

## The Effects of Rural Youth Outmigration on Migrant-sending Households in Gojjam and Wolayta, Ethiopia

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Received date: July 20, 2016; Accepted date: October 07, 2016; Published date: October 14, 2016

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### Abstract

Rural youth outmigration from densely populated agricultural areas is a common phenomenon in Ethiopia. The purpose of this study is to assess the impacts of youth outmigration on the socioeconomic and demographic behavior of migrant-sending households using survey data and in-depth interviews. The findings revealed that remittances are considered important by the migrant-sending households to enhance asset formation, increase levels of income and consumption, improve debt repayment position, and augment family member's education and medication. The study further underscored the positive impacts of youth rural outmigration in improving human-environment relations through fertility reduction and easing population pressure, and mitigation of harmful traditional practices.

**Keywords:** Youth; Outmigration; Migrant-sending household; Remittance

### Background and Problem Statement

Migration is an old and inevitable phenomenon that has accelerated in recent times because of improvements in transportation and communication technology. It is considered as the permanent or semi-permanent movement of people crossing a defined political boundary within or between countries (UN 1958 cited in Central Statistical Agency /CSA/ 1999). Migration occurs as a result of human curiosity or some push conditions in the area of origin and/or real or perceived attractive circumstances in a destination [1,2].

Rural outmigration could be triggered by numerous factors. Intensifying population pressure, land degradation and fragmentation [3,4]; and limited non-agricultural employment opportunities engender outmigration [5,6]. Rural poverty, urban-oriented education, and improvements in access to information about places and transportation networks increase the propensity to migrate [7-9].

Migration is an important component of rural-urban linkages and a means of achieving economic efficiency [5]. It increases level of urbanization and creates open society to new ideas. It is considered as a development-fostering process that corrects rural-urban, interurban and regional imbalances [10]. There is compelling evidence on the positive impacts of internal migration in terms of poverty reduction and livelihoods enhancement through stimulating land and labor markets, transfer of new technologies, harmonization of human-environment relationships, and enhancement of health and education.

On the other hand, the continued drift of young, educated, skilled and energetic agricultural labor force into urban areas, if uncontrolled, is likely to weaken the role of agriculture through manpower shortage and reduction of agricultural productivity. It could accelerate local economic distress by reducing its attractiveness to new industry, increases work burden on family members, particularly women and children left behind, and leads to family disintegration [7,11].

In Ethiopia where the level of urbanization is very low (about 17%), and where rural-urban and regional socioeconomic disparities are enormous, the perpetual influx of people to urban areas is inevitable. There is scanty literature on the impacts of rural outmigration on migrant-sending origins and households in Ethiopia. Likewise, migration impacts could not be determined a priori and be labeled as negative or positive. The objective of this study is, therefore, to bring to light the consequences of migration of rural youth on the migrant-sending households' demographic and socioeconomic situation.

### Methodology

#### Study areas

The study was conducted in Mecha Wereda of West Gojjam Zone in the Amhara National Regional State (ANRS, hereafter) and Sodo Zuria Wereda of Wolayta Zone in the Southern Nations, Nationalities and Peoples Region (SNNPR, hereafter) that have pronounced youth rural outmigration.

Mecha wereda is located about 546 kilometers northwest of Addis Ababa. It is a predominantly rural area with only 7.7 level of urbanization (CSA 2008). The wereda has a youthful population where 54.6 percent of the population is in the age group 10-29 years. The population density in 2010 was 208.2 persons per square kilometer; which is about 1.8 times the density of the ANRS and 2.8 times the density at the country level. It has a subsistence-based cereal-dominated mixed agricultural economy.

Sodo Zuria Wereda is located at about 330 km south of Addis Ababa. In 2010, the Wereda had a population density of 430.7 persons per square kilometer; about 6 times greater than the density of the country and about three times than that of the SNNPR (CSA 2010). The population in the age group 10-29 years makes up 52.4 percent of the total population. The economy of Sodo Zuria wereda is characterized by a subsistence mixed farming system where enset (false banana) farming is intermingled with the production of cereals, root

crops and coffee in a regime of intensive cultivation. It is characterized by diminutive landholdings whereby an overwhelming majority of the farming households (78.21%) have less than half hectare of cultivated land (Figure 1).

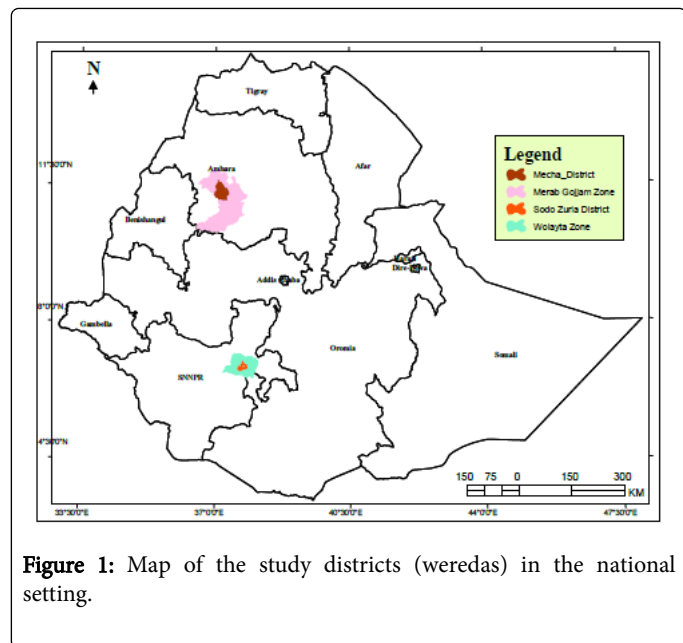


Figure 1: Map of the study districts (weredas) in the national setting.

### Survey Design, Sampling and Selection of Migrant-sending Households

This study employed a hybrid of exploratory and concurrent triangulation mixed methods design. In a two-phase mixed methods

exploratory design, the results of the qualitative method were used in the development of a survey instrument, and to identify important variables for quantitative study. In the triangulation variant mixed methods design, an attempt was made to include open-ended qualitative questions with the quantitative survey instrument that can be used to validate, expand, interpret and embellish the quantitative survey findings. Cross-sectional design was employed in this study as it is best suited to studies aimed at finding out the prevalence of a phenomenon. Household heads (HHs hereafter) provided information about the out migrant family member/s.

In order to identify the target sample households, a multi-stage sampling technique was employed. At the first stage, two ‘weredas’ were selected purposively, one from West Gojjam Zone and the other one from Wolayta Zone. Identification of the study weredas was considerate of the intensity of youth outmigration affirmed from literature and through observation in the zonal, regional and national capitals; and the socioeconomic condition of the weredas. Second, out of the selected ‘weredas’ four kebeles were selected in every direction off the wereda capital purposively again in accordance to migration intensity and proximity to the wereda capitals (two nearest- i.e., within 10 km distance from the wereda town and two farthest kebeles that are more than 10 kms distance away from the wereda capitals- within the two selected ‘weredas’ making a total of four kebeles in each wereda) for better representation (Table 1).

Once the smallest geographic study units (rural kebeles) were determined, the migrant-sending households were selected on the basis of probability sampling techniques for the sake of ensuring representativeness. Since the number of migration affected households in the study weredas was unknown, a sampling frame was created through house- to- house survey meant to identify households with and without migrant members.

Region	Zone	Wereda	Selected Kebele	Total HHs	Identified migrant-sending HHs	Sampled migrant-sending HHs	
ANRS	West Gojjam	Mecha	Adjoining Merawi Town	Enamirt	1176	287	34
				Enashenifalen	1681	401	48
			Farther from Merawi Town	Amarit Wenz	2349	376	45
				Gosh Meda	1285	196	23
			Total	6491	1260	150	
SNNPR	Wolayta	Sodo Zuria	Adjoining Sodo Town	Bossa Kacha	662	211	46
				Ofa Gendabe	763	235	52
			Farther from Sodo Town	Amacho Kodo	532	122	27
				Gilo Bisare	545	114	25
			Total	2502	682	150	
Grand total			8993	1942	300		

The Agrawal [12] statistical formula was used in the determination of the sample size.

$$n = \frac{N}{1 + N(e)^2}$$

Where; n= is sample size

N= is the population from which the sample is drawn

e =is the error which is supposed to be 0.05

The migrant-sending household population identified from the four selected kebeles in each of the two weredas through house to house survey was 1942. Application of the aforementioned formula yielded a representative sample of about 331. However, for ease of treatment and as it doesn't put representation into question, data from 300 migrant-sending households was collected. For simplicity of comparison between the two migrant-sending weredas, 150 migrant-sending households were taken from each wereda, of course keeping proportional allocation from the selected kebeles.

### Methods of Data Acquisition

The primary data used in this study were obtained through a questionnaire survey which covered 300 migrant-sending household heads that had at least one young departed family member within the last ten years. The instrument was pre-tested on ten selected households in each wereda and the necessary amendments were made. The primary survey data were collected by trained development agents (two interviewers in each kebele). In addition, in-depth interviews were made with selected migrant-sending households, community leaders, local administrators, extension workers and potential and actual migrants.

The actual data collection from the rural households using the survey instruments was carried out from February to May 2011. These months could be considered as the slackening period in agricultural activity after the main harvest so that farmers have relatively ample

time to cooperate and feel less anxious of their time to respond to the survey questions.

### Data analysis

Descriptive statistics were used to examine the impact of youth outmigration on the migrant-sending household's socioeconomic condition, and amount and utilization of remittance. Multiple linear regression technique was used to make analysis of the determinants of the amount of remittance received by the rural migrant-sending and remittance-receiving households. For the descriptive and inferential statistical analysis, the Statistical Package for Social Scientists (SPSS version 18) was a helpful computer package. The qualitative data has been analyzed through narratives and used in discussions.

## Results and Discussion

### Migration and rural households living conditions

Migration is instrumental for the enhancement of the livelihoods of rural households through supplementary income which could be used for capital formation. It could also be assumed that the remaining family members get more farm plots. The effect of young people migration on the migrant-sending household's socioeconomic condition is presented in the following sections.

Effect of young people migration on the migrant-sending household	Migrant-sending households' location				Total HHs	
	Mecha Wereda		Sodo Zuria		No. of HHs	% of HHs
	No. of HHs	% of HHs	No. of HHs	% of HHs		
Improved household debt repayment position	52	34.7	33	22.0	85	28.3
Remaining members get more farm plots	65	43.3	17	11.3	82	27.3
Household income & asset position improved	45	30.0	36	24.0	81	27.0
Able to use improved seed, fertilizer	68	45.3	12	8.0	80	26.7
Non-farm/off-farm income generation increased	34	22.7	37	24.7	71	23.7
Improved family member's education/ medication	39	26.0	29	19.3	68	22.7
Household income and asset position declined	28	18.7	14	9.3	42	14.0
Non-farm income generation decreased	18	12.0	12	8.0	30	10.0
Leasing and working on more land	5	3.3	2	1.3	7	2.3

Source: Field survey, February-May 2011

**Table 2:** Migrant-sending households indicating impact of youth outmigration on their socioeconomic condition.

Data presented on Table 2, summarize the socioeconomic impacts of youth outmigration on the rural households. Migrant-sending households have reported an improvement in their household debt repayment position owing to the financial contributions of the departed members (28.3%) and are able to use improved seeds and fertilizer (26.7%). They also indicated that the departure of a young family member gives an opportunity for the remaining members to get more farm plots (27.3%). Migrant-sending households also have got an avenue of improving their income and asset position (27.0%) and the

departure of a young family member was also instrumental to the augmentation of family member's education and medication. On the other hand, the migrant-sending households have been less involved in leasing and working on more land using migrant remittance (2.3%).

Table 2 also illuminates the variation in the real and perceived advantages and disadvantages of youth outmigration for migrant-sending rural households by location. A significantly large proportion of migrant-sending households in Mecha Wereda (43%) indicate that remaining family members get more farm land as a result of the

departure of a young family member/s while the proportion is only 11.3% for Sodo Zuria migrant-sending households who almost have miniscule and indivisible farm plots. Similarly, the percentage of migrant-sending households who are able to use improved seeds and chemical fertilizers on the land through migrant remittances is higher among the Mecha Wereda migrant-sending households (45.3%) compared to the Sodo Zuria ones (8%). The cereal based farming system dominant in Mecha Wereda calls for the use of chemical fertilizers on the distant fields than the sort of agro-forestry type home-garden enriched by organic fertilizer evident in Sodo Zuria Wereda.

## Migration and Remittance

Remittances generated by internal migration have been overlooked and given little attention. Although the individual quantities are smaller, the total volume of internal remittances is likely to be enormous because of the numbers of people involved. Remittance has numerous socioeconomic impacts which include enhanced opportunities and improved livelihoods for the sending households and economic advancement in the community of origin at large [13,14].

### Remittance channels, levels and frequency

#### Level of remittance

Levels of remittances vary depending on a range of factors such as accessibility of the home village, the type of occupation the migrant is engaged at destination, duration of residence at destination, costs of

living, ease of remitting, and the orientation of the migrant. The number of years a migrant is away from home has a direct impact on the amount of remittance sent by the migrant family member. Less remittance is sent during the initial hectic periods of finding a job, adjusting to the new location and community, and of working on lower wages. Migrants' remittances also decline as the duration of residence in the destination increases since migrants establish their own family, be integrated more into the urban way of life and their demand for the urban goods and services and expenditure increases thereby making it difficult for them to send back remittance to the area of origin. Attachment to the home area gradually fades away; and the number of close relatives dwindles with an extended duration of residence away from home.

The average amount of money, excluding gifts in kind, received by each migrant-sending household from the out-migrating family members was 1045.40 birr per year (standard deviation=676.8). The maximum annual receipt of remittance was 5000 birr while the minimum was 200 birr. More than half of the migrant-sending households (59.1%) received less than one thousand birr a year; while an overwhelming majority of them (85.1%) had received less than two thousand birr from the migrant members. The high average amount of remittance received by a migrant-sending household in Sodo Zuria Wereda could be associated with the relatively large number of migrants departing from each household; short distance moves of the migrants out of the village and the frequent visits migrants make with some amount of remittance they bring home; and the higher household poverty levels as manifested in food aid and the migrants' greater motivation of supporting their parents (Table 3).

Attribute	Migrant-sending households' location				Total HHs	
	Mecha Wereda		Sodo Zuria		No. of HHs	% of HHs
	No. of HHs	% of HHs	No. of HHs	% of HHs		
Remittance recipient households	94	62.7	60	40	154	51.3
Amount of money(birr) on average received						
Up to 500	15	16	21	35	36	23.4
501- 1000	39	41.4	16	26.7	55	35.7
1001- 1500	17	18.1	4	6.6	21	13.6
1501- 2000	16	17	3	5	19	12.4
Above 2001	7	7.5	16	26.7	23	14.9
Total	94	100	60	100	154	100
Number of times remittance is received/year						
1	38	40.4	10	16.7	48	31.2
2	40	42.6	16	26.7	56	36.3
3	13	13.8	11	18.3	24	15.6
4 and above	3	3.2	23	38.3	26	16.9
Total	94	100	60	100	154	100
Remittance channels for receiving HHs						

Bank	12	12.8	26	43.3	38	24.7
Visiting relatives and friends	48	51.1	27	45	75	48.7
Commercial vehicle drivers	14	14.9	5	8.3	19	12.4
Visiting migrants themselves	78	82.8	51	85	129	83.8

**Table 3:** Annual amount and frequency of remittance received by the migrant-sending households.

### Frequency of remittance

The frequency of remittance varies with distance from the destination, the presence of very close relatives in the village, income levels of the migrant at destination, economic background of the migrant-sending household, duration of residence away from home, and type of occupation of the migrant. Where the village is no great distance from the destination, the migrant often takes money back or a relative visits him/her to collect. Waged migrants who earn higher per capita incomes are likely to send more money frequently back to the village. The more frequent money is received by rural families from rural out migrants, the smaller could be the amount of money.

The number of times a migrant sends remittances to his parents and relatives in rural areas varies considerably from one household to the other. Most respondents said that remittances are irregular and usually sent following annual festivals like New Year, Meskel (Finding of the True Cross celebrated on September 24), Gena (Birthday of Jesus Christ), Timket (Ethiopian Epiphany) and Easter. Other intermittent causes of remitting by the migrants is to assist relatives back home conducting marriage ceremonies, funerals and as a backup for hardships.

The average number of times a migrant-sending and remittance recipient household received remittance per year was 1.89 times. The highest number of times a migrant-sending household received remittance was found out to be 12 times whereas the minimum number of times remittance was received within a year was only once. It was disclosed that households whose departing youth are engaged in professional activities receive remittance more regularly than those

whose migrant members are involved in casual labor. This could be because of the low level and erratic nature of income from the informal activity, escalating living costs and lack of saving habits. Slightly more than half of the investigated migrant-sending households (51.3%) have received remittance at least once in a year. Closer to three-fourth of the migrant-sending households (72.8%) indicated that it took only two years for rural migrant youth to send the first remittance to the family. Most migrant-sending households (83.1%) receive money from their departed members up to three times in a year.

### Remittance channels

The outlets of receiving money reported by the migrant-sending households include amounts collected from banks; from individuals such as relatives, friends, villagers and drivers; as well as money brought to the household by the migrants themselves personally during visits. Most respondents stated that migrants prefer to bring the money they saved during one of the annual festivals, especially Meskel (in Sodo Zuria), New Year and Easter (in Mecha) and spent it over consumption items during the festivals.

### Remittance utilization by the migrant-sending households

Studies indicate that the amount of remittances received and the manner of utilization in the areas of origin greatly impact the socioeconomic status of the migrant-sending households. Remittance augments the income status of receiving households, improves human capital formation, and increases household consumption and investment (Table 4) [15].

Use to which remittance is put	Migrant-sending remittance receiving households' location				Total HHs (n=154)	
	Mecha Wereda (n=94)		Sodo Zuria Wereda (n=60)		No. of HHs	% of HHs
	No. of HHs	% of HHs	No. of HHs	% of HHs		
Purchase of seed, fertilizer, pesticide, insecticide	68	72.3	23	38.3	91	59.1
Buying clothing	53	56.4	36	60.0	89	57.8
Purchase of household goods/furniture	59	62.7	24	40.0	83	53.8
Loan/debt repayments & land tax payment	43	45.7	23	38.3	66	42.9
Payment of education of and medication	32	34.0	26	43.3	58	37.7
Improving or building housing	37	39.3	20	33.3	57	37.0
Purchase of food items for household	17	18.1	34	56.7	51	33.3



Funerals, holiday festival expenditure, birth, wedding	26	27.7	22	36.7	48	31.2
Buying cattle and other livestock	25	26.6	10	16.7	35	22.7
Purchase of agricultural tools and implements, including water pumps for irrigation	14	14.9	17	28.3	31	20.3
Starting new business	10	10.6	18	30.0	28	18.2
Purchase of consumer durables such as radio, tape recorder, watch, torches and ornaments	5	5.3	22	36.7	27	17.5
Payment for hired labor	22	23.4	4	7.7	26	16.8
Renting/leasing land	6	6.4	5	8.3	11	7.1
Source: Field survey, February-May 2011						

**Table 4:** Remittance-receiving migrant-sending households by the types of uses to which the received money is put (multiple response allowed).

The study disclosed different purposes on which the bulk of remittances were spent by the migrant-sending households. As one can decipher from Table 4, the predominant uses to which remittance are put in order of importance were purchase of seed, fertilizer, pesticide/insecticide (59.1%); buying clothing (57.8%); purchase of household goods/furniture (53.8%); and loan/debt repayments and land tax payment (42.9%). On the other hand, a limited proportion of migrant remittances were put in the hiring of labor on the farm to offset migrant labor. This is a true indicator of the disguised superfluous rural labor under conditions of diminution in landholdings and absence of intensification. None of the remittance receiving migrant-sending households in both locations has indicated any form of saving of the money they have received from their departed member. This could be attributed to factors such as the limited amount of remittance received, the existing limited saving culture of the rural people, or the widespread household poverty that absorbs all the available cash income into the household consumption basket.

The use of remittances for satisfying daily needs and expenses including food is likely to improve food security and nutritional status. The money migrant-sending households collected from their migrating family members could be spent on covering medical/health care expenses or education which can improve the livelihood prospects of future generations. Migrants assist younger siblings by covering accommodation expenses and tuition fees especially for those who do not join governmental higher learning institutions. Households also indicated that rural children receiving remittances in the form of cash income or presents, in the form of for example clothing, find it an enormous motivation to pursue their schooling and persevere in its completion to assume an urban job. The use of remittances for consumer durables (radios, bicycles, milling machines, torches) could also help in making the lives of rural households simpler.

Households take loans both from private money lenders and micro finance institutions to buy fertilizers and finance micro business. They often take money without defined micro investment projects. In a situation where their projects turn out to be a complete failure and where the money is spent as part of the consumption basket, and where other income obtaining opportunities are virtually inexistent, family members resort to migration to get cash income to repay debt.

For rural households, a house is not only a living place for the family, but it is also the basic source of social prestige and pride for the household among the villagers. Migrants, particularly educated and

successful ones, feel ashamed if they are unable to build modest quality house for their family who are still living in an old bad-quality house. Migrants build or are assisting their parents build a housing unit even if they do not have the intention to go back to the village for residence. For a migrant, improving a family's residence is considered to be the hallmark of success by the villagers.

In the study weredas, it was found that there were migrant-sending households that invested their remittances in renting/ buying land; and those who used remittances to purchase agricultural inputs such as improved seed, fertilizer, insecticides and pesticides to increase agricultural productivity. A substantial number of households also invested remittances in buying livestock mainly oxen that could be used as draught power in agriculture. Households also buy sheep and goats for breeding in order to get cash income. As an aspect of diversification of livelihoods, some households are using remittances to be engaged in small business such as buying and selling of cereals in the local markets. The overall impact of these migration related supplementary income for the migrant-sending households is asset and capital formation, improved livelihoods and household living conditions.

### Determinants of remittance received by migrant-sending households

Different factors determine whether migrants send remittances and the amount as well as frequency of remittance transfers. These factors could be related with the characteristic feature of the migrants; the nature of the destination area; and family background of the migrants.

Multiple linear regression technique was used to make analysis of the determinants of the amount of remittance received by the rural migrant-sending households in the selected weredas. The dependent variable, therefore, was the annual amount of remittance (in birr) received by the rural migrant-sending households. The independent or explanatory variables from  $x_1$ -  $x_{22}$  that were believed to determine the amount of remittance received by the migrant-sending and remittance-receiving rural households identified through meticulous literature review and own observation of the study areas as well as preliminary survey are listed here under:

$x_1$ : Number of migrants moving out of the household,

$x_2$ : Age of the migrant at the time of departure,

$x_3$ : Educational level of the migrant (completed grade level) at the time of departure,

$x_4$ : Current age of the household head in completed years,

$x_5$ : Marital status of the head of the household (1: married; 0: divorced/separated),

$x_6$ : Sex of the household head (1: male; 0: female),

$x_7$ : Educational level of the household head from which the first young migrant departed,

$x_8$ : Current size of farmland of the household (per capita land holdings in hectares),

$x_9$ : Current number of heads of the livestock possessed by the household,

$x_{10}$ : Average annual amount of agricultural produce obtained in a year in quintals per HH,

$x_{11}$ : Adequacy of food produced by the HH to feed family all year round (1: Yes; 0: No),

$x_{12}$ : Government/NGO aid to overcome food insufficiency by HH (1: Yes; 0: No),

$x_{13}$ : Income source other than agriculture/ engagement in non/off-farm employment by the household/ (1: Yes; 0: No),

$x_{14}$ : Current number of siblings of the migrant-sending HH from which the migrant departed,

$x_{15}$ : Occupation the migrant is engaged at destination (1: professional; 0: non-professional),

$x_{16}$ : Number of years the migrant is away from home (duration of residence away from origin),

$x_{17}$ : Number of times the migrant-sending household is visited by the migrants in a year,

$x_{18}$ : Number of times the migrant-sending household receives remittance in a year,

$x_{19}$ : Sex of the migrant (1: male; 0: female),

$x_{20}$ : Relation of the migrant with head of the household (1: child; 0: step-child),

$x_{21}$ : Distance of the destination area covered by the migrant,

$x_{22}$ : Receiving presents from the out migrant family member (1: Yes; 0: No).

The regression analysis excluded migrant-sending households who didn't receive remittance, and the total number of the remittance-receiving migrant-sending households considered in the regression analysis was 154. The overall significance of the model for the variation in the amount of remittance received among the remittance recipient migrant-sending households was tested with ANOVA. The regression model was statistically significant with F ratio of 5.502 and  $\alpha=0.00$ . The assumption of normality was assessed by Kolmogorov-Smirnov and Shapiro-Wilk tests with the view to ensure that the errors are identical and independently distributed. As the test of normality of the original data violated the assumption of normality because the p value was less than five percent ( $p=0.00$ ), the data had been transformed by natural logarithm ( $\ln$  of remittance). After the data was transformed, it was again checked for normality and was found to be normal as the p value was greater than five percent i.e.,  $p=0.054$ . The linear regression was, therefore, done on the transformed remittance data. Test of linearity was done on the transformed data and it was found that the predicted value versus the dependent variable showed the presence of linear relationship between predictors and the dependent variable and therefore, the assumption of linearity is satisfied. There existed random structure in the plot of standardized residuals versus standardized predicted value and therefore, there is no problem of heteroscedasticity. The variance inflation factor (VIF) in the collinearity statistics for all variables in the regression model was less than 10 so that there is no problem of multicollinearity. All in all, the assumptions for fitting linear regression models were satisfied (Table 5).

Explanatory variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Constant	6.271	0.849	-	7.383	0	-	-
Current age of the head of the household in completed years	0	0.006	0.002	0.025	0.98	0.624	1.603
Sex of the head of the household	0.262	0.184	0.148	1.422	0.158	0.381	2.621
Educational level of the household head from which the first young migrant departed	-0.103	0.128	-0.069	-0.802	0.424	0.564	1.773
Number of migrating from this family	0.349	0.063	0.088	0.782	0.0436	0.327	3.063
Age of the migrant during departure in completed years	0.008	0.018	0.038	0.475	0.636	0.641	1.559
Educational level of the migrant at departure	0.112	0.015	-0.064	-0.828	0.0409	0.693	1.443
Current number of siblings from which the migrant departed	0.059	0.029	0.162	2.009	0.047	0.639	1.565
Number of years the migrant is away from home	-0.022	0.022	-0.091	-1.004	0.318	0.505	1.979
Sex of the migrant	-0.213	0.133	-0.122	-1.604	0.111	0.72	1.389

Relation of the migrant to head of the household	-0.605	0.319	-0.136	-1.898	0.06	0.808	1.238
Current size of farmland in hectare	0.05	0.094	0.061	0.53	0.597	0.315	3.175
Average annual amount of farm produce the HH earned in qntl	-0.005	0.004	-0.003	-0.021	0.984	0.193	5.185
Government/NGO aid as a way of overcoming food insufficiency by the household	0.137	0.185	0.059	0.743	0.459	0.657	1.522
Adequacy of food produced by the household to feed family all the year round	-0.04	0.127	-0.027	-0.317	0.752	0.567	1.765
Number of heads of all livestock possessed by the household	0.021	0.014	0.165	1.488	0.139	0.338	2.961
Income source of the HH other than agriculture/ non-farm employment	0.071	0.111	0.047	0.638	0.525	0.767	1.304
Distance of destination area to this community in kilometers	0.002	0.005	0.037	0.324	0.747	0.313	3.195
Number of times the HH is visited by the migrants within one year	-0.027	0.033	-0.06	-0.804	0.423	0.741	1.35
Number of times the HH received money within one year from migrants	0.276	0.06	0.442	4.584	0	0.446	2.244
Receiving presents from the out migrant family member	-0.32	0.13	-0.192	-2.458	0.015	0.681	1.468
Marital status of the head of the household	0.234	0.188	0.132	1.247	0.0215	0.367	2.721
Type of job the migrant is engaged at destination	0.351	0.165	0.166	2.124	0.036	0.681	1.469
R	0.824	-	-	-	-	-	-
R Square	0.678	-	-	-	-	-	-

**Table 5:** Summary of the results of the multiple regression analysis.

#### The Regression model

$$\ln Yi = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_{22} x_{22} + e$$

Where Yi= annual remittance received by the  $i^{\text{th}}$  household

$x_1$ - $x_2$  = explanatory variables

The reduced model of the regression analysis is therefore,

$$\ln Yi = 6.271 + 0.349x_1 + 0.112x_3 + 0.234x_5 + 0.059x_{14} + 0.351x_{15} + 0.276x_{18} - 0.320x_{22} + e$$

All the selected explanatory variables included in the regression model explained 67.8 percent ( $r=0.824$  and  $r^2=0.678$ ) of the variation in the annual amount of remittance received by the migrant-sending and remittance receiving households. From the explanatory variables, number of youth migrating from the family ( $x_1$ ), educational level of the migrant at departure ( $x_3$ ), marital status of the head of the household ( $x_5$ ), current number of siblings of the household from which the migrant departed ( $x_{14}$ ), type of job the migrant is engaged at destination ( $x_{15}$ ), number of times the household received money within one year from migrants ( $x_{18}$ ) and whether the household received presents from the out migrant family member ( $x_{22}$ ) were found to be significant in explaining the variation in the annual amount of remittance received by the migrant-sending households. Of course, the association of the explanatory variable, number of times the household received money within one year from migrants with the dependent variable was found to be statistically significant even at 99% confidence level [16,17].

Number of migrants from the household, educational level of the migrant at departure expressed in grade level completed, current number of siblings in the household from which the migrant departed, and number of times the household received money within one year from migrants determined the response variable positively. When the number of times the migrant-sending household receives money increases by one more time within one year, the amount of money increases by 32 percent on average as ( $e^{0.276}$  where  $e=2.718282..$ ) is 1.32. An increase of one migrant member from the family brings about a 42 percent increase of remittance received by the migrant-sending and remittance-receiving household since ( $e^{0.349}$  where  $e=2.718282..$ ) is 1.42. A unit increase in the grade level of the migrant results in 12 percent increment in the amount of remittance received by the migrant-sending household ( $e^{0.112}$  where  $e=2.718282..$ ) is 1.12. On the other hand, if the number of siblings of the household from which migrants depart increase by one unit, the amount of remittance the household receives increases by six percent ( $e^{0.059}$  where  $e=2.718282..$ ) is 1.06.

Analysis of the dummy variables that include the type of occupation the migrant is engaged at the current destination, marital status of the head of the household from which the migrant departed, and whether the household is receiving presents from the out migrant family members had significantly determined the dependent variable. Migrant-sending and remittance receiving households that had professional migrants received remittance which could be greater by 42 percent than households who have non-professional migrants as ( $e^{0.351}$  where  $e=2.718282..$ ) gives a value of 1.42. Likewise migrant-sending and remittance-receiving households whose marital status was married received 26 percent more remittance ( $1.26 = e^{0.234}$  where  $e=2.718282..$ )



than households who were either widowed or divorced. Similarly, migrant-sending and remittance-receiving households that received presents from the out migrant family member received remittance which is 27 percent ( $0.73 = e^{-0.320}$  where  $e=2.718282..$ ) lower than households who did not receive presents.

## Conclusion

Rural out-migrants are invaluable resources for sending areas as they often send or bring back skills, money and modern values which could help in improving agricultural practices, and transferring valuable and improved technologies. Migration improves the rural household's income, debt repayment position, asset formation, and quality of life enhancement.

Remittances are usually received following annual festivals and as a backup for hardships mainly from visiting migrants themselves. The most important determinants of the amount of remittance received by the migrant-sending households are number of youth migrating from the family, number of times the household received money within one year, and type of job the migrant is engaged at destination. The major uses to which remittances are spent by migrant-sending households include acquisition of farm inputs and agricultural tools, purchase of household goods/furniture; and buying clothing and repayment of loans and land tax payment.

Remittances raise migrant-sending household's incomes and asset position, increase levels of consumption, contribute to averting risks resulting from drought, pests and famine, reduce the necessity to incur debt and enhance household debt repayment position, enable recipients to use improved agricultural inputs, improve migrant family member's education and medication, and encourages capital formation and technological change. Therefore, improving the educational levels of out migrants, strengthening migrant-parent relations, improvements in rural and small town infrastructure such as roads, telecommunication and banks are supposed to increase remittance frequency and levels and ease money transfer. Educating rural people on the best use of remittances and inculcating the culture of saving and investment for sustained rural economic development and enhanced wellbeing should be given due attention.

## Acknowledgement

The researcher is grateful to the study participants, OSSREA, Addis Ababa University, Dilla University, NUFU Project, and Dr. Solomon Mulugeta.

## Notes

**Wereda:** is the administrative unit comprising of numerous peasant associations. It is also used as a synonym with district.

**Kebele:** is the smallest administrative unit in the administrative hierarchy in rural Ethiopia. It has also been called Peasant Association.

**Birr:** is the basic unit of currency in Ethiopia; equal to 100 cents (1 USD was about 17.4 Ethiopian birr in March 2012).

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