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Research Article

Correlates of migration networks among recent out-migrants from Ankasha District of the Amhara National Regional State, Ethiopia

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Abstract

Ethiopia has been one of the hot spots for internal migration during the last three decades, where massive rural-to-urban migration took place all over the country due to socio-demographic and political changes. This study primarily aimed at examining the migration network among migrant-sending households in the Ankasha District of the Amhara National Regional State, Ethiopia. The cross-sectional study was employed based on migrant-sending and non-sending households, who were randomly selected from six kebeles of Ankasha District. The study employed Ordinary Least Square Regression analysis techniques to assess the possible impacts of the outmigration of at least one household member on four outcome variables (asset-based wealth, expenditure on agriculture input, expenditure on health, and education of left behind household members). The result showed that the likelihood of having a higher network decreases by about 78% (OR= .221; CI: 0.082-0.595) for those household sizes of <4 members at the place of origin. On the contrary, migrants originating from a household size of 8+ had a 2.47 times higher likelihood of having better networks with sending communities compared to the reference category. Migration network was 3.73 times higher (CI: 1.79- 7.736) among migrants having formal education compared to those having no formal education. The likelihood of migrants having higher networks with sending communities decreased by about 59.6% for those who stayed at the place of destination for <6 months compared to those who stayed for more than 3 years. The findings imply the need to establish ways to monitor the dynamics of impacts of migration on both sending households and migrants themselves. There has been limited research on migration networking in Ethiopia in general and the study area in particular. This calls for an in-depth analysis and the need to examine migration in a wider context of the development agenda based on more reliable longitudinal data.

***Keywords**: Ankasha District, Network, Outmigration, Remittance, Ethiopia*

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1. Introduction

Migration is a worldwide phenomenon that has existed across human history and nations in the world (Bariagaber, 2014). It is argued that migration flows are often a response to economic, social, and political problems people experience in their lives (Solimano, 2010). Migration can be either individual or family decision (Bariagaber, 2014; Uchehara, 2016) and has several implications for the household, the sending society and eventually the entire economy (Azam

and Gubert 2006). Most recent scholars agree that migration is usually a highly successful way of greatly improving a household's financial position and living standards (de Haas, 2003).

Ethiopia has been experiencing influx of internal migration during the last three decades, where massive outmigration from rural areas took place all over the country due to recurrent socio-demographic and political changes (Redehegn et al., 2019). For instance, a recent survey on all regions (with the exception of Tigray) puts rural-to-urban migration at 29% (Central Statistics Agency (CSA) [Ethiopia], 2021). The Ankasha District of Amhara Regional State, which is the focus of this study, is known for massive population movement, where influx of people migrates to small and big towns due to economic and other non-economic reasons. Though the trend and volume of outmigration may differ from one zone to the other, the process takes place in nearly the same fashion across most communities in the region. While complex factors contribute to such rampant population mobility across all regions, political instability coupled with economic distress arising out of increased population pressure and climate change based food insecurity are the main driving forces (Bundervoet, 2018; Dessalegn et al., 2023).

Once a household decides to send a family member to a place of destination, the next phase in the process involves networking through various mechanisms. Network Theory of Migration assumes that the cause of migration is not purely economic. It is a theory that explains migration in relation to the ties or connections among individuals in the home and destination place. It is stated that migration is caused by the interpersonal ties which connect the potential migrants and non-migrants in the origin through different ways of linkages. Social network is increasingly regarded as important sources of social capital (Ryan et al., 2008) that minimizes the cost of migration, maximize the returns the migrants could achieve from migration, and facilitate the finding of jobs in the host countries (Massey et al., 1993). Networks have multiplier effects that could result in a migration chain (Dessalegn et al., 2023). The mere existence of network and migration chain reduces the risks and costs the migrants might incur which in turn increases migration. Migration network entails remittance, interpersonal linkages that interconnect migrants, former migrants, and non-migrants across geographical boundaries (Dessalegn et al., 2023; Massey et al., 1999).

Information and communication between migrants and non-migrants are commonly known means to capture migration network. The previous migrants provide accurate information about the realities such as the available employment opportunity in the destination countries for the potential migrants (Zaiceva and Zimmermann, 2008). Similarly, Van Dalen, Groenewold and Schoorl (2005) stated that social network is influential in determining migration and migration intention in some countries like Ghana and Egypt, but it did not have any impact on individuals to develop migration intention in Morocco and Senegal.

Remittance is one of the most commonly used indicators to measure how an out migrant is connected with his/her place of origin. Remittance is one of the means by which migrants primarily contribute money to support the people they have left home (Binford, 2003). These remittances constitute one such domestic plan to increase the family's forms of income and generate extra funds for ongoing expenses (Binford, 2003; Selamawit, 2013). The migration optimists, the first theoretical approach to migration, argued that migration and remittances were crucial in helping left-behind families and children meet their basic needs. These 'migration optimists' claimed that migrants serve as agents for the families who have been left behind in the sending communities (De Haas, 2007b). In a study conducted in Moroccan, remittance from internal migration accounted for 10% of the income (De Haas, 2006); 18 per cent in Ecuador , and 43% in Brazil (Bendixen and Onge, 2005); half of the total household income in Bangladesh and Nepal (Seddon, 2004); and 50% of household expenditure (Nwajiuba 2005). Migration pessimists have claimed that remittances can encourage others to migrate because they have the potential to build socio-economic disparities in the sending societies, resulting in migration-induced migration being prevalent.

Migration studies in Ethiopia are scarce and very few have attempted to investigate the migration networks in internal migration dynamics. The existing literature on Ethiopian migration has solely focused on understanding and characterizing migration at the place of destination. There are no studies conducted in identifying the predictors of networks (approximated by remittance and ties) among outmigrants and sending communities (i.e., place of origin) in both the study area and the region. Hence, the main objective of this study is to assess the key individual and household level predictors of networks in Ankasha District, Amhara Region.

2. Research Methods

2.1 Study context

Amhara Region is the second largest region in Ethiopia with an estimated population of 32,134,988 (CSA [Ethiopia] 2007). The median age of the population was estimated to be about 17 years. According to a recent estimate, about 12 percent of the total population of the region is residing in urban areas while the bulk of the population (88 %) is living in rural areas. Poverty is one of the most important concerns of the region where about 56.8 percent of the total population is living under the poverty line. It is estimated that the average landholding per household is 1.10 hectares and the average per capita holding is 0.24 hectares (Adenew and Abdi, 2005).

The study area, Ankasha District, is located in Awi Zone of the Amhara National Regional State. It is located in the north-western highlands of Ethiopia. Astronomically, it roughly lies between 10^{o}31’46’’ and10^{o}41’32’’ north and 36^{o}36’18’’–36^{o}59’33’’ east (Adugna and Tamrat, 2022). Currently, it comprises one smaller town named Agaw Gimja Bet - the capital of the district and 16 rural *kebeles*. According to the 2007 Population and Housing Census return of Ethiopia, the district had a total population of 199,826 inhabitants of whom males constitute 99,285 (49.7 %) and the majority of them are residing in areas designated as rural. With regard to migration data, migrants constitute 32,324 (16.2%) of the population (CSA [Ethiopia] 2007).The district is well noted for its intensive agricultural practices and cropping systems. Since virtually the Ethiopian rural population earns a living from agriculture and the effects of rural out-migration directly affect the rural population, the research will focus on the rural population of Ankasha District (Adugna and Tamrat, 2022).

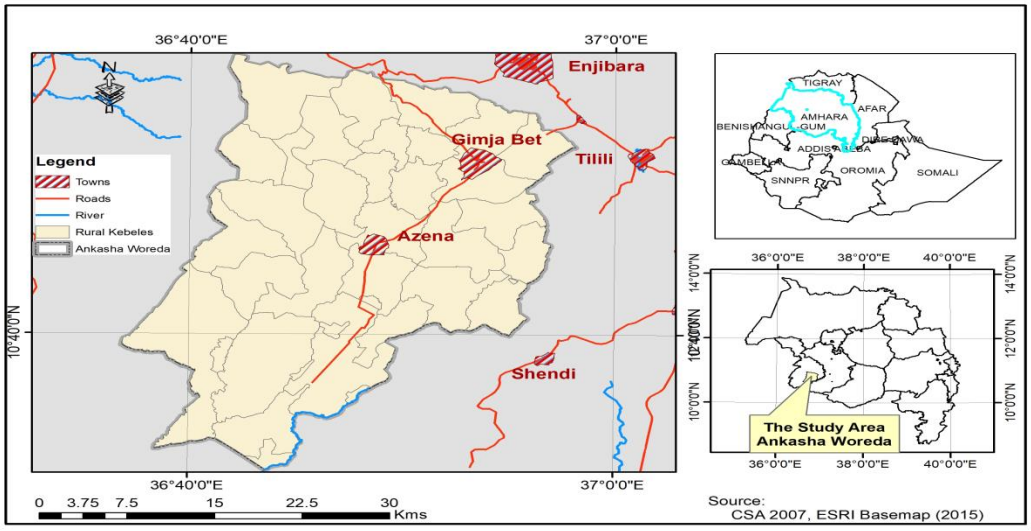

Figure 1: Map of the study area

2.2. Study design and data sources

The study employs a cross-sectional study design. In this design, data are collected at a specific point in time in the lives of the respondents. The design is commonly used when the primary interest is to estimate prevalence rather than studying cause-effect relationship. The data required for this study were generated from household survey of migrant sending households residing in the district using household survey questionnaire.

The data for this study were collected using quantitative household survey, mainly focusing on collecting socio economic profiles, migration history of household members, remittance, networking, positive impacts and adverse consequences of outmigration on source communities. Household survey questionnaire was used to collect quantitative data on socioeconomic and demographic characteristics of both migrant sending and non-sending households. The tool was also used to gather quantitative information on impacts (such as social, financial, physical, natural and human capitals). The interviews were conducted in the local language of the study areas, and they were audio recorded and translated into English for analysis.

The field activities were guided by a standard field procedure with a broad set of actions to be implemented sequentially. The data collection procedure included recruitment of field workers, translation of data collection tools, training of field staff, piloting, and debriefing, and field data collection. A field manual was prepared and used for training the field staff. The contents of the

manual included module by module descriptions of tools, technical skills during the interview, general instructions and ethical standards to be followed by enumerators during the field work. The researchers also understand that due to the complex nature of the subject, a careful selection of the enumerators, supervisors, field/cluster coordinators was required. The researchers arranged two-day intensive training and one-day pretesting session prior to data collection. During the field work, every effort was made to conduct spot checking and close supervisions. After the fieldwork was completed post-fieldwork debriefing session was held by the researchers to share about their field experiences. Secondary data were collected from various sources including published and unpublished materials such as books, topographic and thematic maps, journals, reports of Meteorological and Central Statistical Agencies as well as other publications and scientific works.

2.3. Sampling and sample size

The estimation of a representative sample size began with identifying the outcome variable(s) or the indicators of interest. There could be a wide range of impacts of massive outmigration on individual households which includes economic/financial, physical, social and environmental issues. Given this, a good indicator for sampling purpose would be the proportion of household poverty or livelihood status. As the most current and accurate proportion households with such characteristics for each study village was not readily available, Yemane's (1973) formula to estimate the sample size of 740 migrant sending and non-sending households was used.

Sample size was determined by:

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

n= $= \frac{65000}{1+65000\,(.05)2} * 10\% = \frac{65000}{1+(65000\,.0025)} = \frac{65000}{1+21.93} = \frac{65600}{22.93}$*10% =399 * design effect +10% contingency= 769. 740-29 = 29/740 *100 =3.91 non-response rate/response rate = 96.09%

Note:

(1) Total migrant sending & non-sending HHDs =740

(2) Migrant sending HHs =223 & non-sending HHs =517, since this paper is about migration network, it mostly relies on migrant sending HHs (223)

4) 740 is used when we want to use 70 as a denominator (total sample)

5) A sample of 421 need to be removed/ignored, the total sample is 740 as calculated above

Where, n = sample size

N = is the population from which the sample is to be drawn [sampling frame: complete listing of migrant sending and non-sending households]

e = is the error which is supposed to be .05

D= Design effect of 2

C = contingency for incomplete questionnaire and non-response of 10% to be used.

421 migrant sending households were selected from each selected *kebele* by taking the sampling frame from the *kebele* administration. Less systematic attention has been paid to the non-pecuniary consequences of remittances, such as their impact on health, education, gender, care arrangements and social structures and ethnic hierarchies in migrant communities and countries. The analysis was based on 223 migrant sending households extracted from the full data set. The 223 sample households were selected using two stage sampling technique. First, six rural *kebeles* were selected purposively. According to *Woreda* Labor and Social Affairs Office, these *kebeles* were identified and documented by their intensity of out migration. Second, sub-villages (*gotts*) from each *kebele* were identified. At the second stage, based on a complete listing, eligible households were selected randomly based on Population Proportion to Size (PPS), size being the number of households in the sample *kebele*.

2.4. Data analysis

The outcome variable is migration network, constructed based on the linear and combined effects of a set of yes/no questions for the question "if the migrant sends remittance or has recent ties with the sending households or has got information about the destination before moving". The selection of potential explanatory variables was guided by an extensive literature review and by model fitting procedures. The exposure variables were categorized into two major groups: individual and household characteristics. Variables included in the analysis were age of the migrant, marital status of migrant, education, duration of stay, occupation and cost of migration. Data cleaning, management and analysis were carried out using STATA version 17. The distribution of various socio-demographic variables was described using frequencies and proportions. The hypothesized relationship between selected explanatory variables and the outcome variable was examined using Ordered Logistic regression. The parallel line assumption test was conducted to check if Ordinal logit regression is appropriate. The correlations among

the explanatory variables were checked using the Variance Inflation Factor (VIF). Initially, bivariate proportional Odds regression was conducted to select the most promising explanatory variables for multivariable regression analysis. Variables with a *p* value < 0.20 in the bivariate analysis were selected for entering the initial multivariable proportional odds. AIC and BIC were used to test model fitness (Luke 2019). In each regression model 95% confidence interval of the odds ratio (OR) was calculated as the effect measure of each factor.

3. Results

The age distribution of the migrants shows that a slightly more than a quarter of them were adolescents and youth (age < 25). About 24% were between age 25-29, and 31% in the age group 30-39. About 15% of them were above 40 years old (Table1). Two thirds of the respondents were never married; 42% reside in medium sized household 5-7 and 34% in small sized households (<4 members). Close to 95% of the respondents reported having at least primary education and only 47% of migrants had formal education. There was high disparity in occupation types between the parents of the migrant and the migrants themselves. It is noted that about 87% of the parents were engaged in agriculture whereas more than half of the migrants were reportedly engaged in non-agricultural activities. The distribution of the asset-based wealth status indicates that about 89% of them were categorized as "poor" (Table 1).

Table 1: Background characteristics of respondents and migrants, Ankasha District, (N=223)

Characteristics	No	Percent
Age of respondent (sending HH)		
<30	13	5.8
30-39	16	7.2
40-49	41	18.4
50+	153	68.6
Age of migrant		
<25	67	30.0
25-29	53	23.8
30-39	70	31.4
40+	33	14.8
Current marital status of the respondent		
No	30	13.5
Yes	193	86.5
Marital status of migrant		
Never married	148	66.4
Ever married	75	33.6
Household size category		
<=4	76	34.1
5-7	93	41.7

8+	54	24.2
Educational level of the respondent		
None	3	1.3
Primary	211	94.6
Secondary+	9	4.0
Educational status of migrant		
No formal schooling	118	52.9
Formal schooling	105	47.1
Occupation of the respondent		
Agriculture	193	86.5
Non-Agriculture	14	6.3
Others	16	7.2
Occupation of the migrant		
Student	28	12.6
Farming	65	29.1
Non-agriculture	113	50.7
Others	17	7.6
Asset based wealth		
Low	198	88.8
Middle	13	5.8
High	12	5.4

Source: Own survey

The gender differential analysis aimed to investigate whether there were notable variations between the background characteristics of male and female migrants. The study did not identify any significant differences between male and female migrants based on the indicated factors. While none of the indicators had significant association with gender of the migrant, it is apparent that there are some variations between the two sexes. For example, there are more male migrants having access to information compared to females. Likewise, there is some evidence for higher cost of migration among female migrants. In terms of duration, females have stayed longer in the place of destination (50% vs 35.5%) (Table 2).

Table 2: Access to information, cost of migration, and migration duration by sex of migrants, n=223

	Sex of Migrant		P-value (Chi-Square Test)
	Male (%)	Female (%)	
Access to information			
Yes	150 (80.2)	28 (77.8)	0.620
No	37(19.8)	8(22.2)	
Migration duration			
< 6 months	50(26.7)	5(13.9)	0.129
2.6-12 months	71(38.0)	13(36.1)	
3> a year	66(35.3)	18(50.0)	
Cost of migration			0.762
Yes	154(82.4)	31(86.1)	
No	33(17.6)	5(13.9)	
Source of migration financing			0.312
Selling HH asset	70(37.4)	15(41.7)	
Borrowed from individuals	16(8.6)	5(13.9)	
Own saving	59(31.6)	7(19.4)	
Other	9(4.8)	4(11.1)	
No cost	33(17.6)	5(13.9)	

Source: Own survey

Table 3 presents the predictors of migration network. It is seen that five variables appear to be significant predictors of network (information and remittance): age of the migrant, marital status of migrant, household size at the place of origin, educational status of migrants and migration duration. Migrants in the age group 25-29 were 2.96 times more likely to have higher network with sending community compared to the reference category (age 30-39). Those ever-married migrants had 2.36 times higher likelihood of having higher level of networks with sending households/communities compared to those never married migrants. The likelihood of having higher network decreased by about 78% (OR= 0.221; CI: 0.082-0.595) for household size of <4 members at the place of origin. On the contrary, migrants originating from household size of 8+ had 2.47 times higher likelihood of having better networks with sending communities compared to the reference category. Migration network was 3.73 times higher (CI: 1.79- 7.736) among migrants having formal education compared to those having no formal education. The likelihood of migrants having higher networks with sending communities decreased by about 59.6% for those who stayed at the place of destination for <6 months compared to those who stayed for greater than 3 years. This variable, however, is just marginally significant (p=0.054). The association between cost of migration and networks was significant in the bivariate analysis only ($p < 0.05$).

Table 3: Ordinal Logistic regression analysis for predictors of migrant networking, Ankasha district

Variables	COR	AOR	p-value	95% CI
Age of respondent				
<30	1.10	2.901	0.216	0.536 -15.700
30-39	0.55	1.528	0.593	0.323- 7.243
40-49	0.64	1.058	0.903	0.425-2.636
50+	1	1		
Age of the migrant				
<25	1	1.623	0.323	0.621- 4.238
25-29	0.74	2.956	0.028*	1.125 -7.765
30-39	1.30	1		
40+	0.88	0.606	0.422	0.179- 2.057
Current marital status of the respondent				
No	1	1		
Yes	1.38	0.808	0.729	0.242- 2.697
Marital status of migrant				
Never married	1	1		
Ever married	2.25***	2.369	0.036*	1.057-5.313
Household size				
<=4	0.45***	0.221	0.003**	0.082-0.596
5-7	1	1		
8+	2.05**	2.477	0.044*	1.025-5.986
Educational status of migrant				
No formal schooling	1	1		
Formal schooling	3.00***	3.725	0.000***	1.794-7.736
Occupation of the respondent				
Agriculture	1	1		
Non-Agriculture	0.77	0.689	0.623	0.156-3.044
Others	1.06	0.389	0.160	0.104- 1.454
Asset based household wealth				
Low	1	1		
Middle	1.95	1.045	0.949	0.268- 4.071
High	1.01	0.166	0.026*	0.034-0.803
Access to information on destination				
Yes	1	1		
No	0.00	8.14e-10	0.986	0 .
Migration duration				
< 6 months	0.31***	0.404	0.054*	0.160- 1.017
6-12 months	0.89	0.813	0.627	0.353-1.873
>12 months	1	1		
Cost of migration				
Yes	1	1		
No	0.16***	0.546	0.235	0.201-1.484

Outcome variable: Networking (*None, Medium, High*)

4. Discussion

This study has primarily aimed at examining the key predictors of migration networking in Ankasha District, Amhara National Regional State, Ethiopia. Supported by micro-level empirical research findings around the world, we argued that a mixture of individualistic and familial characteristics explains the likelihood of having reasonable networks. The outcome variable was

measured by a combination of access to information and remittance. The analysis identified five variables having significant associations with the outcome variable, namely age of the migrant, marital status of migrant, household size at the place of origin, educational status of migrants and migration duration. The association between cost of migration and networks was significant in the bivariate analysis only.

It appears that younger migrants in the age group 25-29 are more likely to establish strong networks with the place of origin. This is not surprising because these groups usually remain single, and hence, they are more likely to keep their connection with the sending households. This finding may contravene the proposition that migration networks, opportunities, and experiences developed over time. As expected, migrants' education status made a significant contribution to the level of migration networks with the place of origin. It was noted that migration network was higher among migrants having formal education compared to those having no formal education. Most previous studies reported that education level did not have any positive correlation (Rafia, 2023).

Our finding indicates that the likelihood migration networks decreased for those who stayed at the place of destination for <6 months compared to those who stayed for longer duration. This is consistent with some survey-based studies which suggested that migrant ties and remittances tend to grow slowly until it reaches a peak approximately 15–20 years after moving out (Fokkema and Groenewold, 2003).On the other hand, this finding contravenes with the general thought about the remittance-decreasing effect of the weakening of ties with home countries over time. Even this weakening of transnational ties over time cannot be taken for granted, as such ties can often be sustained over very long periods(De Haas, 2007b).This evidence casts doubt on the proposition that temporary migrants would be better and more reliable remitters than integrated and settled migrants (De Haas, 2007a).

Migration cost was associated with the level of networks in the bivariate analysis, suggesting that those with no cost spent for their mobility had little connection with the sending communities/households. It is worth mentioning that the finding contradicts the remittance decay hypothesis which is based on the assumption that remittances are primarily sent either to pay back migration debts or for altruistic reasons (De Haas, 2007a).

Finally, it is worth mentioning the strengths and limitations of the study. Given studies on migration in Ethiopia (especially on networking and migration impacts) are scares, the findings of the study could be useful for increasing our understanding of the migration dynamics and help planning, monitoring and evaluation of ever increasing trend of outmigration. One of the demerits of the study is that the variables used in the analysis were limited in both scope and size, and there might be some important variables (such as the cultural and community level variables) that may determine network in different fashion. Moreover, as the data were collected based on cross-sectional design, drawing cause-effect relationship among the explanatory and outcome variables was not possible.

5. Conclusion and Implications

Based on the foregoing analysis, it can be concluded that the patterns and level of migration networks are determined by some key household and individual variables such age and marital status of the migrant, duration of stay at the place of destination, educational status and household size. The findings imply the need to establish monitoring of the dynamics of impacts of migration on both sending households and migrants themselves. There has been limited research on migration networking in Ethiopia in general and the study area in particular. This calls for in-depth analysis and the need to examine migration in a wider context of the development agenda based on more reliable longitudinal data.

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Author Contributions: CA, EG and DT involved in the study conception and design. CA collected and analyzed the data and interpreted the findings. EG and DT critically reviewed/edited the manuscript for intellectual content. All authors read and approved the final manuscript.

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