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The effect of social capital on migration aspiration and migration capability: Insights from northern Ethiopia

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ABSTRACT

The decision to migrate is an important economic decision to make. Push factors, such as poverty, drought, lack of jobs, etc. are expected to play a role in forcing the youth to migrate. In the study area, however, youths of similar economic, demographic, and geographic background are observed to have different migration propensities. This paper examines the role of social capital in fostering migration aspiration and migration capability. The study employs both qualitative and quantitative data collected using a cross-sectional research design. In order to account for a potential interdependence between migration aspiration and migration capability, the seemingly unrelated bivariate probit model is used to analyze the data. After controlling some socio-economic and demographic variables, the results show a positive effect of social capital on both migration aspiration and migration capability. The findings indicate that broker influence (relative to job search) and age have a lower effect on the desire for migration, while Christianity has a higher effect relative to other religious beliefs. Findings indicate that farmers and the unemployed have lower migration ability compared to students. The presence of previous immigrants in the family also has a lower effect on migration ability.

1. Introduction

International migration looks to be entering a new phase, with gaps between necessary regulations and actual policies to control migrant flows expected to grow. The early 21st century has seen an increase in immigrants' motivation to flee threats in their countries of origin, leading to very different patterns of migration and selectivity than the late 20th century, when their primary motivation was to improve their wellbeing by accessing opportunities in wealthier countries (Massey, 2020).

Migration is one of the driving forces behind the economic, political, and demographic transformation of countries (Akbari, 2021; Miani et al., 2023; Nguyen & Le, 2022; Wei, 2022). In 2023, Ethiopia's net migration rate is −0.098 per 1000 populations, reflecting a 326.09% increase from −0.023 in 2021 (IOM, 2023). In Africa, the migration dynamics stem from a mix of conflicts, income inequality, poverty, and environmental factors, such as drought (Koser & Laczko, 2010). In Ethiopia, IOM (2021) reports that over 800,000 people migrated abroad between 2017 and 2021. Of these, more than 425,000 migrants returned home between May 2017 and December 2021 mainly as a result of deportation (IOM, 2022). In Tigray, illegal youth migration is well documented in the Eastern, Southeastern, and Southern zones of the region. Migrants from Raya Alamata, the study district, mainly migrate to the Gulf countries, such as Saudi Arabia. Illegal migration in this

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district started years ago and has become a common practice among the youth (ADLSA, 2020).

An individual's decision to migrate is an important economic decision to make. Especially illegal migration involves significant risk-taking behavior. Many factors are hypothesized to influence this decision. In Tigray, push factors, such as poverty and drought play a role in forcing the youth to migrate, legally or illegally. However, youths of the same socio-economic and demographic background in the study area are observed to have different migration propensities. A number of studies (e.g., Blumenstock & Chi, 2019; Büchel & Ehrlich, 2020; Sprong & Skopek, 2023; Diehl et al., 2022) mention social networks among the factors that shape the desire and ability to migrate. A comprehensive empirical view of how social networks affect migratory decisions is offered by Blumenstock and Chi (2019). One's objectives and aspirations are also influenced by the information obtained from social relationships (Coulter & Van Ham, 2013).

Numerous researches discussed two separate channels through which social networks influence migration ability and desire. For example, Dustman n Glitz et al. (2016) claimed that networks offer migrants access to information (e.g., regarding employment and working conditions). According to Comola and Mendola (2015) and Munshi (2014), networks provide material and social help to migrants. Social capital, which has the value of reducing the risks and costs associated with migration and boosting its rewards, influences migration decisions through social relationships (Azadi et al., 2023; Lőrincz & Németh, 2022; Michaelides, 2011; Wissink & Mazzucato, 2018). Social contacts between individuals that are done with the intention of achieving positive consequences are referred to as social capital (Abbay & Rutten, 2016; Portes, 2010; Shirzad et al., 2022; Szreter, 2000, pp. 56–77). There is general agreement that the number of social connections is the easiest way to quantify social capital (Lakon & Godette, 2008). Studies on migration have employed this metric (e.g., Massey & Espinosa, 1997). Lőrincz and Németh (2022) investigated the connection between three social capital indicators derived from social network data and domestic migration. Massey (2023) notes that during the last 25 years, the new economics of migration and social capital theory have recognized forces associated with first, repeat, and return migration probability more so than the neoclassical model's cost-benefit calculations. They said that the development of social capital, the construction of human capital, and market consolidation are the three processes that mutually reinforce migration.

The objective of this research is to examine the role social capital plays in eliciting migration aspiration and migration capability among the youth in the context of a developing country. Migration, rather risky as it is, may not be desirable by itself. However, its implications for risk-taking propensity may be indicative of potential entrepreneurial quality among the youth to adopt other risky but productive undertakings. Drawing upon the common tradition in the literature, we use the number of information sources on migration and connections with previous migrants as an indicator of social capital. This paper has two major contributions. First, unlike previous studies, it disaggregates migration into *migration aspiration* and *migration capability* and examines the effect of social capital on both. It also accounts for a potential interdependence between the two decisions methodologically. Second, by focusing on illegal migration, the paper sheds light on the role social capital may play in boosting risk-taking behavior among the youth, which is desirable for capturing other productive opportunities.

2. Theoretical framework

Social networks theory, initially proposed by Boyd (1989), has evolved significantly over time, with contemporary scholars continuing to contribute to its development. Transactional social space theory, as an influential extension, highlights the critical role of social capital in shaping migration decisions, addressing the 'hows,' 'wheres,' 'whens,' and 'with whoms' of migration. Noteworthy recent contributions from Pergler (2018), Kim et al. (2019), Lee and Kim (2020), Boccagni (2022), Sucka ll Fraser et al. (2017), Carling and Schewel (2018), Tobin Momani et al. (2022) have provided valuable insights into the complex interplay between social capital and migration choices.

In more recent studies, the work of Nguyen and Le (2022) delves into the nuanced dynamics of social influence within networks, shedding light on how individuals influence and are influenced by migration aspirations within their social cir cles. Smith & Jones (2023) have extended the theory by emphasizing the strength of weak ties in shaping migration patterns. This perspective underscores the significance of less intimate connections in opening up novel opportunities and pathways for migration. These contemporary insights from Nguyen et al. and Smith and Jones contribute to the ongoing refinement of social networks theory, highlighting its dynamic nature and relevance in unraveling the intricacies of migration decision-making. De Haas (2014) positions migration as part of the larger social transformation and development. In so doing, he proposed an expanded theoretical migration model by borrowing Berlin's (1969) concept of liberty, Sen's (1999) concept of capability, and Carling's (2001) two-factor migration model (aspiration/ability) and called this expanded model an *Aspiration-Capability framework* of migration. *Negative liberty* and *positive liberty* are terms coined by Berlin (1969). The absence of hurdles, restrictions, or restraints is referred to as *negative liberty*. This is comparable to freedom, which emphasizes how politics and the state limit people's freedom and may force them to flee. *Positive liberty* is the capacity to take charge of one's life and to achieve one's core goals. The desire of the person to be his own master results in positive liberty. Structural conditions, such as the state level of human rights as well as migration laws and regulations, shape the liberties, and these structurally determined liberties may or may not constrain people's individual aspirations and capabilities to enhance migratory agency (De Haas, 2014). A minimum of both negative and positive freedoms (freedom) is necessary for individuals to exercise migratory agency, and a lack of one or both limits people's choice of where they choose to live (i.e., mobility) (Yan et al., 2023).

The structure is characterized by De Haas (2014) as "patterns (habits or routines) of relations, beliefs, and behavior," and the agency was defined as the "limited but real ability of human beings (or social groups) to make independent decisions and to enforce these on the world and thus to alter the structures that shape people's opportunities or freedoms." He also defines people's *mobility* as the "*people's capability (freedom) to choose where to live* – including the option to stay." Accordingly, people's mobility is conditioned by their aspiration and capability factors, and this finally results in leaving one's country of origin (i.e., migration) or staying home (i.e., non-migration). Conceptually, the *structure* defined in the framework can be labeled as a synonym to Carling's (2001) *emigration environment and immigration interface* in the sense that both terms stand to refer to the macro variables that influence, and of course constrain, people's aspiration and capability to migrate or to stay (Bastianon, 2019).

There are two types of migration aspiration: intrinsic and instrumental. According to De Haas (2021), intrinsic aspiration refers to people's natural yearning for adventure, discovery, and absence from home for a short or long length of time; for example, gap year migration, lifestyle migration, and the delight and pleasure obtained from discovering different communities. *Instrumental aspiration* refers to people's desire to achieve another personal goal, such as higher income, higher social status, better education, or better personal safety from persecution. As illustrated in, four types of individual mobility resulting from the interaction between the aspiration and capability variables are highlighted.

Aspiration/capability-derived individual mobility types [Source: De Haas (2014)]

Individuals with *high* aspirations and *high* capability prefer to migrate (voluntary mobility). Conversely, individuals with *low* aspiration and *low* capability do not migrate (acquiescent immobility). Finally, individuals with *high* aspiration but *low* capability also do not migrate

(involuntary immobility). The last group of people may join the actual migrant population at any time when they overcome the low capability by, for example, affording migration costs or establishing social networks with other successful migrants. The fourth type of mobility is in the state of low aspiration but high capability (voluntary immobility or involuntary mobility) (Schewel, 2020; Tsapenko, 2021).

The aspiration-capability framework in Fig. 1 is a general framework that migration studies can adapt in ways that fit their research context. Based on the preceding theories, a theoretical framework has been constructed for the present study. This self-developed new framework has mainly three pillars, namely factors, mobility, and migration decision. Its main center of focus is the factors and the migration decision. These factors are the source of migration aspirations and capabilities. Mobility is the choice that people can make with regard to leaving their country of origin or staying in their country of origin. The youth's mobility choice to stay in Raya Alamata district, called *acquiescent immobility,* happens when they have low or no aspirations and capabilities. Conversely, the mobility choice to leave (migrate from) Raya Alamata district happens when the youth have high aspirations and capabilities. The third pillar – the migration decision – is the decision that people can make with regard to migrating or staying in their country of origin (Thompson, 2017; Czaika & Bijak, 2021).

The framework in Fig. 2 shows that a combination of aspirations and capabilities causes actual migration to happen. Aspirations are preferences, desires, or wishes of leaving the original residence in Raya Alamata district to live in other destination countries, such as Saudi Arabia. Similarly, capabilities are access to resources (or enabling capitals) for the district's youth to migrate. Scholars in the field claim that in order to migrate, people require particular resources such as money, social connections, expertise, and physical ability (Carling & Collins, 2018; De Haas, 2021; Schewel, 2020; Van Heelsum, 2016). The framework further conceives that certain factors lead to the development of aspirations and capabilities among the youth. These factors include social capital and demographic and other socio-economic variables. Overall, all three pillars (factors, mobility, and migration decision) of the framework were conceived here on the belief that people are conscious decision-makers and can explain their feelings, views, desires, and experiences of migration.

3. Methodology

3.1. The study area

Raya Alamata district is located in Tigray Regional State's Southern Zone. It lies 600 km north of Addis Abeba and 180 km south of Mekelle, Tigray's main city. It shares borders with Afar Regional State in the east, Amhara Regional State in the south and west, Ofla district in the northwest, and Raya Azebo district in the northeast. Geographically, Raya Alamata district is located between 12° 15′ 0″ N and 12° 25′ 0″ N latitude, and 39° 15′ 0″ E and 39° 45′ 0″ E longitude. The total area of the district is estimated at 550 km^2. The overall population of the Raya Alamata district was 85043 according to the Ethiopian Population an d Household Census (2007), which is expected to be significantly higher after a decade or so during the research period.

This study was performed in four areas of Raya Alamata district namely *Tao, KuluGize Lemlem*, *Harle,* and *Selen Wuha* (see Fig. 3). The quarterly report of the Youth and Sports Affair (2020)of the district indicates that the district had about 17,612 youth at the time of the study. Out of this total number, 2490 were illiterate, 2470 were below grade eight, and 3192 were secondary/tertiary graduates. The education level of the remaining 9460 is not identified, yet. In addition, 8152 youth are unemployed/jobless. The report also indicates that there were about 1173 returnees from migration. The livelihood of the people of Raya Alamata district is dominantly dependent on agriculture, i.e., crop production and animal husbandry (CSA, 2007). Trade is also the source of the livelihood of many individuals in the district. A few people are civil servants. A significant portion of the community members lack any income generating activity.

Illegal migrants from Raya Alamata district outflow via three routes: *The Southern route* (Tigray-Kenya-Tanzania-Malawi-Zimbabwe-Zambia-Mozambique to the Republic of South Africa), the *Eastern route* (Tigray-Djibouti-Yemen to Saudi Arabia or Tigray-Somali-Yemen to Saudi Arabia), and the *West route* (Tigray-Sudan-Chad/Egypt-Libya-Mediterranean Sea to European countries) (IOM, 2018). Migrants from Raya Alamata, the study district, mainly use the Eastern route to migrate to the Gulf countries, such as Saudi Arabia. Illegal migration in this district started years ago and has become a common practice among the youth (ADLSA, 2020).

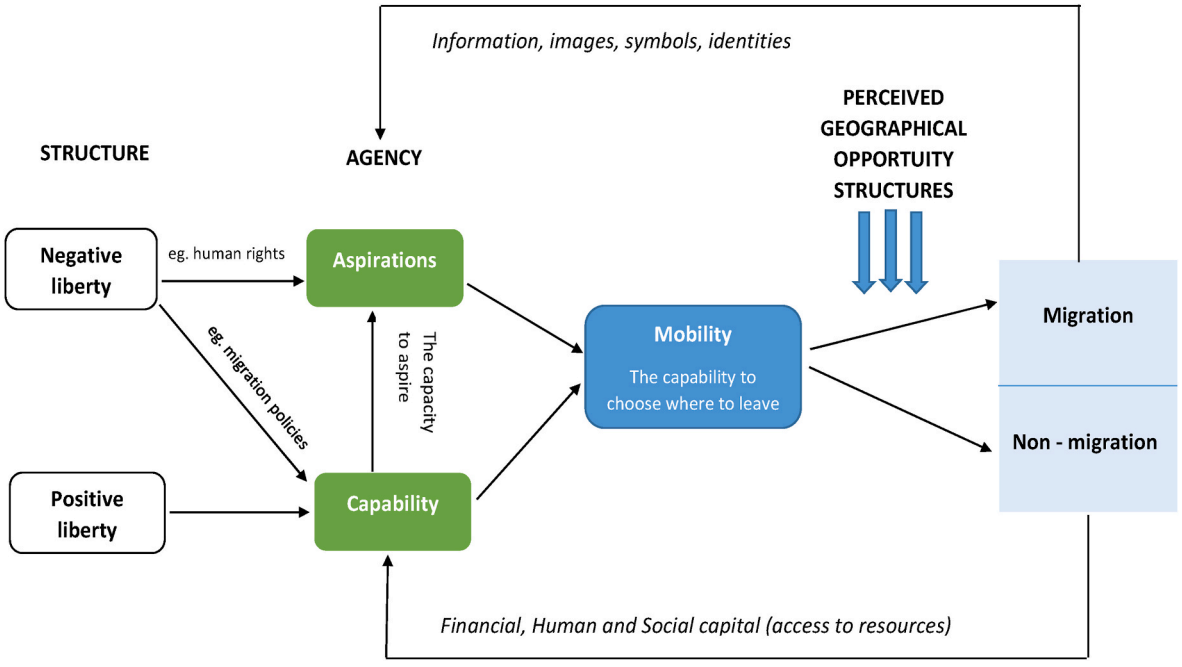

Fig. 1. Aspiration and capability framework [Source: De Haas (2014)].

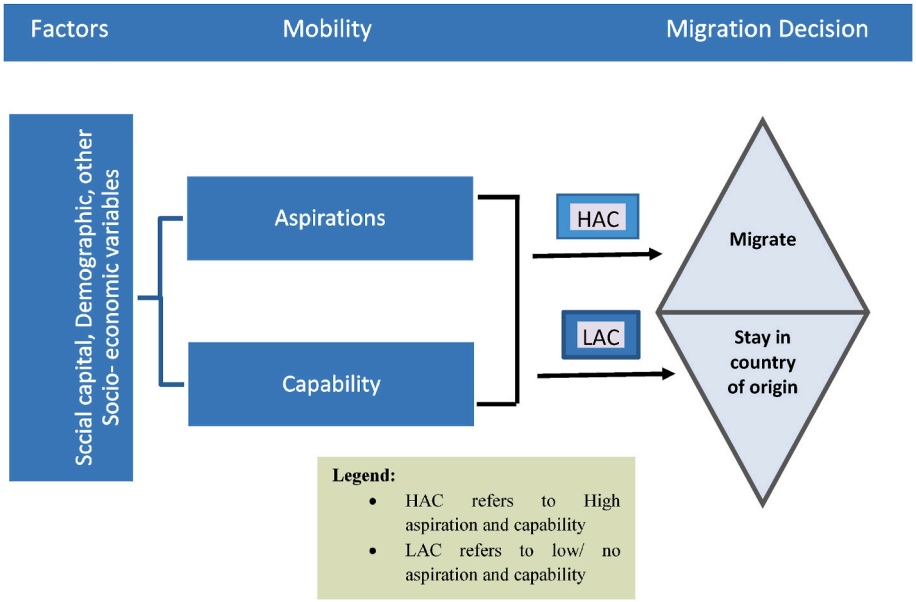

Fig. 2. Theoretical framework of the study adapted from De Haas (2014).

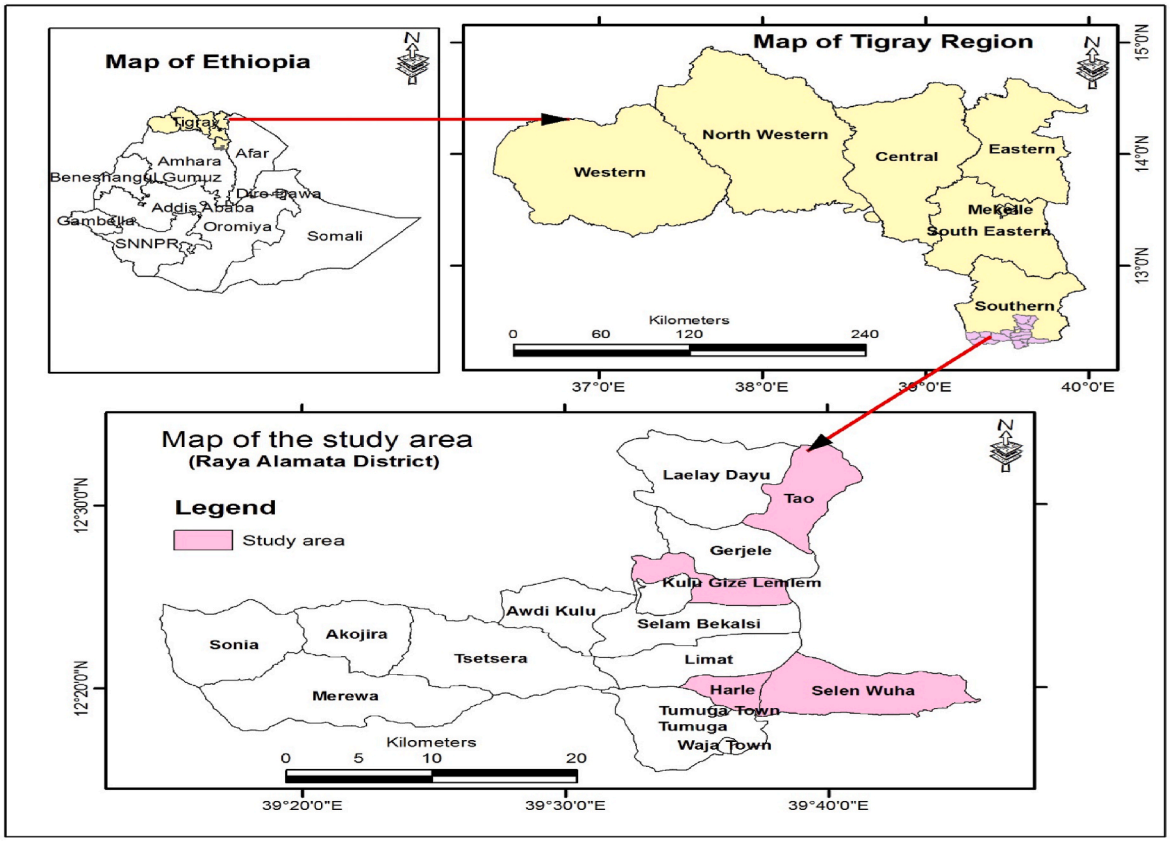

Fig. 3. Administrative map of the study area.

3.2. Research design and data collection

The influence of social capital on migration ambition and capacity in Raya Alamata area was investigated using a cross-sectional survey approach. Data were collected from the participants for only one particular period of time in the year 2020. This was accomplished by utilizing quantitative and qualitative data from both primary and secondary sources. The questionnaire was used to gather quantitative data, while focus group talks were used to obtain qualitative data, which were divided into two groups: Focus Group Discussion 1 (FGD1) and Focus Group Discussion 2 (FGD 2). The first FGD team included 12 returnees as discussants and the second FGD team considered 12 preparatory grade students who did not have migration experience as discussants. The purpose of the FGD was to gain insights into

participants' aspirations and capability to migrate.

3.3. Sampling techniques

The target population for the study was all returnee migrants and grade 11 and 12 students in the study area. A roster from the Labor and Social Affairs of Raya Alamata district was used as a sampling frame. The roster listed the names of the 1173 returnees in random order. In the list, returnees' specific living residence (Tabias or Kebeles) was also indicated. Based on Yamane's (1967) formula stated below, the sample size of the study among the returnees was determined to be 299, which is 26% of the 1173 returnees: $n = N/(1 + Ne^2)$, where n = Sample size, N = Population size, and e = Margin of error (=0.05) with 95% confidence level. Therefore, $n = 1173/(1 + 1173{*}0.05^2) = 298.283 \sim 299$ Once the sample size was determined, systematic sampling technique was used to select the 299 sample subjects from the sampling frame using the following formula: $K = N/n$, where K is the sampling interval and others are as defined above. Thus, $K = 1173/299 = 3.9 \approx 4$. Accordingly, the study randomly selected a starting point in the interval 1 to 4 from the list of returnees in the sampling frame using the lottery method. As the 3rd returnee was selected in the initial step, the selection included the 3rd, then the 7th, 11th, 15th, and so on until the sample size of 299 responses was reached.

In addition to the 299 returnees, the 12 FGD1 participants were selected from the 299 returnees, 1 out of 20 returnees in the sampling frame. Based on this systematic sampling, the returnee in the 19th, 39th, 59th, 79th, and other positions were selected until the total of 12 participants were obtained. The 19th returnee among the first 20 was selected as the first subject using the lottery method. The group discussion was held for 2 h. Likewise, the 12 FGD 2 preparatory grade (grade 11 and 12) students were selected using convenient sample technique. That is, the researcher requested the school director to join him to select the first 12 students. After the students had shown their consent, the focus group discussion was held for about 2 h (Nguyen & Le, 2022)

3.4. Estimation method

In a recent paper, Nguyen and Le (2022) employed logistic regression to model the probability of migration of an individual as a function of social capital and personal and household characteristics. This study used an econometric model to examine the role of social capital in migration. In addition, several socio-economic and demographic factors (e.g., motive, age, gender, marital status, education, occupation, religion, family size, and income) were considered to explain migration aspiration and migration capability. The possible link between the two binary outcome variables, ambition and capacity, is a key starting point for the econometric study in this work. The ability to move may be affected by both observable and unobservable elements that impact the amount of ambition to migrate, making the two variables interdependent. The apparently unrelated bivariate probit model is an appropriate strategy in this situation (Berglund, Söderholm, & Hage, 2022; Greene, 2003, p. 913). We specify the bivariate probit model as in equations (1) and (2), where Y_1^* represents *aspiration* and Y_2^* represents *capability* as unobserved latent variables with a slightly different set of covariates.

$$Y_1^* = X_1'\beta + \varepsilon_1 \; Y_1 = \begin{cases} 1 \; if \; Y_1^* > 0 \\ 0 \; if \; Y_1^* \le 0 \end{cases} \quad (1)$$

$$Y_2^* = X_2'\gamma + \varepsilon_2 \; Y_2 = \begin{cases} 1 \; if \; Y_2^* > 0 \\ 0 \; if \; Y_2^* \le 0 \end{cases} \quad (2)$$

X_1 and X_2 represent vectors of explanatory variables; these vectors share some elements but differ in others. Specifically, X_1 includes *social capital, migration motives, age, gender, marital status, education, occupation, previous migrants in the family (yes=1),* and *religion;* X_2 includes *social capital, gender, marital status, education, occupation, income diversity, family size,* and *previous migrants in the family (yes=1)*. If the error terms, ε_1 and ε_2, are correlated, then the outcomes are endogenously determined. The statistical significance of the correlation parameter ρ (rho) tests the exogeneity (independence) between *aspiration* and *capability*. A statistically significant correlation implies the presence of an association between unobserved factors influencing migration ambition and migration capacity, in which case the bivariate probit is acceptable. Otherwise, if ρ turns out to be statistically insignificant, then we can estimate two separate probit models.

3.5. Analysis of qualitative data

The study employed narrative method of analysis to analyze the qualitative data that were obtained through focus group discussions. Narrative analysis was used because it focuses on the stories or narratives (especially the returnees) that are present in the data. Narrative approach involves examining the structure and content of these narratives to identify key themes and patterns that are relevant to the objectives of the study.

4. Results

4.1. Descriptive statistics

The variables' descriptive statistics are shown in Table 2. *Aspiration* is a binary variable that indicates whether or not returnee migrants want to re-migrate. Of the 299 respondents, about 30% showed a desire to re-migrate. *Capability* is also a dummy variable measured based on the amount of financial resources the respondents had spent on migration costs. Those with less than or equal to 550 USD at their disposal were categorized as *incapable* and those with greater than 550 USD were categorized as *capable* to migrate. In the sample, only about 9% of the respondents were *capable*. *Social capital*, the explanatory variable of interest, was constructed from social network indicators as an ordinal variable with three categories. It was derived from the number of sources of information on migration conditions one had before he/she actually migrated, and the presence of previous migrants in one's family. That is, an index was developed from the number of sources of information (which ranged from 1 to 4) and the presence of previous migrants in the family (yes/no). Then, based on the index, social capital was created as in Table 1.

4.2. Econometric results

Table 3 displays the estimated coefficients of the bivariate probit models, one for each of the outcome variables. Because the estimate for ρ (rho) is statistically significant (p = 0.097), if slightly so, the null hypothesis that the model consists of two discrete probit equations that may be evaluated independently may be safely rejected. Consequently, the procedure of creating the data supports our selection of the bivariate probit model.

Table 1
Measurement of social capital.

Number of sources of information	Presence of previous migrants in family	Social capital
1	No	Weak
1	Yes	Weak
2	No	Weak
2	Yes	Medium
3	No	Medium
3	Yes	Strong
4	No	Strong
4	Yes	Strong

Table 2
Descriptive statistics.

Variable	Measurement attributes	Obs.	Mean	S.D	Min	Max
Aspiration	0 if No, 1 if Yes	299	.301	.459	0	1
Capability	0 if ≤ 550 USD, 1 if > 550 USD (i.e., Based on the context where the study is conducted 0 denotes incapable respondents and 1 capable respondents)	299	.087	.282	0	1
Social capital	(1 = weak, 2 = Medium, 3 = Strong) a variable generated from indicators of social capital specified by respondents' source of information about migration and the presence of previous migrants in their families.	299	2.535	.696	1	3
Migration motive	1 = Searching for a better job 2 = Family and friend pressure 3 = Poverty 4 = Employment 5 = Broker persuasion	299	2.679	1.592	1	5
Age	1 = 15–18 years 2 = 19–24 years 3 = 25–29 years	299	2.569	.589	1	3
Gender	0 if Female, 1 if Male	299	.559	.497	0	1
Marital status	1 = Single 2 = Married 3 = Divorced	299	1.612	.678	1	3
Education	1 = Illiterate 2 = Church/Mosque education 3 = Primary (Grade 1–8) 4 = Secondary (Grade 9–10) 5 = Preparatory (Grade 11–12) 6 = Higher education (Grade 12+)	299	3.204	1.369	1	6
Occupation	1 = Student 2 = Farmer 3 = Trader 4 = Jobless	297	3.428	1.691	1	4
Previous migrants in the family	0 if No, 1 if Yes	299	.569	.496	0	1
Religion	0 Otherwise, 1 if Christian	299	.783	.413	0	1
Income diversity	0 if No, 1 if Yes	299	.231	.422	0	1
Family size	A continuous variable measured in the number of members within the family	299	2.957	.97	1	4

Source: Field survey

Social capital was found to have a significant and positive correlation with *aspiration* and *capability*, both at the 0.05 level of significance. Among the control variables, *age*, *migration motive* (searching for a better job, family and friends' pressure, poverty, employment, and broker persuasion), and *religion* (Christianity vs. all others) turn out to be associated with *migration aspiration* at varying levels of significance. While age and broker persuasion (relative to *searching for better job=the base category*) have a negative correlation with *aspiration*, *Christianity (relative to all others)* has a positive one. On the other hand, only

Table 3
Estimation results.

	Models	
Regressors	*Aspiration*	*Capability*
Social capital (ref = weak)		
Medium	0.703**(0.351)	0.789 (0.562)
Strong	0.709**(0.316)	1.094**(0.480)
Migration motive (ref = searching for a better job)		
Family and friends' pressure	0.095 (0.224)	–
Poverty	−0.162 (0.311)	–
Employment	0.168 (0.317)	–
Broker persuasion	−0.627** (0.245)	–
Age (ref = 15–18)		
19 - 24	−0.663* (0.399)	–
25 - 29	−1.014** (0.421)	–
Gender (ref = female)		
Male	0.309 (0.204)	0.239 (0.315)
Marital status (ref = single)		
Married	−0.007 (0.229)	0.111 (0.517)
Divorced	0.231 (0.367)	−4.621 (3.009.774)
Education (ref = illiterate)		
Church/Mosque education	−0.337 (0.309)	5.632 (1179.567)
Primary (1–8)	−0.415 (0.304)	3.888 (1179.567)
Secondary (9–10)	−0.467 (0.307)	5.090 (1179.567)
Preparatory (11–12)	−0.395 (0.517)	4.218 (1179.567)
Higher education (12+)	−0.226 (0.449)	4.370 (1179.567)
Occupation (ref = student)		
Farmer	−0.423 (0.364)	−1.155*(0.688)
Trader	−0.220 (0.410)	−6.205 (2699.515)
Jobless	−0.135 (0.247)	−1.436***(0.433)
Previous migrant (ref = No)		
Yes	−0.062 (0.190)	−1.218*** (0.395)
Religion (ref = Otherwise)		
Christian	0.400*(0.233)	–
Income diversity (ref = No)		
Yes	–	0.540 (0.390)
Family size (continuous)	–	0.173 (0.235)
Constant	−0.189 (0.551)	−6.690 (1179.568)
Observations	297	297

Source: Field survey and own calculations; ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$

occupations, such as farming, trade, and joblessness (relative to studentship) and the presence of *previous migrants* in the family are found to be negatively correlated with *migration capability*. The remaining control variables, including family and friends' pressure, poverty, employment, gender, marital status, education, and income diversity show no significant association with migration aspiration and migration capability.

4.3. Qualitative results

4.3.1. Social capital and migration aspiration

This section presents how social resources in origin and destination countries influence the youth to develop migration aspirations. First, it is essential to make it clear that the 299 returnees who participated in filling out the questionnaire and discussing the FGDs already had the aspiration to migrate since they actually had migrated before the study. These returnees were asked if they had aspirations to migrate again. As stated in section 3.3, information of this nature was gathered from the 12 returnee participants in the FGD 1. Other data were also collected from the 12 preparatory grade students who did not have migration experience. These students made FGD 2. To begin with, participants of both FGDs were first asked to explain their general life aspirations. Responses show a great desire for well-being by overcoming life

challenges facing them as is evidenced in the following excerpt:

> I wish to have an easy-going life: just my own living house, adequate finance, private business activity, education, health, and excellent relations with other individuals. I believe life is improvable: better life if I work hard and think big, but conversely, miserable life if I am lazy and think short. Today, with my parents, my life is full of challenges, sometimes shocking and scary. To have an improved life, I must get myself better than my parents in all parameters of life. Fortunately, I am learning in grade twelve to be able to avert those challenges at a time in the future. I am optimistic that I will have a better life in the future (Interviewee 3, FGD 2).

The discussants were found optimists thinking that life is improvable through big thought and hard work. In the further question about how they might turn their life aspirations into a reality, the majority of them wish to move to other countries outside Ethiopia, collect money there, return home, and establish competitive businesses in Alamata town and beyond. Nine out of 12 discussants in the FGD 2 responded in support of this wish. The following two excerpts were stated by the respondents who had not any migration experiences but wish to do so in the future:

> An elder brother of my classmate went to Saudi Arabia four years ago. He returned home after working there for three years. Now, he is in Alamata town. He has opened a big boutique, selling clothes and shoes at profitable prices. I think he is successfully changing his life. He motivates us to be quickly transferred to businesspersons after the completion of our schooling. My classmate and I are convinced to have success in life like this successful returnee by gathering money abroad (Interviewee 7, FGD 2).

> *After class, I spend my time just helping my parents with plowing the land and herding animals. My cousin does the same. We often talk about ways of reaching better lives in the future. We ought to agree that fleeing abroad sometimes to make money is preferable to staying home. Of course, we do not know when this might happen. For now, I prefer completing my schooling. After that, I feel I will leave for Arab countries (Interviewee 10, FGD 2).*

Fig. 4 indicates that 136 (45.5%) of the total (299) respondents replied that they had the wish to re-migrate while 96 (32.1%) of the respondents are indifferent and the rest 67 (22.4) declined to re-migrate.

Likewise, the results of the FGD indicate that out of the twelve discussants in the FGD 1 responded of the total (299) respondents in support of this wish. The following excerpt by a returnee who witnessed the wish to re-migrate:

> I regret I would have not been caught in the border and forcefully deported. I came back miserably by wasting money on blockers and traffickers. Here, I again become dependent on my family for food and money. I could not make any life change here. I need initial finance to engage in business here. I have to go again to Saudi to earn this finance because Saudi Arabia allows me to make a quick earn of money than it is in here. To facilitate my journey, I am communicating with two of my friends in Saudi (Interviewee 2, FGD 1)

A further question was asked from the participants of both focus group discussions to reflect how they reached the aspirations to migrate. The general response to this question shows that the respondents had ties and communications with returnees in person and with migrants in telephone who spoke out motivational messages. A migration inexperienced preparatory grade respondent stated the following:

> My sister is now home from Saudi Arabia. She was sent home by force. She frequently tells me that Saudi Arabia is better for males than for females. Although there are difficulties for males, too, they still could find jobs and make money. She says that males only needed to have good conduct, good money saving habit, and hard-working experience. As a male, I think I can do the same if I go there. I hope to go abroad after my completion of grade 12 (Interviewee 1, FGD 2).

Another preparatory grade respondent who had no migration experience stated the following:

> I often talk to my best classmate about our future fate after the completion of our education. He suggests working in a self-owned business here. However, I challenge him that this is unlikely. We do not have the initial finance to start a self-owned business. Getting a loan is almost impossible. The same is working in government offices. You need to be highly competitive to work successfully here. Instead, I suggest that he start thinking about going to countries other than Ethiopia just like what others have been doing. You see, we can gather money in a short period of time and return home.

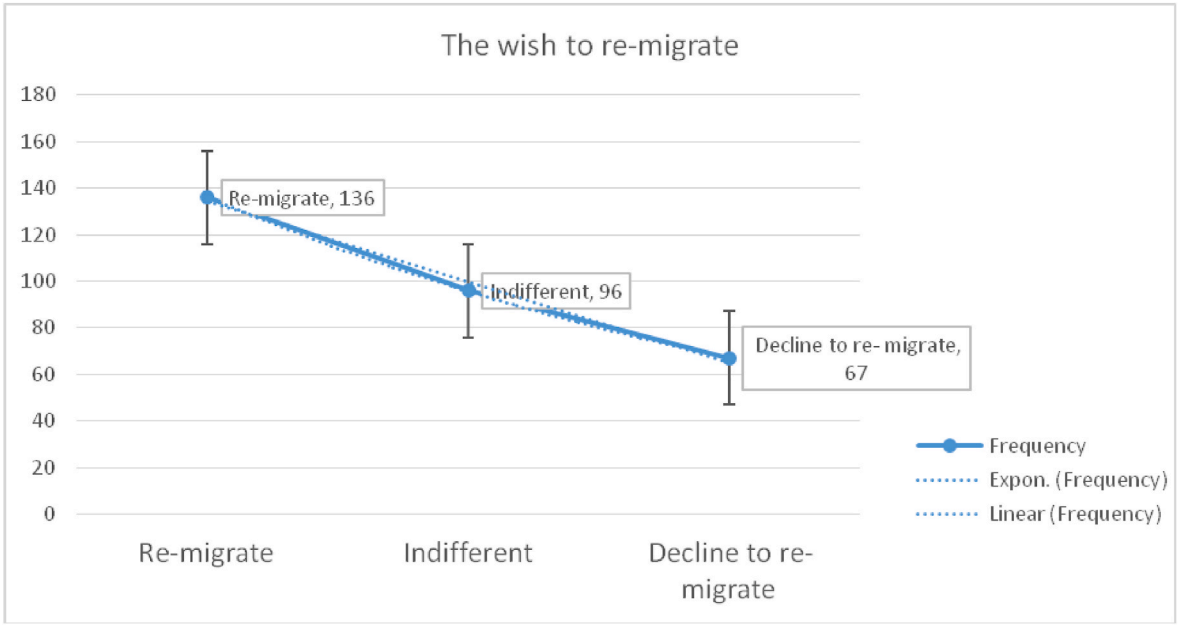

Fig. 4. Frequency distribution of the decision to re-migrate [Source: Field survey (2020)].

Then, what my friend suggests [working in a self-owned local business] might be possible (Interviewee 5, FGD 2)

In the same vein, a respondent who returned from migration stated the following:

My sister, who luckily is still in Jeddah, Saudi Arabia, calls me once a week. She felt sorry for my deportation and advised me to retry joining her at any cost by re-correcting my mistakes in the street travel mechanism. My parents also have the same view. Indeed, it is also my choice to leave soon (Interviewee 11, FGD 1).

In conclusion, it seems that respondents' migration aspirations emerged from within social interactions regardless of their migration experiences. They consider migration life as a way of gaining finance to start self-owned local businesses and improve their well-being.

4.3.2. Social capital and migration capability

In the previous section, we discussed the role social resources play in fostering the youths' aspiration to migrate. However, as it was clearly argued in the literature, aspiration alone is inadequate to actually migrate. Aspiration along with capability makes the actual migration happen. In this section, therefore, we see how social capital nurtures migration capability among the youth. Considering this, the questionnaire and FGD 1 participants, who all were returnees, were asked if social capital actually had enabled them to migrate. Questions to the participants began by asking them about the source of migration information that contributed to their ability to migrate. A summary of the results is presented in Fig. 5 below.

Fig. 5 indicates that 156 (52.2%) of the total (299) respondents got migration information from other former returnees while 75 (25.1%) of the respondents got it from close friends who were home and others were in other countries. 55 (18.4%) of the respondents got migration information from neighbors other than friends. Only 13 (4.3%) of the respondents got migration information from local brokers. The results of the FGD 1 also reveal similar findings in that the respondents' social connections with others contributed to their migration capability. The following participant left for Saudi as the result of the social bond with neighbors, parents, and friends:

It was not my dream to migrate because I did not have any information. One day in time, three neighbors, my father, and I were together harvesting the sorghum in the field. They were talking about those youths in migration and those already returned. In silence mode, I was listening to their talks and finally understood that it was fine if I could migrate in the near future. I shared the point with my close friend, and he agreed to move with me. Our fathers also encouraged us with ideas and finance (Interviewee 6, FGD 1).

Below is also a similar account of a participant who bought the idea of migration from other returnees and was able to migrate:

In our locality, there were individuals who had returned before I thought to migrate. She returned because of a health problem. She loved me and wished me luck in life. She repeatedly told me, "Saudi is good for hard-working people like you; you can benefit much if you go and work there; get rich in a short time." I bought her idea and insisted on advice about the route and travel. She told me that the Addis Ababa-Somali-Yemen-Saudi Arabia route was comparatively preferable. She also connected me with the local broker. Finally, I left for Saudi (Interviewee 8, FGD 1).

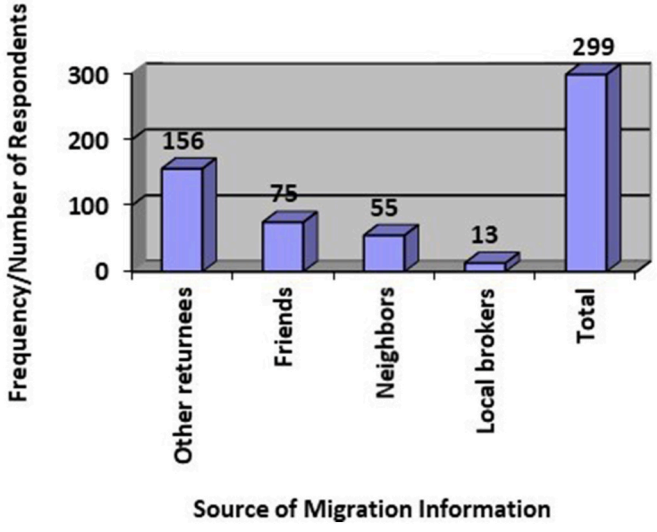

Fig. 5. Frequency distribution of respondents' source of migration information [Source: Field survey (2020)].

The results show that people with migration experience, close friends, and neighbors were the main sources of migration information in the study area. It can be inferred that social connections with individuals with migration experience, friends, and neighbors drove migration capability in the area under study. The results show that the youth migrated in the form of a social group (neighbors, relatives, friends, couples/spouses, or new individuals). In the FGD 1, discussants explained that they would have moved nowhere unless other persons had supported them or had moved with them.

5. Discussion

5.1. Quantitative results

The positive effect of social capital on both migration aspiration and migration capability is consistent with the findings of previous studies. For example, Blumenstock and Chi (2019) found that social contacts increase the likelihood of migration. Büchel and Ehrlich (2020) and Aguilera et al. (2022) also showed the significant effects of networks on migration. Their findings support the social network theory and offer an improved measure of social networks. Lőrincz and Németh (2022) found that social capital is positively associated with migration flows. Similarly, Michaelides (2011) showed a positive effect of non-monetary benefits of social capital (such as emotional support and companionship) on individual migration decisions. Finally, Nguyen and Le (2022) found that social capital and migration are interrelated and suggest a better understanding of this relationship in order to be able to formulate appropriate migration policies.

In addition, migration aspiration is found to be negatively correlated with broker persuasion to migrate compared with migrating in search of a better job. That is, youths that were persuaded by brokers to do their prior migration tend to be less likely to re-migrate. However, no significant effect of the other migration motives on aspiration to re-migrate is found. The results also show a significant negative correlation between age and aspiration to migrate; older persons are less likely to consider another round of migration. However, the results indicate no significant correlation between aspiration to migrate and marital status and education, which is also the case for migration capability. This is likely due to the narrow age range of respondents (15–29), resulting in minimal differences in civil status and education level. While the results show a negative correlation of migration capability with occupation and the presence of previous migrants in the family, no correlation of these covariates is found with aspiration to migrate. While religion turns out to positively correlate with aspiration, income diversity and family size have no effect on capability. Aguilera & Massey (2003) discovered that social capital influences migrant income in both direct and indirect ways. Social capital indirectly affects whether or not a job is in the formal sector and how to get one. Having friends and family who have moved abroad directly increases the efficacy and efficiency of looking for a job in order to increase income. Furthermore, undocumented

migrants have stronger effects of social capital on income than documented migrants, which may be explained by the former's more precarious position in the labor market. These findings support and broaden the social capital theory and highlight the significance of social networks in understanding how migrant earnings are determined.

The link between migration and social capital, which forms a self-reinforcing circle, is the study's last restriction (Massey & Espinosa, 1997). This leads to the problem of endogeneity that hampers impact studies. In this paper, however, we measure social capital using the social connections migrants had before they migrated. This approach likely rules out the potential causality running from migration to social capital. Furthermore, the goal of our research is to establish the potential relationship between social capital, migration ambition, and migration competence; we do not seek to claim causality.

6. Conclusions

The purpose of this paper is to examine the role of social capital in eliciting illegal migration among the youth in Raya Alamata District, North Ethiopia. After controlling several socio-economic and demographic variables, the paper finds a positive association of social capital with both migration aspiration and migration capability. The implication is that social connections may play a role in disseminating favorable information about migration benefits, thereby fostering migration aspiration among the youth. Moreover, the results show that social connections may convert mere aspiration into actual migration by raising the capability to cover migration costs. Since actual migration is a function of aspiration and capability, the disaggregated results (social capital vs. migration aspiration and migration capability) may constitute a step forward toward understanding the relationship between social capital and migration. This disaggregated approach is a novel contribution of this paper, which bestows a good insight to policymakers to formulate context-specific migration policies. Moreover, given that the paper focuses on illegal migration, which is risky, the findings hint at a positive contribution of social capital toward risk-taking behavior among the youth.

CRediT authorship contribution statement

Aradom Gebrekidan Abbay: Conceptualization, Data curation, Formal analysis, Methodology, Software, Writing – original draft, Writing – review & editing. **Hossein Azadi:** Conceptualization, Methodology, Validation, Visualization, Writing – original draft, Writing – review & editing. **Weldebrhan Ayalew:** Conceptualization, Formal analysis, Methodology, Software, Writing – review & editing. **Zbelo Tesfamariam:** Conceptualization, Formal analysis, Methodology, Writing – original draft, Writing – review & editing. **Solomon Hishe:** Conceptualization, Methodology, Resources, Writing – review & editing. **Tekeste Birhanu Lakew:** Conceptualization, Methodology, Resources, Software, Writing – review & editing. **Misghna Gebrehiwot:** Conceptualization, Formal analysis, Methodology, Writing – review & editing. **Tafesse W. Gezahegn:** Conceptualization, Methodology, Resources, Software, Writing – review & editing. **Kamran Nasirahmadi:** Conceptualization, Methodology, Validation, Writing – review & editing. **Astrida Miceikienė:** Conceptualization, Validation, Visualization, Writing – review & editing. **Chi Yin:** Conceptualization, Methodology, Resources, Validation, Visualization, Writing – review & editing.

Consent to participate

All authors contributed equally to the preparation of this manuscript.

Informed consent

All authors have read the manuscript and agreed to its submission.

Ethical approval

Not applicable.

Availability of data and materials

Data are available upon request.

Research involving human participants and/or animals

Not applicable.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.habitatint.2024.103236.

References

Abbay, A. G., & Rutten, R. (2016). Does spatial proximity to small towns matter for rural livelihoods? A propensity score matching analysis in Ethiopia. *Letters in Spatial and Resource Sciences, 9*, 287–307.
ADLSA. (2020). *Alamata district labor and social Affair (ADLSA)*.
Akbari, H. (2021). Exploratory social-spatial network analysis of global migration structure. *Social Networks, 64*, 181–193.
Azadi, H., Robinson, G., Barati, A. A., Goli, I., Moghaddam, S. M., Siamian, N., & Janečková, K. (2023). Smart land governance: Towards a conceptual framework. *Land, 12*(3), 600.
Bastianon, C. D. (2019). Youth migration aspirations in Georgia and Moldova. *Migration Letters, 16*(1), 105–122.
Berglund, C., Söderholm, P., & Hage, O. (2022). Recycling, norms, and convenience: A bivariate probit analysis of household data from a Swedish city. *Frontiers in Sustainable Cities, 4*, 875811.
Berlin, I. (1969). *Four essays on liberty*.
Blumenstock, J. E., & Chi, G. (2019). *Migration and the value of social networks*.
Boccagni, P. (2022). Transnational migration and homemaking. *Handbook on transnationalism*, 141–154.
Boyd, M. (1989). Family and personal networks in international migration: Recent developments and new agendas. *International Migration Review, 23*(3), 638–670.
Büchel, K., & Ehrlich, M. V. (2020). Calling from the outside: The role of networks in residential mobility. *Journal of Urban Economics, 119*, Article 103277.
Carling, J. (2001). *Aspiration and ability in international migration: Cape Verdean experiences of mobility and immobility*.
Carling, J., & Collins, F. (2018). *Aspiration, desire and drivers of migration* (Vol. 44, pp. 909–926). Taylor & Francis.
Carling, J., & Schewel, K. (2018). Revisiting aspiration and ability in international migration. *Journal of Ethnic and Migration Studies, 44*(6), 945–963.
Comola, M., & Mendola, M. (2015). Formation of migrant networks. *The Scandinavian Journal of Economics, 117*(2), 592–618.
Coulter, R., & Van Ham, M. (2013). *New directions for residential mobility research: Linking lives through time and space. New directions for residential mobility research: Linking lives through time and space*. IZA Discussion Paper, 7525.
CSA. (2007). Population and housing Census of Ethiopia. *Addis Ababa, Central Statistical Agency of Ethiopia (CSA)*.
Czaika, M., & Bijak, J. (2021). Migration decision-making and its key dimensions. *The Annals of the American Academy of Political and Social Science, 697*(1), 15–31.
De Haas, H. (2014). *Migration theory: Quo vadis?*.
De Haas, H. (2021). A theory of migration: The aspirations-capabilities framework. *Comparative Migration Studies, 9*(1), 1–35.
Diehl, J. A., Németh, J., Thomas, D. S., & Bose, M. (2022). Power through social networks: A case study of urban farmers facing land development in Delhi, India. *Habitat International, 128*, Article 102626.
Greene, W. (2003). *Econometric analysis* (5th ed.). New York. NY: Pearson.

IOM. (2018). *Migration flows in the horn of Africa and Yemen overview - 2018*.
IOM. (2021). *Labour force and migration survey*.
IOM. (2022). *Return of Ethiopian migrants from the kingdom of Saudi Arabia*. Annual Overview 2021).
IOM. (2023). Available in: https://reliefweb.int/report/ethiopia/iom-ethiopia-migration-management-overview-may-2023.
Kim, M. J., Lee, C. K., & Contractor, N. S. (2019). Seniors' usage of mobile social network sites: Applying theories of innovation diffusion and uses and gratifications. *Computers in Human Behavior, 90*, 60–73.
Koser, K., & Laczko, F. (2010). *World migration report 2010. The future of migration: Building capacities for change*. Geneva, Switzerland: International Organization for Migration. IOM.
Lakon, C. M., & Godette, D. C. (2008). Network-based approaches for measuring social capital. *Social Capital and Health*, 63–81.
Lee, Y., & Kim, K. H. (2020). De-motivating employees' negative communication behaviors on anonymous social media: The role of public relations. *Public Relations Review, 46*(4), Article 101955.
Lőrincz, L., & Németh, B. (2022). How social capital is related to migration between communities? *European Journal of Population*, 1–25.
Massey, D. S. (2020). Immigration policy mismatches and counterproductive outcomes: Unauthorized migration to the US in two eras. *Comparative Migration Studies, 8*(1), 21.
Massey, D. S. (2023). The shape of things to come: International migration in the twenty-first century. In *Migration and integration in a post-pandemic world: Socioeconomic opportunities and challenges* (pp. 29–81). Cham: Springer International Publishing.
Massey, D. S., & Espinosa, K. E. (1997). What's driving Mexico-us migration? A theoretical, empirical, and policy analysis. *American Journal of Sociology, 102*(4), 939–999.
Miani, A. M., Dehkordi, M. K., Siamian, N., Lassois, L., Tan, R., & Azadi, H. (2023). Toward sustainable rural livelihoods approach: Application of grounded theory in Ghazni province, Afghanistan. *Applied Geography, 154*, Article 102915.
Michaelides, M. (2011). The effect of local ties, wages, and housing costs on migration decisions. The *Journal of Socio-Economics. 40*(2), 132–140.
Munshi, K. (2014). Community networks and the process of development. *The Journal of Economic Perspectives, 28*(4), 49–76.
Nguyen, H. T., & Le, M. K. (2022). Social capital and migration: A case study of rural vietnam. *The Journal of Asian Finance, Economics and Business, 9*(1), 63–71.
Portes, A. (2010). Migration and social change: Some conceptual reflections. *Journal of Ethnic and Migration Studies, 36*(10), 1537–1563.
Schewel, K. (2020). Understanding immobility: Moving beyond the mobility bias in migration studies. *International Migration Review, 54*(2), 328–355.
Sen, A. (1999). *Commodities and capabilities*. OUP Catalogue.
Shirzad, H., Barati, A. A., Ehteshammajd, S., Goli, I., Siamian, N., Moghaddam, S. M., & Azadi, H. (2022). Agricultural land tenure system in Iran: An overview. *Land Use Policy, 123*, Article 106375.
Sprong, S., & Skopek, J. (2023). Childcare utilisation by migration background: Evidence from a nationally representative Irish cohort study. *Research in Social Stratification and Mobility, 84*, Article 100773.
Szreter, S. (2000). *Social capital, the economy, and education in historical perspective*. Social Capital: Critical Perspectives.
Thompson, M. (2017). Migration decision-making: A geographical imaginations approach. *Area, 49*(1), 77–84.
Tsapenko, I. (2021). *Forced mobility and immobility in a turbulent world* (Vol. 91, pp. 525–534). Herald of the Russian Academy of Sciences.
Van Heelsum, A. (2016). Why migration will continue: Aspirations and capabilities of Syrians and Ethiopians with different educational backgrounds. *Ethnic and Racial Studies, 39*(8), 1301–1309.
Wei, L. (2022). When the wall is broken: Rural-to-Urban migration, perceived inequality, and subjective social status in China. *Research in Social Stratification and Mobility, 82*, Article 100731.
Wissink, M., & Mazzucato, V. (2018). In transit: Changing social networks of sub-Saharan African migrants in Turkey and Greece. *Social Networks, 53*, 30–41.
Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). New York: Harper and Row.
Yan, N., Matarrita-Cascante, D., Sakamoto, K., Yamazaki, T., & Yokohari, M. (2023). Rural mobility and socio-spatial impacts in Japan: A case study of kutchan, hokkaido. *Habitat International, 141*, Article 102931.