the land is situated from the water source. FHHs tend to avoid labor intensive productions such as vegetable cultivation through irrigation scheme because they face difficulty because of double burden in circumstance where fewer economically-active household members are available. Sara (2007) and Mossa (2013) reported that women bear the burden of household chores that result in time and mobility constraints compared to male-heads.

The study showed that 65 per cent of the respondents had access to credit services. Of these, for 27 per cent of them the livelihood is farm+ nonfarm. The study indicates that most households did not have access to credit services from formal sources. Sara (2007) and Mossa (2013) argued that FHHs are disadvantaged with regard to credit services because of problems like lack of information about credit programmes, low and irregular income, and lack of collaterals. Hence, they are subjected to receive credit from informal sources which charge high interest rates. The study also shows that FHHs had access to use of chemical fertilizer and different chemicals.

### Household Livelihood Diversification strategies

Livelihood strategies are those activities undertaken by smallholder households to provide a means of living, and its aim is to ensure households' economic and social security.

**Table 2. Livelihood diversification strategy of FHHs**

Livelihood diversification strategy of FHHs(%)							
Variables	Response	Farm only	Farm +non-farm	Farm +off-farm	Farm + non-farm +off-farm	total	X <sup>2</sup> - value
Irrigation use	Yes	20	9	1	2	32	49.846***
	No	27	46	8	7	88	
Fertilizer use	Yes	30	35	7	6	68	48.231***
	No	6	15	2	3	26	
use chemicals	No	19	34	5	7	64	48.231***
	Yes	25	35	6	6	72	
	No	11	15	3	3	32	
Access to credit	No	21	30	4	7	62	48.231***
	Yes	23	27	8	7	65	
	No	13	23	1	2	39	
Study area	Highland	25	26	4	7	62	48.231***
	Mid-highland	8	14	0	0	22	
	Low land	3	10	5	2	20	
	De jure	23	33	5	6	67	

\*\*\* and \*\* significant at 1 and 5% respectively. Source: own survey

**Table 3. Multinomial Logit Model Results of Households' Choice of Livelihood Strategies**

Livelihood Diversification Strategy of Female-Headed Households									
Variables	Farm			Farm+ non-farm			Farm + off-farm		
	Coeff.	P-value	Marginal effect	Coeff.	P-value	Marginal effect	Coeff.	P-value	Marginal effect
Number of oxen owned	4.917	.008	136.604	3.734	.037	41.853	-4.485	.014	88.668
Total Land Holding Size	.388	.365	1.474	-.444	.167	.641	-.892	.050	.410
Tropical Livestock Unit	.112	.632	1.118	-.238	.215	.788	-1.055	.080	.348
Community Based Organization	20.620	.000	9.022	18.865	.000	1.559	-1.983	.145	.138
Irrigation Use	3.036	.057	20.823	1.075	.399	2.930	-20.174	.000	1.7329
Access to Credit	-17.464	.997	2.604	.592	.491	1.808	-3.173	.037	23.884
Fertilizer Use	.636	.720	1.888	-.026	.976	.976	-2.414	.134	.089
Seed	-.611	.753	.543	1.952	.055	7.046	2.127	.257	8.932
Chemical	.293	.878	1.34	-.768	.396	.464	-.803	.560	.448
Study Area	2.768	.060	15.927	-.438	.529	.645	-1.193	.274	.303
Dependency Ratio	-14.150	.239	7.154	-.174	.697	.840	12.474	.060	2.6135
No. of obs.				120					
Log likelihood -				337.123					
LR chi2(57)				276					
Prob > chi2				.000					
Pseudo R2				.812					

Source, own survey 2014

The study revealed that the major livelihood diversification strategy practiced by FHHs of Ambo District were farming which include crop-based and livestock based diversification strategies; Non-farm based diversification strategies include petty trading, hand crafts and selling of unskilled labour force. In semi-urban areas of the District, they engaged in preparation of local food and drinks - Tella, Areke, labor wage and prostitution, which are few of the livelihood options being practiced by them. The finding of this research supports the view of other scholars such as [Selamawit \(1994\)](#) and [Metasebia \(2009\)](#) who have stated that the major urban informal activities in the country tend to be petty trading, domestic services, daily labour and prostitution. In the case of off-farm activities the study has found out that daily labour and selling of fuel wood as the diversification strategies among FHHs.

### Dependency Ratio

This variable is significant at 10% level of probability for FHHs to participate in farm + off-farm activities keeping other things constant. The odds ratio of 2.6135 for farm shows, keeping the influence of other things constant, a unit increase in dependency ratio, there will be increase in the likelihood of FHHs to participate in farm + off-farm livelihood diversification strategy by about 2.6135. Studies conducted by [Chant \(2010\)](#) and [Metasebia \(2009\)](#) reported similar results.

**Number of oxen owned (TOX):** This variable is significant ( $p < 0.5$ ) to influence FHHs decision to participate in farm, and farm + non-farm and farm + off-farm. It shows FHHs who doesn't have the required amount of oxen, is forced to participate in other options as the chance to engage only in agricultural activity is curtailed due to lack of oxen as an asset.

**Total Land holding Size (TLH):** This variable has negatively and significantly influenced the probability of livelihood diversification into farm + off-farm than agriculture leaving other things constant. Large farm size helps FHHs to cultivate and produce more, which in turn increases farm income and improves livelihood of a household. The declining land sizes encourage FHHs to diversify their sources of income. Similarly, studies by [Mohammed \(2013\)](#) and [Degefa \(2005\)](#) revealed that insufficient arable land sizes are positively and significantly associated with participation of rural households in off-farm and non-farm activities.

**Total Livestock ownership (TLU):** This variable is significant 10% to influence FHHs decision to participate in farm + off-farm. The odds ratio of 0.348 in farm + off-farm shows a unit decrease in livestock will increase the choice of decision taken by FHHs by a factor of 0.348 to engage more in farm + off-farm than other livelihood diversification strategies. [Metasebia \(2009\)](#) reported similar results.

**Irrigation Water:** This variable is significant at 5% probability to influence FHHs decision to participate in farm as diversification option. The odds ratio of 20.823 for farm indicates that keeping the influence of other things constant, the likelihood of FHHs to participate in agriculture as livelihood strategies increase by 20.823 for unit increase in

access to irrigation. It is consistent with the finding of [Tizita \(2013\)](#).

**Area of the study (agro-ecology):** It is significant at 10% probability level for agricultural activities as livelihood strategies. The odd ratio of 15.927 for farm indicates that a unit increase in FHHs in number of potential areas there will be the likelihood of FHHs to take the decision to participate in farm increases by a factor of 15.927. This implies that FHHs which are found in relatively drier and fragile environment will have the likelihood of participating in last resort activity. Thus, agro-ecology not only limits the options available but also pushes them to diversify into low-return and high risk activities.

### Conclusions and Recommendations

Agriculture is the dominant economic activity and the primary source of livelihoods for rural Female-headed households in the study area. A significant number of FHHs engage in diverse livelihood strategies away from purely crop and livestock production towards non-farm and off-farm activities that are undertaken to broaden and generate additional income for survival and livelihood improvement. The result of this study indicates that low resources endowments were the main features that characterize FHHs of the poor and this meager resource could not enable them to generate sufficient livelihood outcome. To overcome the situation, majority of them depend on livelihood diversification. Whether as a result of demand-pull or distress-push factors, livelihood of FHHs needs to be recognized and policy intervention should concentrate on improving access to asset within the aim of expanding livelihood options rather than assuming FHHs are spatially homogenous and individually engage in one type of activity only. Livelihood behavior of FHHs is diverse due to diversity in livelihood assets and heterogeneous constraints. Thus, future interventions must take into account diversity in endowment of livelihood resources/asset and difference in livelihood strategies.

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