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Analyzing Decisiveness of Migration Intentions: Social Kinship that Matters

Aubrey D. Tabuga



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CONTACT US:

RESEARCH INFORMATION DEPARTMENT
Philippine Institute for Development Studies

18th Floor, Three Cyberpod Centris - North Tower
EDSA corner Quezon Avenue, Quezon City, Philippines

publications@mail.pids.gov.ph
(+632) 372-1291/(+632) 372-1292

<https://www.pids.gov.ph>

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that Matters

Aubrey D. Tabuga

PHILIPPINE INSTITUTE FOR DEVELOPMENT STUDIES

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Abstract

Analyzing future migration intentions is essential in understanding how migration is perpetuated. International migration is such a complex and nuanced phenomenon that those who desire to participate in it go through an elaborate process of intention-formation, planning and decision-making. And yet the literature on migration intentions rarely view it in such manner. Instead, many studies treat migration decision-making as a binary stay-or-leave variable. Moreover, the lens more commonly implemented is economic; there is less focus on the social dimensions of migration decisions. This analysis seeks to explain the influence of social networks on the decisiveness to migrate while controlling for the effects of economic forces, subjective perceptions on well-being, and demographic factors. Using information gathered from individuals residing within a village with high migration incidence, this study found that differentiating migrant networks into degree of association or strength of ties is crucial because different networks have different effects. For intention formation, it is the most immediate, closest of all migrant networks (i.e. intra-household networks) which enhance the decisiveness; migrant networks beyond one's own household are either insignificant or negatively related to intention formation. This paper therefore argues that using aggregate measures like migration incidence in an area wherein homogeneity is assumed and obtaining a significant and positive effect may erroneously amplify the power of migration network in the perpetuation of migration activities. Furthermore, the key to understand the process is to take into account the differences in individuals' phases of migration decision-making in the analysis of factors that influence the decisions. Indeed, network effects vary depending on where one is in the decision-making process. Migrant networks particularly the closest of kin are important in the advanced phase of concrete migration planning, and not in the initial stage. This is an evidence that migrant networks are not only important sources of migration-related information and aspirations but also sources of financial support or the money to move.

Keywords: Migration intention, migration decision-making, Philippine migration, generalized ordered logit, tie strength

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Aubrey D. Tabuga

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1. Introduction

International migration is such a complex and nuanced phenomenon that those who desire to participate in it go through an elaborate process of intention-formation, planning and decision-making. And yet analyses of migration intentions rarely view it in such manner. Instead, they treat migration decision-making as a binary stay-or-leave variable. Moreover, the lens more commonly implemented is economic without much regard to the social aspects of migration decisions. This analysis seeks to explain the influence of social networks on the decisiveness to migrate while controlling for the effects of other factors.

Analyzing future migration intentions is essential in understanding how factors including migrant networks contribute to or hamper the perpetuation of international migration behavior. It gives us a notion of what to anticipate in terms of future migration trends. This analysis uses the case of the Philippines, the third largest migrant-sending country in the world and one of the fastest growing economies in the region. The Philippine government manages the deployment of overseas contract workers since the mid-1970s. Today, the country is a key contributor to global migration flows where over a million workers emigrate, mostly temporarily, on a yearly basis. Based on official data, there is no sign that the deployment will slow down in the medium term.

The recent literature on migration decision-making is focused mostly on the cases of the highly-skilled/highly-educated individuals from high-income countries. Those that examine migration intentions of people from rural areas in developing countries such as the Philippines where the skill set varies are rare. Moreover, the scope is largely internal or inter-regional and Global North-North (e.g. within EU) permanent movements. On the other hand, the Philippines' case is crucial in understanding a particular type of migration – the guest worker program type, which is rarely studied in the past. In fact, the theoretical and empirical literature on temporary migration remains an “underdeveloped area in migration scholarship” (De Jong, 2000, p.318). Therefore, an analysis of the Philippines case is an important addition to the scholarship. Filipino migrant workers engage in largely temporary, cyclical migration. A sizable percentage of the workers are low- to semi-skilled deployed in Middle East countries and key destinations in Asia such as Hong Kong and Singapore. In many of these destinations, migrant workers are accorded very limited set of rights and have relatively lower bargaining power in work contract negotiation. At home, these workers are often the ones who fall prey in the hands of loan sharks and notorious recruitment bodies. Hence, they are more susceptible to exploitation and human trafficking. Understandably, their circumstances vary greatly from those of highly-skilled workers from relatively more developed countries who can freely move and participate in the labor market of other developed nations and are granted a set of rights and welfare benefits comparable to those given to native population. Therefore, looking at the decision-making process of people in such circumstances is essential not only to advance the state of migration research but also to draw useful insights in aid of policymaking in both home and destination countries.

For origin country governments, migration of the vulnerable sectors of the labor force makes management of migration more challenging and costly. From regulating recruitment practices at the origin to educating the workers in pre-departure orientation seminars to providing temporary shelters and adjudication and legal services as needed at the destination, managing migration effectively has been a struggle for a developing country like the Philippines. If it becomes a government policy to install reforms to prevent people from leaving, a greater understanding of the motivations and decision-making process in migration is crucial. Likewise, host governments must understand the circumstances under which migrant workers formulate their decisions. Any attempt to analyze the effects of international migration, either on the host or origin country, must consider the factors that motivate people to move in the first place.

This study examines international migration intentions using data gathered from a semi-structured survey conducted in a migrant-sending rural village in the Philippines.¹ It focuses on the role of social networks in the pre-migration decision-making process holding economic variables, human capital and human agency constant. By analyzing intentions, instead of actual migration behavior, this study recognizes that a human activity as life-changing as migration entails complex intention formation and planning. This analysis also pays considerable attention to contextual factors and how individuals perceive and make sense of these factors in formulating their migration plans. First, it provides a brief review of the recent migration intention literature in the succeeding section (2). This is followed by the analytical framework used and hypotheses to be tested (Section 3). In Section 4, the data and econometric methodology are discussed. Section 5 provides the results and discussion and is followed by concluding remarks in Section 6.

2. Review of Literature

2.1. Why migration intentions?

The traditional neoclassical model of migration seeks to explain migration as an outcome of wage differences across spatial units. It assumes that migration decisions are made by an economically-inclined individual under conditions that are risk-free, uncertainty-free and where information is perfect. It however fails to explain why despite of the large disparities across space, a huge percentage of the population remains immobile (De Jong, 2000) or that despite its ability to explain variation in the migration likelihood of different groups, it fails to explain why in certain groups supposedly likely to migrate, some people move but others don't.

Scholars take great notice of this inadequacy and calls for theoretical and empirical evidence to augment the standard models of migration. Some attribute the difficulty of explaining migration phenomenon to the lack of understanding of contextual factors. As one scholar points out, migration does not happen in a social and cultural vacuum and that migration is a patterned and historically contingent process, not some random phenomenon (De Haas, 2010).

Owing to the nature of migration where motives are hardly singular, and the decision-making process is complex (Balaz, Williams, & Fifekova, 2014; Hoppe & Fujishiro, 2015), several models have been developed in recent works which incorporate a broad range of factors

¹ For a detailed description of the survey data used in this study, please refer to Tabuga (2018) PIDS Discussion Paper No. 2018-02. A Probe into the Filipino Migration Culture: What is there to learn for Policy Intervention?

including expectations and other non-economic dimensions. These analyses² note that prospective migrants go through an elaborate process of intention formation which consist of weighing options, costs, and expectations, as well as planning and undertaking preparations prior to actually deciding to emigrate. Outright analysis of migration behavior without looking at levels of decisiveness therefore is bound to neglect the complexity of migration decision-making process.

One of the most notable models used to analyze intentions is the theory of planned behavior (TPB) (Ajzen, 1991). According to the TPB, ‘favorable attitudes, subjective norms and perceived ease of acting lead to intentions to act, eventually materializing into observed actions, provided the availability of resources and opportunities’ (Kaplan et al., 2016: 62). This theory simply says that intentions are the primary determinant of behavior (Kley, 2011, p.472). The significance of migration intentions in predicting actual behavior has been shown by De Jong, (2000), Van Dalen & Henkens (2013), Hoppe & Fujishiro, (2015), and (Kley, 2013).³

Notably, the more advanced phases of decision-making process (i.e. exploring and planning behaviors and undertaking concrete actions) are a strong predictor of actual migration (Hoppe & Fujishiro, 2015). Being in what they call a pre-decisional stage of decision-making⁴ where the intentions are only beginning to form, is not predictive of actual movement. This strongly suggests that using a mere dichotomous measure of intention such as having or not having desire to migrate does not account for the complexity of migration decision-making. In fact, “differentiating between...phases of migration decision-making (as opposed to intentions and behaviors only) leads to a better understanding of who migrates and who does not...identifying predictors for each phase provides insights into reasons for migrating” (Hoppe & Fujishiro, 2015: 25).

The rare situations where behavior may not be directly affected by intentions is during unexpected events such as when a job offer comes at a very short notice where people may move without making prior plans (Kley, 2013). However, in the context that this study is focusing on (i.e. information asymmetry; labor market frictions), getting and accepting offers at short notice is quite unlikely as most people in rural fishing villages, especially low-skilled ones may not be listed in some online profiling sites. It is likely that the common job search method is via word of mouth through social networks or by seeking it themselves which requires some amount of intention formation and planning.

The above discussion therefore points to the importance of using an appropriate measure of intention. In the empirical literature on intentions to migrate, intention is an arbitrary, subjective concept that is akin to desire or wish. One of the earliest analysis of migration intention is that by De Jong, Root, Gardner, Fawcett, & Abad (1986) on the Philippines’ case whereby the intent to move is simply operationalized as a dichotomous response to the location-specific question – “Do you intend to move away from the village within the next two years?” In a study of Taiwan and Pennsylvania data, Liao, (2001) also used a dummy variable (Yes/No) to signify migration intention, that is - whether the respondent is likely to move to another community within the next two years. More recent works on migration intentions also

² See (Kley, 2013), (Hoppe & Fujishiro, 2015)

³ To cite an example, a study of the Netherlands case shows that over a third of those who had stated an intention to emigrate actually migrated within a 5-year follow-up period (Van Dalen & Henkens, 2013).

⁴See also Kley (2013) and the use of the Rubicon model

use rather arbitrary measures of migration intentions without much effort to discern the decisiveness or maturity of the intention.⁵

There were several attempts to capture subjective rankings of intention into very low, low, high, very high intent (Hyll & Schneider, 2014), and having no firm plans, firm plans, and having neither wishes nor plans (Agadjanian, Nedoluzhko, & Kumskov, 2008). Admittedly, even such measures are largely subjective and do not clearly delineate the difference between wish and a decisive intent since it does not clearly capture ‘firm’ in a more concrete manner. Recent works also relied on arbitrary and subjective measures of intentions such as asking if the respondent expects to work abroad within a specified timeline in the future, with the response usually ranked on some categories;⁶ others simply asked location-specific questions such as where the respondents want to reside, say, 5 years from now.⁷

The body of the literature that differentiates between various phases of the migration decision-making process is a rather new branch in the migration scholarship and is very much concentrated on contexts of the Global North-North migration movements particularly the EU context. One such work is that by Kley (2013) which adapted the Rubicon model within a three-phase model of migration that consists of 1) pre-decisional, or the considering phase where migration and its aspects are considered but where no concrete actions are made yet; 2) pre-actional phase, or the planning stage where concrete plans and preparatory works are undertaken, and 3) actional phase which they refer to as realizing stage or the act of moving. Aside from Kley (2013), Hoppe and Fujishiro (2015) also employed this three-stage process of migration decision-making.

Owing to the complexity of migration decision-making process, this paper seeks to analyze intentions of individuals to participate in a rarely studied type of migration – the guest worker or cyclical type, from the perspective of a developing country of origin. Like Kley (2013) and Hoppe & Fujishiro (2015), I treat intention as one that varies in degree of decisiveness and maturity and analyze how it is influenced by economic factors, perceptions and self-reported life satisfaction, and social capital, while controlling for human capital and other individual characteristics.

2.2. Social networks and migration intentions

The influence of migrant networks is perhaps one of the most documented determinants of migration. The presence of these ties of kinship in the destination increases the likelihood of individuals migrating (Massey, et al., 1993; De Jong, Root, Gardner, Fawcett, & Abad, 1986). In the analysis of pre-migration stages, social networks are found to significantly explain intentions to stay or move (Hoppe & Fujishiro, 2015; Kaplan et al., 2016). There are some who found the significance of social networks in forming intentions but not in actual migration behavior (Hoppe & Fujishiro, 2015; De Jong, 2000) perhaps because movement within a country (such as in the data by De Jong, 2000) or within a bloc like Europe or EU (Hoppe & Fujishiro, 2015) does not necessarily entail that much risks as well as monetary and non-monetary costs, a factor known in the literature to be mediated by social ties (Mckenzie & Rapoport, 2007).

⁵ See Otrachshenko & Popova (2014), Chindarkar (2014), Ivlevs (2015), Mara & Landesmann (2013)

⁶ See for instance Van Dalen & Henkens (2012)

⁷ For example, see Kaplan, Grunwald, & Hirte (2016)

Other migration intention studies have found that local social networks deter outmigration from their place of residence.⁸ This is because people who are more locally embedded socially (i.e. with larger number of close friends living nearby, having strong feeling of closeness to the place of residence, those who were born at their actual place of residence, or those with longer duration of residence in their local community) are less likely to move out. The feelings of being rooted to the area discourages outmigration such as the case of unemployed who are living in more economically deprived regions (Kley, 2013) and technical workers (Dahl & Sorenson, 2010). In fact, for technical workers such as the typical Danish scientists/engineers, ‘social factors swamp economic considerations in their choices of where to work (Dahl and Sorenson, 2010: 44). These findings however must be put into context. Both studies pertain to cases of people from high-income economies, with the latter focusing on technical workers. In the permanent migration of the highly-skilled who originated from high-income countries, one may view social ties to be a deterrent as there is not much need to move and seek opportunities elsewhere unlike in developing country setting where the need for better opportunities may outweigh other considerations.

In the abovementioned studies, social networks or ties are operationalized as 1) having all/most friends/relatives in town, 2) size of social networks (friends and relatives in origin), 3) the presence of close contacts/friends and relatives at destination, 4) former household members living outside the village, and 5) migration-unrelated social capital. To my knowledge, none of the studies mentioned used more nuanced measures of social networks, related or not to migration, in the analysis of migration intentions. Networks are far from being unidimensional; they exist in varying degrees and structures. Moreover, these studies assume that only direct networks matter and do not recognize that networks have structures which may influence the flow of information and resources within which an individual is embedded in.

Furthermore, analyses of migration intentions of people from less developed regions are rare. Conducting such analysis is essential in understanding the social networks-migration dynamics in varying contexts. For instance, while in permanent, Global, North-North migration streams, the size of origin-based social networks (friends and relatives in town) one has may deter plans to move, the opposite can be expected in less developed settings since social networks are a source of social capital that can be converted to financial capital that facilitates one’s movement. The extra layer of economic motivations is what causes the difference. People in less developed countries have larger motivations to move as the earnings gap between the origin and destination is much larger. The social embeddedness of such people may motivate people to migrate temporarily, rather than permanently. The above social networks-migration dynamics can be examined when one does not confine analysis to permanent movements only.

Social networks also tend to mediate other factors’ influence on migration propensity. McKenzie and Rapoport (2007) suggest, using the Mexico-US migration case, that while individuals with lower levels of assets do have a lower likelihood of moving, this constraint can be alleviated through networking. This is so because one of the key, if not the most important, mechanisms through which social networks facilitate migration is lowering the cost of migration. Likewise, it is plausible to assume that having more migration experience may dampen the need for migrant networks because learning comes with repetition. Those already with prior migration experience may no longer be needing that much help from their migrant networks since they have already gained important knowledge and familiarity with migration. The empirical evidence shows however that even after controlling for migration experience,

⁸ See Kley (2013)

migrant networks significantly and positively influence intention (Agadjanian et al. 2008; De Jong et al. 1986). The effect is similar to actual international migration behavior (De Jong et al. 1986). Clearly, migrant networks aren't just information cost-reducing agents. This proves that there is more to learn from the dynamics between migrant networks and migration intentions and behavior.

The social capital theory in migration is a well-documented branch of the scholarship. However, much still needs to be expounded. First, migrant networks must be looked at in a less simplistic term. The dichotomous or unidimensional measure of migrant networks fails to account for the social embeddedness of migration intentions. This paper takes into account the multidimensionality of social networks – considering not only network size but also type or strength of social ties, and the structure of social relations. It analyzes the effect of social networks in this manner while controlling for other important determinants identified in the migration intention literature.

2.3. Other factors affecting migration intentions

Wealth, whether in absolute or relative terms, has been argued to influence intentions to migrate. A key argument says that having the money to move is crucial as migration is a costly endeavor. But the findings are mixed and seem to vary depending on the contextual factors. The availability of resources to finance international move was found to enhance migration intention in a rural village in the Philippines (De Jong et al, 1986). Evidence from rural Taiwan shows that with lower income, people were less likely to intend to move (Liao, 2001). The author attributed this to 'the affordable housing or the availability of family-owned homes that is common in rural Taiwan' (Liao, 2001: 452). On the contrary, the same constraints do not seem to influence internal emigration intention as shown in the Thai rural case (De Jong, 2000) and in the actual emigration of rural Bangladeshis (Mendola, 2008) because internal emigration is far less costly than international migration. Meanwhile, resources proxied by car ownership do not significantly explain variations in international migration intentions of young people in Kyrgystan (Agadjanian et al.,2008).

Under the tenets of New Economic of Labor Migration, a household which experience a greater level of relative deprivation compared to the reference group is more likely to engage in migration. Hyll and Schneider (2014: 337) analyzed migration intention to leave East Germany under the relative deprivation framework and found that indeed 'unfavorable income comparisons affect preferences' and that policies which affect income distribution might also affect propensity to migrate.⁹

Meanwhile, Dustmann & Okatenko (2014) argued that wealth must not be viewed in a simplistic manner. They contend, using multi-country data from the Gallup World Poll, that intentions respond to individual wealth, but this association depends on where one is along the wealth distribution and the migration costs. In relatively poorer regions (sub-Saharan Africa and Asia), where wealth constraints are binding, intentions to migrate increases along the wealth distribution. In the relatively richer region (Latin America), however, wealth constraints are not binding, and we do not see similar influence of wealth on migration intentions. The role of wealth therefore is non-linear; it depends on where one is situated along the wealth distribution. Where migration is costly, wealth alleviates budget constraints and enhances

⁹ See also Quinn (2006) although this study examines determinants of actual migration rather than intentions

migration intentions. Meanwhile, as one goes up along the distribution, wealth decreases migration intentions because the gains from migration relative to the current wealth is lower. The dual role of wealth in migration is consistent with the proposition of the mobility transition hypothesis¹⁰ which proposes that at low levels of income, rising income is associated with rising emigration rates but after some turning point, further income increases is accompanied by declining emigration rates (Clemens, 2014).

To sum up the literature, wealth is important in financing international migration by those who are facing wealth constraints. But this does not seem to consistently apply to internal migration where the cost of movement may be relatively negligible compared to international migration. Those who are not facing such constraints appear to be less likely to migrate when wealth increases. Hence, the influence of wealth on migration is non-linear and is likely to follow an inverted U shape. On the other hand, evidence also shows that the more relatively deprived are more likely to decide to leave which suggests that it is the poorer households which are more likely to participate in migration. Shedding light on this inconsistency is also important to this empirical exercise.

Indeed, a great deal of the variation in emigration tendencies remains unexplained. For instance, despite the inequality that persists, we do not see mass exodus of those at the bottom of the socioeconomic classes. For this, other scholars look to other disciplines to explain migration. These works are guided by the theory of planned behavior (TPB) by Ajzen (1991). In the TPB, intentions being a primary determinant of behavior are a product of perceptions about the behavior and expectations of what one will achieve as an outcome of the behavior – in this case, migration or mobility. These models incorporate perceptions, norms, and attitudes into the analysis. It is proposed that such factors like perceived opportunity differentials between the origin and destination (Kley, 2013; Van Dalen & Henkens, 2012; Kaplan et al., 2016; De Jong, 2000; De Jong et al., 1986) and anticipated job benefits and career aspirations (Hoppe and Fujishiro, 2015) do play a role in the formation of migration intention, which in turn, determines migration behavior.

There is consistency in the findings that such are significant in explaining variations in migration intention (De Jong, 2000; Kley, 2013; Van Dalen & Henkens, 2012; Hoppe & Fujishiro, 2015). In particular, Hoppe and Fujishiro (2015) found that anticipated job benefits and career aspirations are associated with all phases of the migration decision-making process. Likewise, looking at the case of emigration intentions from Netherlands, ‘the perceived labor market opportunities are central to understanding why workers are not oriented much at working abroad, even for a couple of years...in other words, the central tenet of the basic economic models of international migration – driven by net wage gains – does not seem to apply to the Netherlands’ (Van Dalen & Henkens, 2012: 41).

Aside from expectations and attitude, norms affect intentions because these provide intangible support to migration decision (Kaplan et al., 2016). Norms are operationalized as perceptions of one’s inner circle concerning his/her migration (De Jong, 2000; Van Dalen & Henkens, 2012); perception of whether people in the community help each other out, whether there is community improvement, or whether there is likely to be progress due to political factors such as elections (Agadjanian et al. 2008). The findings however are quite mixed. Using Thai internal migration data, De Jong (2000) found that perception of one’s inner circle concerning his/her migration is not significant in explaining intention, but it is so in the Netherland’s case.

¹⁰ See Zelinsky (1971)

In particular, ‘partners who oppose migration are among the main barriers for international mobility’ (Van Dalen & Henkens, 2012: 42). Some factors matter like the perception of improvement in the community living conditions while others don’t – such as perceptions of progress brought about by election or that of people in the community helping each other (Agadjanian et al. 2008). Van Dalen & Henkens (2013) looked at the effects of satisfaction with living condition in the origin country (i.e. Netherlands) and found that people’s discontent with the quality of public domain are strong driving forces in relation to emigration behavior. They likewise found that it is not so much the private gains but the public gains that are linked to moving abroad that weigh heavily in the decision-making process. This is corroborated in Dustmann and Okatenko (2014) which found that contentment with local amenities like security and public services influence migration intentions but more so for the poorest areas. In addition to attributes pertaining to local amenities, community attachment in general was also found to significantly reduce migration intention in the Taiwan case (Liao, 2001) consistent with findings of Kley (2013) on local embeddedness.

Several studies also examine the effects of life satisfaction on the intention to migrate. Applying the case of 27 European countries, Otrachshenko et al (2014) found that life dissatisfaction strongly predicts intention to migrate. This is consistent with Chindarkar (2014) which found that controlling for relative deprivation and place utility factors, life satisfaction influences intentions to migrate abroad among Latin Americans, and this especially true for those who are highly educated. Interestingly, Ivlevs (2015) found a U-shaped relationship between life satisfaction and emigration intentions – that is people who are either very satisfied and very unsatisfied are the most likely to report having intention to move abroad; those at the middle of the distribution in terms of life satisfaction are the least likely to do so.

Based on the foregoing evidence, this paper controls for the effects of perceptions, norms, and life satisfaction in this analysis of the relationship between migrant networks and migration intentions in a context that has not been studied in the past. Moreover, it analyzes effects of these factors at various stages of the decision-making process to obtain a better understanding of what matters more in the formation of migration intention.

Migration intention is likewise largely determined by individual circumstances. Having the desire to migrate is more likely for the young (Kley, 2013; Van Dalen & Henkens, 2012) such as in the context of migration of highly-educated individuals (Hoppe & Fujishiro, 2015) and in rural to urban migration in the Philippines (De Jong et al, 1986). Meanwhile, the odds of considering and planning to migrate is lower for those with lower level of educational attainment based on European context evidence (Kley, 2013; Agadjanian et al., 2008) while evidence from developing country shows that there is significantly negative relationship between years of schooling and international migration intentions (De Jong et al., 1986). In the Taiwan case, educational level was found to positively and significantly enhance likelihood to migrate (Liao, 2001). Based on Mexican data, McKenzie & Rapoport (2007) found that the influence of education is found to depend on the migration prevalence in a community such that negative educational selection is observed in areas with large migration networks. Hence, they noted that analyzing education influence on migration behavior must account for variation in the migration prevalence across communities of origin. The current analysis however looks at only one community of origin and that the effects of education and migrant network variables, among others, are examined at the micro-level.

Gender’s influence on migration intention is mixed. Agadjanian et al (2008) found very little variation, if any, in the tendency to migrate by gender while De Jong (2000) found considerable

gender effects in his analysis of Thai internal migration intentions. For instance, gender mediated the effects of several key explanatory variables. Migration experience influences intention positively but only for women. On the other hand, migrant networks tend to encourage migration intentions of men but not women. Also, while lower income expectancies for remaining in the local village vis-à-vis urban locations encourage women to migrate, this is not the case for men. Having dependents was also found to have gendered effects based on the same Thai internal migration data – it encourages men’s intention to move in the future but dampens women’s desire (De Jong, 2000) which reflects the traditional delineation in gender roles.

There is also mixed empirical evidence on marriage and migration intention. Being single encourages international migration intention among Filipinos (De Jong et al. 1986) consistent with the Thai data (De Jong, 2000) but in contrary to the evidence found in the Krygyzstan data, at least for those with European ethnicity (Agadjanian et al., 2008). It is also found that childbearing tended to discourage migration intentions.

The role of migration experience was also examined in past studies of migration intention and the findings vary depending on the type or nature of migration. In the context of migration of highly-skilled between high-income countries, migration experience (i.e. having lived abroad previously) is associated with neither migration intention nor actual migration behaviour (Hoppe & Fujishiro, 2015). In contrast, experience is a consistently significant predictor of migration intentions and behavior, whether internal or international, of people from low-income to high-income areas (see De Jong, 2000; De Jong et al, 1986; Agadjanian et al. 2008).

This illustrates the selectivity of migration – that is, the highly skilled need not have that much experience to move from one labor market to another while those from low-income origins who may have relatively lower level or quality of skills must possess greater experience for them to penetrate other markets particularly those in high-income economies. It is noted that with more migration experience, the amount of migration information sought decreases (Balaz et al, 2014). ‘Migrants already possess some tacit knowledge about migration and deal with information overload more efficiently than non-migrants: they seek less information as they probably know which information is important to them’ (Balaz et al, 2014:51).

2.4. Literature gap and research questions

The literature on migration and social networks rests heavily on the use of dichotomous or unidimensional measures of social networks which fail to expound on the types/degree of relations that matter. Moreover, much of the recent literature that explain migration intentions focus on inter-regional or intra-country migration (see Kley, 2013; Kaplan et al., 2016; Dahl & Sorenson, 2010, De Jong, 2000), and international flows from or within Europe (see Hoppe & Fujishiro, 2015, Hyll and Schneider, 2014, Otrachshenko et al., 2014, Mara et al. 2013, Ivlevs, 2015). Many of these studies focus on rather permanent type or residential relocation-type of migration or on the movement or intentions to move of highly-educated, knowledge workers or career individuals, mostly moving freely within developed economies (see Hoppe et al, 2015; Van Dalen & Henkens, 2012 & 2013). Others focus mainly on the aspects of wealth, life satisfaction, perceptions and norms but overlook the role of migrant networks and/or network structures.

To advance our understanding of the migration decision-making process, this analysis focuses on the social context while controlling for other, equally important, factors. It considers the

context characterized by largely temporary and cyclical movement where migrant's skills may vary from low to high. It is reasonable to believe that the factors that shape migration intentions in such setting differs significantly from the permanent movement of highly-skilled knowledge workers and professionals in rich countries. This is attributed to differences in the underlying social, cultural, and economic context, level of individual capacities and values accorded to movement between the two types of migration.

This study seeks to answer the following research questions: How do migrant networks influence the decisiveness to migrate by individuals from developing countries like the Philippines? Holding other factors like wealth and subjective perceptions constant, do migrant networks matter at every phase of the decision-making process? What kinds of social ties matter for migration decision-making?

3. Analytical Framework and Hypotheses

This analysis focuses on the relationship between networks and migration intentions but without disregard to roles that economic, political, and development processes play in the process of decision-making. Moreover, it recognizes that people may have different appreciation of the events happening in their environment (such as potential outcomes of political events and subjective perceptions on economic developments) – leading those of similar status, characteristics, and environment to act differently from one another. Furthermore, this analysis treats migration decision-making as a complex process that may be formed in stages, not as a simple stay-or-leave dichotomy. Such approach is necessary given the complexity of migration as a human phenomenon.

Hugo (1987) as cited in Gurak and Caces (1992) viewed migration decision-making as a stress-handling mechanism wherein individuals choose between staying, migrating temporarily or permanently as the optimal stress reliever. Aside from human capital and demographic attributes of the individual, he noted that the source, nature and amount of information available to prospective migrants as well as the community-level factors that shape the way one evaluates the available information are the key factors that matter in the migration decision-making process. Taking these into consideration, the unit of analysis in this study is the individual person level. Nevertheless, this study does not assume that decision-making is made purely at the individual level, it is still possible that the individual is acting or behaving based on household decisions. Doing the analysis at this level allows the inclusion of human capital and human agency without overlooking the roles of household characteristics and broader social and developmental factors that are often mediated by public policies. Furthermore, in the analysis of the role of social networks, the network measure is presented in a more inclusive manner, which is beyond the dichotomous with-or-without-access as well as relation-neutral network size. The potential influence of not only direct links but also indirect ones; the weak and the strong ties are considered.

This analysis looks at the cases of individuals from a rural village, in a top labor-sending developing country. The type of migration people engaged in is largely temporary, cyclical, guest worker type involving largely low-skilled workers, which is by the way a well-documented deficiency in the migration intention literature dominated by permanent, Mexico-US, intra-regional, and high-skilled migration analyses. The context under which the hypotheses of this analysis are formulated is characterized by high migration cost (i.e. the costs are binding) coupled with income and credit constraints. Given these characteristics of the

context, migrant networks affect migration intentions in several ways. One is through its influence on aspirations and psyche of people – their awareness on the migration of others and the gains obtained from these activities. The other is through its facilitative mechanism – where migrants support the migration of their kin through financing and provision of information and job recommendation.

Because migration is a costly endeavor, a greater amount of commitment and support from kin is needed by the prospective migrant. It is, therefore, reasonable to hypothesize that migrant networks of closer relations, whether pioneer or more recent ones, influence intention-formation in a more significant way since, by social conventions, close relations have more moral obligation and altruistic motives to support the prospective migrant than weaker relations. Although weak relations are known to expand one’s opportunity set, the closer relations may matter more in settings where costs are binding, unlike in North to North migration streams. Furthermore, in studies of permanent migration intentions, scholars have argued trust and affinity (e.g. the presence of close family in the origin community) can keep people from leaving (see Caces, et al, 1985). In contrary, I propose that in this study’s context, the presence of close ties in fact act as a motivating factor for migration. As proposed in the New Economics of Labor Migration (NELM), people migrate so that they can send remittances back to their family back home.

In summary, the following hypotheses about the association between migration decision-making and migrant networks will be tested:

Hypothesis 1: Individuals with larger migrant networks who are close relations are more likely to decide or plan to migrate as well, *ceteris paribus*.

Hypothesis 2: An individual in relational proximity to pioneer migrants are more likely to want to consider or plan to migrate because they are in a better position to access migration-related social capital, holding other factors constant.

4. Data and Econometric Methodology

4.1. Data

To analyze migration intentions, data were gathered from the semi-structured survey conducted in a rural village of origin in the country – Brgy. Camachile in the municipality of Orion, Bataan Province. The survey questionnaire was administered in 2016 through face-to-face interviews for all 365 households in the village. The data that were collected include household demographic characteristics such as sex, birthdates, educational attainment, occupation, and marital status; individuals’ migration intentions and subjective perceptions on and valuation of government performance and household economic conditions. The survey also collected information about social kinship and friendship links among all the households in the village.

¹¹ While the data used in the empirical analysis is mainly cross-sectional, retrospective information such as complete migration histories (destinations, timeline of each deployment, occupation at destination, and monthly earnings) of all members of the household who have migration experience were collected.

¹¹ For more details about this dataset, see PIDS Discussion Paper No. 2018-03 The Structure of Origin-based Social Network and Its Influence on Migration Diffusion: The Case of a Migrant-sending village in the Philippines.

4.2. Variables

4.2.1. Migration intention

To represent migration intention, an ordinal variable that reflects the phases¹² of migration decision-making was developed. The dependent variable is a migration decision variable with values 1 to 3 corresponding to the decisiveness to migrate. The absence of desire to migrate is assigned a value of 1. Being in the pre-decisional stage (i.e. having the desire to emigrate if given adequate migration-related support from kin; and the planned migration timeline is not later than 2 years from interview date) is assigned a value of 2. Almost all of those in this phase have also identified a target destination. The third category, with a value of 3, is called the pre-actional phase where the plans are more decisive. In this phase, the person is already carrying out concrete actions for migration plans, the minimum criteria of which is possessing a valid passport. In rural villages in the Philippines, having a valid passport is not customary; it signifies having a serious plan to work overseas in the near future. In addition, being in the pre-actional phase means that the person must have done at least one of the following – saved own money or sought out lenders to finance migration costs, obtained migration-related information from kin, searched for jobs on the Internet or other platforms, and visited recruitment agencies, among others. The actional stage, where the individual has already migrated is not yet observed in this study, hence this analysis is only up to the pre-actional phase. Unlike the dichotomous and arbitrary measure of migration intentions used in the past, this analysis uses one that is measured with less subjectivity and arbitrariness as it provides a sense of maturity or decisiveness of the intent. As mentioned earlier, such approach is relatively similar to that by Hoppe et al (2015) and Kley (2013), only that this is adjusted based on the context under consideration.

4.3. Social networks

The first set of migration network variables refers to the lagged migration network size by degree of consanguinity or affinity defined as the number of individuals who were considered migrant workers (MW) in the five years prior to the study (i.e. 2010-2014) belonging to households living in the village who are related to the household of interest by:

- a. first degree of consanguinity or affinity,
- b. second degree,
- c. third degree,
- d. fourth degree,
- e. other familial relations,
- f. close friendship, and
- g. other friendship ties.

The second set pertains to the household-affirmed migrant networks (HAMN) while the third set is composed of the number of direct links to pioneer migrant households, both disaggregated by type/degree of relation. HAMN refers to the number of persons identified by the respondents as their ‘migration network’. Pioneer migrant households refer to those whose at least one

¹² This is quite similar to the different phases of rubicon model as proposed in Kley (2013) and Hoppe and Fujishiro (2015).

member participated in international migration from the 1960s up to 1980s. The number of pioneer migrant households indirectly connected to the individuals is also included.¹³

It was known from a related paper¹⁴ that pioneer migrant households hold strategic, hence influential positions (i.e. high centrality scores) within the web of social relations. Therefore, using the direct and indirect connections to pioneer migrants already controls for network position. After all, it is the access to pioneer migrants, with their prior migration experience and resources, which are hypothesized to have an influence on the decision of a person to leave or stay.

Finally, the last set of network variable refers to the network parameters calculated from the social network analysis of the links in the study area.¹⁵ Measures of network connectedness or centrality are important because they allow us to assess one's ability and opportunity to access migration-related information and resources, among others. In addition, this analysis looks at the influence of the individual's migrant network within his or her own household – the number of household co-members who have had any past migration experience which represents the immediate and the closest (most trustworthy) migrant network of the respondent.

4.4. Control variables

To control for wealth, I used a household asset index and relative income of the individuals. Applying the relative deprivation hypothesis, it is expected that the higher the relative income or wealth is, the lower the propensity to desire to emigrate. People of the same economic stature may have different perceptions on things and events that have a direct influence on their well-being. Therefore, this analysis likewise controls for perceptions on the performance of the national government on job creation and expectations brought about by new political leaderships. The questions used in the interviews to determine these are:

How satisfied are you with what the national government is doing to create/provide jobs for the people?

Do you believe/perceive that the country's economic situation will improve after the presidential election in May?

Do you believe/perceive that your locality's economic situation (Municipality of Orion) will improve after the local election in May?

¹³ For indirect links to pioneer migrants, I included the number of pioneer migrant households that each can reach via the network graph of social relations within a pathlength of 2. The length of a path is the number of relationships or lines it contains. A path with a length of 2 from node *i* to node *j* exists when a third actor *h*, an intermediary, is present such that *i* is adjacent to *h* and *h* in turn is adjacent to *j*. This is determined by simply multiplying the NxN adjacency matrix of social relations (undirected; with values 0 to denote no relation and 1, with relation) by itself once. The matrix containing the product of the square gives the number of paths of length 2 between two nodes, or the number of ways one can reach the other when there is one intermediary between them. I summed up the households or nodes that have a non-zero value to get the number of households indirectly linked to the household of interest.

¹⁴ See PIDS Discussion Paper No. 2018-03 The Structure of Origin-based Social Network and Its Influence on Migration Diffusion: The Case of a Migrant-sending village in the Philippines.

¹⁵ See PIDS Discussion Paper No. 2018-03 The Structure of Origin-based Social Network and Its Influence on Migration Diffusion: The Case of a Migrant-sending village in the Philippines.

Respondents were asked to provide Likert scale-type responses to each of these questions with 5 as having a positive response while 1 reflects a negative response. The middle point, 3, denotes neutrality. The responses in these three questions were pooled into a perception index via principal component analysis (PCA) which then served as an explanatory variable in the econometric analysis. The expected sign is negative such that the more satisfied people are in the government's ability and performance in creating jobs or the more optimistic they are in the ability of the incoming national and local officials, the less likely they are to move out to seek for better opportunities elsewhere.

The analysis also looks at the possible influence of an individual's satisfaction with respect to their own household's living condition. The following questions were asked and again Likert scale responses (i.e. scale of 1 to 5 with 5 coded as 'absolutely yes' and 1 as 'absolutely not') were gathered.

Do you believe/perceive that your household's economic situation has improved in the last 5 years?

How satisfied are you with your household's overall living conditions?

How satisfied are you with your current household earnings at present?

As in the perception variables, these self-reported satisfaction variables were reduced into a satisfaction index via PCA. Like in the perception variable, we expect that the less satisfied people are with the progress made by their households, if they are not pleased with their current earnings and overall living condition, the more likely that they will contemplate on migrating. How the perception and satisfaction indices were constructed are discussed in the Appendices.

Owing to the empirical significance of human capital in migration, this analysis also controls for schooling and age – as a proxy to skill and overall experience, respectively. Schooling is operationalized as years spent in formal education including technical and vocational training. We expect that the more educated will have greater desire to migrate than the less educated because of the potential higher earnings from migration. It is also expected that age has a non-linear relationship with intention such that initially age is positively correlated with migration desires but at some point, as people get older, there is less desire and eligibility for migration.

This analysis also controlled for the years of migration experience. The literature largely relied on a dichotomous measure of experience – that is, whether the respondent has had any migration experience of some specified length of time. But using such does not account for the depth of experience and the possibility that longer experience may have varied effects as opposed to shorter exposure. This study exploits the complete migration history of an individual to go into the estimation. Other basic demographic factors like the number of dependents, marital status, and sex were also included as control variables. The summary statistics of the variables used in this analysis are shown in Table 1. Majority (55.43 percent) of the respondents reported that they do not intend to leave, around a quarter are considering migrating within the next two years while around 20 percent are already conducting concrete actions for their migration plans.

Table 1. Summary statistics of explanatory variables (Part 1 of 2)

Variable	Percent to total	Obs	Mean	Std. Dev.	Min	Max
<i><u>Dependent variable</u></i>						
Decision-making phase		517	1.650	0.797	1	3
1 - Not considering	55.3					
2 - Pre-decisional	24.4					
3 - Pre-actional	20.3					
<i><u>Individual characteristics</u></i>						
Age, years		517	41.749	14.542	15.000	80.000
Age, squared		517	1954.015	1280.731	225.000	6400.000
Education, years		516	10.052	2.835	2.000	15.000
Education, years, squared		516	109.072	55.333	4.000	225.000
Male dummy		559	1.397	0.859	0.000	5.000
Married dummy		517	0.652	0.477	0.000	1.000
With work		496	0.619	0.486	0.000	1.000
Migration experience, years		516	1.752	4.775	0.000	27.000
Satisfaction index (PC1)		517	0.005	1.410	-2.955	1.983
Perception index (PC1)		517	0.008	1.299	-3.264	2.202
<i><u>Household characteristics</u></i>						
Household size		548	4.557	1.648	1	10
Asset Index		477	3.803	2.098	0.814	9.849
Asset Index, squared		477.000	18.858	20.763	0.662	97.009
Relative income, 2012		527	0.934	1.266	0.053	15.883

Table 1. Summary statistics of explanatory variables (Part 2 of 2)

Variable	Obs	Mean	Std. Dev.	Min	Max
Household co-members with migration experience	517	0.9477756	0.91879	0	5
<i>Network connectedness</i>					
Degree	548	12.967	8.468	0.000	46.000
Eigenvector	548	0.034	0.051	0.000	0.244
Betweenness	548	379.652	444.056	0.000	3240.659
Closeness	548	0.348	0.039	0.125	0.453
<i>Direct links to pioneer (number of households)</i>					
Close family	558	0.728	0.907	0.000	4.000
Other family	558	1.722	2.102	0.000	10.000
Close friends	558	0.889	1.226	0.000	8.000
Other friends	558	0.079	0.276	0.000	2.000
All	558	3.418	2.888	0.000	15.000
Indirect links to pioneer households	537	27.786	12.835	1.000	64.000
<i>Lagged migrant network, identified via SNA</i>					
1st degree	537	0.311	0.651	0.000	3.000
2nd degree	537	1.104	1.400	0.000	7.000
3rd degree	537	1.415	1.595	0.000	8.000
4th degree	537	1.696	2.229	0.000	11.000
Other family	537	0.780	1.665	0.000	11.000
Close friends	537	2.197	2.354	0.000	12.000
Other friends	537	0.106	0.494	0.000	6.000
All	537	7.611	5.377	1.000	28.000
<i>Household-affirmed migrant network, direct</i>					
1st degree	548	0.122	0.373	0.000	3.000
2nd degree	548	1.047	1.426	0.000	7.000
3rd degree	548	1.325	1.607	0.000	8.000
4th degree	548	0.714	1.299	0.000	9.000
Other family	548	0.100	0.457	0.000	4.000
All	548	3.307	2.540	0.000	15.000

4.5. Econometric estimation

To estimate decisiveness of migration intention, we fit an ordered logistic regression model or what is known as a proportional odds model where we specify the dependent variable as the migration decision stage with ordered categories $j=1,2,3$ (i.e. 1 – not considering; 2- pre-decisional; 3- pre-actional). The problem however with ordered logistic regressions is that sometimes the parallel regression assumption is violated. For this, Williams (2006) offers an alternative – the generalized ordered logit (i.e. `gologit2`) model. The advantage of using the generalized ordered logit model over the usual ordered logit estimation is that the constraint of parallel regression assumption can be relaxed – that is, the influence of an explanatory variable is not constrained to be similar through all categories of the outcome variable. In this exercise, for instance, it is plausible that the influence of some factors, such as the case of some life-course factors (Kley, 2011), may be greater on planning migration than on considering it. The Brant test of parallel regression assumption can be utilized to see if indeed the model fails to meet the parallel regression assumption. If the test turns out significant, the generalized ordered logit model can be utilized instead.

In addition to the unconstrained generalized ordered logit model, there is also a more parsimonious solution to the problem which is the partial proportional odds model that allows some β s to vary but not all. This relaxes the parallel lines constraint only for the variables where the assumption is violated. To achieve robustness, both the unconstrained generalized ordered logit model and the partial proportional odds model were estimated along with the ordered logit model to analyze migration intentions of the current study's sample. The test of parallel assumption is discussed below as part of the results.

5. Results and Discussion

In this analysis, we want to determine how migrant networks influence decisiveness to migrate taking into consideration economic factors and human perceptions. In contrary to past studies which operationalize migration intention using dichotomous measures, this analysis accounted for the fact that migration is a complex phenomenon whereby decisions are made in various phases. These phases of intention formation, with values 1 to 3, are estimated via ordered logit regression. Specifically, the likelihood of considering (i.e. being in pre-decisional phase or $Y=2$) or planning (i.e. being in pre-actional; $Y=3$) migration versus not considering at all (i.e. $Y=1$); and planning versus being in the early considering stage or not considering at all are estimated. This paper uses various migration network variables measured at the household level. The assumption is that the concept of network in a household extends to the individuals belonging to that household. The estimation results, reported as odds ratios, are shown in Table 2 (for ordered logit regression), Table 3 (for generalized logit), and Table 4 (for partial odds regression).¹⁶

5.1. Within-village migration networks (lagged) and network connectedness

All the estimation results (i.e. ordered logit, generalized ordered logit and partial odds model) show that the total number of lagged, within-village migration networks are found to negatively influence migration intentions. On the average, it reduces the odds by around 4 percent.

¹⁶ In the estimation of the partial odds model, part of the results in Stata is a Wald test of parallel-lines assumption for the final model (after implementing constraints to variables that violate the assumption) showing the final model not violating the proportional odds assumption.

Meanwhile, none of the measures disaggregated by degree of relation consistently and significantly influence intention, holding other factors constant. This is a deviation from the usual expectation that having a larger migrant network encourages one's migration motivation. This study, in fact, says otherwise which suggests that with the current extent of international migration activities in the area under study, people's motivations are negatively influenced by their migration networks.

The abovementioned finding is consistent with that for network connectedness. In contrast to expectation, within-village network connectedness does not enhance the maturity of individual migration intentions, all else being held equal. In fact, the different regression results show that the effect of connectivity is negative and significant. Individuals belonging to more central households within the village of study are less likely to be motivated to migrate in the future. Among the network parameters included, the eigenvector centrality which measures strategic network position (i.e. being connected to better-connected households) has a consistently negative result with a P-value of <0.05 . The effect of eigenvector centrality is almost the same in varying levels of the decision-making process under study. It must be noted though that by being strategically positioned, individuals do not only have the potential to extract greater amount of social capital, whether it is related to migration or not, but can also obtain various types of information about migration – including both gains and drawbacks as well as other non-migration opportunities. Perhaps, people in more central household are more likely to obtain opportunities in the local market and therefore, have no great need to seek job elsewhere.

The abovementioned findings might, again, reflect the limitation of this measure (as well as the lagged, within-village migration networks) in gauging one person's extent of social network since it is constrained only within the village of residence. People's networks may go beyond such geographical boundary and the appropriate concept of "connectedness" is that which include networks other than that which is measured in this study. Moreover, due to limitations in research resources, this empirical exercise on the role of networks focuses on inter-household networks rather than inter-personal ties. Admittedly, this is a significant limitation that related works must address in the future.

5.2. Household-affirmed, current migration networks

As for the current set of migration network (household-affirmed), the relatively consistent finding is negative and significant but only for the third-degree relations (e.g. aunt, uncle, niece, nephew); the total network size is not significant in any of the estimations, holding other factors constant. There is also some, though inconsistent, indication that fourth-degree migrant relations enhance migration intentions. The unexpected, though not surprising, result which varies according to type of relations suggests that in the formation of migration plans, not all migration networks matter and have similar influence. Note that the household-affirmed variable measures current migration networks of the individuals and there are some people who may not be encouraged to engage in international migration when many of their kin are already working abroad; some of them may be receiving support already and find no need to leave as well. On the other hand, some people may aspire more and therefore are wanting of better opportunities if they tend to compare themselves with some of their kin like their cousins (i.e. fourth-degree relations).

Table 2. Results of ordered logistic regression of migration intention phase using robust errors, odds ratios (Part 1 of 2)

Variable	M1	M2	M3	M4	M5	M6
<i><u>Individual characteristics</u></i>						
Age, years	1.1210	1.1377 *	1.1292 *	1.1331 *	1.1257 *	1.1355 *
Age, squared	0.9977 **	0.9975 **	0.9976 **	0.9975 **	0.9976 **	0.9975 **
Education, years	1.4717	1.5080 *	1.5710 *	1.6147 **	1.5681 *	1.5763 *
Education, years, squared	0.9865	0.9853	0.9830	0.9819	0.9829	0.9830
Male dummy	1.7536 **	1.7916 **	1.7297 **	1.7507 **	1.7401 **	1.7540 **
Married dummy	0.8823	0.9049	0.8906	0.8843	0.8894	0.8841
With work	1.2524	1.2982	1.3059	1.2616	1.3294	1.2822
Migration experience, years	1.0838 **	1.0665 *	1.0641 *	1.0632 *	1.0648 *	1.0651 *
Satisfaction index (PC1)	0.7346 ***	0.7176 ***	0.7165 ***	0.7139 ***	0.7187 ***	0.7144 ***
Perception index (PC1)	0.9913	0.9859	0.9908	0.9934	0.9913	0.9900
<i><u>Household characteristics</u></i>						
Household size	1.1314 *	1.0617	1.0658	1.0587	1.0726	1.0589
Asset Index	1.2899	1.1811	1.2298	1.2101	1.2330	1.2414
Asset Index, squared	0.9697	0.9774	0.9726	0.9723	0.9731	0.9719
Relative income, 2012	1.0861	1.0588	1.0756	1.0724	1.0806	1.0766
<i><u>Network variables</u></i>						
Household co-members with migration experience		1.4655 ***	1.5516 ***	1.5944 ***	1.5431 ***	1.5540 ***
<i><u>Network connectedness</u></i>						
Degree			0.9770 *			
Eigenvector				0.0050 **		
Betweenness					0.9996 *	
Closeness						0.0036 *
/cut1	4.7076	4.8620	4.6575	4.8845	4.7699	3.1259
/cut2	6.0769	6.2601	6.0656	6.3030	6.1763	4.5351
N	443.0000	443.0000	443.0000	443.0000	443.0000	443.0000
Pseudo R2	0.1596	0.1683	0.1723	0.1761	0.1722	0.1724

legend: * p<.1; ** p<.05; *** p<.01

Table 2. Results of ordered logistic regression of migration intention phase using robust errors, odds ratios (Part 2 of 2)

Variable	M7	M8	M9	M10	M11	M12
<u>Individual characteristics</u>						
Age, years	1.148581 *	1.136101 *	1.129222 *	1.134735 *	1.131065 *	1.133305 *
Age, squared	0.997367 ***	0.997484 **	0.997585 **	0.997491 **	0.997562 **	0.997504 **
Education, years	1.59124 *	1.507089 *	1.547134 *	1.580087 *	1.549091 *	1.533112 *
Education, years, squared	0.982811	0.985256	0.984145	0.98313	0.98424	0.984378
Male dummy	1.860562 **	1.768724 **	1.780369 **	1.771039 **	1.740647 **	1.710915 **
Married dummy	0.88872	0.910072	0.863171	0.899538	0.837309	0.883224
With work	1.344754	1.318431	1.260632	1.253432	1.276542	1.271788
Migration experience, years	1.069302	1.066947 *	1.062171 *	1.064881 *	1.057179	1.063627 *
Satisfaction index (PC1)	0.705793 ***	0.717057 ***	0.713638 ***	0.712002 ***	0.71624 ***	0.715745 ***
Perception index (PC1)	1.006778	0.984989	0.992418	0.99049	0.991811	0.98496
<u>Household characteristics</u>						
Household size	1.081261	1.062901	1.062651	1.063331	1.071078	1.06625
Asset Index	1.117741	1.219442	1.209876	1.277946	1.263485	1.282511
Asset Index, squared	0.986005	0.974709	0.973728	0.96904	0.968336	0.968461
Relative income, 2012	1.041773	1.067689	1.07195	1.084969	1.062422	1.094901
<u>Network variables</u>						
Household co-members with migration experier	1.557066 ***	1.487926 ***	1.535172 ***	1.538403 ***	1.699725 ***	1.592488 ***
<u>Direct links to pioneer (number of households)</u>						
Close family			0.890863			
Other family			0.94766			
Close friends			1.009332			
Other friends			1.021752			
All				1.027832		
Indirect links to pioneer households				0.976345 *		
<u>Lagged migrant network, identified via SNA</u>						
1st degree					0.948427	
2nd degree					0.877708	
3rd degree					1.066013	
4th degree					0.915202 *	
Other family					0.926096	
Close friends					1.009842	
Other friends					1.005403	
All						0.955742 **
<u>Household-affirmed migrant network, direct</u>						
1st degree	1.493421					
2nd degree	0.964605					
3rd degree	0.831203 **					
4th degree	1.10488					
Other family	1.172221					
All		0.968512				
/cut1	5.277347	4.811871	4.738138	4.618255	4.845601	4.682061
/cut2	6.706506	6.211554	6.145078	6.033046	6.275236	6.095201
Pseudo R2	0.1811	0.1689	0.172	0.1745	0.1807	0.1742
N	443	443	443	443	443	443

Table 3. Result of generalized ordered logit regression, odds ratios (Part 1 of 3)

Variable	G1	G2	G3	G4	G5	G6
1 versus 2 or 3						
<i>Individual characteristics</i>						
Age, years	0.9175	0.9176	0.9067	0.9108	0.8986	0.9134
Age, squared	0.9999	0.9999	1.0000	0.9999	1.0001	0.9999
Education, years	1.5578	1.5661	1.6584 *	1.6942 *	1.6580 *	1.6561 *
Education, years, squared	0.9851	0.9851	0.9821	0.9812	0.9819	0.9823
Male dummy	1.2308	1.2896	1.2294	1.2549	1.2271	1.2554
Married dummy	1.5315	1.5924	1.5944	1.5679	1.5746	1.5685
With work	1.6956 *	1.6484 *	1.6945 *	1.6350 *	1.7516 **	1.6425 *
Migration experience, years	1.0547 *	1.0424	1.0417	1.0400	1.0430	1.0432
Satisfaction index (PC1)	0.6607 ***	0.6583 ***	0.6583 ***	0.6530 ***	0.6622 ***	0.6552 ***
Perception index (PC1)	0.9755	0.9824	0.9871	0.9880	0.9870	0.9869
<i>Household characteristics</i>						
Household size	1.1718 **	1.1577 *	1.1634 *	1.1533 *	1.1838 **	1.1557 *
Asset Index	1.4411	1.4164	1.4640	1.4324	1.4886	1.4712
Asset Index, squared	0.9607	0.9608	0.9567 *	0.9572 *	0.9556 *	0.9567 *
Relative income, 2012	1.0615	1.0333	1.0446	1.0401	1.0491	1.0482
<i>Intra-household migration network</i>						
Household co-members with migration experience		1.1478	1.2005	1.2424	1.1891	1.1967
<i>Network connectedness</i>						
Degree			0.9753 *			
Eigenvector				0.0061 **		
Betweenness					0.9994 **	
Closeness						0.0025 *
Constant	0.1932	0.1800	0.2316	0.1817	0.2232	1.1924
1 or 2 versus 3						
<i>Individual characteristics</i>						
Age, years	1.4581 ***	1.5170 ***	1.5027 ***	1.5033 ***	1.5042 ***	1.5019 ***
Age, squared	0.9949 ***	0.9944 ***	0.9945 ***	0.9945 ***	0.9945 ***	0.9946 ***
Education, years	1.0981	1.0236	1.0489	1.0886	1.0583	1.0560
Education, years, squared	1.0010	1.0036	1.0023	1.0005	1.0017	1.0020
Male dummy	3.6812 ***	3.8320 ***	3.7939 ***	3.6757 ***	3.8159 ***	3.8719 ***
Married dummy	0.4971 **	0.5053 **	0.4934 **	0.5014 **	0.4934 **	0.4936 **
With work	0.7693	0.9018	0.9061	0.8729	0.9091	0.9093
Migration experience, years	1.1173 ***	1.0768 *	1.0736 *	1.0731 *	1.0740 *	1.0709 *
Satisfaction index (PC1)	0.7956 **	0.7656 **	0.7617 **	0.7594 **	0.7591 **	0.7629 **
Perception index (PC1)	1.0360	0.9924	0.9950	0.9994	0.9972	0.9955
<i>Household characteristics</i>						
Household size	1.0893	0.9613	0.9635	0.9622	0.9621	0.9626
Asset Index	1.1502	1.0110	1.0276	1.0489	1.0076	1.0386
Asset Index, squared	0.9827	0.9962	0.9938	0.9897	0.9964	0.9924
Relative income, 2012	1.0443	1.0380	1.0468	1.0546	1.0481	1.0503
<i>Network variables</i>						
Household co-members with migration experience		2.0275 ***	2.1264 ***	2.1683 ***	2.1455 ***	2.1372 ***
<i>Network connectedness</i>						
Degree			0.9880			
Eigenvector				0.0079		
Betweenness					0.9998	
Closeness						0.0546
Constant	0.0001 ***	0.0001 ***	0.0001 ***	0.0001 ***	0.0001 ***	0.0002 ***
Pseudo R2	0.2301	0.2474	0.251	0.2536	0.2529	0.2511
N	443	443	443	443	443	443

legend: * p<.1; ** p<.05; *** p<.01

Table 3. Result of generalized ordered logit regression, odds ratios (Part 2 of 3)

Variable	G7	G8	G9	G10	G11	G12
1 versus 2 or 3						
<i>Individual characteristics</i>						
Age, years	0.9167	0.9221	0.9034	0.9127	0.9006	0.9118
Age, squared	0.9999	0.9998	1.0001	0.9999	1.0001	0.9999
Education, years	1.7325 *	1.5771	1.6207	1.6590 *	1.6727 *	1.6020
Education, years, squared	0.9803	0.9848	0.9834	0.9825	0.9819	0.9839
Male dummy	1.3306	1.3081	1.2603	1.2748	1.2205	1.2353
Married dummy	1.5120	1.5796	1.5001	1.6334	1.3628	1.5510
With work	1.8046 **	1.6558 *	1.6687 *	1.5709	1.7617 **	1.6303 *
Migration experience, years	1.0507	1.0464	1.0408	1.0444	1.0407	1.0410
Satisfaction index (PC1)	0.6395 ***	0.6559 ***	0.6674 ***	0.6501 ***	0.6693 ***	0.6572 ***
Perception index (PC1)	0.9979	0.9819	0.9932	0.9926	0.9885	0.9811
<i>Household characteristics</i>						
Household size	1.1736 *	1.1480 *	1.1777 *	1.1618 *	1.1743 *	1.1577 *
Asset Index	1.3005	1.4388	1.5039	1.5009	1.4996	1.5072
Asset Index, squared	0.9744	0.9594	0.9541 *	0.9551 *	0.9545 *	0.9543 *
Relative income, 2012	0.9858	1.0202	1.0470	1.0537	1.0141	1.0592
<i>Intra-household migration network</i>						
Household co-members with migration experience	1.1594	1.1381	1.1482	1.1724	1.2780	1.2291
<i>Household-affirmed migrant network, direct</i>						
1st degree	1.5663					
2nd degree	0.9879					
3rd degree	0.8366 **					
4th degree	1.2262 **					
Other family	1.2181					
All		1.0084				
<i>Direct links to pioneer (number of households)</i>						
Close family			0.8417			
Other family			0.9676			
Close friends			1.0056			
Other friends			0.7884			
All				1.0385		
Indirect links to pioneer households				0.9732 *		
<i>Lagged migrant network, identified via SNA</i>						
1st degree					0.9665	
2nd degree					0.8871	
3rd degree					1.1112	
4th degree					0.9131	
Other family					0.9391	
Close friends					0.9766	
Other friends					0.9843	
All						0.9589 *
Constant	0.1168	0.1554	0.2074	0.2545	0.1995	0.2287

legend: * p<.1; ** p<.05; *** p<.01

Table 3. Result of generalized ordered logit regression, odds ratios (Part 3 of 3)

Variable	G7	G8	G9	G10	G11	G12
1 or 2 versus 3						
<i>Individual characteristics</i>						
Age, years	1.5396 ***	1.4964 ***	1.5326 ***	1.4950 ***	1.4950 ***	1.5038 ***
Age, squared	0.9943 ***	0.9946 ***	0.9943 ***	0.9946 ***	0.9947 ***	0.9945 ***
Education, years	0.9486	0.9492	1.0291	1.0625	1.0157	1.0341
Education, years, squared	1.0070	1.0071	1.0035	1.0018	1.0041	1.0030
Male dummy	3.9788 ***	3.6571 ***	3.9609 ***	3.8456 ***	3.6725 ***	3.7064 ***
Married dummy	0.5279 *	0.5162 **	0.4912 **	0.4905 **	0.4980 **	0.4970 **
With work	0.9290	0.9616	0.8551	0.9261	0.7679	0.8960
Migration experience, years	1.0527	1.0581	1.0646	1.0702 *	1.0602	1.0736 *
Satisfaction index (PC1)	0.7594 **	0.7716 **	0.7441 **	0.7640 **	0.7377 **	0.7633 **
Perception index (PC1)	0.9941	0.9721	1.0077	0.9923	0.9772	0.9927
<i>Household characteristics</i>						
Household size	0.9897	0.9760	0.9531	0.9603	0.9672	0.9673
Asset Index	1.0429	1.1033	0.9888	1.0595	1.0484	1.0712
Asset Index, squared	0.9913	0.9860	0.9958	0.9899	0.9864	0.9893
Relative income, 2012	1.1072	1.1218	1.0338	1.0547	1.0717	1.0619
<i>Network variables</i>						
Household co-members with migration experience	2.3276 ***	2.1229 ***	2.1623 ***	2.1414 ***	2.3258 ***	2.1527 ***
<i>Household-affirmed migrant network, direct</i>						
1st degree	1.6842					
2nd degree	0.9115					
3rd degree	0.8741					
4th degree	0.9682					
Other family	1.0502					
All		0.9209				
<i>Direct links to pioneer (number of households)</i>						
Close family			1.0183			
Other family			0.9442			
Close friends			1.0786			
Other friends			0.8786			
All				1.0191		
Indirect links to pioneer households				0.9873		
<i>Lagged migrant network, identified via SNA</i>						
1st degree					0.9905	
2nd degree					0.8433	
3rd degree					1.0144	
4th degree					0.9147	
Other family					0.9877	
Close friends					1.0951	
Other friends					0.7333	
All						0.9709
Constant	0.0001 ***	0.0001 ***	0.0001 ***	0.0001 ***	0.0001 ***	0.0001 ***
Pseudo R2	0.267	0.251	0.252	0.254	0.263	0.251
N	443	443	443	443	443	443

legend: * p<.1; ** p<.05; *** p<.01

Table 4. Result of partial odds regression, odds ratios (Part 1 of 3)

Variable	M1	M2	M3	M4	M5	M6
1 versus 2 or 3						
<u>Individual characteristics</u>						
Age, years	0.9396	0.9399	0.9328	0.9340	0.9296	0.9379
Age, squared	0.9996	0.9996	0.9997	0.9997	0.9997	0.9996
Education, years	1.4032	1.4244	1.4881	1.5274	1.4857	1.4851
Education, years, squared	0.9898	0.9889	0.9865	0.9854	0.9864	0.9868
Male dummy	1.2545	1.4191	1.3790	1.3921	1.3803	1.4010
Married dummy	1.3697	1.4033	1.3828	1.3702	1.3768	1.3695
With work	1.5642 *	1.3266	1.3352	1.2973	1.3629	1.3127
Migration experience, years	1.0738 **	1.0537 *	1.0519 *	1.0508 *	1.0527 *	1.0528 *
Satisfaction index (PC1)	0.7134 ***	0.6989 ***	0.6972 ***	0.6943 ***	0.6993 ***	0.6958 ***
Perception index (PC1)	0.9981	0.9852	0.9886	0.9905	0.9891	0.9882
<u>Household characteristics</u>						
Household size	1.1394 *	1.1490 *	1.1531 *	1.1454 *	1.1631 *	1.1477 *
Asset Index	1.2919	1.2417	1.2847	1.2653	1.2926	1.2925
Asset Index, squared	0.9701	0.9736	0.9694	0.9693	0.9696	0.9691
Relative income, 2012	1.0697	1.0487	1.0624	1.0599	1.0677	1.0635
<u>Intra-household migration network</u>						
Household co-members with migration experience		1.1370	1.1950	1.2266	1.1915	1.1925
<u>Network connectedness</u>						
Degree			0.9789			
Eigenvector				0.0068 **		
Betweenness					0.9996 *	
Closeness						0.0063
Constant	0.3253	0.2879	0.3440	0.2919	0.3139	1.3790
1 or 2 versus 3						
<u>Individual characteristics</u>						
Age, years	1.3854 ***	1.4636 ***	1.4499 ***	1.4523 ***	1.4475 ***	1.4587 ***
Age, squared	0.9957 ***	0.9948 ***	0.9949 ***	0.9949 ***	0.9949 ***	0.9949 ***
Education, years	1.4032	1.4244	1.4881	1.5274	1.4857	1.4851
Education, years, squared	0.9898	0.9889	0.9865	0.9854	0.9864	0.9868
Male dummy	3.5369 ***	3.3116 ***	3.1673 ***	3.1659 ***	3.2072 ***	3.2171 ***
Married dummy	0.5445 **	0.5708 *	0.5723	0.5697 *	0.5677 *	0.5631 *
With work	0.8660	1.3266	1.3352	1.2973	1.3629	1.3127
Migration experience, years	1.0738 **	1.0537 *	1.0519 *	1.0508 *	1.0527 *	1.0528 *
Satisfaction index (PC1)	0.7134 ***	0.6989 ***	0.6972 ***	0.6943 ***	0.6993 ***	0.6958 ***
Perception index (PC1)	0.9981	0.9852	0.9886	0.9905	0.9891	0.9882
<u>Household characteristics</u>						
Household size	1.1394 *	0.9562	0.9612	0.9569	0.9654	0.9562
Asset Index	1.2919	1.2417	1.2847	1.2653	1.2926	1.2925
Asset Index, squared	0.9701	0.9736	0.9694	0.9693	0.9696	0.9691
Relative income, 2012	1.0697	1.0487	1.0624	1.0599	1.0677	1.0635
<u>Network variables</u>						
Household co-members with migration experience		2.1123 ***	2.2130 ***	2.2690 ***	2.2169 ***	2.2175 ***
<u>Network connectedness</u>						
Degree			0.9789			
Eigenvector				0.0068 **		
Betweenness					0.9996 *	
Closeness						0.0063
Constant	2.58E-05 ***	1.09E-05 ***	1.32E-05 ***	1.09E-05 ***	1.19E-05 ***	5.25E-05 ***
Pseudo R2	0.2194	0.2378	0.2408	0.2441	0.2412	0.2408
N	443	443	443	443	443	443

legend: * p<.1; ** p<.05; *** p<.01

Table 4. Result of partial odds regression, odds ratios (Part 2 of 3)

Variable	M7	M8	M9	M10	M11	M12
1 versus 2 or 3						
<u>Individual characteristics</u>						
Age, years	0.9420	0.9382	0.9353	0.9371	0.9316	0.9357
Age, squared	0.9996	0.9996	0.9997	0.9996	0.9997	0.9997
Education, years	1.4999	1.4279	1.4593	1.4871	1.4735	1.4471
Education, years, squared	0.9866	0.9888	0.9879	0.9869	0.9874	0.9880
Male dummy	1.5127	1.4052	1.4342	1.4103	1.3935	1.3696
Married dummy	1.3498	1.4115	1.3437	1.4041	1.2963	1.3590
With work	1.3973	1.3461	1.2892	1.2857	1.3191	1.3080
Migration experience, years	1.0539 *	1.0539 *	1.0486 *	1.0531 *	1.0450	1.0518 *
Satisfaction index (PC1)	0.6829 ***	0.6984 ***	0.6959 ***	0.6935 ***	0.6950 ***	0.6973 ***
Perception index (PC1)	1.0027	0.9837	0.9950	0.9892	0.9889	0.9836
<u>Household characteristics</u>						
Household size	1.1670 *	1.1508 *	1.1528 *	1.1509 *	1.1561 *	1.1516 *
Asset Index	1.1876	1.2744	1.2744	1.3267	1.3043	1.3303
Asset Index, squared	0.9813	0.9714	0.9696	0.9665	0.9669	0.9662
Relative income, 2012	1.0320	1.0566	1.0581	1.0705	1.0464	1.0769
<u>Intra-household migration network</u>						
Household co-members with migration experience	1.1330	1.1540	1.1681	1.1768	1.2892	1.2213
<u>Household-affirmed migrant network, direct</u>						
1st degree	1.5879					
2nd degree	0.9608					
3rd degree	0.8477 **					
4th degree	1.2062 **					
Other family	1.1309					
All		0.9716995				
<u>Direct links to pioneer (number of households)</u>						
Close family			0.9013			
Other family			0.9583			
Close friends			1.0412			
Other friends			0.8291			
All				1.0360		
Indirect links to pioneer households				0.9767 *		
<u>Lagged migrant network, identified via SNA</u>						
1st degree					0.9529	
2nd degree					0.8887	
3rd degree					1.0797	
4th degree					0.9151	
Other family					0.9508	
Close friends					1.0168	
Other friends					0.9251	
All						0.9612 *
Constant	0.2067	0.2997	0.3031	0.3734	0.3017	0.3502

legend: * p<.1; ** p<.05; *** p<.01

Table 4. Result of partial odds regression, odds ratios (Part 3 of 3)

Variable	M7	M8	M9	M10	M11	M12
1 or 2 versus 3						
<i>Individual characteristics</i>						
Age, years	1.5048 ***	1.4615 ***	1.4571 ***	1.4594 ***	1.4469 ***	1.4530 ***
Age, squared	0.9945 ***	0.9948 ***	0.9949 ***	0.9948 ***	0.9950 ***	0.9949 ***
Education, years	1.4999	1.4279	1.4593	1.4871	1.4735	1.4471
Education, years, squared	0.9866	0.9888	0.9879	0.9869	0.9874	0.9880
Male dummy	3.2318 ***	3.2737 ***	3.2737 ***	3.2536 ***	3.1246 ***	3.1249 ***
Married dummy	0.5904	0.5752 *	0.5529 *	0.5747 *	0.5375 *	0.5667 *
With work	1.3973	1.3461	1.2892	1.2857	1.3191	1.3080
Migration experience, years	1.0539 *	1.0539 *	1.0486 *	1.0531 *	1.0450	1.0518 *
Satisfaction index (PC1)	0.6829 ***	0.6984 ***	0.6959 ***	0.6935 ***	0.6950 ***	0.6973 ***
Perception index (PC1)	1.0027	0.9837	0.9950	0.9892	0.9889	0.9836
<i>Household characteristics</i>						
Household size	0.9785	0.9571	0.9593	0.9603	0.9683	0.9614
Asset Index	1.1876	1.2744	1.2744	1.3267	1.3043	1.3303
Asset Index, squared	0.9813	0.9714	0.9696	0.9665	0.9669	0.9662
Relative income, 2012	1.0320	1.0566	1.0581	1.0705	1.0464	1.0769
<i>Network variables</i>						
Household co-members with migration experience	2.3650 ***	2.1392 ***	2.1721 ***	2.1832 ***	2.3805 ***	2.2446 ***
<i>Household-affirmed migrant network, direct</i>						
1st degree	1.5879					
2nd degree	0.9608					
3rd degree	0.8477 **					
4th degree	0.9748					
Other family	1.1309					
All		0.9716995				
<i>Direct links to pioneer (number of households)</i>						
Close family			0.9013			
Other family			0.9583			
Close friends			1.0412			
Other friends			0.8291			
All				1.0360		
Indirect links to pioneer households				0.9767		
<i>Lagged migrant network, identified via SNA</i>						
1st degree					0.9529	
2nd degree					0.8887	
3rd degree					1.0797	
4th degree					0.9151	
Other family					0.9508	
Close friends					1.0168	
Other friends					0.9251	
All						0.9612 *
Constant	4.96E-06 ***	0.0000112 ***	0.0000111 ***	0.0000137 ***	0.0000112 ***	0.0000136 ***
Pseudo R2	0.2562	0.2382	0.2407	0.2428	0.2476	0.2419
N	443	443	443	443	443	443

legend: * p<.1; ** p<.05; *** p<.01

5.3. Links to pioneer migrants

The regression analyses likewise show that current migration intention is not influenced by the number of direct links to pioneer migrants from other households, regardless of the degree of social relation. There is some indication that indirect links even dampen migration aspiration, with all else being held equal. The insignificance of direct links suggests that people do not take inspiration from their pioneer migrant kin in forming their decisions to leave or stay, at least for the migration decision stages being analyzed in this study.

5.4. Intra-household migration network

While the abovementioned network variables are either insignificant or negative, intra-household migration network or that which represents the closest set of migration contacts significantly enhances an individual's decisiveness to migrate, even after controlling for demographics, human capital, wealth, and subjective perceptions. This result is robust to different specifications of the model. Interestingly, this variable is significant at the more mature stage (pre-actional versus pre-decisional or having no intention at all) of intention-formation and not in the earlier stage (see Table 3 and 4). A unit increase in the intra-household migration network doubles the odds of being in the pre-actional, more advanced, stage versus being in the pre-decisional or having no intention at all. This is a strong indication that intra-household migration social capital provides concrete migration-related support to prospective migrants.

5.5. Migration history

This analysis shows that an act of migration is likely to lead to subsequent migration. One's own length of migration history positively influences decisiveness to migrate again soon. In other words, once a person engages in international migration, it is very likely that he or she will continue to do so. A year of increase in migration experience enhances the odds of planning to migrate by 7 to 10 percent. Those who have long migration experience may have also developed ties with potential employers and contacts at the destination, thereby enhancing the possibility to migrate again. This result is robust to different model iterations.

5.6. Other factors

There is a non-linear inverted U relationship between age and migration intention as shown by the positive coefficient of years of age and the negative coefficient of the square of age specifically in the latter stages of decision-making in both generalized ordered logit and partial odds models. At younger ages, individuals who are relatively older are more likely to have serious migration plans than those who are younger, while among the older individuals, the likelihood of wanting to leave decreases with age. Age, however, does not consistently influence migration intentions at the earlier phase (i.e. pre-decisional phase) but rather, its influence is significant in the latter stage (i.e. having more concrete plans versus having some desires or not having any intention at all).

Meanwhile, the estimations do not show consistent result for education after holding for other factors. Meanwhile, men are more likely to have more mature migration intentions than women. This finding is not observed at the lower phase of the decision-making process. Being married, meanwhile, has negative and significant effect on migration intentions at the more advanced level but not in the earlier intention formation stage.

The regression result for having work or job is interesting. The findings for the unconstrained generalized ordered logit (see Table 3) are mixed. Having work enhances the odds of desiring to migrate but is insignificant in being at the more mature stage. Those with existing jobs have some desires to migrate but are not necessarily making concrete plans to get to it, perhaps because they are not quite desperate to do so.

Meanwhile, the satisfaction index that represents the individual's appreciation of its household's living condition is shown to statistically significantly explain migration decision-making. This variable is significant in all iterations of the model and in all stages of the decision-making process. Conforming to expectations, the more satisfied one is with their living condition, the less likely that he or she shows intention to leave, all else being the same. In contrary, the perception index that accounts for one's awareness of the national and local government efforts in bringing progress to the home country and community does not significantly influence migration intentions.

In terms of household characteristics of the individuals, the more household members there are, the more likely that a person would contemplate, but not necessarily to make concrete arrangements, to seek pastures elsewhere, holding other factors constant. In terms of wealth, there is some indication that at relatively high level of assets, there is less likelihood to desire to migrate (see Table 3).

5.7. Likelihood ratio test goodness of fit and test of parallel assumption

To check robustness, we employ a likelihood-ratio test for the ordered logit model estimations. The outcome for M1 (no migration network) being nested in M4 (with intra-household migration network and eigenvector centrality measure) does not show violation of the assumption that the former is nested within the latter as shown by a highly significant test statistic ($\text{Prob} > \chi^2 = 0.0008$). Similarly, the test for M1 being nested in M7 (including household-affirmed migrant networks) has a p-value of 0.005. The test result for M1 being nested in M11, the result of also significant ($\text{Prob} > \chi^2 = 0.0194$), and in M12, the test yields a significant test statistic (i.e. P-value=0.0018). The nestedness of M1 within M9 has an insignificant outcome ($\text{Prob} > \chi^2 = 0.0579$).

To assess the importance of including migration networks independent of the intra-household migration network, the nestedness of M2 (one with intra-household migration network only) in M4, which includes eigenvector score, is tested and the test shows a significant result with a p-value of 0.0096. Indeed, M2 is nested within M4. For M2 being nested in M7, M9 and M11, the test results are insignificant with p-values exceeding the 0.05 mark. On the other hand, M2 is shown to be nested in M12 as the likelihood ratio test result shows a $\text{Prob} > \chi^2 = 0.0241$.

To test the goodness of fit, we predicted the probabilities using the estimation results of Model 4 and we can gain an idea of the model's performance from the summary statistics of the predicted probabilities (see Table 5). The computation of predicted probabilities was conducted for only 443 observations not for the full sample of 560 because some 117 observations did not have all the variables used in the model. To compare the predicted probabilities and the actual distribution of responses in the dependent variable, these 117 observations were excluded. The prediction for having a value of 1 in the dependent variable was only slightly higher at 57.91 percent as opposed to the actual proportion of those in that category which is 57.56 percent.

The prediction for being in the second category (i.e. pre-decisional) was relatively accurate at 22.39 compared to the observed at 22.35. The third category was predicted at 19.69 percent; in the sample, the proportion of those in that category is 20.09 percent.

Table 5. Predicted probabilities and actual frequency distribution of migration decision-making phase

Variable	Obs	Mean	Std. Dev.	Min	Max
Predicted probabilities					
p1	443	0.5791	0.2597	0.0489	0.9998
p2	443	0.2239	0.1092	0.0001	0.3405
p3	443	0.1969	0.1724	0.0000	0.8248
Actual decision-making stage					
	Freq.	Percent			
1	255	57.56			
2	99	22.35			
3	89	20.09			
Total	443	100			

As mentioned earlier, there is a reason to believe that the parallel odds assumption in the ordered logit regression is violated. To show that indeed it is, the Brant test is conducted, and the result shows a significant test statistic (see Table 6) which provides an evidence that indeed, there is a reason to assume that the β s vary in different levels of the dependent variable. Using generalized ordered logistic regression or partial proportional odds model is more appropriate.

Table 6. Test of parallel odds assumption ('oparallel' routine)

		Chi2	df	P>Chi2
Wolfe	Gould	52.79	16	0
	Brant	56.16	16	0
	score	56.29	16	0
likelihood	ratio	60.46	16	0
	Wald	55.66	16	0

5.8. Network influence on migration intentions vis-à-vis actual migration behavior

This empirical exercise shows that one's extent of networks has implications even in the process of intention-formation and planning. Interestingly, the findings for this analysis of migration intentions corroborate with the findings in the analysis of migration behavior – that it is migrant networks of close kin relations that consistently matter in the perpetuation of international migration in recent times and in the context under consideration. At the household-level migration participation, it is the close inter-household networks which are consistently significant, while for the individual person-level intentions, it is the person's intra-household migrant networks, here shown as family migration norm, which matter in the decision-making. Other types of migration networks such as weaker familial ties and friendship ties are, most of the time, not significant for migration behavior and are even

negatively related to intentions. The consistent significance of close rather than weak relations for international migration suggests the need for relevant, detailed, and trustworthy information throughout the duration of the migration process, not to mention the need for financial resources.

Note that there is a contrast in the result for household members with migration experience for the household-level migration behavior (i.e. negative and significant) and individual-level migration intention (i.e. positive and significant). This is attributed to the multi-perspective approach that this study has implemented. For individuals, having more people with migration experience in the household means that – 1) there are more sources of migration-related information and other resources; 2) that migration is accepted as a viable option for income generation; or 3) the presence of direct social influence from these members on the decisions of the individual. Therefore, the effect is positive for intention formation or planning. On the other hand, having more people with migration experience also means that the household may have already accumulated gains from the activity. Because migration may form part of its income diversification strategy, there is no need to send so many members to work overseas. That is why the sign of this variable is negative at the household-level analysis of migration behavior. This is understandable because the type of migration under study is largely temporary, labor migration where other members are left behind to attend to child care and daily household operations.

Likewise, the insignificant influence of direct links to pioneer migrants and other migrant networks in intention formation against the positive, significant effect of some types of networks in actual behavior reflects the complexity in migration decision-making process. I argue that while such networks may not figure in the formation of migration plans, these matter in the actual movement because it is in the stage of actual movement where members of a household decide to pool their resources together and seek the help of others, if necessary. In the case of Filipino migrant workers, the latter stage consists of traveling to the city for processing routine requirements such as medical examination and police records clearance, undergoing overseas job interviews, skills training at placement agencies, and other seminars such as the compulsory pre-departure orientation seminar (PDOS) of the Philippine Overseas Employment Administration. All these activities demand informational and monetary resources that networks can provide. In contrast, networks may not be that important in the earlier stages of intention-formation and planning where perceptions on one's economic well-being play a more central role. The finding likewise suggests that not all those who desire to migrate but without access to migrant networks may be able to make the actual move since actual migration behavior is enhanced by the presence of close migrant kin. This has important policy implications in terms, for instance, of what the government can do to level the playing field so that those who desire to migrate but without access to the informational and monetary resources that are provided by migrant networks can still successfully engage in labor migration. It is also probable that those who do not have firm intentions to migrate but with close migrant networks eventually decide to do so given the influence of their kin or friends. Unfortunately, such cannot be tested unless the influence of networks is estimated on both intentions and behavior of the same set of observations. How networks help translate intentions into actual migration behavior is beyond this study.

6. Concluding Remarks

This analysis illustrates the nuances in the influence of migration networks on the decisiveness of migration intention. Such nuances are attributed to the fact that migration networks are rarely homogenous. In fact, differentiating migrant networks into degree of association or strength of ties is this study's most important contribution to the literature on migration and social networks. This is crucial because different networks have different effects. For intention formation, it is the most immediate, closest of all migrant networks (i.e. intra-household networks) which enhance the decisiveness; migrant networks beyond one's own household are either insignificant or negatively related to intention formation. This paper therefore argues that using aggregate measures like migration incidence in an area wherein homogeneity is assumed and obtaining a significant and positive effect may erroneously amplify the power of migration network in the perpetuation of migration activities. It provides an evidence that not all migrant networks matter in migration decision-making process.

Moreover, this analysis shows that migration decision-making is a complex process, not some simple leave or stay decision. And the key to understand the process is to take into account the differences in individuals' phases of migration decision-making in the analysis of factors that influence the decisions. Indeed, network effects vary depending on where one is in the decision-making process. Migrant networks particularly the closest of kin are important in the advanced phase of concrete migration planning, and not in the initial stage. This is an evidence that migrant networks are not only important sources of migration-related information and aspirations but also sources of financial support or money to move.

Bibliography

- Agadjanian, V., Nedoluzhko, L., & Kumskov, G. (2008). Eager to leave? Intentions to migrate abroad among young people in Kyrgyzstan. *International Migration Review* 42(3), 620-651.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes* 50, 179-211.
- Clemens, M. (2014). *Does development reduce migration?* Washington DC: Center for Global Development Working Paper 359.
- Dahl, M. S., & Sorenson, O. (2010). The migration of technical workers. *Journal of Urban Economics* 67, 33-45.
- De Haas, H. (2010). *Migration transitions: a theoretical and empirical inquiry into the developmental drivers of international migration*, DEMIG Project Paper No. 1. International Migration Institute Working Paper Series No. 24.
- De Jong, G. F. (2000). Expectations, gender, and norms in migration decision-making. *Population Studies* 54, 307-319.
- Hoppe, A., & Fujishiro, K. (2015). Anticipated job benefits, career aspiration, and generalized self-efficacy as predictors for migration decision-making. *International Journal of Intercultural Relations* 47, 13-27.
- Hyll, W., & Schneider, L. (2014). Relative deprivation and migration preferences. *Economic Letters* 122, 334-337.
- Kley, S. (2013). Migration in the face of unemployment and unemployment risk: A case study of temporal and regional effects. *Comparative Population Studies* 38(1), 109-136.

- Liao, P.-S. (2001). Contextual analysis of rural migration intention: A comparison of Taiwanese and Pennsylvania Data. *International Journal of Comparative Sociology* , 435-460.
- Mckenzie, D., & Rapoport, H. (2007). Network effects and the dynamics of migration and inequality: Theory and evidence from Mexico. *Journal of Development Economics* 84, 1-24.
- Mendola, M. (2008). Migration and technological change in rura households: Complements or substititute? *Journal of Development Economics* 85, 150-175.