

Research Article

Analysis of Wealth and Livelihood Capitals in Southern Ethiopia: A Lesson for policy makers

¹Adugna Eneyew and ²Wagayehu Bekele

¹Department of Agricultural Economics and Extension, Jimma University, Ethiopia

²Department of Resource and Environmental Economics, Dire Dawa University, Ethiopia

Abstract: Access to different levels and combination of asset has a major influence on choice of livelihood options and wellbeing of households. Knowledge of rural people's access to livelihood capitals would be critical to improve their living standards. Therefore, this study investigated access to livelihood capitals by wealth in southern Ethiopia with evidence from Boloso Sore district. Data was collected from 120 randomly chosen households and analyzed using X² test, one-way ANOVA and descriptive statistics. The results indicate that distribution of livelihood capitals in the study area are skewed by wealth showing that the majority of the production resources are owned by small fraction of the smallholders. Access to human (education), financial (credit), natural (land), social (membership to agricultural cooperatives), physical (home, water and farm input) capitals; especially by the poor households, are at best scant. There is a need to address the issue of inequitable access to these assets by wealth so that the poor may be equally benefited. The key strategies to improve their livelihoods are to divert the community from land to non land options and promote diversification strategies while enhancing the access to financial resources.

Keywords: Financial, human, natural, physical, social

INTRODUCTION

The emergence of the livelihoods concept had all the qualities of a classic 'paradigm shift'-defined as 'a fundamental change in approach or underlying assumptions. In the 1970s, many development practitioners were concerned about the famines that were taking place in Africa and Asia a concerted effort was made to put more resources into increasing food supplies globally (Ashley and Carney, 1999). In 1980s it was realized that many households were still not obtaining adequate amounts of food for a healthy life. This led to a shift from national food security to a concern with the food security and nutritional status of households and individuals (FAO, 2001). In the mid-1980s to the early 1990s, researchers began to widen their perspective from food security to a livelihood perspective (Chambers and Conway, 1992; Solesbury, 2003). This ensured that, livelihoods approaches are based upon evolving thinking about combating food insecurity and poverty reduction, the way the poor live their lives the importance of structural and institutional issues. By the early 1990s, certain donor agencies had seen sufficient merit in livelihoods approaches to begin employing the approach in their work (Solesbury, 2003). From 1990s until the present, there has been a shift from a material perspective focused on food production to a social perspective that focuses on the

enhancement of peoples' capacities to secure their own livelihoods. Since the 1990s, there has been a shift in development studies and development policy towards more holistic views of the activities and capital assets that households draw on to make a living (Carney *et al.*, 1998; Scoones, 1998; Ellis, 2000).

Livelihood Approaches (LA) emphasizes understanding of the context within which people live, the assets available for them, livelihood strategies they follow in the face of existing policies and institutions livelihood outcomes they intend to achieve (DFID, 2001).

In the livelihoods approach, resources are referred to as 'assets' or 'capitals' (Ellis and Allison, 2004). Livelihood capitals are the resources on which people draw in order to carry out their livelihood strategies (Farrington *et al.*, 2002). Identifying what livelihood resources (or combinations of 'capitals') required for different livelihood strategy combinations is a key step in the process of analysis (Soussan *et al.*, 2000). So an accurate and realistic understanding of people's strengths (here called "assets" or "capital") is crucial to analyze how they endeavor to convert their assets into positive livelihood outcomes (Bezemer and Lerman, 2002). Therefore, the objectives of this study is to assess rural households access to livelihood capitals, investigate significance of each livelihood capital in households wellbeing and recommend policy options to further improve access to assets by the poor.

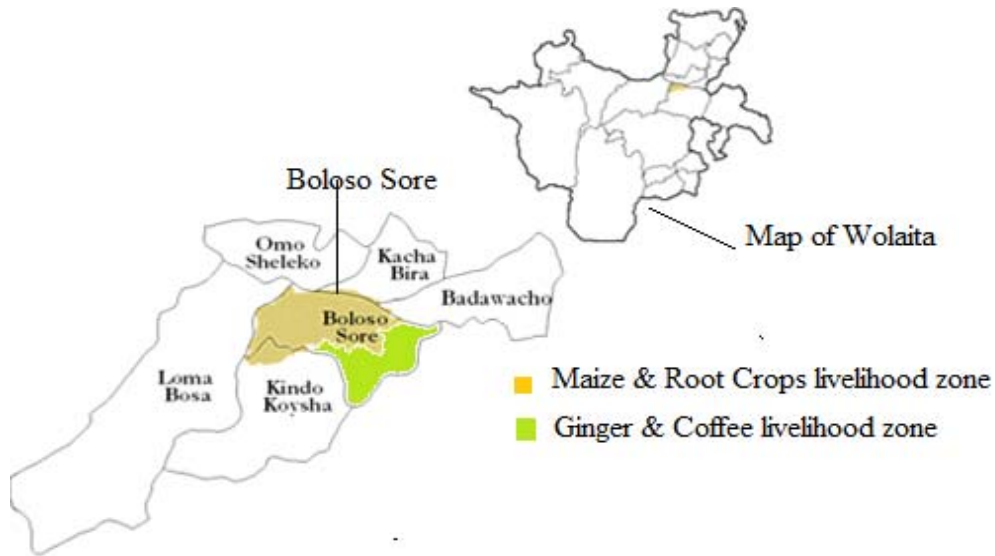


Fig. 1: Map of the study area-Wolaita

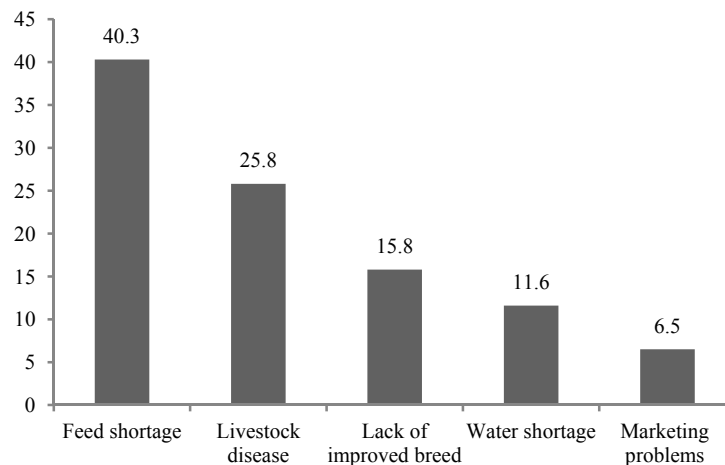


Fig. 2: Livestock production problems

METHODOLOGY

The study area: The study area Wolaita is located at about 380 km south of Addis Ababa in Southern Nations, Nationalities and Peoples' Region (SNNPR). It is part of the enset (*Ensete ventricosum*) zone of Ethiopia. This system is characterized by small landholdings supporting high populations' high fertility rates. Boloso Sore is one of the 12 districts in Wolaita (Fig. 1). The total population of Boloso Sore is 196,614 of which 96,341 are men and 100,273 are women, with population density of 637 per Km². Out of the total population 92% live in rural areas (BoFED, 2005).

Wolaita comprises of two livelihood zones: The Ginger and coffee and the maize and root crops

livelihood zones (Fig. 2). The former one is characterized by midland, although in the west it slopes down to dry midland and upper lowland. An increasingly dense population occupies arable plots of necessarily diminishing size intensive cultivation has led to increasing soil infertility for food crops. Nevertheless, middle and better-off wealth groups, who number about 40% of total households, are normally able to produce 80-90% of their food requirements. But rains have been untrustworthy for the poor and very poor a serious hunger gap often appears. The main food crops are maize and sweet potatoes, with a shift towards the latter in recent years. Normally the poor (roughly 50% of households) manage to grow about 45% of their staple food requirement, whilst other households grow between 60 and 75% of requirement. All wealth groups

depend heavily on the market for the balance of their food. Usually ginger and declining amounts of coffee account for some 25% of poor households' annual cash earnings whilst another 25% comes from casual laboring, including work migration which increases in bad years. By contrast, better-off households get by far the greater part of their cash from both cash crops and livestock sales, in about equal proportions.

The maize and root crops livelihood zone covers most of the midland and upper lowland/dry midland terrain of the Wolaita Administrative Zone and therefore most of its population. Population pressure dictates generally very small landholdings, but maximum use is made of what there is, with possibly the most varied cropping in all Ethiopia, spread between 2 growing cycles per year. But rain failure as well as pests such as the sweet potato butterfly frequently pushes part of the population over the hunger threshold and onto relief food aid (SNNPR, 2005). The main food crops are maize and beans intercropped sweet potatoes in 2 harvests, whilst *enset* is generally small in volume. With very scarce grazing, livestock must be largely hand-fed with crop residues and fodder bought on the market. By far the biggest investment is in cattle and for better-off and middle households the greater part of their annual cash earnings actually come from livestock and butter sales

These owners also contract poorer households to keep and fatten some of their stock, rewarded by a share in the sales, so that poor (but not very poor) households gain about 1/3 of their cash in this way. By comparison, crop sales are far less important across the board. Very poor people depend on casual work earnings for about 80% of their cash earnings, poor people for about 45%, so that somewhat over half of all households are heavily dependent on working away from their own land.

Data: The data in this study was used from survey result conducted in 2007/8 by the researcher. Multistage stratified sampling technique was used to select the respondents. In the 1st step, the district was classified in to 2 ecological zones highland and midland and 1 Peasant Association (PA) from highland and 3 PAs from midland were selected respectively. Secondly, a typology of farmers into different wealth categories was done for each site. Finally, 120 households were selected randomly. Primary data was collected through interview using structured questionnaire. Secondary data was collected from various sources as acknowledged in the reference list. One way ANOVA and Chi-square test were applied to examine the significance of livelihood capitals in explaining wealth variations. Data analysis was done using Statistical Package for Social Sciences (SPSS version 16).

RESULTS AND DISCUSSION

Wealth indicators and status in Wolaita: The key characteristics of being better-off in the study area were ownership of moderate levels of livestock in most places (2-3 oxen, 2-6 cows, 1-4 heifers and calves, 3-6 sheep); being food self sufficient from own production (those who do not depend on food aid); possessing land in the range 0.6 to 2.5 ha. They also owned corrugated iron sheet relatively furnished house and capable of educating their children. The less poor category of households tended to be defined by owning a few livestock ($\frac{1}{2}$ to 2 Oxen, 1/2-2 cows, 1-3 sheep); being food secure for 5-8 months and about 41.5% of them depends on food aid; possessing land in the range of 0.01-0.25 ha. The poor were identified by non-ownership of cattle (0 to $\frac{1}{2}$ cows/sheep). The average months of food self sufficiency does not exceed 4 months. As a result 58.8 % of the less poor groups are net beneficiaries of food aid. The overall ranking of households by wealth status indicated that 42.5, 35 and 22.5% were poor, less poor and better off respectively. In rural Ethiopia, overall, only 11% of households were classified as better off; 33% were classified as middle; and 56% were classified as "worse off", poor or very poor. Here the situation in Wolaita is relatively better. At the household level continuous decline in livestock holding and increasing pressure on land the key challenge of human livelihoods in the area.

Livelihood capitals and wealth status:

Human capitals: Human capital represents the skills, knowledge, education, ability to labor and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives (Carney *et al.*, 1998; DFID, 1999). Human capital is extremely low in Ethiopia, which is both a cause and a consequence of food insecurity, due to adverse synergies between poor education, health and nutrition status labor productivity (Devereux, 2000). In the survey, the average age of the respondents was 34 years with standard deviation of 9.46. This is below the national average, i.e., 44 years (MoFED, 2002). The age of respondents ranged from 15 to 68 years and the majority of them were within the active labor force (99.2%). The statistical analysis, however, revealed that there is no significant difference in the mean age of sample household heads between the 3 wealth categories. Women and men have different access to critical economic resources and varying power to make choices that affect their lives, as a consequence of the state of gender relations that exists in a given society. The direct result of this is seen in the unequal roles and responsibilities of women and men. From the 23% female respondents in the survey, more than half of female headed households are poor, whereas only one third of the men counterparts were poor (Table 1).

Table 1: Age and sex distribution of respondents by wealth categories

Age category	Wealth category of the household (%)			Total (N = 120)
	Poor (N = 51)	Less poor (N = 42)	Better off (N = 27)	
15-64	42.50	35	21.70	99.200
>64	00	00	0.80	0.800
Mean	31.98	34.90	36.33	33.980
S.D.	9.19	7.90	11.60	9.460
F				2.218
p-value				0.113
Male	29.20	28.30	19.20	76.700
Female	13.30	6.70	3.30	23.300
χ^2 /p-value				3.369/ 0.186

Table 2: Distribution of family size and dependency ratio by wealth category

Family size	Wealth category of the household (%)			Total (120)
	Poor (N = 51)	Less poor (N = 42)	Better off (N = 27)	
1-3	10.80	1.70	0	12.500
4-6	21.70	17.50	7.50	46.700
7-9	9.20	14.20	12.50	35.800
>10	0.80	1.70	2.50	5.000
Mean	4.94	6.14	7.37	5.900
S.D.	2.18	1.85	2.88	2.430
F-value				10.569
p-value				0.000***
Dependency ratio				
<1	25.000	18.300	10.300	54.200
1-2	15.800	12.500	10.300	38.300
>2	1.700	4.200	1.700	7.500
Mean	1.068	1.249	1.212	1.164
S.D.	0.664	0.806	0.73449	0.731
F				0.779
p-value				0.461

***: Significant at less than 1% probability level

In many developing countries a large proportion of the population lives in rural areas this population continues to grow at a substantial rate. Given limits to arable land, such growth rates in the rural labor force will not be productively absorbed in the agricultural sector (World Bank, 1995). Specially, population pressure in Africa is increasing dramatically. Between 2000 and 2030, population in Ethiopia, Kenya, Tanzania and Uganda is expected to double. Obviously, the dynamic nature of population growth is the result of family size growth of each household in that country. In the present study, the overall size of the sample

household members is 863, of which 391 and 472 constitutes male and female population respectively. The study revealed that there is significant difference in the mean family size at less than 1% probability level between poor, less poor and better off household groups. In that the mean was in increasing order (4.9, 6.1 and 7.3) for poor, less poor and better off households, respectively. While the overall mean family size of the sample household was 5.90. This was above the national average (4.9), (Table 2). Based on such surprising result, it might be worthy to argue that the better off the household will be the more incentive to have more number of children. The result is in agreement with the results obtained by Berehanu (2007), Bezemer and Lerman (2002) and Tesfaye (2003). Specific to the study area, Bush (2002) identified that the better-off households are uniformly large because they are both polygamous and extended family.

Dependency ratio is defined as household members older than 65 and younger than 15 divided by the complement of this set in sampled households. Although children are often engaged in productive activities as of 7 particularly in rural Ethiopia, it is conventional to categorize children under 15 as dependents. On the other hand, old people above the age of 65 too are considered as dependants. This variable was also used as a proxy indicator for number of economically active family members since it indicates the burden over the latter. Large ratio of dependents in a population of an area indicates the burden, which the active population should bear. Those households with proportionally more number of children under the age of 15 years and older people above the age of 65 seem particularly vulnerable to falling into poverty. According to the survey result the sample population has highest dependency ratio for a young population is 1.167, than old age dependency ratio is 0.007. This indicates that there is high fertility and probably mortality of the older group. In addition, households' are investing more on satisfying the dependent members rather than constructing their future asset. The overall dependency ratio for the sample household is 1.164 (Table 3). This value is greater than

Table 3: Mean income by wealth groups

Source of income	Wealth category of the household (%)			F	p-value
	Poor (N = 51)	Less poor (N = 42)	Better off (N = 27)		
Crop	467.627	757.000	3291.815	14.237	0.000***
Livestock	154.980	456.476	2046.204	24.546	0.000***
Off farm	208.667	119.750	128.148	0.539	0.585
Non farm	220.235	412.262	422.963	1.880	0.157
Subsistence	415.430	898.826	1438.916	20.497	0.000***
Saving habit				Total	
No	40.800	22.500	10	73.300	χ^2 /p-value
Yes	1.700	12.500	12.500	26.700	26.770/0.000***

***: Significant at less than 1% probability

Table 4: Distribution of sample respondents by years of education completed

Head's years of education	Wealth category of the household (%)			Total (N = 120)
	Poor (N = 51)	Less poor (N = 42)	Better off (N = 27)	
0	29.20	14.20	10.00	53.300
1-4	5.80	7.50	1.70	15.000
5-8	3.30	8.30	8.30	20.000
9-12	4.20	5.00	2.50	11.700
Mean	1.88	3.33	3.52	2.740
S.D.	3.40	3.70	3.60	3.600
F				4.520
p-value				0.013**

** : Significant at less than 5% probability level

Table 5: Land and livestock holding by wealth category

Land size held (in ha)	Wealth category of the household (%)			Total (N = 120)
	Poor (N = 51)	Less poor (N = 42)	Better off (N = 27)	
0.01-0.25	26.700	10.700	0	37.400
0.36-0.50	13	14.600	1.300	28.900
0.51-1	2.800	9.700	12.900	25.400
>1	0	0	8.300	8.300
Mean	0.270	0.400	0.840	0.450
S.D.	0.155	0.233	0.619	0.402
F				25.598
p-value				0.000***
TLU				
<1	97.300	2.400	0.000	29.200
1-3	2.700	64.300	0.000	36.700
3.01-4	0.000	28.600	14.800	13.300
4.01-6.03	0.000	4.800	51.900	13.300
>6.03	0.000	0.000	33.300	7.500
Mean	0.773	2.676	6.160	2.651
S.D.	0.680	0.890	2.430	2.460
F				142.228
p-value				0.000***

*** : Significant at less than 1% probability level

the Zonal and national average, since zonal and the national dependency ratio was computed to be 92 (BoFED, 2005) and 101 (CSA, 2001), respectively.

The educational status of sampled households' heads showed that 53.3, 15, 20 and 11.8% of them completed 0, 1-4, 5-8 and 9-12 years of schooling respectively (Table 4). The average years of schooling for the poor, less poor and better off households respectively, is 1.88, 3.33 and 3.52. Which implies as the years of schooling increases the probability of the farmer to be in better off wealth category increases. The difference between the 3 wealth groups with regard to education was found to be statistically significant at less than 5% probability level. This human capital tended to mostly include households' heads with only primary level education. The contribution of capacity to work, skill possession vocational training and extension services having significant contribution to human capital. Figure 3 also indicated the proportion of rural households who accessed education is very low.

Another important aspect of human capital is the health status of individuals in a society. Besides having a direct impact on welfare of individuals, their health status has repercussions on their potential productivity. To diversify and participate in superior livelihood

strategy and gain access to livelihood asset, physical wellbeing of the rural household head is very mandatory (Scoones, 1998). The survey result indicated that 95% of the household heads were found to be healthy for the reference year only 5% reported that they at least faced illness prior to the survey year. The result for the health situation of family members showed that, 46.7% of the total sample populations are not sick. Whereas, 54% are reported sick (this fig. is double of the national average during 2000 survey (MoFED, 2002). Among them, 27 households faced sickness of family members of more than 2 in size and 12.5% of the total sample population were died. Regarding sick treatment, 1.7% of the sick did not get any medical treatment, 5% received traditional treatment and 93.3% got health service.

Natural capitals: Natural capital is the term used for the natural resource stocks from which resource flows and services useful for livelihoods are derived (DFID, 1999). In this study natural capital comprises land size held by the HH, soil fertility status agro-ecology in which the HHs operates. From any other productive resources land is by far the most important resource in agriculture. That is why the community wealth ranking begun with consideration of land in wealth breakdown. Regardless of the size, all the respondents own land. In the study area, as similar to elsewhere in rural Ethiopia, the respondents accessed the land they own in four ways, inheritance, which is the main means 71.7% and it is highly challenged by the alarmingly growing population pressure resulting in land fragmentation, gifts 14.2%, land distribution 9.2% and purchase 5.6%, which, although strictly illegal as all land belongs to the government; that however has been prevail in the informal market. For the total sample the land holding of the households vary from 0.01 to 2.5 ha. The average land holding being 0.45 ha; for poor, less poor and better off households is 0.27, 0.40 and 0.84, respectively. The F-test revealed that the mean difference between the 3 groups is statistically significant at less than 1% probability level (Table 5). This implies that land access is everywhere an acute problem; there is no longer any scope for village headmen to allocate new land to families farm size declines with each successive sub-division at inheritance. A comparison, of land owned would reveal that land flows from the poorer households towards the better off ones via share cropping and informal markets.

Physical capitals: At community level; physical capitals like schools, health centers, potable water etc are at improving rate in Wolaita. At household level, livestock is considered as a security during crop failure and additional income for farmers in Ethiopia. The present study showed that out of the 120 sample

Table 6: Access to input and credit by wealth

Input use	Poor (N = 51)	Less poor (N = 42)	Better off (N = 27)	Total (N = 120)
No	90.2	57.1	37	66.700
Yes	9.8	42.9	63	33.300
χ^2				25.087
p-value				0.000***
Credit use				
No	78.4	54.8	57.7	65.500
Yes	21.6	45.2	42.3	34.500
χ^2				28.087
p-value				0.000***
Amount of credit (birr)				
<100	80.4	61.9	59.3	69.200
100-1000	11.8	16.7	11	13.300
1001-2500	7.8	21.4	29.6	17.500
F				4.153
p-value				0.018**

***: Significant at less than 1% probability level; **: Significant at less than 5% probability level

households 108 own livestock though the numbers of livestock were not large. The mean livestock holding in Tropical Livestock Unit (TLU) for the sample households is 2.65, where as the relationship between livestock holding and wealth category is the minimum are 0.00 and the maximum is 13.3. The statistical analysis showed that it is significant at less than 1% probability level (Table 5).

The survey data on livestock production further included problems related to livestock production in the study area. For the purpose respondents were asked to rank livestock related problems in order of importance. The result indicates that feed shortage/grazing 38.3%, livestock disease 25.8%, lack of improved breed 15.8%, shortage of water 11.6% and market related problems 6.5% were the major livestock constraints in the study area (Fig. 2). Thus, this study suggests that feed development, veterinary services and improve livestock breed through expansion of artificial insemination will be priority areas of intervention in solving livestock production constraints in the area.

The use of chemical fertilizer (Dap and Urea) improved varieties (Maize and Teff) were considered for this study. About 69.9% of the respondents reported that they used chemical fertilizers the rest 30.1% used improved varieties. The chi-square test of the data reveals that there is statistical difference between users and non users of farm inputs at less than 1% probability level between poor, less poor and better off households (Table 6, Fig. 3). The decision to use or not to use new technologies at any time is influenced by various factors. At the most basic level, an economic agent is assumed to make decisions to use or not to use a new technology based on its objectives and constraints as well as cost and benefit it is accruing to it. Ranking the reason for not using technology, the survey results showed that expensiveness of the input stood 1st 81.2%, followed by land shortage 10.2%.

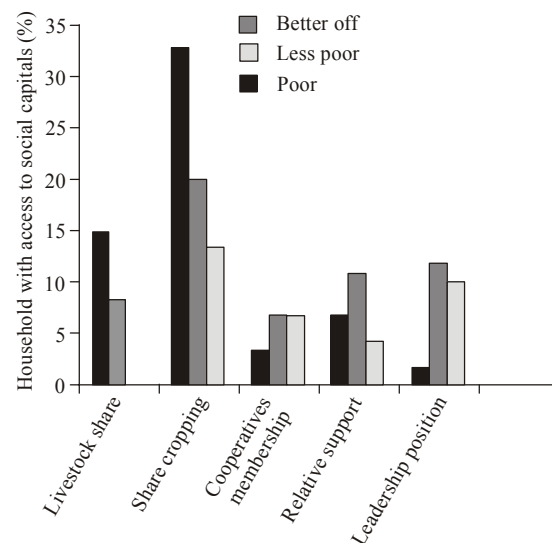


Fig. 3: Access to social capital by respondents

Social capitals: Social capital may be defined as the ability of actor to secure benefits by virtue of membership in social networks or social structures (Krishna, 2000). It entails reciprocity within communities and between households based on trust deriving from social ties (Moser, 1998). According to the key informant interview result, in the study area, livestock sharing, participation in share cropping, membership to cooperatives, relatives support and social leadership are the major sources of social capital. Obviously, the better off households have higher access to many of the reciprocal relationships than the poor. Livestock sharing refers to taking livestock of others (rearing others livestock) to take care and share some benefit based on negotiation made between livestock owner and caretaker. It is also mainly the job of poor households who took livestock of the better offs in pursuit of sharing some benefit. This implies that, the means of accessing livestock benefit by the poor is by participating in share breeding and the reasons for livestock sharing in the study area are concentration of livestock ownership in the hands of the better off than the poor.

Participation in share cropping refers to those households who shared their land for those who can afford input and oxen to share the output based on the agreement made and vice versa or those who worked on others farm to share their labor with agreement to gain benefit. Sharecropping is found to be one of the strategies to cope with household's food deficit situation among poorer households. Accordingly, most poor households are forced to have all or a portion of their land sharecropped. Although they may receive part of the harvest, they do not control the selection of crops, nor the amount of inputs used. As a result, benefits from sharecropping are usually very small.

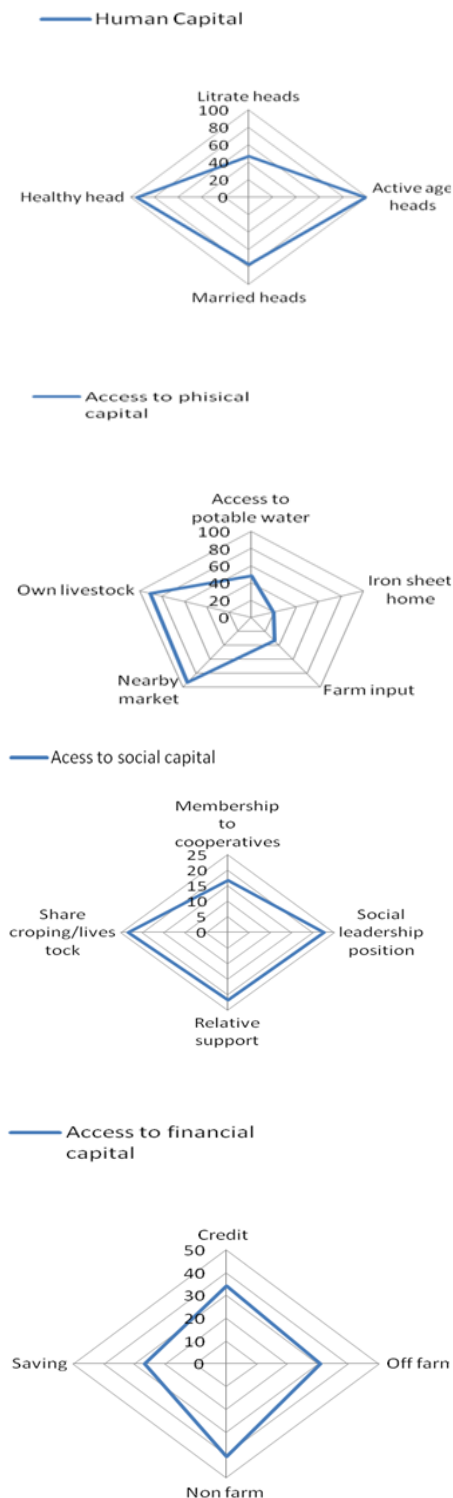


Fig. 4: Spiral diagrams for access to livelihood capitals

In Boloso Sore almost every one is a member of either of the traditional local institutions such as Iddir, Ekub Debo; in which the community help families (especially the poor) to cope with funerals, house construction and savings. Membership to such

institutions increases the social network of the household and enables to obtain pooled labor and cash in credit where individual households are incapable otherwise.

There are strong kinship ties in Wolaita, which are important alignments in arrangements for share-cropping, share-breeding, labor exchange and security during a crisis. Within larger kin groups and between households, risk can be shared by the transfer of goods between households in time of need. This strategy covers a vast range of situations and methods of transfer, but there are three basic types: gift, where food or some other item is transferred freely and without obligation from one household to another; reciprocity, where the transfer imposes an obligation on the recipient to return the goods or some other service at a later time, obligation, where the giver is obliged to relinquish some item under specified circumstances (Fig. 4).

The involvement of heads of the household in different local administrative positions is expected to access the household to a number of information sources on different strategies to enhance access to various resources. So households who are involved in such positions are expected to be more likely to be better off than the counterparts (Fig. 4).

Financial capital: Financial capital refers to stocks of money to which the household has access. This mainly involves credit use in the form of loans, saving ability and receiving remittances. The study thus analyzed sample household's use of credit, reception of remittance and saving habit in the coming section.

The most commonly reported obstacle to investment and entrepreneurship is inadequate access to capital (Davis, 2003). The availability of agricultural credit to subsistence farmers who have little or no capital or savings to invest in farming is important component of small farm development programs. In line with this, an attempt was made to assess the number of households who had benefited from farm credit. The study result showed that 34.5% of the sample households received credit while 65.5% of them did not due to various reasons. The comparison by wealth status disclosed that 21.6, 45.2 and 42.3% poor, less poor and better off households respectively received credit. Out of the non users, 28.6% failed to use credit due to fear of repayment. Whereas, 71.4% of they complained that they lack credit institution at their locality. The chi square test result revealed that the relationship between credit use and wealth status is statistically significant at less than 1% probability level. In accessing credit it is not only the use of credit that differs significantly between poor and the better offs. However the amount of credit used also showed that the poor and less poor are concentrated at the bottom and

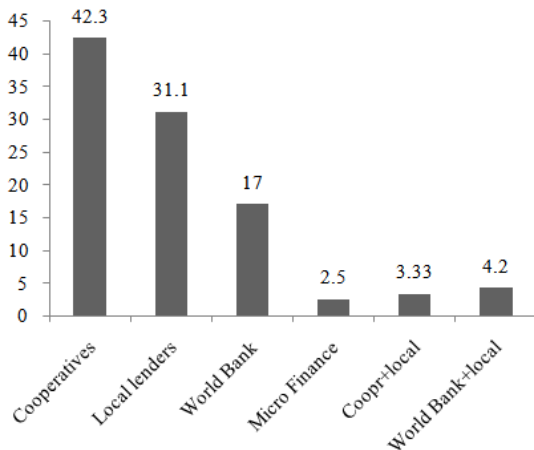


Fig. 5: Sources of credit used by respondents

there is statistical difference between wealth groups at $<5\%$ probability level (Table 6).

The main source of credit in Ethiopia is from government and non government organizations. The main governmental sources of credit in the study area are micro finance institute and bureau of cooperatives. The nongovernmental source is the World Bank which delivers credit in cash as well as in kind for the poorest category of the community. Most people in the study area depend on the informal financial sector to meet their credit needs 38.3%. Figure 5, shows that cooperatives, local money lenders including relatives, the World Bank microfinance served 42.3, 31.1, 17 and 2.5% of the credit users in the study area. The picture that emerges from these figs. is that of a rural economy with an active, but almost exclusively informal financial market providing small interest-free and uncollateralized loans to households like what has been done by the World Bank is worth interesting to rural economy. From all respondents showed that only 26.7% have a saving habit. The poor spend almost all their income on food. Thus, for poor households generating savings is difficult and most often they run a debt.

Income of the respondents was composed of crop, livestock, off farm and nonfarm sources. Analysis of mean income of each activity has showed that the mean income from crop sale, livestock and livestock product sale own subsistence consumption values increases along the wealth continuum from poor to better off households. Whereas, that of the off farm activities increase in the opposite direction towards the poor households and the contribution made by off farm activities seems more important to the poor households. Hence crop production, livestock production and remunerative non-farm activities favor the better off households. There is also statistical difference at $<1\%$ probability levels between poor, less poor and better off households with respect to income generated from own production (Table 3).

In addition to the various cash income streams, the data collected on incomes also included the value of food produced and directly consumed by each household. Since the subsistence income is one of the more straight forward pieces of information that provide viable insights in to differences in circumstances across wealth groups and it tells the ability to buffer households food security through self consumption. Therefore, the role of subsistence in rural livelihoods in the study area can be further defined by looking at the mean value of own consumption across different wealth groups. The survey data in this regard showed that the poor groups have the lowest subsistence income than the 2 wealth groups (415.430-898.826 and 1438.916 Birr per household) at $<1\%$ probability level (Table 3).

Remittance refers to relative economic support in the form of money or food to the household from abroad and within the country, mainly from urban to rural dwellers. Remittances contribute to economic growth and to the livelihoods of needy people worldwide (DFID, 2001). The survey result indicates that the proportion of better of households receiving remittance was more than that of the poor and less poor. But, the situation regarding remittance is not statistically different between wealth categories. The probable justification for the result is that the better off can afford and invest in their children education and had good opportunity to receive remittance from educated family members who are employed in the urban areas. The finding of this study is inline with that of Tesfaye (2003) and Bezemer and Lerman (2002).

Institutional supports: In many developing countries, policies and institutions discriminate against those with few assets and disadvantage poor people. Such discriminatory policies and institutions undermine development efforts to eradicate poverty and food insecurity. One of the most common problems in development is that Transforming Structures and Processes do not work to the benefit of the poor (DFID, 1999). Policies and institutions operate at all levels in both public and private spheres, where they influence the formation and outcomes of livelihood strategies. Institutions may influence livelihoods in many ways: for instance, the access that poor people have to assets, the benefits they derive from them, as well as incentives for the development of assets, depend upon institutional arrangements. These in turn depend upon the institutional environment, information flows, asset characteristics and the vulnerability and power of different actors.

In the context of this study, institutional support variables included are: extension contact to the household proximity to various social services such as market, health, primary education and water.

Extension contact by the household: Extension contact deliver services like advice, training,

Table 7: Access to various services (km)

	Wealth category of the household (%)			
Extension contact	Poor (N = 51)	Less poor (N = 42)	Better off (N = 27)	Total (N = 120)
No	45.10	19.00	11.10	28.300
Yes	54.90	81.00	88.90	71.700
χ^2/p -value				12.786/ 0.002***
Frequency of extension contact				
52	7.80	7.10	18.50	9.200
24	0.00	2.40	7.40	3.300
12	2.00	16.70	18.50	10.100
1-12	45.10	54.80	44.40	48.300
0	45.10	19.00	11.10	28.300
χ^2/p -value				26.890/ 0.003***
Nearest market				
Mean	1.97	2.86	2.60	2.420
S.D.	2.05	2.45	2.28	2.270
F (p-value)				1.880 (0.157)
Health centre				
Mean	1.95	2.71	2.77	2.400
S.D.	1.64	2.22	2.62	2.120
F (p-value)				2.040 (0.130)
Access to 1° education				
Mean	1.48	1.36	1.53	1.450
S.D.	0.97	0.93	1.13	0.990
F (p-value)				0.274 (0.761)
Drinking water				
Mean	1.24	1.13	0.85	1.120
S.D.	1.10	1.37	1.13	1.200
F (p-value)				0.930 (0.398)

demonstration and distribution of input to rural households. A household who has a frequent contact with extension personnel and service is expected and has a potential to improve agricultural production and gain better reward from agricultural production. The survey result showed that 71.7% of the sample households get extension contact, which is 54.9, 81 and 88.9% for the poor, less poor and better off categories respectively (Table 7). The chi-square test also indicated that there is a significant relationship between extension contact and wealth status at less than 1% percent probability level.

Access to social services: An important measure of access to public services is the distance between the residence of households and the facility at hand. This measure is particularly useful for large countries like Ethiopia where the efficiency of transport network is quite low (MoFED, 2002). Among various social services, markets are important in determining access to assets and livelihood strategies, terms of exchange for assets returns to investment. In practice, the way households use markets often depends upon the ease of physical access. The present study indicated that the mean distance between the residence and the nearest market place in kilometer for the sample households is

2.4 km with a min of 0.01 km and a max of 8 km. The average for poor, less poor and better off households is 2.05, 2.8 and 2.5 km, respectively. In relative term, the poor households have a better access to the nearby market place. However, the mean difference between the 2 groups with regard to distance from the market place is not statistically significant (Table 7).

Another important service which highly correlated with human capital is health service. Ethiopia is known to have one of the lowest health statuses in the world. Thus, proximity to health service can affect the wellbeing of the rural households. This is mainly due to backward socioeconomic development resulting in widespread poverty, low standard of living, poor environmental conditions and inadequate health services. The survey result showed the mean distance in kilometer to reach the nearest health centre is 2.4 Km with standard deviation of 2.22 for the all sample and there is no statistical difference between wealth groups (Table 7). Distance to primary school is on average 1.45 km, which is relatively better with reference to other rural areas. Access to potable drinking water is another important support for the rural poor in Ethiopia, since drinking water from protected sources is a 'luxury' available to only a quarter of the population (only around 15% in the rural areas), (MoFED, 2002). In agreement to this fact, out of the total sample only 48.3% were found to get access to drinking water in the study area. The rest, those who do not get access to protected drinking water, get water from springs 76%, 21% from aquifers/river beds. The fact that, distance to fetch water can be expected to affect livelihood of the rural poor, reasonably by diverting the labor of particularly women from agriculture, distance to fetch water was measured for the SHHs and the mean distance to fetch water for the poor, less poor and better off households is 1.25, 1.14, 0.86 km, respectively, although, there is no significant difference (Table 7).

CONCLUSION AND RECOMMENDATIONS

The result of this study revealed that the key indicators of wealth are livestock, land and food self sufficiency. The significant contribution to wealth from both livestock and land has been declining due to overpopulation and land degradation. In addition the type of house and ability to educate children was considered as a sign of living well. The overall wealth status of respondents indicated that 42.5, 35 and 22.5% were poor, less poor and better-off respectively. Among all the livelihood capitals in the study area; access to land, credit, education, farm input and cooperatives by the poor households was limited. There is a need to address the issue of skewed access to these assets by wealth so that they may be equally benefited from these assets. The possession of social capitals (informal reciprocals) can play significant role in the economic

and political status of the household if support from formal institutions is endeavored. At the same time the key strategies to improve the livelihoods are promotion of resource use efficiency like intensification on land and diversification into nonfarm and migration. The contribution of capacity to work, skill possession vocational training and extension services having significant contribution to human capital. Effort has to be made to divert the community from land to non land options to minimize the competition over scarcest land resources. In this regard; establishment of a labor intensive plant/industry in place and facilitation of access to finance would be an inevitable solution.

REFERENCES

- Ashley, C. and D. Carney, 1999. Sustainable Livelihoods: Lessons from Early Experience. Department for International Development DFID, London, UK.
- Berehanu, E., 2007. Livelihood strategies of smallholder farmers and income poverty in draught prone areas: The case of Gena- Bosa woreda, SNNPRS. M.Sc. Thesis, Presented to the School of Graduate Studies of Haramaya University.
- Bezemer, D.J. and Z. Lerman, 2002. Rural Livelihoods in Armenia: The Centre for Agricultural Economic Research. The Department of Agricultural Economics and Management Discussion Paper No. 4.03.
- BoFED, 2005. Socio-Economic Profile of Wolayta Zone. Wolayta Zone Beauru of Finance and Economic Development.
- Bush, J., 2002. Baseline Report on Household Food Economy Assessment: Boloso Sore Woreda, Wolaita Zone SNNPR, Action for Development (AFD).
- Carney, D., M. Drinkwater, T. Rusinow, K. Neefjes, S. Wanmali and N. Singh, 1998. Livelihoods Approaches Compared: A Brief Comparison of the Livelihoods Approaches of the UK Department for International Development (DFID), CARE, Oxfam and the United Nations Development Programme (UNDP), UK.
- Chambers, R. and G.R. Conway, 1992. Sustainable Rural Livelihoods: Practical Concepts for 21st Century. Institute of Development Studies Discussion Papers, 296, Cambridge.
- CSA, 2001. Report on the 1999/2000 Household Income and Consumption Expenditure Survey: Statistical Bulletin 258. Ethiopia, Addis Ababa.
- Davis, J.R., 2003. Rural Non-Farm Economy: Livelihoods and their Diversification, Issues and Options. NRI Report No. 2753.
- Devereux, S., 2000. Food Insecurity in Ethiopia: A Discussion Paper for DFID, IDS Sussex.
- DFID, 1999. Sustainable Rural Livelihoods Guidance Sheet. Department for International Development, London, UK.
- DFID, 2001. Sustainable Rural Livelihoods Guidance Sheet. Department for International Development, London, UK.
- Ellis, F., 2000. Rural Livelihoods and Diversity in Developing Countries. Oxford University Press, Oxford.
- Ellis, F. and E. Allison, 2004. Livelihood Diversification and Natural Resource Access: Overseas Development Group Working Paper 9. University of East Anglia, UK.
- FAO, 2001. Proceeding from the Forum on Operationalizing Sustainable Livelihoods Approaches. ODI, London, UK.
- Farrington, J., T. Ramasut and J. Walker, 2002. Sustainable Livelihoods Approaches in Urban Areas: General Lessons, with Illustrations from Indian Cases. ODI, London, UK.
- Krishna, A., 2000. Creating and Harnessing Social Capital. In: Dasgupta, P. and I. Serageldin, (Eds.), Social Capital: A Multifaceted Perspective. the World Bank, Washington, DC.
- MoFED, 2002. Ethiopia: Sustainable Development and Poverty Reduction. Addis Ababa, Ethiopia.
- Moser, C., 1998. The asset vulnerability framework: Reassessing urban poverty reduction strategies. *World Dev.*, 26(2).
- Scoones, I., 1998. Sustainable Livelihoods: A Framework for Analysis. IDS Working Paper Number 72, Brighton.
- SNNPR, 2005. Livelihood Profile Regional Overview, USAID. Disaster Prevention and Preparedness Commission (DPPC), the Government of Ethiopia.
- Solesbury, W., 2003. Sustainable Livelihoods: A Case Study of the Evolution of DFID Policy, London, UK.
- Soussan, J. and P. Blaikie, O. Springate-Baginski and M. Chadwick, 2000. Understanding Livelihood Processes and Dynamics: Livelihood Policy Relationships in South Asia Working Paper 7, DFID, UK.
- Tesfaye, L., 2003. Diversity in Livelihoods and Farmers Strategies in Hararghe Highlands. Eastern Ethiopia, University of Pretoria, South Africa.
- World Bank, 1995. Rural Non-Farm Employment: A Survey Background Paper for World Development Report. Washington, D.C.