



ISSN: 0975-833X

RESEARCH ARTICLE

PERCEPTION OF RISK AND COPING MECHANISMS BY FEMALE-HEADED HOUSEHOLDS IN
AMBO DISTRICT OF ETHIOPIA

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ARTICLE INFO

Article History:

Received 07th April, 2015
Received in revised form
29th May, 2015
Accepted 10th June, 2015
Published online 31st July, 2015

Key words:

Gender,
Risk,
Coping mechanism,
Female-headed households
Abbreviation Used:
FHH – Female-Headed Household.

ABSTRACT

Risks are events, trends and structural factors that threaten food supplies, access or utilization. Risks have effects at different levels from individual to global or regional level. Although risks affect everyone, it is not gender neutral. African smallholders show wide diversity in perception, adaptations and responses to internal and external challenges. A more comprehensive understanding of the rural women perception of risk along with reasons why female-headed households develop and use certain risk management strategies need to be studied. The study area Ambo district is located in West Shewa Zone, Oromia Regional State, Ethiopia. The study area was stratified into relatively higher-potential and relatively low-potential using agro-ecology and nearness to market as criteria to capture the different farming systems and its exposure to risk. Then three kebeles from relatively high potential and two kebeles from relatively low potential were selected using simple random sampling technique. Further stratified into male- and female-headed households and finally all the 104 Female-Headed Households in the five kebeles were selected for the study. Standard tools of structured household survey interview schedule and checklist were designed and used. Descriptive statistics such as mean, percentage, frequency were used and results were transcribed, interpreted and analysed accordingly. The study indicated that majority of the respondents perceived social-cultural problem, health problem, lack of labour & oxen, share/rent cropping, and lack of access to potential non-farm and off-farm along with startup capital as major sources of risk. The livelihood diversification strategies adopted were: income diversification, crop diversification and livestock diversification. Income diversification strategies followed were: diversification of resources and enterprises like depending on non-farm activity, share cropping, engage in prostitution, send household members for work; whereas crop diversification was reliance on some ecologically well adapted crops like Enset production. Livestock diversification included small ruminant husbandry and adjustments within cropping and livestock systems. It was found that female-headed households lack productive resources such as farm land, cattle, male labour, social capital, non-agricultural income. Severity of risk and perception of risk were among the major factors affecting behavior of risk management. Thus, given, their vulnerable positions, female-headed householdss in their locality adapt and engaged in various coping mechanism to overcome food deficient.

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Citation: Mulu Debela Ofolsha, Fikadu Abdise Erena and Dr. J. Paul Mansingh, 2015. "Perception of risk and coping mechanisms by female-headed Households in Ambo district of Ethiopia", *International Journal of Current Research*, 7, (7), 18765-18769.

INTRODUCTION

Risks are events, trends and structural factors that threaten food supplies, access or utilization. Risks affect people in different ways. Improving our understanding of risk and vulnerability is an issue of increasing importance for female-headed households, as it is for much rural households of Ethiopia. Risks have effects at different levels from individual to global or regional level.

Although risks affect everyone, it is not gender neutral (Huiru *et al.*, 2013; Kumar and Quisumbing, 2014). Risks magnify existing inequalities, reinforcing the disparity between women and men in their vulnerability to and capability to cope with risks and uncertainty. As a result, men and women have different capabilities to manage risk and cope with shocks. It is commonly perceived that women may be less able than men to cope with and overcome crises because they have less access to and control over resources and they experience gender-based vulnerabilities (Kumar and Quisumbing, 2014). Christian and Marco (2005) stated that men and women were exposed to

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different types of risks because of a combination of biological, economic, and cultural factors, including gender roles. It is clear that men and women have different response against risks. Hence, understanding differential exposure and response to risks are keys in helping men and women to become more resilient in the face of risk and uncertainty.

African smallholders show wide diversity in perception, adaptations and responses to internal and external challenges. This scenario is not exceptional for female-headed households of Ambo District, Ethiopia. Such responses often have gendered dimensions. Study conducted by Stefan (2000) on rural households in Ethiopia revealed that many households suffer from common or idiosyncratic shocks related to economic policy, labour or livestock. In the same token evidence on the differential exposure or vulnerability to shocks by gender comes from studies that compare differences across male-headed and female-headed households as well as those that compare differential exposure and impact of shocks on men and women within the same household. However, so far in the study area such study is scant. For instance, study conducted by Kumar and Quisumbing (2013) revealed on impact of shock and risks on rural households of Ethiopia shows experiencing a reduction in living standards or asset holdings as a result of the 2007–2008 food price increases. Although this literature has documented that shocks affect rural households differently, but evidence on how shocks affect female-headed households asset holdings and difference between rural and urban women are relatively scarce. Hence, how rural female-headed households perceive different types of risks and how the final selection of risk management tools is made in complex situations need to be studied.

Furthermore, so far the existing literature does not capture that female-headed households are intrinsically different from male-headed households in terms of observable as well as unobservable characteristics, arising from the very same processes that make a household male-headed or female-headed. Therefore, differences between male-headed and female-headed households may reflect these differences along with the difference in gender of headship. Therefore, a more comprehensive understanding of the rural women perception of risk along with reasons why female-headed households develop and use certain risk management strategies need to be studied.

MATERIALS AND METHODS

The study region is located in West Shewa 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 is ranges from 1300mm to 1700mm. The mean annual range of temperature ranges from 23-28°C having an average temperature of 22° C. The major economic activity is 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 also common in most parts of the district. Multi-stage sampling techniques

were used to select the respondents. First, the area was stratified into relatively higher-potential and relatively low-potential using agro-ecology and nearness to market as criteria to capture the different farming systems and its exposure to risk. Then three kebeles from relatively high potential and two kebeles from relatively low potential were selected using simple random sampling technique. Further stratified into male- and female-headed households and finally all the 104 FHHs in the five kebeles were selected for the study. Standard tools of structured household survey interview schedule and checklist were designed and used. Descriptive statistics such as mean, percentage, frequency were used and results were transcribed, interpreted and analysed accordingly.

RESULTS AND DISCUSSION

Sources of Risks along with its perception

The study made an attempt to identify different types of risks as perceived by Female-headed households of different localities. The occurrence of risk along with its type was well perceived by communities of the study area as most of them have been observing different types of risks. The study indicated the major types of risk perceived by FHHs are presented in Table 1.

Almost all participants understood that risk occurrence is obvious. Also the study indicated the sources of risk in the area are many. It was well documented that men and women faced different risks throughout the life cycle. It is important to notice that perceptions about the understanding of risk inform the strategies they adopt towards risk management. The result indicated that most of female-headed households (84.60%) perceived that cultural related risks are always occur which leads to discrimination of them not to engage in different types of social participation. Crop production risk was perceived by 82.80 per cent of the respondents. They understood that it occurs always. This is due to late planting of crops, infestation by pest and disease. In addition, the inability of FHHs to carry out critical agricultural tasks such as ploughing when faced with chronic illnesses or death of household members who provide labour may lead to poor crop performance. The other major causative factor for crop failure mentioned by the respondents was the inability of women to purchase and apply optimal fertilizer to the soils. Apart from crop failure, the households in Ambo District experienced losses of livestock due to theft and disease outbreaks.

The study indicated that majority of the respondents perceived social-cultural problem (84.60%), health problem (71.10%), lack of labour & oxen (70.20%), share/rent cropping (63.50%), and lack of access to potential non-farm (65.40%) and off-farm (61.50%) along with startup capital as major sources of risk. Female-headed households faced labour and oxen shortage as other source of crop production risk. As a result it lead to late planting of crops and consequently to yield reduction to certain extent. Due to the limited resource capacity of women, their capacity to take risks was also low. In addition, in the study area, like other parts of the country, female-headed households does not have inheritance rights or transfer entitlements to her husband's plots of land and other possessions. As a result land holding size of female-headed households is decreasing.

Table 1. Types of Risk As Perceived By Female-Headed Households

Types of risks	Always		Sometimes		Rarely		Never		Total	
	F	%	F	%	F	%	F	%	F	%
Cultural related risk	88	84.6	12	11.5	4	3.8	0	0	104	100
Personal risk (health)	74	71.1	24	23	6	5.8	0	0	104	100
Crop production risk	86	82.8	10	9.6	6	5.8	2	1.9	104	100
Lack of labour& oxen	73	70.2	18	17.3	8	7.7	5	4.8	104	100
Share/rent cropping	66	63.5	25	24	9	8.6	4	3.8	104	100
Lack of access to non-farm employment opportunities	68	65.4	20	19.2	4	3.8	12	11.5	104	100
Lack of access to off-farm employment opportunities	64	61.5	30	28.8	10	9.6	0	0	104	100
Lack of access to credit	55	52.9	28	26.9	21	20.2	0	0	104	100
Technological risk	48	46.1	30	28.8	20	19.2	16	15.4	104	100
Plots location risk	64	61.5	22	21.1	10	9.6	8	7.6	104	100
Market risk	68	65.4	20	19.2	10	9.6	6	5.8	104	100
Land holding problem	70	67.3	12	11.5	10	9.6	12	11.5	104	100

Source: Own Survey 2014

Table 2. Coping Mechanism Used By Female-Headed Households

Types of coping mechanism/measures used	Number	Percent (%)
Share cropping	82	78.8%
Exchange arrangement	44	42%
Livelihood diversification	104	100%
• Income diversification	90	87%
• crop diversification	66	64%
• livestock diversification	58	56%
Rely on less preferred food	65	62.5%
Borrow food	55	52.9%
Purchase food on credit	45	43.3%
Consume food stock	67	64.4%
Send HH members to eat else where	42	40.4%
Send HH members for work	44	42%
Reduce number of meals eaten in a day	73	70.2%
Engage in prostitute	40	38.5%
Selling durable goods	62	59.6%
Working in exchange for food	48	46.2%
Getting help from relative or friend	34	32.7%
Limiting portions of meal size	62	59.6%

Source: own survey 2014

Types of risk management

There is a growing recognition that there are differences between men and women in their needs, vulnerabilities, capacities and coping strategies. It is also recognized that women are more vulnerable to hazards. Since, roles played and nature and degree of risk they exposed to, vary between rural women and men of same localities. Therefore, the management strategies of risks are the reflection of these factors. Hence, the current study identified risk management strategy employed by female-headed households along with the determinants in risk minimizing strategy and loss management strategy of rural female-headed households of the study areas (Table 2).

A) Risk Minimizing Strategies (ex-ante)

Risk minimizing (ex-ante) refers to actions intended to reduce the risk of failure or income shortfall by reducing the variability of income (Stefan, 2000; Belayneh, 2006). Risk minimizing practices are adjustments to production and resource use before and during a production season. It is change of production activities to ensure the level of household income stability before risks. The investigation shows that what measures did FHHs take to prevent risk and the details are presented in Table 2. These measures are within livelihood diversification strategy according to the frequency from high to

low are as follows: income diversification (87%), crop diversification (64%) and livestock diversification (56%). Income diversification involve such practices as diversification of resources and enterprises like depending on non-farm activity, share cropping, engage in prostitution, send HH members for work; whereas crop diversification like reliance on some ecologically well adapted crops like Enset production. Livestock diversification includes small ruminant husbandry and adjustments within cropping and livestock systems.

B) Loss Management Strategies (ex-post)

Loss management (ex-post) refers to coping strategies intended to reduce the consequences of failure or income shortfall once it has occurred. The study indicated that the responses to risk are determined by the specific characteristics of individual households, resource endowment and types of headship.

From the results of the study presented in Table 2 it was found that borrowing from relatives, friends or neighborhood, selling of physical assets, purchase of food on credit, limiting portions of meal size, rely on less preferred food, reduce number of meals eaten in a day are the strategies used for loss management by female-headed households.

Exchange Arrangements

The study indicated that exchange arrangements are among the major coping measures used by the respondents. About 42.00 per cent of the respondents were engaged in exchange arrangement. This could be labour and/or oxen shortages often result in delays in farm operations. To overcome this problem, there is a social organization of production or a labour exchange arrangement named 'Dabo' or 'Jige' when family members of FHH organized as a unit in order to cultivate the land or harvest of the crop during peak labour periods. There are also cases in which a single ox is borrowed for a certain period of time in exchange for two and half quintals of cereals mainly, wheat, maize and teff at harvest.

Share Cropping

The current study revealed share cropping system as one of the risk minimizing measures. The study indicated that 78.80 per cent of the respondents make use of share cropping as one major of coping mechanism in case of labour, oxen and/or seeds shortage. FHHs cannot cultivate their plots on time, or even at all, due to lack of oxen, labour and/or seeds which forced them to make arrangement with rich and or/male-headed households who possess the required capital. Kumar (2014) and Belayneh (2006) in their work stated that poorer households (mainly female-headed) cannot cultivate their plots on time hence they arranged share cropping.

Livelihood Diversification

Ellis (2000) defined livelihood diversification as the 'process by which rural families construct a diverse portfolio of activities and social support capabilities in their struggle for survival and in order to improve their standards of living'. Diversification reduces risk exposure by spreading it over a portfolio of income generating activities whose returns are not perfectly correlated with respect to the risk of concern. Diversification with and beyond agriculture is a widely recognized strategy for reducing risks and improving the wellbeing of freeholders through income and asset management (Ellis, 2000; Osbahr *et al.*, 2008) Livelihood diversification in the study area in which FHH engage in includes on-farm could be (crop-based, livestock-based with time and space dimensions), non-farm include (petty trading, selling of 'Bulla', tailoring, hand crafts, construction work, wage labour, local food and drinks -sale of 'injera' and bread) and off-farm activities (fuel wood and charcoal making) which are undertaken to spread risk. Some of the livelihood diversification activities require initial capital (start-up financing) to start with thus making them inaccessible to the FHHs and limiting their options for a more diversified income portfolio. Also, the most remunerative of these strategies are accessible to a few better-off FHHs, well endowed with good productive resources and good networks. Almost the entire above listed income diversifying portfolio of activities were within the domain of women especially female-headed households.

Use of Ecologically Well-Adapted Crops

In addition to diversifying their portfolio of activities, assets and incomes, FHH in the five Kebeles of the district tried to

reduce risk through relying on ecologically well adapted crops such as Enset in Shukute and Ilmau Goromti which are suitable to highlands but in Galan-Wadessa sorghum was the commonly used crop. Selection of the 'most suitable' crop enterprises was one of the major farm decision in the process.

Other Risk Reducing Strategies

Informal coping mechanisms may include a redistribution of food, where individuals participate in a reciprocal exchange of resources. Reciprocal exchange of resources include exchanging food for domestic help (e.g., gardening), sharing food, and lending money to purchase food. Such reciprocal practices stem from social responsibility, which tend to be more prominent among kin groups and rural communities. Seeking assistance from relatives and/or friends was an informal reciprocal exchange of food resources that may increase food intake.

Intentional Loss of Appetite: Self-Deprivation from Food

Internal loss include a decrease in food intake, including the modification of eating patterns and a reduction in food consumption, restricted food sharing practices to conserve resources, and food replacement. Households may refrain from hosting a dinner to reduce food expenditure or make unhealthy food decisions when faced with limited resources. Skipping meals and/or cutting back were the prominent coping mechanisms among rural food insecure that reduced food intake. Comparisons between male and female-headed households in time of rise in food prices female-headed households tend to eat less-preferred foods and cut back on quantities served (Kumar and Quisumbing, 2013). The current study also indicated that frequency of food intake was reduced from three to two while the portions/sizes of meals served were also reduced drastically.

Factors influence rural female-headed households' behavior of risk management

It was found that FHH lack productive resources such as farm land, cattle, male labour, social capital, non-agricultural income. Severity of risk and perception of risk were among the major factors affecting behavior of risk management. Thus, given, their vulnerable positions, FHHs in their locality adapt and engaged in various coping mechanism to overcome food deficient.

Conclusion

A descriptive study about female headed household's perception of risk along with risk management strategy choice was carried out in Ambo District. Majority of FHHs understood that they face multiple risks having different degree of effect. Risk management strategy was determined by the understanding and perception about risk and resources that FHH have, roles played by women and nature and degree of risk they are exposed to. It was found that FHH lack productive resource such as farm land, cattle, male labour, social capital, non-agricultural income. Severity of risk and perception of risks were among the major factors affecting behavior of risk

management. Thus, given, their vulnerable positions, FHHs in their locality adapt and engaged in various coping mechanisms to overcome food deficient. Risk factors will continue to threaten FHHs and dealing with such risks through an effective mix of *ex - post* and *ex - ante* interventions will be essential in moving towards achieving FHHs food security targets.

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