



Digital Receipt

This receipt acknowledges that **Turnitin** received your paper. Below you will find the receipt information regarding your submission.

The first page of your submissions is displayed below.

Submission author: Erma Novriawati
Assignment title: Metodologi Penelitian
Submission title: Paper Journal
File name: Erma_Does_migration_network_matter_24072023_RN1_turnit...
File size: 57.61K
Page count: 11
Word count: 4,172
Character count: 23,975
Submission date: 24-Jul-2023 04:10PM (UTC+0700)
Submission ID: 1687186341

Does Migration Network Matter in Driving Internal Migration in Indonesia?

Abstract

Migration theory has developed a framework that considers factors that influence migration, including a better economic life in the hosting location as one of the pull factors of migration. Despite this, the internal migration literature currently lacks empirical evidence to show the role of migration networks as a mediating element in this mechanism. To address this gap, we use Indonesia as a case study to examine the role of the migration network in influencing the decision to migrate among internal migrants in Indonesia. Our finding shows that migration network matters in driving internal migration with a moderate size of the effects, implying informational factors other than coming from networks are also important.

Keywords: migration, migration network, internal migration, OLS, Indonesia
JEL Classification: J61, R23, O15, C13

Introduction

Migration has become an essential strategy in economic development, especially in developing countries. In 2020, approximately 3 percent of the world's population, or 281 million people, lived outside their countries (UN DESA, 2020). The decision to migrate, either internally within one country or across borders between countries, is influenced by complex factors. Lee (1966) explained that the reasons people migrate are influenced by what is known as pull and push factors or Lee's theory of migration. Push factors are conditions that make people leave their current areas, such as unavailability of job opportunities, poverty, political instability, racial discrimination, poor healthcare, and natural disasters. In contrast, pull factors attract people to certain areas, such as wide employment opportunities, better education, better transportation facilities, and security. Those factors do not influence absolutely because each individual's decision to migrate will never be entirely rational (Lee, 1966).

Furthermore, continuous migration leads to the formation of migration networks (De Haas, 2010). These migration networks can provide benefits to migrants, such as providing information, temporary accommodation in destination areas, and financial assistance to go to migration areas (Karamba et al., 2011; Dolfin and Genicot, 2010). The migration network is also widely used as an instrument variable in several studies that consider the endogeneity of migrant status, such as Nguyen and Winters (2011) and Karamba et al. (2011). Nevertheless, empirical works exploring the role of networks as mediating factors in the pull factor theory of internal migration have been limited. At the same time, many studies in the international migration context have discussed the migration network and its role in driving migration (Nowotny and Peenstorfer, 2019; McKenzie and Rapoport, 2010; McKenzie and Sasir, 2007; Winters et al., 2001). Ultimately, migration networks can increase the probability of migration by lowering migration costs (Stark and Taylor, 1991) and increasing opportunities to find work or reducing job search time (Winters et al., 2001).

Indonesia provides an interesting migration context to study the role of migration networks because internal migration in Indonesia has been ongoing for over a few centuries, forming a migration network in the destination area. Meanwhile, much research on internal migration in the Indonesian context has been carried out (Pardebe et al., 2020; Auwalin, 2020; Marta et al., 2020; Farri and Fasani, 2011). Pardebe et al. (2020) examine the influence of individual and household characteristics on internal migration in Indonesia. They proved that gender and family structure are significant in

Paper Journal

by Erma Novriawati

Submission date: 24-Jul-2023 04:10PM (UTC+0700)

Submission ID: 1687186341

File name: Erma_Does_migration_network_matter_24072023_RN1_turnitin.docx (57.61K)

Word count: 4172

Character count: 23975

Does Migration Network Matter in Driving Internal Migration in Indonesia?

Abstract

Migration theory has developed a framework that considers factors that influence migration, including a better economic life in the hosting location, as one of the pull factors of migration. Despite this, the internal migration literature currently lacks empirical evidence to show the role of migration networks as a mediating element in this mechanism. To address this gap, we use Indonesia as a case study to examine the role of the migration network in influencing the decision to migrate among internal migrants in Indonesia. Our finding shows that migration network matters in driving internal migration with a moderate size of the effects, implying informational factors other than coming from networks are also important.

Keywords: migration, migration network, internal migration, OLS, Indonesia

JEL Classification: J61, R23, O15, C13

Introduction

Migration has become an essential strategy in economic development, especially in developing countries. In 2020, approximately 3 percent of the world's population, or 281 million people, lived outside their countries (UN DESA, 2020). The decision to migrate, either internally within one country or across borders between countries, is influenced by complex factors. Lee (1966) explained that the reasons people migrate are influenced by what is known as pull and push factors or Lee's theory of migration. Push factors are conditions that make people leave their current areas, such as unavailability of job opportunities, poverty, political instability, racial discrimination, poor healthcare, and natural disasters. In contrast, pull factors attract people to certain areas, such as wide employment opportunities, better education, better transportation facilities, and security. Those factors do not influence absolutely because each individual's decision to migrate will never be entirely rational (Lee, 1966).

Furthermore, continuous migration leads to the formation of migration networks (De Haas, 2010). These migration networks can provide benefits to migrants, such as providing information, temporary accommodation in destination areas, and financial assistance to go to migration areas (Karamba et al., 2011; Dolfin and Genicot, 2010). The migration network is also widely used as an instrument variable in several studies that consider the endogeneity of migrant status, such as Nguyen and Winters (2011) and Karamba et al. (2011). Nevertheless, empirical works exploring the role of networks as mediating factors in the pull factor theory of internal migration have been limited. At the same time, many studies in the international migration context have discussed the migration network and its role in driving migration (Nowotny and Pennerstorfer, 2019; McKenzie and Rapoport, 2010; McKenzie and Sasin, 2007; Winters et al., 2001). Ultimately, migration networks can increase the probability of migration by lowering migration costs (Stark and Taylor, 1991) and increasing opportunities to find work or reducing job search time (Winters et al., 2001).

Indonesia provides an interesting migration context to study the role of migration networks because internal migration in Indonesia has been ongoing for over a few centuries, forming a migration network in the destination area. Meanwhile, much research on internal migration in the Indonesian context has been carried out (Pardede et al., 2020; Auwalin, 2020; Marta et al., 2020; Farré and Fasani, 2011). Pardede et al. (2020) examine the influence of individual and household characteristics on internal migration in Indonesia. They proved that gender and family structure are significant in

3
migration decision-making. Furthermore, Marta et al. (2020) studied migration motives and their impact on household welfare and found that migration positively impacted household welfare based on investment motivation.

Meanwhile, Farré and Fasani (2011) investigate the impact of media exposure on internal migration and show that an increase in the number of television channels reduces inter- and intraprovincial migration. However, research studying the role of migration networks at the district level in Indonesia's context is still not well explored. A study explores the role of networks, but in a narrower form, namely, ethnic identity, in influencing internal migration decisions in Indonesia (Auwalin, 2020). The social norms belonging to a particular ethnicity provide a sense of identity and belonging for its members so that they tend to influence individual decisions within that ethnic group (Auwalin, 2020).

10
Based on the aforementioned review of the empirical evidence, the primary objective of this study is to quantitatively measure the migration network at the district/city level and provide a descriptive overview of its characteristics. Moreover, the study seeks to investigate the influence of migration networks on the decision-making process behind internal migration in Indonesia. We posit that migration networks significantly influence an individual's or household's decision to migrate, leading them to prefer areas with stronger migration networks.

The contribution of this research is twofold. First, migration research in Indonesia is still scarce and pays attention to the power of migration networks in influencing migration flows. Therefore, this study seeks to fill this gap to add to the literature on migration, especially in the Indonesian context. Second, the measurement of migration networks is rarely the focus of research in Indonesia. Accordingly, this research presents how to measure migration networks and portrait migration network patterns at Indonesia's district/city level. Thus, it can be a starting point for further migration network research in Indonesia.

This study uses data from the Indonesian Population Census 2010 to construct the migration network variable and the Susenas 2019-2021 for other variables. We employ the ordinary least squares (OLS) approach supplemented with a coefficient stability testing analysis considering omitted variable problems to analyze the link between migration networks and internal migration decisions. The results of the study show that the migration network matters in migration decisions. The migration percentage tends to be higher in areas with higher migration networks. We perform heterogeneity analysis by the island to examine the variety of effects across the Indonesian archipelago. This research finding is expected to add empirical evidence that the migration network is essential in determining Indonesia's migration flows.

Research Method

The concept of migration used in this study leads to lifetime migration. A lifetime migrant is a person whose current district/city of residence differs from the district/city of birth (Badan Pusat Statistik, 2021). This definition of migrant status is similar to the research by Nowotny and Pennerstorfer (2019), which uses country of birth boundaries. Migrant data in our study were taken from Susenas 2019-2021, in which we define individuals as migrants if their hosting district differs from their born district. Moreover, the Susenas data are cross-sectional, with different samples between survey periods, so we use the repeated cross-section or pooled dataset setup.

Migration decisions are usually joint decisions within a household. Therefore, the focus of this research is the status of migrants at the household level. The dependent variable in this study is household migrant status, which is a binary variable. This dependent variable has a value of 1 if there are one or more individuals in the household with migrant status and 0 if none. Migrant households consist of mixed households (migrant and nonmigrant members) and pure migrants (all members are migrants). Meanwhile, nonmigrant households are households where all members are not migrants or born and domiciled currently in the same district/city.

However, no information is available when individuals/households migrated, so we cannot build a migration network variable precisely in the year before the migration decision is made. Therefore, we used a proxy migration network with a lag a few years ago using the Indonesian Population Census 2010. This strategy follows Rivera and Garamen (2021), which uses a historic migration rate variable with a lag of a few years. This migration network variable is the primary independent variable in this study. The household's socioeconomic condition and head are considered to be control variables in the model. In addition, adding a control variable in the model can also reduce the potential for omitted variable bias.

We employ the Ordinary Least Square (OLS) model to answer the research question. We acknowledge that the independent variable might not be strictly exogenous, leading to a potential bias point of estimate. To address this issue, we introduce a set of battery of control variables in equation 1 represented by vector X_{hjt} . Moreover, to limit the potential bias considering the omitted data, we conduct coefficient stability testing introduced by Oster (2019).

$$Y_{hjt} = \alpha + \beta(LnMigrationNetwork)_{hij,2010} + \sum_k \theta_1^k X_{hjt}^k + \delta_r + \gamma_t + \varepsilon_{hjt} \quad (1)$$

The subscripts h , t , and r in model (1) denote the household, year, and region, respectively. The index j refers to the hosting district, and index i refers to the origin district, which we assume from the born district of an individual in the Susenas data. $LnMigrationNetwork_{hij,2010}$ is the main independent variable whose relationship is observed with the migration status of the household. Furthermore, variable X_{hjt} is a set of control variables at the household level. The control variables consist of information on the head of the household, namely, age, gender, education, type of main job, marital status, and household information, including rural-urban residences, house ownership status, and land ownership status. The characteristics of the head of the household are important to consider in the model because, usually, the head of the household is the main decision maker in the household. Moreover, we included regional fixed effects (δ_r) at island levels to control the time-invariant characteristics of unobserved heterogeneity in the region, such as the perception of the destination area. We also consider the year-fixed effect γ_t to control for time-varying unobserved heterogeneity. Finally, we cluster all standard errors at the district level.

Constructing Migration Network

We measure migration networks by adopting the research of McKenzie and Rapoport (2010) and Massey et al. (1994), where they calculated the migration network with the proportion of all individuals aged at least 15 in a given community who have ever migrated. Adopting this measurement, we defined migration network as the share of the number of migrants coming from the origin district i and living in hosting region j to the number of populations in the origin district i . In this case, the migration network acts as a pull factor for workers to migrate. Access to these networks strongly impacts migration even though it has a diminishing effect (Karamba et al., 2011).

$$m_{ij,2010} = \left(\frac{\text{total of migrants living in district } j \text{ coming from origin districts } i \text{ in 2010}}{\text{total of populations in origin districts } i \text{ in 2010}} \right) \times 100 \quad (2)$$

Then, we perform the natural logarithm of the value as follows.

$$\text{Ln}(\text{migration network}) = \text{Ln}(m_{ij,2010} + 0.0001) \quad (3)$$

where m is the migration network in percent. The natural logarithmic specification describes the assumption of decreasing marginal utility from the migration network variable (Nowotny and Pennerstorfer, 2019). Thus, an increase in m has a smaller effect on the probability of selecting a migration destination as the network size increases. Adding 0.0001 to the m value aims to avoid losing observations because the value 0 is not defined in logarithms.

We perform a robustness check by measuring the migration network using the stock of previous migrants adopted from Nowotny and Pennerstorfer (2019) research. To distinguish the migration network variable from equation (3), we then mention it as Network.

$$\text{Network} = \text{Ln}(\text{mig}_{ij,2010} + 1) \quad (4)$$

where mig is the number of migrants in the origin districts. The purpose of adding number 1 to equation (4) is the same as the previous equation to anticipate the loss of observations because there are no migrants in the origin districts.

Results and Discussion

Before conducting an empirical analysis of the relationship between migration networks and household migration status, we explore the data to study household characteristics and migration networks. After data cleaning of Susenas 2019-2021, the total households that we analyzed were 988,876 households in 34 provinces. Table 1 provides the mean differences between the two groups of analysis: migrant and nonmigrant households. The null hypothesis of this mean-comparison test is that the mean between the two groups is statistically equal. The null hypothesis should be rejected if the p value is lower than 0.05, meaning that the mean between the two groups is significantly different.

The average migration network of migrant households is one and a half times larger than the average migration network of nonmigrant households, and this difference is statistically significant. This could be an early signal that the migration network tends to influence the intensity of household migration. Of all sample households, 374,549 households, or 37.88 percent, are migrant households. 84.54 percent of the sample households are headed by men, and the rest are headed by women. Migrant households tend to have household heads with higher education than nonmigrant households. This may indicate that people with higher education have more bargaining power to migrate.

In addition, migrant households work more in the nonagricultural sector, probably because it is relatively easier to mobilize than in agriculture. As much as 28.48 percent of the heads of migrant households work in the nonagricultural sector. In comparison, the heads of nonmigrant households account for almost half of all nonmigrant households working in the agricultural sector (46.00

percent). More migrant households choose to migrate to urban areas (55,51 percent) than rural areas; this implies that urban areas are more attractive as migration destinations. This preference is because urban areas generally offer better infrastructure standards for life, such as better education, healthcare, communication, and transportation. In contrast, established households in areas characterized by ownership of houses or land are less likely to migrate or choose to stay.

Table 1 The Mean Difference Between Migrant Households and Nonmigrant Households

Variables	Nonmigrant households		Migrant households		Mean differences
	Mean	Std. dev.	Mean	Std. dev.	
Migration network	18.7295	15.1977	27.2173	21.5181	-8.4878***
HH Head's characteristics:					
Age	49.3415	13.6341	47.5857	13.2946	1.7558***
Age squared	2620.47	1418.81	2441.15	1334.17	179.33***
Gender (male=1)	0.8286	0.3769	0.8731	0.3329	-0.0445***
Marital status (married=1)	0.7810	0.4136	0.8310	0.3748	-0.0500***
Years of schooling	7.4445	4.2169	9.5492	4.2500	-2.1047***
Sector (agriculture=1)	0.4600	0.4984	0.2848	0.4513	0.1752***
Household's characteristics:					
Number of members	3.7050	1.7055	3.8978	1.7261	-0.1928***
Land ownership (yes=1)	0.7804	0.4140	0.7078	0.4548	0.0726***
House ownership (yes=1)	0.8848	0.3193	0.7306	0.4437	0.1542***
Rural-urban status (urban=1)	0.3310	0.4706	0.5551	0.4970	-0.2241***
Observations	614,327		374,549		

Source: Migration network from the Indonesian Population Census and other variables from Susenas 2019-2021 (processed by author). ***, **, * indicate statistical significance at 1%, 5%, and 10%.

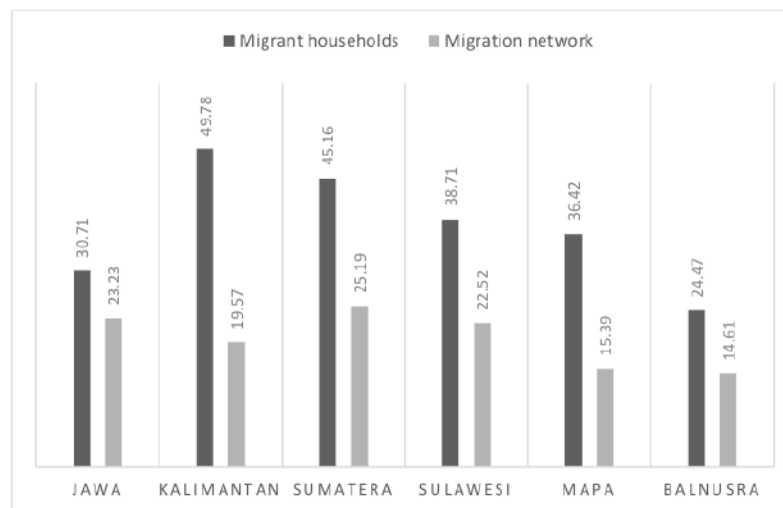


Figure 1 Percentage of Migrant Households and Migration Network by Islands

Figure 1 presents the percentage of migrant households calculated using the Susenas 2019-2021 data and the migration network formed from the Indonesian Population Census 2010 data by island group. Mapa shows a group of islands in Maluku, North Maluku, Papua, and West Papua. Meanwhile, Balnusra is a group of Bali and Nusa Tenggara islands. Figure 1 illustrates a positive correlation pattern between the size of the migration network and the percentage of migrant households on the islands of Sumatra, Sulawesi, Mapa and Balnusra compared to the number of households on each island. A higher percentage of migrant households in the four island groups seems to be associated with an increasing migration network.

Moreover, Kalimantan Island has the largest percentage of migrant households compared to the population of all households in Kalimantan. Mostly half of the household population are migrant households, either pure migrants or mixed. However, Kalimantan has a smaller migration network size than Jawa. In absolute terms, the number of migrant households in Jawa is greater than that in Kalimantan. The findings of Table 1 and Figure 1 indicate the necessity for further analysis to examine the impact of the migration network on household migration status.

Main Estimation

Table 2 presents the estimation results of the effects of the migration network on household migrant status in several specifications. Specification (1), without including any control variables, shows that the relationship between the migration network and the status of migrant households is positive and statistically significant, meaning that an increase in the migration network can increase the probability of a household migrating. Furthermore, in specifications (2), (3), and (4), we include island fixed effects, year fixed effects, and the interaction of both. In specification (2), when considering the control in the form of the characteristics of the head of the household, the migration network still has a positive effect on the probability of household migration, although with a smaller magnitude. These results indicate that we cannot ignore the characteristics of the head of the household in household migration decisions.

Meanwhile, specification (3) controls the household characteristics and indicates the same direction as the previous specifications. However, specification (3) produces an even smaller magnitude than specification (2), indicating that the socioeconomic conditions of the household have a more significant influence on the decision of a household to migrate compared to the characteristics of the head of the household. Finally, the full specification (4) takes into account both the characteristics of the head of the household and the socioeconomic conditions of the household and confirms the results of the three previous specifications. Every one-point increase in the migration network will increase the probability of migration by 0.12 percentage points. This magnitude is equivalent to an implied elasticity of 0.33%. Nevertheless, the magnitude of the migration network is not too large in influencing migration decisions. This is because migration is a decision influenced by many complex factors. Furthermore, the R-squared value shows an increase from not including any control variable (specification (1) in Table 2) to specification (4), indicating that explanatory variables have increasing power in explaining the dependent variable.

Nevertheless, these findings are consistent with the literature showing that migration networks are essential for migrating opportunities (Beine et al., 2015; McKenzie and Rapoport, 2010; McKenzie and Sasin, 2007). The result is very reasonable to understand in the case of Indonesia, considering that Indonesia is a country that has tight kinship values. Individuals or households subjectively will be more comfortable moving to areas considered more familiar because of the presence of relatives, friends, or residents from the same region in the destination area.

Table 2 Regression Estimation of Migration Network on Household Migrant Status

Variables	Household migrant status			
	(1)	(2)	(3)	(4)
Ln (Migration Network)	0.1553*** (0.0103)	0.1405*** (0.0104)	0.1328*** (0.0103)	0.1239*** (0.0102)
Ln (Migration Network) from Oster Test	-	-	-	[0.1149***]
R-squared	0.0598	0.1393	0.1499	0.1717
Age	-	-0.0020** (0.0009)	-	-0.0003 (0.0008)
Age squared	-	0.0000** (0.0000)	-	0.0000 (0.0000)
Gender (male)	-	0.0353*** (0.0037)	-	0.0264*** (0.0034)
Marital status (married)	-	0.0387*** (0.0045)	-	0.0435*** (0.0039)
Years of schooling	-	0.0173*** (0.0008)	-	0.0137*** (0.0006)
Sector (agriculture)	-	-0.0864*** (0.0055)	-	-0.0615*** (0.0048)
Number of members	-	-	0.0169*** (0.0012)	0.0169*** (0.0012)
Own land	-	-	0.0398*** (0.0059)	0.0398*** (0.0059)
Own house	-	-	-0.1935*** (0.0075)	-0.1935*** (0.0075)
Urban	-	-	0.1920*** (0.0116)	0.1920*** (0.0116)
Island FE	No	Yes	Yes	Yes
Year FE	No	Yes	Yes	Yes
Island*year FE	No	Yes	Yes	Yes
Constant	-0.0575** (0.0261)	-0.0638* (0.0384)	0.0478 (0.0304)	-0.0526 (0.0354)
Observations	988,876	988,876	988,876	988,876

Note: clustered standard error in parentheses. ***, **, * indicate statistical significance at 1%, 5%, and 10%.

Coefficient Stability Test

Furthermore, we perform an Oster test (Oster, 2019) for migration network and household migration status to examine the coefficient stability of the independent variable and R-squared movements, and the result is shown in Table 3. The implications of the Oster Test are whether the indication of improvement in bias by the control variables is stable and whether the addition of the control variables increases the R-squared (Oster, 2019). The baseline effect (column 1) in Table 3 is the resulting coefficient without including any control variables in the model. Meanwhile, the controlled effect (column 2) is a coefficient that includes all control variables. Adding the control variables to the model reduces the coefficient by 0.0314 points but moves the R-squared by 0.1119 points.

Table 3 The Coefficient Stability Test

Variable	Baseline Effect	Controlled Effect	β if $\delta=0.545$	δ for $\beta=0$
	(1)	(2)	(3)	(4)
Ln (Migration Network)	0.1553*** (0.0103)	0.1239*** (0.0102)	0.1149***	3.7506
R-squared	0.0598	0.1717	-	-

Note: clustered standard error in parentheses. ***, **, * indicate statistical significance at 1%, 5%, and 10%.

In this coefficient stability test, δ is the relative degree of selection on observed and unobserved variables. Using $\delta = 0.545$, which is the value proposed by Oster (2019), produces a lower bound of the β coefficient of 0.1149. This coefficient relatively does not differ too much from the final result obtained by including all the controls we have (0.1239). Therefore, we can conclude that the coefficients we produce are robust. Furthermore, column (4) shows the value of δ or the effect value of Ln (Migration Network) equal to zero with the maximum R-squared (30%) equal to 0.2232. The resulting δ value is 3.7506, meaning that to make the value of $\beta=0$, the unobserved variable needs to consider the Ln (Migration Network) variation, which is approximately three times more than the observed variables.

Heterogenous Effects

Table 4 Regression Estimation of Migration Network on Migrant Status by Island

Variables	Migrant status					
	Sumatera	Jawa	Kalimantan	Sulawesi	Balnusra	Mapa
Ln (Migration Network)	0.1503*** (0.0228)	0.0856*** (0.0133)	0.2111*** (0.0431)	0.0884*** (0.0306)	0.0544** (0.0234)	0.1632*** (0.0224)
R-squared	0.1094	0.2094	0.2045	0.0699	0.1937	0.3262
HH Head's characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Household's characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Island FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Island*year FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-0.0831 (0.0694)	-0.1148* (0.0601)	-0.3145*** (0.0957)	0.0116 (0.0901)	0.1387** (0.0682)	-0.0846 (0.0742)
Observations	281,386	304,654	97,032	138,387	74,629	92,788

Note: clustered standard error in parentheses. ***, **, * indicate statistical significance at 1%, 5%, and 10%.

In aggregate, it has been proven that migration networks play a significant role in influencing the probability of households migrating. However, the effects of the migration network may differ from one region to another due to regional characteristics such as the region's topography and other economic conditions. Therefore, we estimate by dividing the sample into six groups of islands: Sumatera, Jawa, Kalimantan, Sulawesi, Balnusra, and Mapa. The results of the heterogeneous effect estimation (Table 4) prove that the migration network has a positive and statistically significant path to household opportunities to migrate across the island. Kalimantan Island has an immense migration network magnitude compared to the other four islands. In contrast, the migration network effect on the islands of Balnusra has the least influence on households migrating to these areas. Overall, these results prove that our estimate is valid.

Robustness Test

Table 5 Regression Estimation of Network on Household Migrant Status

Variables	Household migrant status			
	(1)	(2)	(3)	(4)
Network	0.0751***	0.1186***	0.1139***	0.1097***
	(0.0065)	(0.0068)	(0.0069)	(0.0069)
R-squared	0.0486	0.1736	0.1821	0.2038
Age	-	-0.0024***	-	-0.0013*
		(0.0009)		(0.0008)
Age squared	-	0.0000***	-	0.0000***
		(0.0000)		(0.0000)
Gender (female)	-	0.0315***	-	0.0230***
		(0.0039)		(0.0036)
Marital status (married)	-	0.0330***	-	0.0332***
		(0.0047)		(0.0040)
Years of schooling	-	0.0182***	-	0.0146***
		(0.0008)		(0.0007)
Sector (agriculture)	-	-0.1104***	-	-0.0539***
		(0.0075)		(0.0047)
Number of members	-	-	0.0190***	0.0138***
			(0.0011)	(0.0011)
Own land	-	-	0.0398***	0.0288***
			(0.0059)	(0.0055)
Own house	-	-	-0.1868***	-0.1581***
			(0.0073)	(0.0067)
Urban	-	-	0.1854***	0.1345***
			(0.0111)	(0.0093)
Island FE	No	Yes	Yes	Yes
Year FE	No	Yes	Yes	Yes
Island*year FE	No	Yes	Yes	Yes
Constant	-0.4564***	-0.9608***	-0.8322***	-0.8945***
	(0.0663)	(0.0755)	(0.0723)	(0.0751)
Observations	988,876	988,876	988,876	988,876

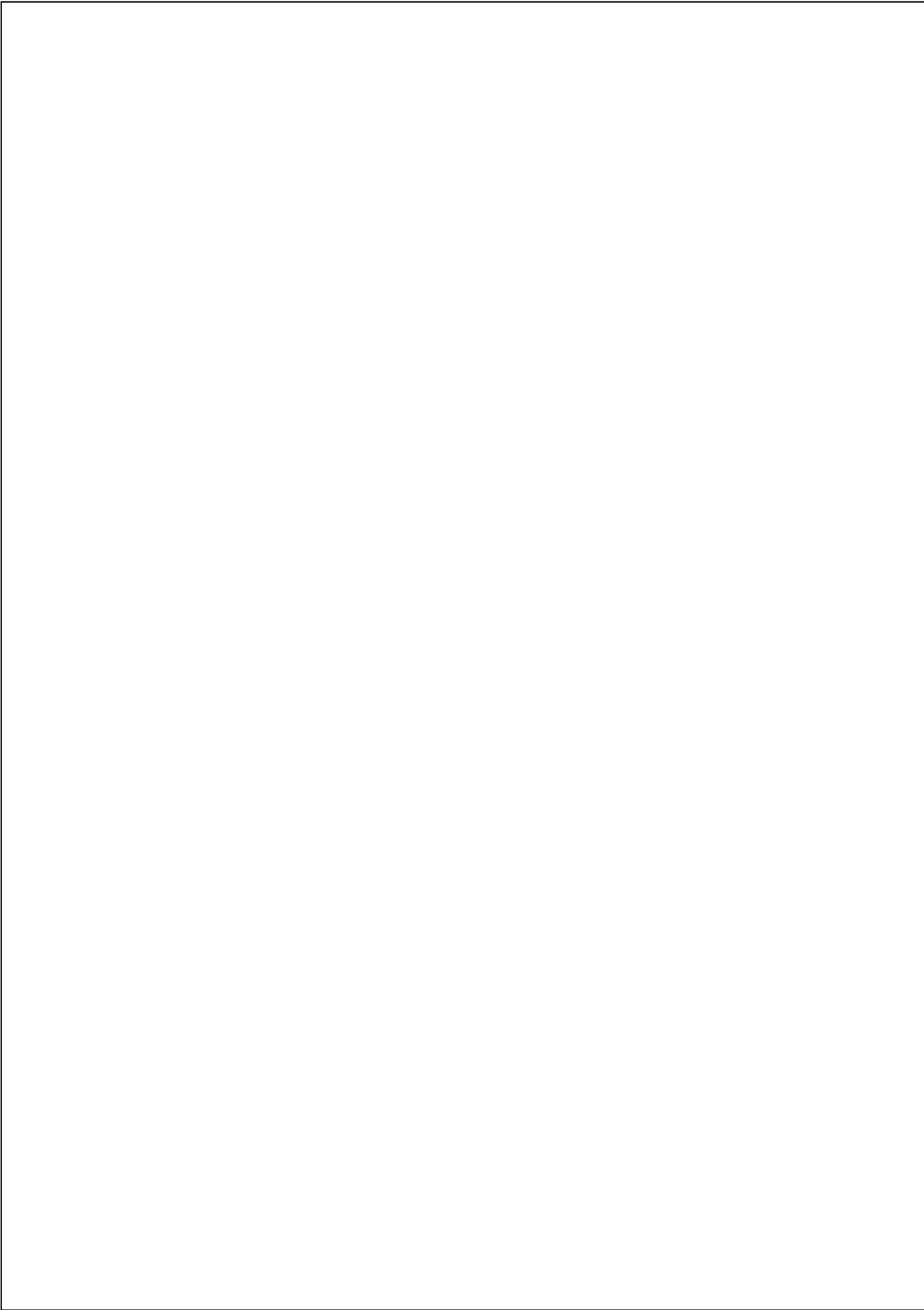
Note: clustered standard error in parentheses. ***, **, * indicate statistical significance at 1%, 5%, and 10%.

Furthermore, we conduct a robustness test (shown in Table 5) by using another measurement of the migration network variable, adopting the research of Nowotny and Pennerstorfer (2019). The OLS estimates give almost the same results as the main estimates, direction, and significance. The network positively affects the probability of household migrant status, with or without controlling the characteristics of the household head and the socioeconomic conditions of the household. These results suggest that our estimates are relatively robust.

Conclusion

This study found that the migration network matters in driving internal migration in addition to the characteristics of the head of the household and the socioeconomic conditions of the household. The percentage of migrant households tends to be higher in a region with higher migration networks. These results suggest that the government must regulate the migration flow to achieve economic and population equality between districts/cities. Furthermore, based on data exploration, the Bali and Nusa Tenggara islands have the lowest migration network compared to other islands in Indonesia. Meanwhile, Sumatra Island is the highest migration network among others.

Although there is sufficient evidence to state that our estimation results are reliable, we are aware of the limitations of this study. As mentioned earlier, we did not receive information on when households migrated. Therefore, we cannot calculate a more precise migration network before a migration decision is made. Furthermore, we cannot carry out an analysis by looking at the short-term and long-term impacts of migration. Meanwhile, the literature states that the effect of the network is not only limited by area administratively but can be based on function, such as family network or community network. Based on this study's limitations, we suggest further research by separating the analysis according to short-term and long-term migration and considering other networks that might be important in driving migration. In addition, analysis of causal inferences can be considered to address potential endogeneity that may arise.



Paper Journal

ORIGINALITY REPORT

7%

SIMILARITY INDEX

5%

INTERNET SOURCES

3%

PUBLICATIONS

1%

STUDENT PAPERS

PRIMARY SOURCES

1

eprints-phd.biblio.unitn.it

Internet Source

2%

2

www.econ.ucl.ac.uk

Internet Source

1%

3

Joan Marta, Akhmad Fauzi, Bambang Juanda, Ernan Rustiadi. "Understanding migration motives and its impact on household welfare: evidence from rural-urban migration in Indonesia", Regional Studies, Regional Science, 2020

Publication

1%

4

Submitted to University of Birmingham

Student Paper

1%

5

Edward Martey, Ralph Armah. "Welfare effect of international migration on the left-behind in Ghana: Evidence from machine learning", Migration Studies, 2020

Publication

<1%

6

www.coursehero.com

Internet Source

<1%

7	Winter, M.. "Tracking family businesses and their owners over time: panel attrition, manager departure and business demise", <i>Journal of Business Venturing</i> , 200407 Publication	<1 %
8	Raouf Hammami, Michael J. Duncan, Ammar Nebigh, Hanen Werfelli, Haithem Rebai. "The Effects of 6 Weeks Eccentric Training on Speed, Dynamic Balance, Muscle Strength, Power, and Lower Limb Asymmetry in Prepubescent Weightlifters", <i>Journal of Strength and Conditioning Research</i> , 2020 Publication	<1 %
9	ndl.ethernet.edu.et Internet Source	<1 %
10	www.ncbi.nlm.nih.gov Internet Source	<1 %
11	"The Nature of the International Firm", <i>International Marketing Review</i> , 1998 Publication	<1 %
12	Okten, C.. "Social Networks and Credit Access in Indonesia", <i>World Development</i> , 200407 Publication	<1 %

Exclude bibliography Off