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Ethnic identity and internal migration decision in Indonesia

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ABSTRACT

Due to differences in geographical situations and other ethnic-specific factors, different ethnic groups have developed different preferences towards migration as part of their socioeconomic norms. An ethnic group's social norms provide a sense of identification and belonging to its members, and are hence likely to influence the decision-making of the individuals within the group. We hypothesise that the effects of these norms will be attenuated when one's ethnic group is in the majority in their community. This case has been established in social psychology studies on the salience of social categories. Using the Indonesia Family Life Survey (IFLS) panel dataset combined with the 2000 and 2010 Indonesia population census data, this paper empirically investigates the role of ethnic identity in individuals' internal migration decisions in Indonesia. The estimation exploits variation in whether an individual is living as a part of the ethnic majority or minority within their community, to explain the migration rates variation. The results demonstrate that while the individuals from more mobile ethnic groups tend to have a higher probability to migrate compared to those of less mobile ethnic groups, the effect is weakened when the individuals live as part of the majority ethnic group in the community.

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Introduction

This study identifies the role of ethnic identity on individuals' migration decisions, particularly in the case of internal migration in Indonesia. Due to differences in geographical situations, historical shocks, and other ethnic-specific factors, such as physical appearances and languages, each ethnic group develops different preferences towards migration. Some ethnic groups may tend to encourage certain members to venture outside their village of birth, while others may suggest that members stay. These heterogeneous ethnic-specific preferences towards migration might be learned, transmitted, or taught by one generation to the next through the social norms developed and shared within each ethnic group. The ethnic group's norms provide a sense of identification and belonging to its members, and are also likely to influence the decision-making of individuals within the group.¹ Recent developments in economic studies have recognised the role of cultural aspects, such as social norms, in shaping social identity and influencing individual choices.² However, empirical examination of the impact of identity on various

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economic outcomes is not yet well explored. The objective of this paper is to analyse the impact of ethnic identity on the decision to migrate internally.

Indonesia provides an interesting case to study the relationship between ethnicity and migration due to at least two reasons. Firstly, there are a large number of different ethnic groups in Indonesia. The latest 2010 census identified 1,471 distinct ethnic groups in Indonesia, with 15 groups having at least one million Indonesian citizens (BPS 2011; Ananta et al. 2015). Secondly, there are differences in migration behaviour among these ethnic groups. Figure 1 shows the internal migration rates of the 10 largest ethnic groups in Indonesia based on the census dataset. Although there are some changes within each group over the 10 year gap between censuses, it appears those with relatively high migration rates in 2000 continue to exhibit high migration rates in 2010. It is likely there are certain factors causing the propensity to migrate to remain relatively high or low within individuals across the various ethnic groups.

Indeed, various sociological and ethnographic studies have identified differences in the tendency to migrate among various ethnic groups in Indonesia (Hugo 2015). These studies show that migration, or spending some part of an individuals' lifetime outside of their village of birth, has become customary for some ethnic groups. It has been claimed that these groups' high population mobility is driven by their ethnic social norms and cultural influences. In this respect, Hugo (2015) points out ethnographic studies on several ethnic groups in Indonesia, such as a study by Siegel (1969) on Acehnese of Aceh region, Naim (1979) and Murad (1980) on Minangkabau people of West Sumatera, Bruner (1972) on Batak people from northern Sumatera, Fox (1977) on Rotinese from East Nusa Tenggara, Rambe (1977) on the Banjarese of South Kalimantan, and Lineton (1975) on Buginese from South Sulawesi. Conversely, other ethnic groups, such as some Javanese sub-ethnic groups in Central and East Java and Makianese of Moluccas, tend to remain attached to their home villages (Hugo 1982). While there have been numerous

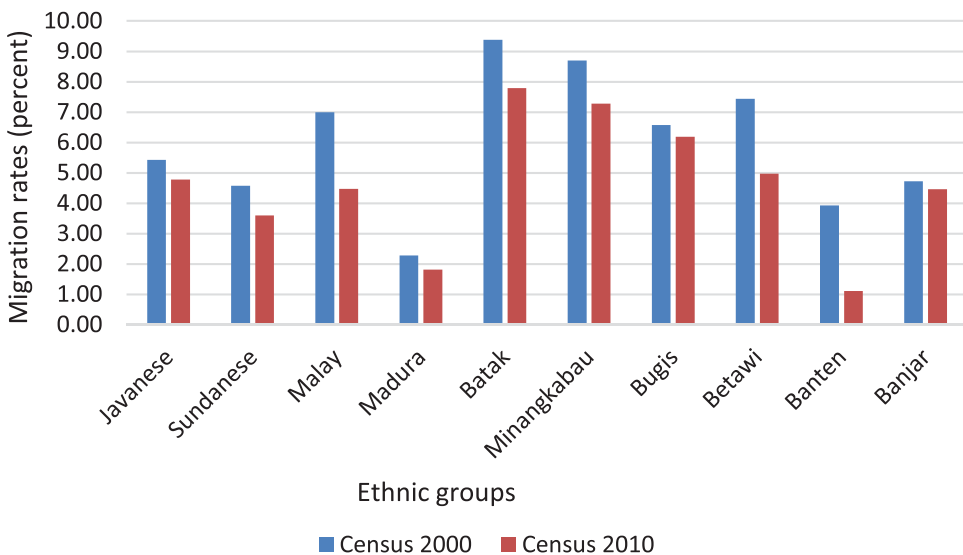


Figure 1. Internal migration rates of the 10 largest ethnic groups in Indonesia. Source: calculated based on Census 2000 and 2010.

ethnographic studies and a few recent demographic studies on ethnic groups in Indonesia, as far as our knowledge, there have been no studies examining ethnic groups' migration behaviour by considering the variation in their propensity towards migration. This study is an attempt to fill this gap.

In Indonesia, due to migration processes, it is common that people from different ethnicities live together in the same communities. The migration processes mostly occur naturally, such as urbanizations, and in some areas outside Java Island occur by design through the Indonesian government's transmigration programme. In general, in each region, there is an original ethnic inhabitants who dominate the population as they have traditionally been living in the area for generations. Meanwhile, the incoming migrants from other areas might be of different or of the same ethnic groups. This condition creates variations in which an individual might live in a community with a majority ethnic group that is either similar or different from his/her ethnicity. This fact provides another significant empirical variation in ethnic social norms and network status, which is essential for this study.

We hypothesise that the effects of the ethnic norms will be attenuated when one's ethnic group is in the majority in their community. This case has been established in social psychology studies on the salience of social categories (Tajfel and Turner 1986; Phinney 1990; Bernal and Knight 1993). Using the first four waves of the Indonesia Family Life Survey (IFLS) panel dataset combined with the 2000 and 2010 Indonesia population census data, this study examines the effect of ethnic social identity on migration behaviour. The empirical estimation exploits variation in whether an individual is living as a part of the ethnic majority or minority within their community, to explain the variation in migration rates. The results demonstrate that while individuals from more mobile ethnic groups tend to have a higher probability to migrate compared to those of less mobile ethnic groups, the effect is attenuated when they live as part of the majority ethnic group in the community. The estimation results indicate that individuals from high-migrating ethnic groups are 1.6–2.4% less likely to migrate when living as an ethnic majority in the community. While a community is both the origin or the sender and also the destination of migration, this study particularly focuses on out-migration from a community.

Study context: internal migration in Indonesia

In Indonesia, internal migration has mostly consisted of poor people from rural areas moving into the informal sector in urban areas (Hugo 2000). The magnitude of international migration is much smaller compared to the internal migration. Table 1 presents statistics for the recent internal migration by major islands in Indonesia accompanied by statistics for external migration of Indonesian citizens, for comparison.

In Table 1, the internal recent migration, which identifies whether an individual lives in a province that is different from the province where he/she lived 5 years ago, only records the migration across provincial borders but not the migration between districts within provinces. Thus, the figures would be much larger if the migration between districts within provinces was included. It is necessary to note that there are almost no restrictions on Indonesians who wish to migrate to different provinces within Indonesia. In this case, most migration across provinces occurs in Java. This is not surprising, as almost 60% of Indonesia's population live on Java Island. Although still lower compared to Java, internal

Table 1. Internal recent migration and international migration in Indonesia.

Year	1985	1990	1995	2000	2005	2010	2015
Internal in migration							
Sumatera	582,704	1,182,444	783,012	1,356,916	860,513	1,251,726	1,022,589
Java	1,693,996	3,058,725	2,667,869	3,156,278	2,364,576	2,929,845	2,616,475
Bali & Nusa Tenggara	70,377	130,475	136,832	217,099	136,884	199,412	311,442
Kalimantan	192,387	415,461	289,100	418,407	259,925	482,632	357,072
Sulawesi	160,850	295,368	286,963	363,765	267,051	358,639	339,349
Maluku & Papua	76,631	142,477	76,266	109,047	74,873	174,165	166,470
Internal out-migration							
Sumatera	607,091	1,020,535	959,898	1,338,259	754,836	1,123,703	999,196
Java	1,794,973	3,416,923	2,525,867	3,365,515	2,404,690	3,284,005	2,574,057
Bali & Nusa Tenggara	67,008	138,600	123,462	153,056	101,499	149,682	163,506
Kalimantan	118,078	226,340	209,470	176,014	169,530	204,981	262,221
Sulawesi	144,828	277,041	264,113	329,377	275,798	372,703	341,386
Maluku & Papua	43,307	70,530	72,432	163,213	84,078	100,704	119,811
Total internal migration^a	5,552,230	10,374,919	8,395,284	11,146,946	7,754,253	10,632,197	9,273,574
% of population	3.40	5.78	4.31	5.40	3.57	4.47	3.63
International migration^b	55,476	93,481	120,886	435,222	474,310	575,804	275,736
% of population	0.03	0.05	0.06	0.21	0.22	0.24	0.11

Sources: BPS and Badan Nasional Penempatan dan Perlindungan TKI (BNP2TKI) (2017).

Notes: The incoming migration rate is the number of migrants moving into a province. The outgoing migration rate is the number of migrants moving out of a province.

^aSummation of recent in-migration and out-migration.

^bTotal number of migrant workers leaving Indonesia in the respective year.

migration in other areas of Indonesia is growing due to improved infrastructure and transportation modes. In contrast, international migration is fairly small compared to internal migration. This probably due to higher costs and tighter restrictions on migrating internationally.

Although internal migration is an important characteristic of Indonesia's population, there have been relatively few studies on the topic. Some studies examine the economic importance of internal migration for the households in Indonesia (Deb and Seck 2009; Caruthers 2013; Kleemans 2014), other study measures the effect of internal migration on regional economic growth (Vidyattama 2016), and other studies the determinants of internal migration in Indonesia (Rammohan and Magnani 2012; Farré and Fasani 2013). However, the fact that Indonesia consists of a multitude of distinct native ethnic groups is missing from these studies.

Ethnic diversity is one of the most important population characteristics in Indonesia. It is fairly safe to claim that Indonesia is one of the most ethnically heterogeneous countries in the world (Hugo 2003). However, ethnicity based studies in Indonesia have been limited, mainly due to the unavailability of updated ethnicity data. Since early post-independence Indonesia until the fall of Suharto's New Order in 1997, the Indonesian government had placed a strong emphasis on Indonesian nationality association over ethnicity identification. The effort was especially noticeable during Suharto's New Order regime (1965-1997), when the government tried to enforce homogeneity over Indonesia's regions and populations (Suryadinata, Arifin, and Ananta 2003; Ananta et al. 2015; Hugo 2015).

Data

This study mainly uses the first four waves of the Indonesian Family Life Survey (IFLS) dataset in the analysis. However, due to sampling limitations on the ethnic level, excerpts

of Indonesian census data are also employed to generate the baseline migration information for the ethnic groups. The constructed information from the census is then combined with the data from the IFLS.

Constructing ethnic groups migration rates

Constructing ethnic groups' baseline migration rates is important, as this is basis to determine whether certain ethnic groups have high or low-migrating rates, which reflect the groups' migrating culture. It is possible to construct this information using the IFLS data, as the IFLS covers several different ethnic groups throughout the surveys. However, using the IFLS sample to create migration rates of ethnic groups in Indonesia might not be appropriate because IFLS is not sampled based on ethnicities. In this case, Indonesia's census provides the more suitable dataset. However, after the Dutch colonial census in 1930, ethnicity identification was only reintroduced in the 2000 census and again in the recent 2010 census. Prior to the 2000 census, the only possible proxy of ethnicity is information on the mother tongue language spoken at home, introduced in the 1980 population census. Unfortunately, there might be some issues in using language as a proxy of ethnicity. This is because, in post-independence Indonesia, the government has been keen to promote the use of Bahasa Indonesia in daily living, especially for official purposes. The reason behind this policy is to encourage unity and reduce identity within Indonesia's diverse ethnic groups. In the 1980 census, 11.9% of the population reported speaking Bahasa Indonesia at home (Hugo 2015).

In constructing ethnic groups' migration rates, we use 10% of the 2000 and 2010 Indonesia population censuses. The dataset is obtained from the Integrated Public Use Microdata Series (IPUMS) provided by the Minnesota Population Center, University of Minnesota (Minnesota Population Center 2015). Before we can assign the ethnic migration rates from the census to the IFLS, first we need to match the ethnic groups in the census with group identified in IFLS. In matching the grouping with the 28 groups identified in IFLS, we follow the grouping of ethnicities in Indonesia described by Ananta et al. (2015). The detailed procedures are described in Appendix A on Dataset Construction.

In identifying whether a certain ethnic group has had high or low migration, we take the average of migration rates between 2000 and 2010. Taking averages from two points of time might not be sufficient to represent migration history. However, information from the two censuses with a span of 10 years may cover possible changes throughout the period. Then, using the median as the reference point, any ethnic group with average migrating rates below the median falls into the 'Low-migrating ethnic group', and any ethnic group with average rates above the median falls into the 'High-migrating ethnic group'. Using the ethnic code, this migrating grouping is then matched with the IFLS dataset.

Working with IFLS data

The main analysis of this study employs the individual, household, and community level panel data of the Indonesia Family Life Survey (IFLS). The IFLS is a continuing longitudinal survey initially conducted in 13 of the 27 provinces in Indonesia by the RAND

Corporation in collaboration with some institutions in Indonesia. The provinces were selected to provide the best representation of the Indonesian population's socioeconomic and cultural diversity. The survey sample represents 83% of the country's total population as of 1994 (Strauss et al. 2009).

The IFLS surveys collect a rich set of information at the household, individual, and community level, as well as about the facilities available to them. To date, there have been five full-sample waves of the survey (IFLS1-IFLS5), carried out in 1993, 1997, 2000, late 2007, and the latest in 2014. All of the surveys' documentation are publicly accessible via the RAND website, www.rand.org.

Identifying ethnicity and migration in IFLS

Empirical studies mostly identify ethnicity based on self-identified ethnicity information from survey questionnaires or interview results. This type of ethnicity measurement implies the concept of identity in sociology, where social identity relates to the way individuals define themselves as members of particular groups (Casey and Dustmann 2010). It also reflects the identity concept in the work of Akerlof and Kranton (2000), where an individual identifies him or herself as belonging to a certain social group, such as an ethnic group.

The IFLS covers self-identified information related to an individual's ethnicity. The question directly identifies each individual ethnicity was firstly introduced in IFLS4. Using the ethnicity information from IFLS4, we can identify the ethnicity of individuals who appeared in previous waves of the IFLS household rosters and who were surveyed in the IFLS4. Unfortunately, there are around 24% of individuals' ethnicity are still missing. In identifying these missing ethnicity, we employ several proxy variables including the household head's ethnicity, the daily spoken language and the most influential ethnic custom in daily life available in the previous waves of IFLS. The details of this procedure are available in Appendix A.

In validating the method in deriving the ethnicity of the individuals who do not have their ethnic identity reported explicitly, we test the predictive value of the variables employed to proxy the non-reported individuals' ethnicity. We predict the ethnic identity of individuals with reported ethnicity using the ethnicity proxy variables including the daily language, the ethnic custom with the most influence on the daily life, and the household head ethnicity. The results, available in Appendix B, show that each of the variables is statistically significant, both individually and simultaneously, in predicting the ethnicity of the individuals with reported ethnicity.

In addition to individual's ethnicity information, IFLS also collects information of the ethnic custom at the community level. A relevant part of the tradition book is the information on the majority ethnic group in the community. Any individual with the same ethnicity as the identified majority ethnic group in the community is coded 1 and 0 otherwise.

In this study, information on individuals' migration decisions is obtained from the retrospective migration histories. An important feature of IFLS is that if a previously interviewed individual moves away from the place where they were interviewed, then the individual is tracked down, as much as possible, and interviewed in his/her new place of residence. Therefore, in each subsequent IFLS wave, after the first in 1993, we can identify whether or not an individual has moved away from their previous community. Since we

are examining the influence of ethnicity and community on the migration decision, we considered the community where an individual lived prior to moving as the 'origin'. Therefore, there are three periods within the constructed dataset, the first period is the movement between IFLS1 and IFLS2, the second period is the movement between IFLS2 and IFLS3, and the third period is between IFLS3 and IFLS4. Any individual identified with any movement lasting more than six months in any of the three periods is coded 1 and 0 otherwise.

Summary statistics of IFLS dataset

Table 2 summarises the main variables in the model and compares the characteristics of those who do not migrate versus those who migrate. There are some notable differences. In individual characteristics, the majority of those who do not migrate are household heads, are married, and are already working. In terms of gender, the proportion of males who migrate is lower than those who do not migrate. Related to skill, 94% of those who migrate can read, compared to only 76% of those who do not migrate. In terms of education, those who migrate have, on average, more than 1 additional year of education compared to those who do not migrate.

Regarding household characteristics, those who migrate generally come from slightly smaller households. However, they are economically better off compared to those who do not migrate, indicated by the higher household expenditure, 33% higher on average, as well as a higher asset index of 0.14 as opposed to 0.07. In community characteristics, apart from the urban/rural location, the two groups are relatively similar. Meanwhile, related to ethnic characteristics, those who migrate, as expected, have higher ethnic migrating rates based on the census dataset. In addition, they have lower proportions of living as part of the majority and living in their ethnic group's heartland.

Empirical methodology and identification strategy

Ethnic identity within migration decision

Initially, Tajfel and Turner (1979) introduced the Social Identity Theory within the field of Psychology to understand the intergroup discrimination phenomena. Within the field of economics, Akerlof and Kranton (2000) were the first to directly incorporate a social identity variable into an individual utility function. The seminal paper of Akerlof and Kranton (2000) on economics and identity introduces a novel theoretical framework of the utility maximisation function by including an individual's self-identification as a motivation for behaviour. They point out that individuals' utility increases if they achieve and feel comfortable with their 'ideal self' identity. In this case, the 'ideal self' is achieved by considering the prescribed behaviour of the social group they belong to as well as the action of other individuals. This theory explains the possibility of rational individuals choosing non-optimal occupations due to identity considerations.

Relating to the framework of Akerlof and Kranton (2000), the action in this study is the decision to migrate, the social category is the ethnic group, and the prescribed ideal action is to migrate or to stay depending on the ethnic group's norm. It has been claimed that migrating norms have been institutionalised within some ethnic groups in Indonesia, while other ethnic groups have experienced the opposite, attaching to the village of

Table 2. Summary statistics of the main variables.

Variables	All observations ^a			Do not migrate			Migrate			Diff. No Mig. vs. Mig.	t-stat
	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.		
Migrate	69,675	0.19	0.40	56,134	0	0	13,541	1.00	0.00		
Muslim	69,675	0.79	0.41	56,134	0.83	0.38	13,541	0.64	0.48	0.193***	(43.60)
Household head	69,675	0.28	0.45	56,134	0.31	0.46	13,541	0.15	0.36	0.156***	(42.70)
Male	69,675	0.42	0.49	56,134	0.44	0.5	13,541	0.35	0.48	0.0832***	(18.06)
Married	62,661	0.60	0.49	52,908	0.63	0.48	9753	0.39	0.49	0.245***	(45.77)
Work	57,264	0.58	0.49	48,034	0.61	0.49	9230	0.47	0.50	0.140***	(24.85)
Read	48,178	0.78	0.41	41,330	0.76	0.43	6848	0.94	0.24	-0.184***	(-51.48)
Age	62,661	33.23	19.91	52,908	34.81	20.61	9753	24.66	12.49	10.14***	(47.03)
Educ. year	45,500	6.24	3.11	38,570	6.04	3.04	6930	7.32	3.23	-1.272***	(-31.70)
HH size	65,564	5.07	2.19	52,994	5.09	2.15	12,570	5.02	2.33	0.0651**	(3.00)
HH expenditure ^b	65,249	729,992.40	1,664,376.00	52,754	686,875.60	1,766,212.00	12,495	912,031.80	1,119,958.00	-225156.2***	(-13.62)
Per capita exp. ^b	65,249	159,408.00	321,573.90	52,754	147,340.20	326,713.40	12,495	210,358.70	293,494.40	-63018.5***	(-19.76)
Assets index ^c	65,478	0.09	0.96	52,918	0.07	0.95	12,560	0.14	1.01	-0.0682***	(-7.16)
Rural	65,585	0.53	0.50	53,000	0.54	0.5	12,585	0.45	0.50	0.0930***	(18.85)
HH electricity	69,675	0.79	0.41	56,134	0.78	0.41	13,541	0.82	0.38	-0.0387***	(-10.38)
Public trans.	69,675	0.65	0.48	56,134	0.66	0.47	13,541	0.61	0.49	0.0553***	(11.90)
Village electricity	59,789	0.96	0.20	49,480	0.96	0.21	10,309	0.96	0.19	-0.00866***	(-4.24)
Major ethnicity	69,675	0.72	0.45	56,134	0.74	0.44	13,541	0.60	0.49	0.142***	(30.88)
Live in eth. origin	59,812	0.78	0.41	49,510	0.79	0.4	10,302	0.74	0.44	0.0535***	(11.41)
Ethnic mig. census	68,695	5.02	1.43	55,420	4.99	1.42	13,275	5.13	1.46	-0.145***	(-10.54)

^aOnly includes adult individuals (15 years of age or older at the time of the survey).

^bIn Indonesia's Rupiah.

^cAsset index is generated using Principal Component Analysis (PCA) methodology following the construction of Wealth Index in the USAID's Demographic and Health Survey.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

birth norms (Hugo 2015). While it may take generations to trace back the formation of these social norms, migrating or staying norms within certain ethnic groups might have initially been introduced to bring benefits to the ethnic group’s members or to the group as a whole. For example, some ethnic groups might encourage particular members to venture outside the heartland region due to resource limitations. By contrast, other ethnic groups might introduce a norm for the younger generation to remain in their birth village because they are needed to work in the farm or to take care of older generations. These norms are then naturally passed down by parents, as they have learned from their own parents, to their children without a comprehensive evaluation of the current optimality of the norm (Fernandez, Fogli, and Olivetti 2004). Ethnic groups that introduced a migrating norm would likely have created a strong migration habit within the groups. On the other hand, ethnic groups that encourage their members to remain in their village of birth will likely have created strong attachment of individuals towards their village of birth. Considering this process, it is possible to insert the decision to migrate or stay as the prescribed action within the Akerlof and Kranton (2000) framework.

Related to this study and considering these previous works, as ethnicity is part of individual identity, we can include ethnic identity into the utility model with the specific action of migration. Let $m_i(1, 0)$ be the migration choice by individual i and $\tilde{m}_i(1, 0)$ be the individual’s own preferred choice. Then, a loss to the individual will be in the form of a deviation of his action from his own ideal choice, $(m_i - \tilde{m}_i)$. The individual also belongs to a certain ethnic group, g , which also has a certain prescribed ideal choice related to migration, $m_g^*(1, 0)$. Any action deviating from the prescribed ethnic group action, $(m_i - m_g^*)$, will also be a loss to the individual. Adding to this setup is a parameter c_g , which indicates the strength of conformity towards an ethnic group g , where $0 \leq c_g \leq 1$. Following Benjamin, Choi, and Strickland (2010) and Georgiadis and Manning (2013), who develop choice models based on Akerlof and Kranton’s model, the loss function can be written as a quadratic function and can include the adherent strength parameter, then the individual utility function is:

$$U_i(m_i, g) = -(1/2)(1 - c_g)(m_i - \tilde{m}_i)^2 - (1/2)c_g(m_i - m_g^*)^2 \tag{1}$$

The first part of the utility function is the economic utility from choosing the migration action and the latter part is the utility from being a member of ethnic group g . We can take the first-order conditions of the utility function and set it to 0 to obtain the optimal action m_i^* that will maximise the individual’s utility.

$$m_i^* = (1 - c_g)\tilde{m}_i + c_g m_g^* \tag{2}$$

The optimal action is the preferred choice without considering ethnicity identity but with consideration of the prescribed ethnic group ideal. Inserting m_i^* back into the utility function (1), we can obtain the maximised utility as follows:

$$U_i(m_i, g) = -1/2 c_g(1 - c_g)(\tilde{m}_i - m_g^*)^2 \tag{3}$$

The ethnic identity effect can be defined by differentiating the first-order condition (2)

with respect to the parameter, c_g , as follows:

$$\frac{dm_i^*}{dc_g} = c'_g(m_g^* - \tilde{m}_i) \quad (4)$$

In this setting, an individual's utility from the migration choice depends on c_g , which indicates the level of conformity toward the ethnic group culture and the $|m_g^* - \tilde{m}_i|$ part, which indicates the gap between the prescribed ethnic group action and the individual's ideal action. The less adherent strength of the individual and the larger the gap, the lower benefit that the individual can gain from being a member of the ethnic group.

In order to understand the individual's level of conformity towards an ethnic group, c_g , we need to turn to social psychology, which has already established a large body of research on the salience of social categories related to human behaviour and interaction. A shared sense of self-belonging among individuals from the same ethnic group is an important aspect of individuals' social identity and is closely related to their respective minority-majority status within a community (Tajfel and Turner 1986; Phinney 1990; Bernal and Knight 1993). Within multi-ethnic settings, studies in this field find that individuals from minority groups report a more salient and stronger sense of ethnic identity than individuals of majority groups (Phinney and Alipuria 1990; Martinez and Dukes 1997; Xu, Farver, and Pauker 2015). Within the field of economics, Akerlof and Kranton (2000) point out that the relative salience of individual identity can motivate and affect behaviour. This argument has been further confirmed by various experimental studies, such as McLeish and Oxoby (2011), Benjamin, Choi, and Strickland (2010), Chen and Li (2009), and Hoff and Pandey (2006).

Relating to this study, suppose an individual live as a minority ethnic group in a community, this individual will likely have a more salient ethnic identity and hence would develop a stronger level of conformity towards the individual's ethnic group. If the ethnic group has strong migrating norms, then the individual will likely migrate from the community at some point in time. However, a stronger conformity toward one's ethnic group may or may not make the individual ideal closer to the ethnic group prescribed action. It will likely vary among individuals depending on their situations.

The differences associated with living in a majority versus minority community are important in our analysis. Individuals who live in areas with many of their own ethnic group will likely to have a larger social network. Bertrand, Luttmer, and Mullainathan (2000) show the importance of this type of social network in the individuals' decision-making. Related to our study, the decision to migrate would also likely to be influenced by the situation whether the individual is living as part of the majority ethnic group in the community or not.

Empirical identification strategy

In estimating the ethnic identity effect, assume the true model is the resulting outcome of migration choice, modelled as MIG^* , which measures the propensity of an individual to migrate.

$$\begin{aligned} \Pr(MIG_{ijkl})^* &= \beta_1^* ETHNIC_{ijkl}^* + \beta_2^* X_{it-1}^* + \beta_3^* H_{jt-1}^* + \beta_4^* C_{kt-1}^* + \beta_5^* Z_{lt-1}^* \\ &+ \beta_6^* D_t^* + \varepsilon_{ijkl} \end{aligned} \quad (5)$$

Where subscripts i, j, k, l , and t denotes individuals, households, communities, ethnic groups, and time periods respectively. MIG_{ijklt} is a binary indicator variable of migration status at period t . $ETHNIC_{ijkl}$ measures the effect of ethnic identity on the migration decision of individual i from household j lives in community k from ethnic group l at the period prior to migration $t-1$. X_{it-1}^* are observed and unobserved individual characteristics, H_{jt-1}^* are observed and unobserved household characteristics, C_{kt-1}^* are observed and unobserved community characteristics, and Z_{lt-1}^* are observed and unobserved ethnic group characteristics, all at period $t-1$, the period before the migration. P_t^* is the period variable and ε_{ijklt} is the error term.

The general model, particularly the $ETHNIC_{ijkl}$ part, needs to be translated into a more practical variable for estimation purposes. We interact the ethnic identity salience level with the ethnic groups' migration rates to represent $ETHNIC_{ijkl}$. In order to proxy an individual's ethnic identity salience level, we use the information on whether the individual lives in a community with a majority ethnic group similar or not similar to his/her ethnicity. As the migrating/staying decision is considered part of the ethnic groups' social norms, the gap between ethnic group members' ideal and the ethnic group's prescribed migrating/staying action is represented by the average migration rates at the ethnic group level. If a certain ethnic group has a migrating culture, the group would encourage migration to its group members. However, while some group members leave their village of birth to migrate, not all members would have the same migrating preference as suggested by the group. Thus, the average embodies the differences among migration preferences within the ethnic group.

In order to simplify the estimation, the mean outcomes of the ethnic groups migration are transformed into a dummy variable of high or low-migrating rates, where ethnic groups with average migrating rates below the median migrating rates fall into the low-migrating group and those of higher than the median fall into the high-migrating group. By setting the low-migrating group as the base group, the regression equation is:

$$MIG_{ijklt} = \beta_0 + \beta_1(MJETH_{jkl_{t-1}}*HMIG_l) + \theta_1MJETH_{jkl_{t-1}} + \theta_2HMIG_l + \beta_2X_{it-1} + \beta_3H_{jt-1}\gamma + \beta_4C_{kt-1} + \beta_5Z_{lt-1} + \beta_6P_t + e_{ijklt} \tag{6}$$

MIG_{ijklt} is the observed binary variable indicating an individual's migration decision. It is equal to 1 if the individual migrated and 0 if he/she remained in the same community at period t . The interaction term $(MJETH_{jkl_{t-1}}*HMIG_l)$ is the proxy for ethnic identity effect on an individual migration decision. $MJETH_{jkl_{t-1}}$ is a binary variable that equals 1 if an individual's ethnicity is similar to the majority ethnic group in his/her community and 0 if an individual's ethnicity is not the same as the majority ethnic group in the community at period $t-1$. $HMIG$ represents High-Migrating Ethnic groups, equals 1 if an individual's ethnic group falls into the high-migrating group and 0 otherwise. The direct effects of both interacted variables are included as controls. Observed individual, household, community, and ethnic group characteristics are also included as controls.

While attempting to minimise the endogeneity issue by focusing on the ethnicity, which is naturally exogenous, there is a possible reverse causality issue in the empirical estimation of equation (6). This is due to the fact that being a minority in the local community is likely to be correlated with being a migrant. In other words, the fact that the individual is a minority is likely caused by the individual or the individual's family have migrated from

somewhere else into this community. We address this issue by including fixed effect specifications in our estimations to control for time invariant unobserved heterogeneity, including whether the individual or the individual's family have migrated from somewhere else into the community before the period covered in the IFLS. Although the time-invariant variables will not be identified, the interaction term as the main source of identification will still be identified.

Results and discussion

A simple difference-in-difference calculation might be useful to illustrate the relationship between ethnicity and migration. In this case, we can split people into two groups: those who live in a community with majority ethnicity similar to his/her ethnicity, and those who do not. We can also split people on the basis of ethnicity migrating rates: those from ethnic groups with high-migrating rates and those from ethnic groups with low-migrating rates. The combination of these two splits yields four groups. An individual may be from a high or low-migrating ethnic group and live in a community with majority ethnic group as his/her ethnicity or in a community as a minority ethnic group. Taking the difference between those who live in a majority ethnic group and those not in a majority ethnic group is similar to using ethnic group fixed effects. Likewise, taking the difference between high and low-migrating ethnic groups provides the control for the community where the individual lives in a given time. The interaction term between the two splits becomes the difference of these differences.

Table 3 shows the results of the simple difference-in-difference calculations. Looking sideways across the columns, the migration means of people from ethnic groups with low migration living as non-majority in a community is 27%, while living as majority is 15.5%. In this low migration group, the difference between living as non-majority and majority is 11.5%. Meanwhile, people from the high-migrating ethnic groups have a slightly smaller difference of 10.8% in migration mean between living as non-majority versus living as majority in the community. Looking down the rows, the difference between ethnic groups with low migration rates versus ethnic groups with high migration rates is relatively small compared to the differences between living as non-majority/majority. All in all, the difference-in-differences is somewhat small, with 0.7%, as shown in the bottom right corner cell of the table.

The effect of more salient ethnic identity while living as a minority on migration for high-migrating ethnic groups is visible. However, low ethnic groups also exhibit the same circumstances, though the migration means is lower. This may suggest that the gap between the individual ideal and the prescribed ethnic action is larger for low-

Table 3. Differences in Differences of migration means and ethnicity dominance in the community.

	Non-majority ethnicity	Majority ethnicity	Δ Ethnic majority
Low-migrating rates	0.26955 (0.00501)	0.15456 (0.00272)	0.11499 (0.00005)
High-migrating rates	0.27556 (0.00427)	0.16785 (0.00208)	0.10771 (0.00003)
Δ migrating rates	0.00601 (0.00007)	0.01329 (0.00002)	0.00728 (0.0000003)

Note: Standard error in parentheses.

migrating ethnic groups. This simple comparison gives some idea of how the groups compare to each other in relation to their migration behaviour.

Table 4 summarises the estimation results of equation (6). In the estimations, we only include adult individuals aged 15 years or older. As the dependent variable is a binary variable, we carry out the estimation on the constructed IFLS panel dataset using the Linear Probability Model (LPM), the Logit model, and the Probit model. While the LPM might be problematic, as the predicted value may fall outside the 0 and 1 boundaries, it is useful to provide insight on the marginal effects of the interested variables. Furthermore, we check whether the predicted values fall outside the 0-1 interval by generating the predicted values of the LPM estimates. The results show none of the predicted values of the basic model fall outside 0-1. In the full model, where all of the control variables are included, only 7.93% of the predicted values fall outside 0-1.

In the case of panel dataset, clustering is present, whereby the observations are assumed to be independent across individuals, but correlated over time for a given individual (Cameron and Miller 2011). Moulton (1990) and Bertrand, Luttmer, and Mullainathan (2000) demonstrate that where clustering is present, it is important to control for it. Therefore, we employ the cluster-robust with clustering on the individual declared in the panel dataset to correct the standard errors.

In the estimations, we do not cluster at the ethnic group level. If we cluster the standard errors at the ethnic group level, it would require an assumption that individuals from each ethnic group do not interact with individuals from other ethnic groups. This assumption is difficult to be fulfilled due to the fact that individuals are living together with other ethnic groups within communities. Therefore, individuals from certain ethnic groups are likely to have interactions with individuals from other ethnic groups living in the same community. Meanwhile, clustering the standard error at the community level is not possible, as migrating individuals are changing communities as they migrate to new places.

In the main estimation, we employ Random Effect estimation because the variable of whether an individual is a member of the High-Migrating Ethnic groups, one of the important variables, is a time-invariant variable. The Fixed-effect panel regression, while keeping the interaction term, omits these types of variables from the regression computation. Keeping the main effects of the interacting variables is necessary, even if they are not significant. Otherwise, main effects and interaction effects may get confounded. However, whenever possible, we include the fixed effect estimation for comparison and also to check that possible reverse causality issue does not present in the estimation.

In Table 4, columns (1) to (3) present the estimation results of the main variables of interest without control variables. Columns (4) to (6) only include individual characteristics, consist of gender, year of education, age and age square, marital status, and religion. Columns (7) to (9) add the household characteristics, which include household size, household expenditure, household assets index, and location (rural equals 1 and urban equals 0). Columns (10) to (12) add the community characteristics, consist of availability of public transport and electricity supply. For Logit and Probit results, we only present the average marginal effects. For brevity, only the results of the variables of interest are reported in the table.

The inclusion of the interactive dummy in the models adds complication when interpreting the regression results. Nevertheless, the main effects of the interacting variables are still relatively simpler to interpret. In columns (1) to (3), the positive main effect of being

Table 4. Main empirical estimation results using random effects model.

Variables	(1) LPM	(2) Logit margins	(3) Probit margins	(4) LPM	(5) Logit margins	(6) Probit margins	(7) LPM	(8) Logit margins	(9) Probit margins	(10) LPM	(11) Logit margins	(12) Probit margins
High Migrating = 1 X Majority ethnic = 1	0.018** (0.009)	0.013* (0.007)	0.014* (0.007)	-0.018 (0.012)	-0.013 (0.009)	-0.014 (0.009)	-0.022* (0.012)	-0.016* (0.009)	-0.017* (0.009)	-0.024** (0.012)	-0.016* (0.009)	-0.018* (0.009)
High Migrating = 1, Low Migrating = 0	-0.001 (0.007)	0.003 (0.006)	0.003 (0.006)	0.011 (0.011)	0.009 (0.008)	0.010 (0.008)	0.014 (0.011)	0.012 (0.008)	0.013 (0.008)	0.015 (0.011)	0.011 (0.008)	0.012 (0.008)
Majority ethnic = 1, Minority ethnic = 0	-0.059*** (0.007)	-0.073*** (0.006)	-0.077*** (0.006)	-0.012 (0.009)	-0.015** (0.007)	-0.015** (0.007)	-0.010 (0.009)	-0.013* (0.007)	-0.013* (0.007)	-0.006 (0.009)	-0.009 (0.007)	-0.009 (0.007)
Constant	0.131*** (0.007)			0.204*** (0.016)			0.209*** (0.018)			0.239*** (0.021)		
Individual characteristics	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
Household characteristics	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES
Community characteristics	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES
Observations	68,694	68,694	68,694	26,998	26,998	26,998	26,923	26,923	26,923	26,876	26,876	26,876
Number of pidlink	35,029			15,535			15,503			15,491		

Notes: Robust standard errors in parentheses. Full results available in the Appendix.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

part of the High-Migrating Ethnic group shows that individuals from these groups have higher migration probability compared to individuals from Low-Migrating Ethnic Groups when living as Minority in the community. In this case, when living as minority, individuals from High-Migrating Ethnic groups are 0.3% more likely to migrate than individuals from Low-Migrating ethnic groups. However, the effect is not statistically significant. The main effect of being part of the Majority indicates the difference in migration probability for individuals from the Low-Migrating Ethnic groups when living as majority vs. living as minority. For the Logit and Probit estimates, the negative signs indicate individuals from low-migrating ethnic groups are 7.3 and 7.7% less likely to migrate when living as majority compared to when living as minority in the community. It necessary to note that no control variables are included in the estimations.

The interaction term allows for the identification of whether the effect of being part of High/Low-migrating groups varies according to whether the individual lives as part of majority/minority in the community. In columns (1) to (3), where only main variables of interest are included, the interaction term is statistically significant in all 3 estimators, confirming the effect of coming from high/low-migrating groups on the migration decision does vary with the situation of living as majority/non-majority in the community. The positive signs suggest that the effect of living as majority is stronger among individuals from high-migrating ethnic groups than among those from low-migrating ethnic groups. There are some differences in their magnitude due to different methods of estimation. In this case, the LPM result indicates that an individual from high-migrating ethnic groups is 1.8% more likely to migrate when living as an ethnic majority. The results of logit and probit estimations are slightly lower, 1.3% and 1.4%, respectively. However, these results change as we include control variables in the estimation.

In general, as control variables are included in the estimation, the results of LPM, probit, and logit are changing in sign and significance. While the magnitude remains the same, adding individual characteristics as controls change the sign of the interaction term from positive to negative, as seen in the coefficients in columns (4) to (6). The negative signs of the interactive dummy remain as more control variables are included, as seen in the rest of the columns to the right. The negative sign of the interaction term indicates that the effect of living as majority is smaller among individuals from high-migrating ethnic groups than among those from low-migrating ethnic groups. In columns (4) to (6), while the sign of the interacting term changes and the magnitude of the coefficients become larger, the signs of the direct effect of the main variables remain the same as in columns (1) to (3). However, none of the effects of the variables of interest are statistically significant.

Including the household characteristics, columns (7) to (9), keeps the signs of the interested variables constant, while increases the magnitude of the coefficients and improves the statistical significance of the interaction term. The LPM result indicates that the likelihood to migrate is 2.2% lower when an individual from high-migrating ethnic groups lives as an ethnic majority. The logit and probit estimations show a similar result, the likelihood to migrate is 1.6% lower from the logit estimation and 1.7% lower from the probit estimation. This change is likely to be driven by the inclusion of individual and household characteristics.

The same case applies to columns (10) to (12) when community characteristics are included in the estimations. The LPM result shows that when an individual from high-

migrating ethnic groups is 2.4% less likely to migrate as he/she lives as an ethnic majority. The magnitudes are slightly lower in the logit and probit estimations where the likelihood to migrate are 1.6% and 1.8% lower. The results show that while individuals from the high-migrating ethnic groups have a higher tendency to migrate, as indicated by the positive direct main effect of the High-Migrating Ethnicity, their probability to migrate is significantly lower if they live as the majority in communities, as indicated by the larger marginal effect of the Majority Ethnic.

In addition to ethnic social norms, religion has been identified to have some influence on ethnic groups' norms. Considering the importance of religion, we include the religion variable in the estimations as one of the control variables in the individual characteristics. The religion variable is set as a dummy variable, 1 = Muslim and 0 otherwise. This is due to the fact that around 80 percent of individuals in the dataset identify themselves as Muslim. When included in the estimation, this variable is only statistically significant at 10 percent level. Indicating that religion does not have a strong influence on internal migration decision.

The fixed effects model is less favourable as it will eliminate the direct effect of the time-invariant variable, the high/low-migrating group in this regards. However, we will still be able to obtain the interaction terms which is the main interest of the estimation. In addition, it is also necessary to see how the results above hold up when estimated using fixed effects model. Table 5 summarises the results of the panel fixed effect estimations. In general, while the magnitudes are slightly higher in the fixed effects estimations, the sign of the coefficient of the interaction term, which is the main interest, is similar to the random effect model.

The results show a similar pattern to the random effects model, but with larger magnitudes on the coefficients of the interaction term. This is likely due to the elimination of the direct effect of the high/low ethnic migration rates. When all control variables are included, column (7) and (8), the magnitude of the interaction term of the LPM is more than twice of the random effects model (−2.4% vs. −5.7%), while logit estimation

Table 5. Main empirical estimation results using fixed effects model.

Variables	(1) LPM	(2) Logit margins	(3) LPM	(4) Logit margins	(5) LPM	(6) Logit margins	(7) LPM	(8) Logit margins
High Migrating = 1 X Majority ethnic = 1	0.034* (0.018)	0.025* (0.014)	−0.040 (0.025)	−0.023 (0.017)	−0.041 (0.025)	−0.020 (0.017)	−0.057** (0.025)	−0.022 (0.022)
Majority ethnic = 1, Minority ethnic = 0	0.091*** (0.014)	0.124*** (0.010)	0.022 (0.020)	0.020 (0.014)	0.024 (0.020)	0.019 (0.014)	0.041** (0.020)	0.025 (0.021)
Constant	0.026*** (0.008)		−0.227 (0.152)		−0.208 (0.143)		−0.211** (0.107)	
Individual characteristics	NO	NO	YES	YES	YES	YES	YES	YES
Household characteristics	NO	NO	NO	NO	YES	YES	YES	YES
Community characteristics	NO	NO	NO	NO	NO	NO	YES	YES
Observations	68,694	14,827	26,998	2495	26,923	2489	26,876	2480
R-squared	0.019		0.040		0.042		0.046	
Number of pidlink	35,029		15,535		15,503		15,491	

Notes: Robust standard errors in parentheses.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

is only slightly larger (-1.6% vs. -2.2%). However, while the LPM result remains statistically significant at 5% level, the logit estimate is no longer statistically significant.

Based on these results, it appears that being part of an ethnic group with strong migrating norms increases the probability that an individual will migrate compared to individuals of low-migrating ethnic groups. However, when they are living as the majority in the community, the tendency to migrate is attenuated. This ethnic based influence to migrate strengthens as individuals live further away from their own ethnic groups and as non-majority in communities. Referring to the theoretical framework discussed earlier, it might indicate that there are more individuals with large gaps between individuals' ideal and prescribed ethnic groups' actions within the high-migrating ethnic groups when they live as majority in their community.

The work of Tajfel and Turner (1979) on intergroup discrimination, which leads to the development of the social identity theory, may explain the higher mobility of individuals from high-migrating ethnicities when they are living as minorities. Based on the theory, individuals define their own identities with regard to social groups by categorising one's 'in-group' versus an 'out-group'. In this regards, individuals have the tendency of viewing their own group with positive bias. This view leads to the intergroup dynamics at the level of communities where these individuals live. Although the diversity within a community make communities more tolerant, as proposed by some theorists such as Vertovec (2007) and Meissner and Vertovec (2015), hence may minimise the 'push' effects for out-migrants, the individuals from high-migrating ethnic groups living as minority would likely still maintain the migrating norms from their ethnic groups. Various studies indicate that minority communities have a stronger sense of identity. Therefore, when living as minorities, individuals from high-migrating ethnicities would likely to have enhanced identity, including their migrating value. Furthermore, due to their migrating behaviour, the high-migrating ethnic groups would likely to have better developed social networks. Some studies, such as Bertrand, Luttmer, and Mullainathan (2000), Munshi (2003), McKenzie and Rapoport (2007), indicate the important role of social networks on the migration decision. The better access to social networks combined with the enhanced identity by their minority status in communities, further explains the higher out-migration decision individuals from high-migrating ethnic groups when living as minorities.

Robustness checks

The use of the 2000 and 2010 censuses to measure ethnic migration norm is mainly dictated by the data availability. As the dataset in the main estimations is the panel dataset IFLS1 fielded in 1993 to IFLS4 fielded in 2007, the use of the 2000 and 2010 census ethnic migration rates might induce the possibility of reverse causality issue. In addressing this issue, we run the same estimation using the IFLS5 fielded in 2014 and publicly released in 2016. By limiting the identification of migration to only include the migration after 2010, we can check the consistency of the main estimation results which use the census 2000 and 2010 ethnic migration average rates. The results are similar to that of the main estimations.

The High-Migrating Ethnic variable in the estimation model is constructed by categorising the ethnic group's migration rates by the median of the overall migrating rates. However, this categorisation might be arbitrary. To check the consistency of the main

estimations in [Table 4](#), we also estimate the regression model using the migration rates at the ethnic group level. Overall, the signs of the variable of interest are similar to the main estimations, suggesting that the migration categorisation reflects the effect of the migration rates estimates.

In order to check the strength of the interaction effect, we contrast between the ethnic groups with high migration rates and the low ones. We limit the sample to individuals from the categorically high ethnic groups with migration rates of 1 standard deviation above the median and from the categorically low migration for those ethnic groups with migration rates 1 standard deviation below the median. Generally, the signs of the estimated parameters are similar to the main estimations.

In the main estimations, the measure of social salience is the variation of whether an individual is part of the majority ethnic group in the community or not. An alternative social salience measurement is whether an individual is using the traditional ethnic language in the daily life. In this respect, we construct a dummy variable of daily ethnic language equals 1 if an individual is listing their ethnic language as one of their daily languages and equals 0 otherwise. The basic model estimations show a similar sign to the main estimation, with the larger magnitude and stronger effect when ethnic language is used. However, once the control variables are included, the interaction terms are no longer statistically significant. This indicates that speaking an ethnic language is less important in relation to migrate internally within Indonesia due to the fact that the vast majority of Indonesians speak Bahasa Indonesia.

In the IFLS dataset, initially, ethnicity information of around 24% of the total observations was missing. We employed several proxy variables to identify the ethnicity of these individuals. To check that the proxy does not lead to different estimation results, we re-estimate the same regression model in Equation (7) using only the individuals whose ethnicity were reported. In general, the signs of the coefficients are the same as in [Table 4](#). The details of these robustness checks are available in [Appendix C](#).

Summary and conclusion

This study examines the role of ethnic identity on individuals' decisions to migrate using the case of Indonesia. It has been claimed that different ethnic groups have different propensities towards migration. Some studies find that migration has been part of the culture within some ethnic groups. The identification strategy relies on the theoretical model proposed by Akerlof and Kranton (2000), which integrates social psychology's 'identity salience' within an individual utility function. Within social psychology theories, the salient level of social identity is higher as individuals move away from their groups. Within the context of this study, people's mobility in Indonesia has created variation within communities, where there are people from different ethnicities living together in the same community. These individuals have different ethnic backgrounds, some from ethnic groups with migrating norms while others from less mobile ethnic groups. This study tests the effect of these differences on the individuals' probability to migrate.

The findings generally confirm the claims from sociological and ethnographic studies, where individuals from high-migrating ethnic groups tend to have a higher probability to migrate compared to those of low-migrating ethnic groups. The grouping of high/low-

migrating ethnic groups is constructed from Indonesia's population census data of 2000 and 2010. Prior to the census 2000, there was no reliable information on ethnic groups in Indonesia. A novel finding of this study is that higher migration probability of individuals from high-migrating ethnic groups occurs when the individuals are not surrounded by members of their own ethnic groups. While this also applies to individuals from the low-migrating ethnic groups, the effect is much smaller.

In the policy-making context, the implication of these findings is the need for further consideration of different characteristics of different ethnic groups in designing and delivering policies. Some policies might have different impacts across different ethnic groups.

One of the important aspects of migration that has not been properly addressed in this study is the existence of ethnic social networks, both at the origin and the migration destination. One of the reasons for this is that in IFLS, some new communities to which the IFLS panel respondents migrated are not covered in the community level survey. Some new communities are surveyed but only basic information is included, unlike the extensive coverage of the communities initially covered in the earlier waves of IFLS. Various studies have identified the importance of social networks on the migration decision, particularly in the case of overseas migration (Munshi 2003; McKenzie and Rapoport 2007; Patacchini and Zenou 2012; Lara 2015). Later waves of the IFLS survey might cover these new communities with more extensive information. When this information becomes available, further studies should focus on exploring the effect of ethnic social networks on the migration decision.

Notes

1. There has been a growing body of literature and empirical studies on the role of culture in determining economic outcomes. Guiso, Sapienza, and Zingales (2006) provide a summary of different approaches and studies that examine the role of culture in economics. A more recent literature survey by Alesina and Giuliano (2015) summarizes the relationship of culture and institutions, while Epstein and Gang (2010) explore the link between culture and migration.
2. The seminal paper of Akerlof and Kranton (2000) point out that individual identity, based on social category, determines the increase or decrease of an individual's utility depending on their level of conformity to the prescribed actions of a certain social category. The emergence of this concept is then followed by numerous studies on identity and economics.

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