Populasi

Volume 33 Issue 1 2025 Page 31-49

Mobile Phones, Social Capital, and Internal Migration in Indonesia

Mery Yanti[1], Yusnaini Yusnaini[1], and Alamsyah[2]

[1]Department of Sociology, Sriwijaya University, Palembang, [2]Department of Public Administration, Sriwijaya University, Palembang, South Sumatera, Indonesia

Corresponding Author: Mery Yanti (email: mery.yanti@fisip.unsri.ac.id)

Submission: February 4, 2025 Revised: March 20, 2025 Accepted: April 28, 2025

Abstract

This study investigates internal migration in Indonesia using logistic regression to analyze the impact of nine independent variables: social participation, social capital, risk-taking attitudes, age, marital status, gender, education level, mobile phone ownership, and internet access. The data were derived from the 5th Indonesian Family Life Survey (IFLS), which included 16,204 households and 50,418 individuals across 13 provinces. Respondents comprised of households' head, their partners, and family members aged 15 years and older. The findings indicate that education level, internet access, marital status, and social capital significantly influence internal migration. Specifically, the contributions of these variables to explaining internal migration were 58.36% (OR: 1.401) for education level, 58.17% (OR: 1.398) for internet access, 51.63 % (OR: 1.068) for social capital, and 49.7% (OR: 0.987) for marital status, cumulatively explaining 1.55% of the variance in migration outcomes, with a Chi-square (X^2) of 153.16 and $p < 0.000$. Based on these results, it is recommended that the government develop new economic growth centers, enhance social capital at the community level, and improve the information and communication technology infrastructure nationwide to optimize the benefits of internal migration for societal welfare.

Keywords: education; IFLS 5; Indonesia; internal migration; mobile phone; social capital

Introduction

In 2018, 55% of the world's population lived in urban areas, projected to reach 68% by 2050 (United Nations, 2018). In Indonesia, urbanization is also rising, with the urban population expected to reach 60% by 2025 and 66.6% by 2035 (BPS-Statistics Indonesia, 2024a). Projections for 2035 show an urban population of 89.3% in West Java and 84.9% in Banten (McDonald, 2014). Besides fertility and mortality, internal migration significantly impacts urban growth. In 2020, Indonesian provinces showed both positive and negative net migration rates (BPS-Statistics Indonesia, 2023a), and in 2022, in-migrant rates fell by 0.9%, though migrant workers increased by 0.3% during Covid-19 recovery, signaling more job opportunities across provinces (BPS-Statistics Indonesia, 2023b).

Internal migration in Indonesia has deep historical roots, with colonial policies serving as a pivotal force in shaping migration patterns. During the Dutch colonial period, migration was heavily influenced by the economic interests of the colonial regime. Infrastructure projects, such as the development of plantations and extractive industries in resource-rich regions,

necessitated a vast labor force. To meet these needs, the Dutch implemented forced migration programs, relocating nearly 700,000 Javanese contract laborers to northern Sumatra between the 1880s and 1920s (Bosma, 2013; Hugo, 2006; Oostindie, 2008). This policy was not just about labor supply; it reflected broader colonial strategies to reorganize populations in ways that facilitated resource extraction and power consolidation. The focus of these policies was often Java, the most densely populated region, as it was viewed as a source of cheap labor. The relocation of Javanese workers under exploitative conditions was accompanied by strict social controls to ensure productivity and prevent resistance. These practices entrenched patterns of inter-island migration, which persisted beyond the colonial period and into the policies of the post-independence government.

Additionally, the colonial restructuring of land and agricultural practices in Java exacerbated landlessness and poverty, which acted as a push factor compelling people to seek opportunities elsewhere. Although this migration appeared voluntary, it was heavily influenced by the economic pressures and social conditions engineered by colonial policies, leaving many with limited choices for survival. These circumstances illustrate how seemingly voluntary migration often exists on a spectrum shaped by systemic forces of coercion and necessity. This dynamic contributed to the long-term pattern of population redistribution and laid the groundwork for the institutionalized transmigration programs of the independent Indonesian state. By emphasizing the forced migration of laborers and the colonial exploitation of Indonesia's regions, the Dutch policies left a legacy which continues to shape migration patterns. This influence is evident in how the post-independence transmigration programs mirrored colonial priorities, such as opening up frontier regions for national integration, economic development, and food security (Abdoellah, 2012; Hardjono, 1978, 1986; Tirtosudarmo, 2001, 2021). Post-1998 decentralization shifted this policy, with current initiatives under Jokowi's administration focused on land reform and food estates (Neilson, 2016). However, transmigration has led to deforestation (Hayes, 2002; Whitten, 2005), ethnic tensions, and human rights issues (Barter & Côté, 2015; Tirtosudarmo, 1997, 2021).

The colonial era thus not only altered the demographic landscape but also ingrained systems of labor migration which became a significant feature of Indonesian history and policy. These foundational influences highlight the continuity between colonial practices and modern migration dynamics, offering a stark reminder of the long shadow cast by historical power structures. This study uses cross-sectional data from the 2014-2015 Indonesian Family Life Survey (IFLS 5), examining migration, social participation, and demographic factors. Analysis includes univariate, bivariate, and multivariate logistic regression to assess factors influencing internal migration in Indonesia.

Rationale

Migration is a multi-dimensional process involving voluntary or conflict-driven movement, impacting individuals, households, and communities across social, economic, and physical dimensions (Ranjan & Chattoraj, 2023; Ullah & Chattoraj, 2023). Internal migration affects mental and physical health for both migrants and their families (Arlini, et.al., 2019; Lu, 2008; Muir, et.al., 2019), enhances economic status through remittances (Mantra, 1988; Rahman & Fee, 2009), and reshapes household institutions (Mee, 2014). It also promotes community-level change by introducing new ideas, changing local political dynamics, and sometimes disrupting kinship systems (Bräuchler, 2017; Côté, 2013; Hugo, 1982). Research has identified four main factors

influencing internal migration in Indonesia: political (e.g., transmigration policies, decentralization) (Tiwari, 2017; Tjiptoherijanto, 1995), economic (e.g., job opportunities, poverty) (Miranti, 2019; Prayitno, et.al., 2013; Sugiyarto, et.al., 2019; Syafitri, 2013), social (e.g., social networks, sense of belonging) (Elmhirst, 2002; Minza & Herlusia, 2022), and environmental (e.g., disasters, climate change) (Bekaert, et.al., 2021; Jesline, et.al., 2021). However, limited research has explored the roles of social participation, social capital, risk-taking attitudes, mobile phone ownership, internet access, and monthly income simultaneously in driving internal migration in Indonesia.

Theoretical Framework

This article uses the aspirations-capabilities framework to examine how social participation, social capital, risk-taking attitudes, mobile phone ownership, internet access, and monthly income influence internal migration. The framework views migration as a dynamic interaction between *agency* (individual aspirations and capabilities) and *structure* (perceived opportunities and constraints), encompassing negative and positive liberties (de Haas, 2021). Due to data limitations (see Figure 1), only selected components of the framework were studied, with education as a positive liberty proxy, shown to have a significant effect on migration (Jones, et.al., 2016; Pardede & Venhorst, 2024). Although the aspirations-capabilities framework was applied only to certain variables due to the limitations of available data, which restricts the generalization of the research findings, the study's results still provide relevant insights into internal migration in Indonesia.

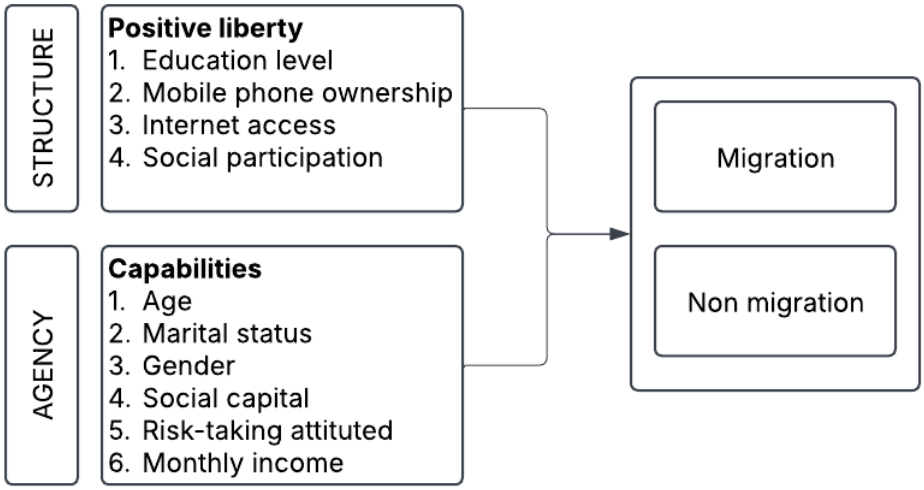

Figure 1. Research Framework

Information and Communication Technology (ICT), mobile phones, and social media are also influential. Internet access aids migration decision-making and strengthens social ties, though it can reduce international migration (Vilhelmson & Thulin, 2013; Winkler, 2016). Mobile phones enhance migration by reducing geographic barriers, facilitating information sharing, enabling remittance transfers (Porter, et.al., 2018), and creating the dialectical dynamics of opportunity, vulnerability, solidarity, and the forms of resilience (Gillespie, et.al., 2018). Social media could transforming migration networks and lowering the threshold for migration (Boas, 2020; Dekker & Engbersen, 2014). Indonesia's 1998 Reform Era promoted freedoms, enhancing

social participation, which supports migration through strengthened social cohesion (Millard, et.al., 2018). This study includes variables representing migratory agencies: social capital, risk-taking attitudes, and socio-demographics like age, marital status, and monthly income. Social capital supports migration at all stages, reducing risks (Hasanah, 2015; Prayitno, et.al., 2014). Migration involves inherent risks, but hypothesis of the study show that migrants often have risk-taking attitudes, influenced by social networks which mitigate such risks (Goldbach & Schlüter, 2018; Prayitno, et.al., 2014). Additionally, this research considers age, marital status, and gender as socio-demographic control variables, which are known to have complex effects on migration patterns (Bernard, et.al., 2014; Darlington-Pollock, et.al., 2018). These factors will be anticipated positively influence internal migration.

Data and Methods

Data Source

This research uses the cross-section data from the 5th Indonesian Family Life Survey (IFLS 5) collected by Rand Corporation in collaboration with the Survey Meter in 2014-2015. IFLS 5 is a continuation of IFLS 1 (1993), IFLS 2 (1993) activities 1997), IFLS 3 (2000) and IFLS 4 (2007). The research data came from questionnaires several questionnaires: (a) Book 3A, the migration section (MG), risk-taking section (SI), trust section (TR); (b) Book 3B, the section on community participation (PM); (c) Book T and Book K which contain information about the social and demographic characteristics of the research respondents(Strauss, et.al., 2016b). The study uses IFLS data, despite its age, because of its ability to provide multidimensional data which supports detailed and reliable analysis. This makes it an invaluable resource for understanding the complexities of migration and other socio-economic phenomena in Indonesia over an extended period.

Study Design

IFLS 5 is a part of IFLS research. IFLS is a continuing longitudinal socioeconomic and health survey. The survey collects data on individual respondents, their families, their households, the communities in which they live, and the health and education facilities they use. IFLS 5 drew its sample from IFLS 1, IFLS 2, IFLS 2+, IFLS 3 and IFLS 4. The IFLS1 sampling scheme stratified on provinces and urban/rural location, then randomly sampled within these strata. Provinces were selected to maximize representation of the population, capture the cultural and socio-economic diversity of Indonesia, and be cost-effective to survey given the size and terrain of the country. The sample included 13 of Indonesia's 27 provinces containing 83% of the population: four provinces on Sumatra (North Sumatra, West Sumatra, South Sumatra, and Lampung), all five of the Javanese provinces (DKI Jakarta, West Java, Central Java, DI Yogyakarta, and East Java), and four provinces covering the remaining major island groups (Bali, West Nusa Tenggara, South Kalimantan, and South Sulawesi). Within each of the 13 provinces, 321 enumeration areas (EAs) were randomly chosen from a nationally representative sample frame used in the 1993 Susenas (*Survai Sosial-Ekonomi Nasional* or National Socio-Economic Household Survey), a socio-economic survey of about 60,000 households. Within a selected EA, households were randomly selected based upon 1993 Susenas listings obtained from regional BPS (Badan Pusat Statistik or Central Bureau of Statistics of the Republic of Indonesia) office. A household was defined as a group of people whose members reside in the same dwelling and share food from the same cooking pot (the standard BPS definition). Twenty households were selected from each urban

EA, and 30 households were selected from each rural EA. The main respondent of IFLS is (a) the household head and his/her spouse; (b) two randomly selected children of the head and spouse age 0 to 14; (c) an individual age 50 or older and his/her spouse, randomly selected from remaining members; (d) for a randomly selected 25% of the households, an individual age 15 to 49 and his/her spouse, randomly selected from remaining members (Strauss, et.al., 2016a, 2016b).

The re-contact protocols for IFLS5 or the rules for following moved individuals were: (a) 1993 main respondents; (b) 1993 household members born before 1968; (c) individuals born since 1993 in origin 1993 households, also in split off households if they are children; (d) of 1993 IFLS household members; (e) individuals born after 1988 if they were resident in an origin household in 1993; (d) 1993 household members who were born between 1968 and 1988 if they were interviewed in 2007; (f) 20% random sample of 1993 household members who were born between 1968 and 1988 if they were not interviewed in 2007. IFLS 5 was fielded in late 2014 and early 2015 on the same set of IFLS households and split-offs: 16,204 households and 50,148 individuals were interviewed. Another 2,662 individuals who died since IFLS 4 had exit interviews with a proxy who knew them well. IFLS 5 used Census and Survey Processing System (CSPro) (the U.S. Census Bureau, 2024), a computer-assisted personal interview system (CAPI), during interview with respondent (Strauss, et.al., 2016a, 2016b).

Dependent Variables

The dependent variable of this study is internal migration. Internal migration is measured by the question: *When you are 12 years old, do you live in the same place as your birthplace?* This question has two answer options: Yes (1) and No (0). Information was recorded about the respondent's location at age 12 where a move crossed a *desa* (village) boundary and lasted for 6 months or longer (Strauss, et.al., 2016a). IFLS 5 adopts a broader and more inclusive approach to internal migration, thus capturing various types of movements, including inter-village migration, migration from villages to cities, inter-city migration, and migration from cities to villages. This approach helps to understand the complex and varied dynamics of internal migration in accordance with the different social, economic, and geographic contexts in Indonesia.

Independent Variables

This study has ten independent variables. First, level of social participation. This variable measured using the question: *Have you followed the social gathering in the last 12 months?* This question has two answer options: Yes = 1 and No = 0. Second, social capital. This variable is measured using a Likert scale which contains seven statements. Each statement has four answer options: strongly agree, agree, disagree, strongly disagree. The final score of the respondent is the total score obtained by the respondent. The total score of respondents was grouped into two categories: 1 = high (> mean score and 0 = low (< mean score). Third, risk-taking attitude. This variable is measured with the following questions: *Suppose you have been offered two choices for income. In the first choice, you are guaranteed to get IDR 4 million per month. In the second option, you are guaranteed to get Rp4 million per month or Rp2 million per month, each with the same opportunity. Which choice will you make?* This question has three answer options: (a) Rp4 million per month; (b) Rp4 million or Rp2 million per month; and (c) do not know. The variable changed to a dummy variable: 1 = dare to take risks (respondents who chose the option Rp4 - Rp2 million per month) and 0 = did not dare to take risks (respondents who chose the option Rp4 million per month and

did not know). Fourth, age. This variable is measured by the question: *How old are you?* Data recorded into three categories: 14 – 30 years old (1), 31 – 50 years old (2), > 50 years old (3). Fifth, marital status. This variable has six categories: single (1), married (2), separated (3), divorced (4), death divorced (5), and cohabitate (6). Data recorded into three categories: not married (1), married (2), divorce (3), and cohabitate (4). Sixth, sex (1 = male and 0 = female). Seventh, level of education (1 = elementary school; 2 = high school; 3 = higher education). Eight, mobile phone ownership. This variable is measured by the question: *Do you have a mobile phone?* which has two answer options, yes (1) and no (0). Nineth, internet access. This variable is measured by the question: *Do you have internet access?* which has two answer options, yes (1) and no (0). Tenth, monthly income. This variable is measured by the question: *How much monthly income do you receive when you work in that job?*

Analytical Strategies

Data analysis followed several steps. The first step involved merging individual datasets into a single dataset and cleaning the data by removing meaningless information, such as missing data or special response codes. The second step was to recode variables and conduct univariate analysis for each variable using frequency tables. The third phase involved conducting bivariate analysis using cross-tabulation to identify statistical relationships between internal migration and each independent variable. The results of the bivariate analysis were used to select independent variables for multivariate analysis; only variables with a $p < 0.25$ were included. The fourth phase was multivariate analysis, which was performed using logistic regression (Hosmer & Lemeshow, 2000). The output of logistic regression was interpreted through regression coefficients and odds ratios. STATA 15 was used to complete all phases of the analysis (StataCorp, 2023).

Results

The setting

Indonesia is the largest archipelago in the world because it has 17,508 islands with a total area of 1,904,569 km^2. Astronomically, Indonesia is located between 60°04'30" North Latitude and 110°00'36" South Latitude and between 940°58'21" to 1410°01'10" East Longitude and crossed by the equator. The Indonesian Archipelago is located between the Asian Continent and the Australian Continent and is flanked by the Pacific Ocean and the Indian Ocean. In 2024, the total population of Indonesia was 281,603.8 people and spread in 38 provinces or 514 districts/cities 7,288 sub-district, or 83,971 villages. Half of Indonesia's population lives in the Java Islands, while the island of Papua has the least population (BPS-Statistics Indonesia, 2024b).

Not only the difference in population, inequality between Java and Outer Java is a classic issue in Indonesia's economic development since independence. The government then continued the Dutch colonial government program, which moved Java's population to other islands in Indonesia through the transmigration program to reduce the concentration of the population in Java and open areas outside Java. During the New Order regime (1966 - 1998), the transmigration program was carried out centrally. In the era of the Reform Order (1998 - present), the transmigration program as a planned migration was managed jointly between the central government and provincial/district/city governments. This situation is the impact of the decentralization policy adopted by Indonesia to address the imbalance between Java and Outside Java in various development sectors.

Univariate analysis

Results in Table 1 indicate that 18.83% of the sample were migrants, 23.80% participated in social activities, and 56.67% have high social capital, while 17.45% were identified as risk-takers. Majority (67.10%) of the sample were unmarried. Females comprised of 51.12% respondents, slightly more than males at 48.88%. A large portion of respondents, 49.07%, had an elementary school education. Although many respondents owned mobile phones (76.57%), only 43.37% had access to the internet.

Table 1. Summary of Univariate Analysis

Variable	Number	Percentage
Migration status		
Migrant	1,951	19.09
Non migrant	8,267	80.91
Social participation		
Yes	10,240	32.70
No	21,077	67.30
Social capital	*n* = 31,496, mean = 17.19901, SD = 2.331889, min = 7, max = 26, variance = 5.437708, skewness = .1651925, kurtosis = 2.79171	
Risk-taking attituded		
Taking risk	5,606	17.80
No taking risk	25,888	82.20
Age	*n* = 31,490, mean = 37.35, SD = 14.94, variance = 223.2424, skewness = .614813, kurtosis = 2.819111	
Marital status		
Not married	6,220	19.75
Married	25,275	80.25
Sex		
Male	14,470	46.80
Female	16,755	53.20
Education		
Elementary school	15,465	51.06
High school	10,437	34.64
University	4,383	14.47
Mobile phone ownership		
Yes	23,167	73.56
No	8,327	26.44
Internet access		
Yes	11,384	36.15
No	20,110	63.85
Monthly income	N = 833, mean = 811447.4 SD = 1595806, min = 40, dan max = 200e+07	

Bivariate analysis

Bivariate analysis was conducted using cross-tabulation to evaluate the relationships between independent variables and internal migration. This initial step was critical to determine which variables should be carried forward to the more complex multivariate analysis using logistic regression, as outlined by Hosmer and Lemeshow (2000). Among the ten independent variables examined, only five—education level, internet access, mobile phone ownership, marital status, and social capital—demonstrated significant associations with internal migration, each with a p-value of less than 0.25. Conversely, two variables (sex and monthly income) did not meet the threshold for inclusion in the multivariate analysis due to their lack of statistically significant relationships with internal migration. This decision to exclude these variables is based on their higher p-values, indicating weaker or non-significant associations as per the criteria set for this study.

These findings are detailed in Table 2, which presents the variables which will be included in the subsequent logistic regression analysis. Table 2 not only lists these variables but also arranges them according to their Chi-square (X^2) scores. This organization helps prioritize the variables in the logistic regression model, with those showing the most substantial statistical significance being entered first. This methodological approach ensures that the most impactful predictors of internal migration are considered, enhancing the robustness and explanatory power of the model developed to understand the dynamics influencing internal migration patterns.

Table 2. Summary of Bivariate Analysis

No.	Bivariate analysis	X^2	*P*	ϕ	Decision
1.	Education level and internal migration	93.97	0.00 ($p < 0.25$)	0.09	Included in multivariate
2.	Internet access and internal migration	89.34	0.00 ($p < 0.25$)	0.09	Included in multivariate
3.	Marital status and internal migration	61.68	0.00 ($p < 0.25$)	-0.07	Included in multivariate
4.	Social capital and internal migration	49.31	0.00 ($p < 0.25$)	0.00	Included in multivariate
5.	Age and internal migration	34.60	0.00 ($p < 0.25$)	0.00	Included in multivariate
6.	Mobile phone ownership and internal migration	15.57	0.00 ($p < 0.25$)	0.03	Included in multivariate
7.	Social participation and internal migration	3.67	0.05 ($p < 0.25$)	0.01	Included in multivariate
8.	Risk-taking attitudes and internal migration	2.54	0.11 ($p < 0.25$)	-0.01	Included in multivariate
9.	Sex and internal migration	0.00	0.97 ($p > 0.25$)	-0.00	Excluded in multivariate
10.	Monthly income and internal migration	0.05	0.82 ($p > 0.25$)	0.00	Excluded in multivariate

Multivariate analysis

Logistic regression was executed in eight distinct stages, culminating in a final model which accounts for 1.55% of the variance in migration, a significant contribution as evidenced by a Chi-square (X^2) of 153.16 with $p < 0.000$, as detailed in Table 3. This outcome suggests that, while modest, the variables included in the model do provide

valuable insights into the factors influencing migration decisions. It is noteworthy that variables not included in the final model collectively account for approximately 99 percent of the explanatory power for internal migration, indicating that other factors outside of the model also play a substantial role in migration dynamics. This low figure may be attributed to the complexity and multi-dimensional nature of the internal migration phenomenon, where factors such as socio-cultural aspects, government policies, and economic conditions may have significant impacts but are challenging to capture with the currently available data.

Some independent variables, for example age (5th stage), mobile phone ownership (6th stage), social participation (7th stage), and risk-taking attitude (8th stage), were excluded from the regression model because they did not have a significant effect and did not enhance the model's ability to estimate internal migration. The adequacy and significance of the final logistic regression model were further confirmed by the Hosmer-Lemeshow goodness-of-fit test. With a test statistic ($\hat{C}$) of 172.65 and a probability greater than 0.05 (Prob > chi2 = 0.2012, $p > 0.05$), the test indicates that there is no statistically significant difference between the observed migration patterns and those predicted by the model. This result underscores the model's robustness and its capability to accurately reflect real-world data, enhancing the credibility of the findings. The predictions generated by the logistic regression model are not only statistically significant but also practically relevant, offering a quantifiable insight into the dynamics of internal migration. These results empower policymakers and researchers alike to better understand the subtle interplay of technological access and personal mobility on migration patterns, paving the way for targeted interventions and studies which could explore additional variables potentially influencing migration.

Table 3. Summary of Multivariate Analysis

Stage of logistic regression	Independent variable	Model				Variable			
		X^2	*df*	*p*	Pseudo R2	Coef.	SE	*p*	OR
1	Education level	92.56	1	0.00	0.0094	.344	.035	0.000	1.41
2	Education level	124.80	2	0.00	0.0126	.246	.039	0.000	1.27
	Internet access					.336	.059	0.000	1.39
3	Education level	140.81	3	0.00	0.0142	.257	.040	0.000	1.29
	Internet access					.214	.067	0.001	1.23
	Marital status					-.231	.057	0.000	.793
4	Education level	153.16	4	0.00	0.0155	.259	.040	0.000	1.401
	Internet access					.204	.067	0.002	1.398
	Marital status					-.137	.063	0.031	0.987
	Social capital					.042	.012	0.000	1.068
5	Education level	153.50	5	0.00	0.0155	.255	.040	0.000	1.291
	Internet access					.215	0.07	0.002	1.240
	Marital status					-.158	.072	0.030	.853
	Social capital					.042	.012	0.000	1.043
	Age					.001	.003	0.555	1.001
6	Education level	153.17	5	0.00	0.0155	.259	.040	0.00	1.296
	Internet access					.205	.069	0.00	1.228

	Marital status					-.137	.063	0.03	.871
	Social capital					.042	.012	0.00	1.043
	Mobile phone ownership					-.009	.084	0.90	.990
7	Education level	152.44	5	0.00	0.0155	.258	.040	0.00	1.29
	Internet access					.202	.067	0.00	1.22
	Marital status					-.146	.065	0.02	.863
	Social capital					.041	.012	0.00	1.042
	Social participation					.025	.062	0.68	1.025
8	Education level	153.31	5	0.00	0.0155	.257	.040	0.00	1.294
	Internet access					.203	.067	0.00	1.225
	Marital status					-.137	.063	0.03	.871
	Social capital					.042	.012	0.00	1.043
	Risk taking attituded					-.026	.068	0.69	.973

At the variable level, as shown in Table 4, the level of education contributes the most to explaining internal migration at 58.36% (OR = 1.401), followed by internet access at 58.17% (OR = 1.398), social capital at 51.63% (OR = 1.068), and marital status at 49.7% (OR = 0.987). Among these four covariates, level of education, internet access, and social capital have a positive and significant effect on internal migration at $p < 0.01$. In contrast, marital status has a negative and significant effect at $p < 0.05$.

Table 4. The Final Model of Logistic Regression

Independent variable (X)	**Dependent variable:**
	Internal migration
Level of education	0.259***
	(0.0401)
Internet access	0.204***
	(0.0671)
Marital status	-0.138**
	(0.0636)
Social capital	0.0423***
	(0.0121)
Constant	-2.724***
	(0.247)
Observations	10,099

Standard errors in parentheses
*** p <0.001, ** p <0.01, * p <0.05

Discussion

Internal migration, often conceptualized purely in economic terms, is increasingly recognized as a complex phenomenon influenced by a confluence of social, economic, and technological factors. This study seeks to expand on traditional models by examining the interplay between social capital, ICT access, and individual

predispositions towards migration. While economic drivers such as employment opportunities have long been acknowledged as primary motivators (Todaro & Smith, 2015), emerging research suggests that migration decisions are also heavily influenced by social networks and technology (Garip, 2008; Prayitno, et.al., 2014). In investigating these dynamics, this research critically analyzes the impact of nine identified variables on internal migration within Indonesia. Surprisingly, of the ten independent variables identified as causes of migration, there are only five independent variables that have a statistically significant effect with internal migration: education level, marital status, internet access, and social capital. The five independent variables that are not statistically related to migration are risk-taking attitude, age, sex, mobile phone ownership, and social participation, and monthly income.

It is expected that risk-taking and internal migration would have a significant relationship. Logically, because internal migration is a risky act, only people who have a risk-taking attitude dare to migrate. Even the main factor of migration is economical (Todaro & Smith, 2015) then the attitude of risk-taking should play an essential role in the internal migration process. Therefore, the economy is a matter of profit and loss cannot be released without a risk-taking attitude. The findings reject this argument because risk-taking does not have effect on internal migration. Because risk-taking is not statistically related to internal migration, anyone can migrate. No matter what their age is, gender, and whether a person has a risk-taking attitude or not. Why is it happening? Researchers suspect that this is due to the contribution of migrant social capital. Social capital may take the form of migrant social networks (Curran & Saguy, 2001; Garip, 2008; Hasanah, 2015; Sawai & Bose, 2024), sense of belonging, sense of attachment, or sense of place (Prayitno, et.al., 2014; Prayitno, et.al., 2013). This finding prompts a reevaluation of the role of non-economic factors which may play more critical roles than previously understood. This shift in understanding aligns with current trends emphasizing the multi-faceted nature of migration and the various undercurrents that drive it.

The argument presented by Todaro and Smith (2015) that economic factors predominantly drive the migration process is compelling and well-established. Nonetheless, it is essential to recognize that migration, while fundamentally an economic activity, is intricately linked with complex social processes. As Fukuyama (1995) insightfully demonstrates, economic interactions, such as profit-oriented business transactions, cannot occur without the foundational trust between sellers and buyers. This underpinning of social capital transforms potentially high-risk migration activities into endeavors with minimal or even negligible risk, enabling a broader range of individuals to participate, including those without a natural propensity for risk-taking. Therefore, while economic motivations are undeniably critical in influencing migration decisions, the interplay with social structures and networks that can either facilitate or impede these migrations cannot be overlooked. These social elements not only support but also shape the economic dynamics of migration, suggesting a more nuanced interaction between economic incentives and the social capital that pervades the migratory landscape.

In the Qur'an, the critical role of social capital in the migration process is shown in the stories of Prophet Moses (Musa), Prophet Jacob (Yakub), and Prophet Muhammad. Prophet Moses migrated to Madyan country because he killed one of the Egyptians. He became comfortable staying in Madyan because of security guarantees in the broadest sense of one of the families (Surah Al-Qasas [28]: 25). The Prophet Muhammad migrated to Medina because of the high trust and social support of the people of Madinah for the teachings of Islam. The Prophet Jacob (Yakub) and his family

dared to migrate and settle in Egypt because they had interpersonal trust networks with Prophet Joseph (Yusuf), which was one of the symbols of political authority in Egypt (Surah Yusuf [12]: 93, 99). It demonstrates that the concept of social capital as a factor in migration has deep historical and cultural roots.

In addition to the risk-risk attitude, the lack of a relationship between social participation in the origin area and migration is also beyond the expectation of researchers. Initially, researchers suspected that migration was caused by migrants feeling safe to migrate because participation and social cohesion in their place of origin were kind enough so that they did not have to worry about leaving their family members within a specified period. However, this conjecture is not proven statistically. Bivariate analysis between social participation and migration showed no significant relationship between these variables. This fact tends to strengthen the argument about economic factors as the dominant cause of internal migration of the population (Hugo, 2000; Malamassam, 2016; Muthmainnah & Budyanra, 2017; Prayitno, et.al., 2013; Syafitri, 2013; Todaro & Smith, 2015; Wajdi, et.al., 2018).

These findings corroborate the arguments of some literature about the contribution of social capital to internal migration (Elmhirst, 2002; Hasanah, 2015; Minza & Herlusia, 2022). However, there are differences between this research and previous research in understanding the concept of social capital in the context of migration studies. As mentioned above, some researchers interpret social capital as a social network of migrants, a sense of community, a sense of place, a sense of belonging, a sense of attachment, and neighboring. In contrast, this study interprets social capital as trust among residents in the respondent's origin area. Research findings show that respondents who consider their area of origin to have a high level of trust have a 51.63% chance of migrating. Because the relationship between social capital and migration is positive, the higher the social capital, the greater the chance that community members will migrate. Logically, a person will not leave his family for a long time if he feels the family left behind is in an “insecure” situation. It means that trust at the community level provides a sense of security for migrants to migrate. They do not need to worry that their family will starve, be robbed, or face other harmful risks because they believe and are confident that the environment of the original area in which they live will help their families while they go to other areas. This kind of social support can also arise because of the strength of extended family relations in the origin area.

Meanwhile, a positive and robust relationship between education level and migration strengthens and is consistent with the results of previous research (Auwalin, 2019; Jones, et. al., 2016; Malamassam, 2016; Pardede, et.al., 2020; Pardede & Venhorst, 2024; Speare & Harris, 1986; Syafitri, 2013). However, this study rejects arguments about the significance of sex and age as predictors of internal migration. It might be due to better public transportation and telecommunications facilities and infrastructure, as well as migrant social networks. This analysis is strengthened by the positive effect between mobile phone ownership and migration produced by this study. This finding supports the previous research which confirms the ability of mobile phones to provide migrant connectivity to the outside world with a variety of functions, for example, looking for jobs (Muto, 2012), internal coordination between migrants (Schaub, 2011), and a tool for deciding routes and modes of travel (Van Liempt & Zijlstra, 2017), as well as various other experience related to the migration (Chang & Benson, 2022; Huangfu & Nobles, 2022; Lynn, 2023; Madianou & Miller, 2011; Powell, 2015; Twumasi Baffour, et.al., 2020; Wantanasombut, 2022).

The ownership of mobile phones appears to have an insignificant effect on

internal migration, whereas internet access shows a positive and significant impact. This aligns with earlier research which highlights the internet's positive influence on internal migration (Vilhelmson & Thulin, 2013). However, contrasting evidence suggests that the internet may hinder migration by lowering the costs associated with it. From a methodological standpoint, mobile phone ownership and internet access often overlap as they both represent access to ICT (Cooke & Shuttleworth, 2017). With the growing integration of ICT, where internet access is increasingly available through mobile phones, the distinction between these two aspects has become less meaningful. In today's digitally interconnected world, access to mobile phones and the internet does more than simply support migration, it redefines its essence. This study challenges the conventional view of technological access as a mere facilitator of migration by arguing that it transforms the migrant's capacity to plan, adapt, and integrate into new environments.

Policy Implication

From a practical point of view, this finding has three policy implications. First, because the level of education is positively related to migration, the government needs to control the level of migration in the original area so that they do not lose human resources. One strategy for internal migration not to be concentrated in particular regions is creating new centers of economic growth. The effort to move the capital of the Republic of Indonesia to Kalimantan Island is one of the strategies which can impact the rate of migration to the capital of Jakarta. Second, for Indonesia, internal migration is, to some degree, indispensable to the process of socio-cultural acculturation between ethnicities which will strengthen social cohesion and national integration. That is, migration must be facilitated naturally. Because the findings of this study indicate that regions with high social capital have a greater chance of sending their citizens outside the region to migrate, government institutions need to pay special attention to social capital at the community level. The government needs to intervene in social capital. Because social capital is a public good that is needed by many people, but not many are willing to invest. Third, the findings show that respondents who have internet access have a 58.17% chance of migrating. It is implied that the government needs to increase internet access among the population. This access can only be increased if the mobile telephone network is evenly distributed throughout Indonesia. The government must improve the quality of the network and the quantity of mobile telephone infrastructure development throughout the country.

Conclusion

This article concluded that the level of education, social capital, internet access, and marital status have significant effect on internal migration. These four variables can explain the internal migration together as much as 1.37 percent significantly, X^2 (4) = 153.16, $p < 0.000$. However, this research has several serious weaknesses. First, it ignores several variables that represent economic factors, such as respondent occupation, women's labor force participation, economic growth at the provincial/district/city level, transportation costs (e.g. airplane tickets), and so on. In the future, these variables need to be included in the logistic regression model. Second, social capital is a very complex concept. It is attached to religion, culture, ideology, and other social institutions. This research only measures one dimension of social capital: trust. Beyond this dimension, there are still many elements of social capital needed to be investigated with migration, for example, social norms which encourage someone to migrate, personal networks of migrants, and

reciprocal patterns between migrants. The qualitative research needs to be designed to explore the complexity of social capital that encloses of internal migration in Indonesia. Third, IFLS 5 data focuses on ownership and internet access but ignores the respondent's behavior when using his mobile phone or when connected to the internet. The types of hardware and mobile telephone networks are also varied. The future research should investigate the relationship between various types of hardware and mobile telephone networks with migration behavior among the Indonesian people and explore these intersections in more diverse contexts, particularly in regions experiencing rapid technological change. Although the aspirations-capabilities framework has a powerful to explaining international migration, it prerequisites more complex data to apply it more comprehensively. In the future, it is suggested the next researchers to adopt mix-method when using this framework so that all part of this framework could be tested.

References

Abdoellah, O. S. 2012. 10: Transmigration Policies in Indonesia: Government Aims and Popular Response. *Center for Migration Studies special issues*, *5*(2), 180-196. https://doi.org/10.1111/j.2050-411X.1987.tb00501.x.

Arlini, S. M., Yeoh, B. S. A., Khoo Choon, Y., & Graham, E. 2019. Parental migration and the educational enrolment of left-behind children: evidence from rural Ponorogo, Indonesia. *Asian Population Studies*, *15*(2), 190-208. https://doi.org/10.1080/17441730.2019.1609294.

Auwalin, I. 2019. Ethnic identity and internal migration decision in Indonesia. *Journal of Ethnic and Migration Studies*, *46*(13), 2841-2861. https://doi.org/10.1080/1369183x.2018.1561252.

Barter, S. J., & Côté, I. 2015. Strife of the soil? Unsettling transmigrant conflicts in Indonesia. *Journal of Southeast Asian Studies*, *46*(1), 60-85. https://doi.org/10.1017/s0022463414000617.

Bekaert, E., Ruyssen, I., & Salomone, S. 2021. Domestic and international migration intentions in response to environmental stress: A global cross-country analysis. *Journal of Demographic Economics*, *87*(3), 383-436. https://doi.org/10.1017/dem.2020.28.

Bernard, A., Bell, M., & Charles-Edwards, E. 2014. Life-Course Transitions and the Age Profile of Internal Migration. *Population and Development Review*, *40*(2), 213-239. https://doi.org/10.1111/j.1728-4457.2014.00671.x.

Boas, I. 2020. Social networking in a digital and mobile world: the case of environmentally-related migration in Bangladesh. *Journal of Ethnic and Migration Studies*, *46*(7), 1330-1347. https://doi.org/10.1080/1369183x.2019.1605891.

Bosma, U. 2013. *The Sugar Plantation in India and Indonesia: Industrial Production, 1770-2010*. Cambridge University Press.

BPS-Statistics Indonesia. 2023a. *Migration Statistics of Indonesia: The Result of Long Form Population Census 2020*. BPS-Statistics Indonesia.

BPS-Statistics Indonesia. 2023b. *Population and Labor Mobility Statistics 2023*. BPS-Statistics Indonesia.

BPS-Statistics Indonesia. 2024a. *Percentage of Urban Population by Province, 2010—2035*. BPS-Statistics Indonesia. Retrieved 30 September 2024 from https://www.bps.go.id/statictable/2014/02/18/1276/persentase-penduduk-

daerah-perkotaan-menurut-provinsi-2010-2035.html.

BPS-Statistics Indonesia. 2024b. *Statistical Yearbook of Indonesia 2024*. BPS-Statistics Indonesia.

Bräuchler, B. 2017. Changing patterns of mobility, citizenship and conflict in Indonesia. *Social Identities*, *23*(4), 446-461. https://doi.org/10.1080/13504630.2017.1281468.

Chang, W.-L., & Benson, V. 2022. Migration and financial transactions: factors influencing mobile remittance service usage in the pandemic. *Information Technology & People*, *36*(5), 2112-2136. https://doi.org/10.1108/itp-12-2020-0882.

Cooke, T. J., & Shuttleworth, I. 2017. Migration and the Internet. *Migration Letters*, *14*(3), 331-342. https://doi.org/10.33182/ml.v14i3.347.

Côté, I. 2013. Internal migration and the politics of place: a comparative analysis of China and Indonesia. *Asian Ethnicity*, *15*(1), 111-129. https://doi.org/10.1080/14631369.2013.830365.

Curran, S. R., & Saguy, A. C. 2001. Migration and Cultural Change: A Role for Gender and Social Networks? *Journal of International Women's Studies*, *2*(3), 54-77.

Darlington-Pollock, F., Lomax, N., & Norman, P. 2018. Ethnic internal migration: The importance of age and migrant status. *The Geographical Journal*, *185*(1), 68-81. https://doi.org/10.1111/geoj.12286.

de Haas, H. 2021. A theory of migration: the aspirations-capabilities framework. *Comparative Migration Studies*, *9*(1), 8. https://doi.org/10.1186/s40878-020-00210-4.

Dekker, R., & Engbersen, G. 2014. How social media transform migrant networks and facilitate migration. *Global Networks*, *14*(4), 401-418. https://doi.org/10.1111/glob.12040.

Elmhirst, R. 2002. Daughters and Displacement: Migration Dynamics in an Indonesian Transmigration Area. *Journal of Development Studies*, *38*(5), 143-166. https://doi.org/10.1080/00220380412331322541.

Fukuyama, F. 1995. *Trust: The Social Virtues and the Creation of Prosperity*. Free Press Paperbacks.

Garip, F. 2008. Social capital and migration: how do similar resources lead to divergent outcomes? *Demography*, *45*(3), 591-617. https://doi.org/10.1353/dem.0.0016.

Gillespie, M., Osseiran, S., & Cheesman, M. 2018. Syrian Refugees and the Digital Passage to Europe: Smartphone Infrastructures and Affordances. *Social Media + Society*, *4*(1). https://doi.org/10.1177/2056305118764440.

Goldbach, C., & Schlüter, A. 2018. Risk aversion, time preferences, and out-migration. Experimental evidence from Ghana and Indonesia. *Journal of Economic Behavior & Organization*, *150*, 132-148. https://doi.org/10.1016/j.jebo.2018.04.013.

Hardjono, J. 1978. Transmigration: a new concept? *Bulletin of Indonesian Economic Studies*, *14*(1), 107-112. https://doi.org/10.1080/00074917812331333281.

Hardjono, J. 1986. Transmigration: looking to the future. *Bulletin of Indonesian Economic Studies*, *22*(2), 28-53. https://doi.org/10.1080/00074918612331334814.

Hasanah, T. 2015. Potential Social Capital of Indonesian Immigrant in Malaysia: A Preliminary Research. *Procedia Social and Behavioral Sciences*, *211*, 383-389. https://doi.org/10.1016/j.sbspro.2015.11.050.

Hayes, A. C. 2002. Slashing and burning: developmental transformations of population-environment relationships in Indonesia. *Asia Pacific Viewpoint*, *38*(3), 251-265. https://doi.org/10.1111/1467-8373.00046.

Hosmer, D. W., & Lemeshow, S. 2000. *Applied Logistic Regression*. John Wiley & Sons, Inc.

Huangfu, Y., & Nobles, J. 2022. Intergenerational support during the rise of mobile telecommunication in Indonesia. *Demographic Research*, *46*, 1065-1108. https://doi.org/10.4054/DemRes.2022.46.36.

Hugo, G. 2000. The Impact of the Crisis on Internal Population Movement in Indonesia. *Bulletin of Indonesian Economic Studies*, *36*(2), 115-138. https://doi.org/10.1080/00074910012331338913.

Hugo, G. 2006. Forced Migration in Indonesia: Historical Perspectives. *Asian and Pacific Migration Journal*, *15*(1), 53-92. https://doi.org/10.1177/011719680601500104.

Hugo, G. J. 1982. Circular Migration in Indonesia. *Population and Development Review*, *8*(1). https://doi.org/10.2307/1972690.

Jesline, J., Romate, J., Rajkumar, E., & George, A. J. 2021. The plight of migrants during COVID-19 and the impact of circular migration in India: a systematic review. *Humanities and Social Sciences Communications*, *8*(1). https://doi.org/10.1057/s41599-021-00915-6.

Jones, G. W., Rangkuti, H., Utomo, A., & McDonald, P. 2016. Migration, Ethnicity, and the Educational Gradient in the Jakarta Mega-Urban Region: A Spatial Analysis. *Bulletin of Indonesian Economic Studies*, *52*(1), 55-76. https://doi.org/10.1080/00074918.2015.1129050.

Lu, Y. 2008. Test of the 'healthy migrant hypothesis': a longitudinal analysis of health selectivity of internal migration in Indonesia. *Social Science & Medicine*, *67*(8), 1331-1339. https://doi.org/10.1016/j.socscimed.2008.06.017.

Lynn, N. 2023. Migrant Autonomies in Singapore's Migrant Domestic Worker (MDW) Industry. *Migration, Mobility & Displacement*, *6*(1), 79-101. https://journals.uvic.ca/index.php/mmd/article/view/21604.

Madianou, M., & Miller, D. 2011. Mobile phone parenting: Reconfiguring relationships between Filipina migrant mothers and their left-behind children. *New Media & Society*, *13*(3), 457-470. https://doi.org/10.1177/1461444810393903.

Malamassam, M. A. 2016. Youth Migration in Indonesia: Decision to Move and to Choose of Destination Areas. *Indonesian Journal of Geography*, *48*(1). https://doi.org/10.22146/ijg.12469.

Mantra, I. B. 1988. Population mobility and the links between migrants and the family back home in Ngawis Village, Gunung Kidul Regency, Yogyakarta Special Region. *Indonesian Journal of Geography*, *18*(55), 47-62. https://doi.org/https://doi.org/10.22146/ijg.2180.

McDonald, P. 2014. A Population Projection for Indonesia, 2010–2035. *Bulletin of Indonesian Economic Studies*, *50*(1), 123-129. https://doi.org/10.1080/00074918.2014.896240.

Mee, W. 2014. Beyond the Personal in Sambas, Indonesia. *Critical Asian Studies*, *46*(3), 405-432. https://doi.org/10.1080/14672715.2014.935134.

Millard, A., Baldassar, L., & Wilding, R. 2018. The significance of digital citizenship in the well-being of older migrants. *Public Health*, *158*, 144-148. https://doi.org/10.1016/j.puhe.2018.03.005.

Minza, W. M., & Herlusia, S. I. 2022. Affect and trust in educational migration of young people from provincial towns in Indonesia. *Ethnography and Education*, *17*(3), 206-223. https://doi.org/10.1080/17457823.2022.2071590.

Miranti, R. 2019. Examining the Interdependencies Between Urbanization, Internal Migration, Urban Poverty, and Inequality: Evidence from Indonesia. In K. Jayanthakumaran, R. Verma, G. Wan, & E. Wilson (Eds.), *Internal Migration, Urbanization, and Poverty in Asia: Dynamics and Interrelationships* (pp. 47-75). SpringerOpen. https://doi.org/https://doi.org/10.1007/978-981-13-1537-4_3.

Muir, J. A., Cope, M. R., Angeningsih, L. R., Jackson, J. E., & Brown, R. B. 2019. Migration and Mental Health in the Aftermath of Disaster: Evidence from Mt. Merapi, Indonesia. *International Journal of Environmental Research and Public Health*, *16*(15). https://doi.org/10.3390/ijerph16152726.

Muthmainnah, A. N. l., & Budyanra, B. 2017. Determinant Status Migrasi Penduduk Di Provinsi Jawa Barat Tahun 2015 Menggunakan Regresi Logistik Multilevel. *STATISTIKA: Journal of Theoretical Statistics and Its Applications*, *16*(2), 47-60. https://doi.org/10.29313/jstat.v16i2.2142.

Muto, M. 2012. The Impacts of Mobile Phones and Personal Networks on Rural-to-Urban Migration: Evidence from Uganda. *Journal of African Economies*, *21*(5), 787-807. https://doi.org/10.1093/jae/ejs009.

Neilson, J. 2016. Agrarian transformation and land reform in Indonesia. In J. F. McCarthy & K. Robinson (Eds.), *Land and Development in Indonesia: Searching for the People's Sovereignty* (pp. 245-264). ISEAS Publishing.

Oostindie, G. 2008. *Duth Colonialism, Migration and Cultural Heritage*. KITLV Press.

Pardede, E. L., McCann, P., & Venhorst, V. A. (2020). Internal migration in Indonesia: new insights from longitudinal data. *Asian Population Studies*, *16*(3), 287-309. https://doi.org/10.1080/17441730.2020.1774139.

Pardede, E. L., & Venhorst, V. A. 2024. Does Ethnicity Affect Ever Migrating and the Number of Migrations? The Case of Indonesia. *European Journal of Population*, *40*(1), 6. https://doi.org/10.1007/s10680-023-09694-z.

Porter, G., Hampshire, K., Abane, A., Munthali, A., Robson, E., Tanle, A., Owusu, S., de Lannoy, A., & Bango, A. 2018. Connecting with home, keeping in touch: physical and virtual mobility across stretched families in sub-Saharan Africa. *Africa*, *88*(2), 404-424. https://doi.org/10.1017/s0001972017000973.

Powell, C. 2015. 'Uphi?'1 ICTs and the mitigation of distance in a South African township. *Technology in Society*, *42*, 39-48. https://doi.org/10.1016/j.techsoc.2015.03.002.

Prayitno, G., Matsushima, K., Jeong, H., & Kobayashi, K. 2014. Social Capital and Migration in Rural Area Development. *Procedia Environmental Sciences*, *20*, 543-552. https://doi.org/10.1016/j.proenv.2014.03.067.

Prayitno, G., Nugraha, A. A., Sari, N., & Balqis, P. U. Y. 2013. The Impact of

International Migrant Workers on Rural Labour Availability (Case Study Ganjaran Village, Malang Regency). *Procedia Environmental Sciences*, *17*, 992-998. https://doi.org/10.1016/j.proenv.2013.02.118.

Rahman, M. M., & Fee, L. K. 2009. Gender and the Remittance Process. *Asian Population Studies*, *5*(2), 103-125. https://doi.org/10.1080/17441730902992059.

Ranjan, A., & Chattoraj, D. 2023. *Migration, Regional Autonomy, and Conflicts in Eastern South Asia*. Springer Nature Switzerland AG. https://doi.org/10.1007/978-3-031-28764-0.

Sawai, S., & Bose, C. 2024. Indonesian domestic workers: Hong Kong migrants' activism, value creation, and post-migration entrepreneurship. *Journal of Ethnic and Migration Studies*, 1-18. https://doi.org/10.1080/1369183x.2024.2415403.

Schaub, M. L. 2011. Lines across the desert: mobile phone use and mobility in the context of trans-Saharan migration. *Information Technology for Development*, *18*(2), 126-144. https://doi.org/10.1080/02681102.2011.604082.

Speare, A., & Harris, J. 1986. Education, Earnings, and Migration in Indonesia. *Economic Development and Cultural Change*, *34*(2), 223-244. https://doi.org/10.1086/451525.

StataCorp. 2023. *Stata Statistical Software: Release 18*. In StataCorp LLC.

Strauss, J., Witoelar, F., & Sikoki, B. 2016a. The Fifth Wave of the Indonesia Family of Life Survey: Overview and Field Report. In (Vol. 1). California, USA: RAND Corporation.

Strauss, J., Witoelar, F., & Sikoki, B. 2016b. User's Guide for the Indonesia Family Life Survey, Wave 5. In (Vol. 2). California, USA: RAND Corporation.

Sugiyarto, E., Deshingkar, P., & McKay, A. 2019. Internal Migration and Poverty: A Lesson Based on Panel Data Analysis from Indonesia. In K. Jayanthakumaran, R. Verma, G. Wan, & E. Wilson (Eds.), *Internal Migration, Urbanization and Poverty in Asia: Dynamics and Interrelationships* (pp. 135-162). Springer Nature Singapore. https://doi.org/10.1007/978-981-13-1537-4_6.

Syafitri, W. 2013. Determinants of Labour Migration Decisions: The Case of East Java, Indonesia. *Bulletin of Indonesian Economic Studies*, *49*(3), 385-386. https://doi.org/10.1080/00074918.2013.850638.

the U.S. Census Bureau. 2024. *The Census and Survey Processing System (CSPro)*. In (Version 8) the U.S. Census Bureau.

Tirtosudarmo, R. 1997. Economic Development, Migration, and Ethnic Conflict in Indonesia: A Preliminary Observation. *Sojourn: Journal of Social Issues in Southeast Asia*, *12*(2), 293-328.

Tirtosudarmo, R. 2001. Demography and Security: Transmigration Policy in Indonesia. In M. Weiner & S. S. Rusell (Eds.), *Demography and National Security* (pp. 199-225). Berghahn Books.

Tirtosudarmo, R. 2021. *From Colonization to Nation-State*. Springer Nature Singapore Pte Ltd. https://doi.org/10.1007/978-981-16-6437-3.

Tiwari, S. 2017. Does Local Development Influence Outmigration Decisions? Evidence from Indonesia. *World Development*, *93*, 108-124. https://doi.org/10.1016/j.worlddev.2016.12.028.

Tjiptoherijanto, P. 1995. Partisipasi Masyarakat dalam Menarik Migrasi Penduduk Ke Luar Jawa *Economics*

and Finance in Indonesia 43, 371–392.

Todaro, M. P., & Smith, S. C. 2015. *Economic Development* (Vol. 12). Prentice Hall, Inc.

Twumasi Baffour, P., Abdul Rahaman, W., & Mohammed, I. 2020. Impact of mobile money access on internal remittances, consumption expenditure and household welfare in Ghana. *Journal of Economic and Administrative Sciences*, *37*(3), 337-354. https://doi.org/10.1108/jeas-04-2020-0045.

Ullah, A. A., & Chattoraj, D. 2023. *The Unheard stories of the Rohingyas: Ethnicity, Diversity, and Media*. Bristol University Press.

United Nations. 2018. *World Urbanization Prospects 2018: Highlights* Department of Economic and Social Affairs.

Van Liempt, I., & Zijlstra, J. 2017. Smart(phone) travelling: understanding the use and impact of mobile technology on irregular migration journeys. *International Journal of Migration and Border Studies*, *3*(2-3). https://doi.org/10.1504/ijmbs.2017.083245.

Vilhelmson, B., & Thulin, E. 2013. Does the Internet encourage people to move? Investigating Swedish young adults' internal migration experiences and plans. *Geoforum*, *47*, 209-216. https://doi.org/10.1016/j.geoforum.2013.01.012.

Wajdi, N., Adioetomo, S. M., & Mulder, C. H. 2018. Gravity Models of Interregional Migration in Indonesia. *Bulletin of Indonesian Economic Studies*, *53*(3), 309-332. https://doi.org/10.1080/00074918.2017.1298719.

Wantanasombut, A. 2022. Sending Money Back Home: Banking Digitalization, Myanmar Migrant Workers, and the Thailand-Myanmar Border Trade. *Southeast Asian Studies*, *11*(3), 452-475. https://doi.org/10.20495/seas.11.3_451.

Whitten, A. J. 2005. Indonesia's Transmigration Program and Its Role in the Loss of Tropical Rain Forests. *Conservation Biology*, *1*(3), 239-246. https://doi.org/10.1111/j.1523-1739.1987.tb00038.x.

Winkler, H. 2016. How does the internet affect migration decisions? *Applied Economics Letters*, *24*(16), 1194-1198. https://doi.org/10.1080/13504851.2016.1265069.