

When Does Social Capital Matter for Migration? A Study of Networks, Brokers, and Migrants in Nepal

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Abstract

The study of social capital has been one of the strongest areas of recent advance in migration research, but there are still many questions about how it works and why it has varying effects in studies of different places. In this article, we address the contextual variation in social capital's effects on migration by considering migration brokers. We argue that destinations for which migration is logistically difficult to arrange give rise to brokerage industries and hypothesize that brokers, in turn, substitute for the informational capital typically provided by social networks. Our empirical tests in Nepal support this narrative, showing that social networks matter for migration to destinations where brokers are not available and have little discernible effect on migration to brokered destinations. Our results suggest that

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migration research should consider the growing role of brokerage agencies, that theorizations of social capital more broadly must contend with how it is delimited by brokers, and that social scientists might also consider other consequences that can arise from these migration brokers that are increasingly common in many countries and provide a marketized replacement for social capital in some cases.

Keywords

migration, social networks, social capital, migration brokers, Nepal, South Asia

Introduction

While the early years of migration studies focused almost entirely on economic factors that influenced migration (Massey et al. 1998), social capital and networks have become fruitful avenues of migration research in recent decades (Garip and Asad 2016). There is a general consensus that social relationships with prior migrants provide prospective migrants with resources that reduce migration's financial costs and social risks, thereby increasing the likelihood for a prospective migrant to move (Fussell and Massey 2004; Curran et al. 2005; Garip 2008, 2012). Prior migrants also encourage migration by contributing to the development of a "culture of migration" (Massey 1990b; Osella and Osella 2000; Kandel and Massey 2002). However, a comparison of different studies shows that the magnitude of social capital's influence on migration varies by gender, context, measurement, and a host of other factors. This variance in results suggests that more research is needed to understand what exactly about social capital influences migration, how it does so, and in which contexts social capital matters more.

This article aims to contribute to better understanding the variance in social capital's effects on migration by focusing on the difference between brokered and nonbrokered migration corridors. We disaggregate migration into corridors — dyads of two places, an origin and a destination, along which migrants travel. Multiple corridors (also referred to as migration streams) can exist from one sending country to multiple other countries and to one receiving country from many sending countries. Even within one system or country, corridors can be differentiated by a variety of characteristics, including geographic distance, visa regulations, the migrant community's maturity, and employment opportunities. Recognizing this variance in migration corridors' characteristics is important because it allows us to consider the theoretical pathways that lead migrants to choose one corridor over another.

We focus on one primary corridor characteristic: the difficulty in meeting logistical requirements for migration. We propose that logistical difficulty can give rise to a brokerage industry that provides support in arranging employment contracts, travel, and housing and in meeting other regulations. We then examine whether a brokerage industry in a particular migration corridor substitutes for, complements, or

has no effect on the influence of social capital obtained from family and community networks. In arguing for more focus on migration brokers, we build on the work of Lindquist, Xiang, and Yeoh (2012). However, instead of presenting brokers as a different perspective from social networks, as do Lindquist, Xiang, and Yeoh (2012), we focus on how the two phenomena are intricately linked and ask which, if any, of their functions are fungible.

Our empirical analysis of this theoretical narrative draws on the Chitwan Valley Family Study (CVFS), which contains destination-specific migration records for a representative sample of residents of Nepal's Chitwan Valley from 2008 through 2012. Nepal has a migration system with a diversity of migration corridors, ranging from the link between it and adjacent India, for which there are almost no brokers, to the primarily brokered corridors between it and the Persian Gulf countries. Our results support the hypothesis that the extent to which a migration corridor is brokered influences the relationship between migration-specific social capital and migration behavior, suggesting partial substitution and complementation effects.

Our examination of brokered corridors can help explain some of the variation in social capital's effects on migration in studies of different places and allows us to identify logistical support as a key factor for consideration in the social networks–migration relationship. This article also highlights migration brokers' overall importance. Given their recent profusion in many countries around the world (Hugo 2005; Arif 2009; Rodriquez 2010; Kern and Müller-Böcker 2015), social science research would do well to consider carefully how this burgeoning industry can influence migration more broadly. Further, given our finding that brokers substitute for some, but not all, of social networks' functions in migration, it is important to examine how the move from the use of social capital (as a relationship-creating process¹) to market-oriented transactions with brokers changes the nature of interpersonal and community social interactions, cohesion, trust, and reciprocity.

Social Capital and Migration

Attention to social capital, the notion that relational social ties via family, friends, and the larger community matter for migration, emerged in the 1970s (Choldin 1973; Banerjee 1983; Taylor 1984; Fawcett 1989). Since that time, increasingly sophisticated and detailed studies (e.g., Curran et al. 2005; Garip 2008; Dolfin and Genicot 2010; and Garip and Asad 2016) have left almost no question that migration-specific social capital has a strong influence on migration. For example, migrant spouses, parents, siblings, or community members can shape the likelihood of leaving, which we examine in this study, as well as migrants' support, well-being, and assimilation trajectories at destinations, which we discuss as implications of our study in the conclusion.

¹See Portes and Landolt 2000.

Even with these advances in recent decades, some aspects of this topic remain poorly understood. To start, it is clear that context matters for understanding the function of migrant social capital. For example, much of the social capital–migration research is based on migration between Mexico and the United States (Deléchat 2001; Davis and Winters 2001; Palloni et al. 2001; Kandel and Massey 2002; Fussell and Massey 2004; Dolfin and Genicot 2010; McKenzie and Rapoport 2010; Creighton and Riosmena 2013; Tucker et al. 2013), a corridor characterized by specific legal and logistical traits (e.g., semipermeable and adjacent land border, visa restrictions, and sector-specific employment opportunities). Comparing these studies on Mexico with studies on other countries, including Bangladesh (Donato et al. 2016), Thailand (Curran et al. 2005), Senegal (Liu 2013), the Democratic Republic of Congo (Toma and Vause 2014), Bulgaria (Haug 2008), China (Zhao 2003), India (Banerjee 1983), Colombia (Silva and Massey 2014), and Nepal (Thieme 2006), however, we can see important differences in social capital's effects on migration and the exact types of resources that matter. While a comparison of studies, each based on a single country or corridor, allows us to see that contextual differences exist, it does not explain the *reason* for this variation.

With the aim to better understand the reasons for variation in social capital's effects, this article, by contrast, seeks to address when (or in which corridors) social capital might be more or less applicable to the migration outcome. As one (of many) possible explanations, migration brokers, we propose, who provide logistical resources to facilitate the migration process, might substitute for the informational resources otherwise obtained from social networks. Thus, variance in where migration brokers are present might constitute one source of contextual variation in the influence of social networks. To understand this possible relationship, we begin with the work of Dolfin and Genicot (2010), who suggest that migration-specific social networks can provide two types of assistance: material and informational. Material assistance includes resources (most often financial) that can support travel, living expenses, and so forth. Informational assistance includes knowledge or coordination to help facilitate a migration event, such as information about how to find employment, enter the country, or find housing. Along with others (Curran et al. 2005; Garip 2008), Dolfin and Genicot (2010) also find that the impact of household members' informational assistance is likely higher than the impact of information from community members and that the probability of receiving financial support is likely much higher from family members than from the community.²

Garip and Asad (2016) have a broader focus when they identify three key mechanisms for how social capital influences migration. The first is "social facilitation," referring primarily to Dolfin and Genicot's (2010) informational assistance.

²However, Garip (2008) finds that in Thailand, community ties produce stronger effects but that those effects' statistical significance is marginal or not significant. The effect of household ties is weaker, but the statistical significance is strong.

The second is “normative influence,” whereby prior migrants influence migration’s normative value and create what is often called a “culture of migration” (Osella and Osella 2000; Kandel and Massey 2002). The third mechanism is “network externalities,” whereby prior migrants generate institutions that encourage further migration. In the Mexican case, Garip and Asad identify human smugglers as an example of a network externality, whereas in our case in Nepal (and in many other countries), employment brokers prominently fill this role. The rest of this section addresses how social networks’ facilitation might function in the presence of brokers (as network externalities). We see little possibility of brokers substituting for the normative influence of social networks and shall not discuss this mechanism further.

Introducing Migration Brokers

We define brokers (also called middlemen, employment agencies, or manpower agencies) as people or organizations that provide assistance to facilitate migration, including arranging travel and housing and obtaining employment contracts, visas, and required insurance. The broker might or might not already be known to the migrant and might or might not operate within legal structures. The key to defining brokers, and to differentiating them from social networks, is the transactional component: brokers provide market-based services for a monetary fee.³ In contrast, social networks provide resources through relational transactions with less clearly defined social “fees” or obligation.

We observe that in some corridors, most, if not all, migrations are organized by brokers. Some examples of “brokered” corridors are those from Nepal, India, Bangladesh, Pakistan, and the Philippines to South Korea, Malaysia, and Persian Gulf countries (Hugo 2005; Arif 2009; Rodriguez 2010; Kern and Müller-Böcker 2015). In other corridors, even from the same sending area, most migrations are organized through social networks.⁴ This apparent empirical dichotomy between largely

³ Another type of migration broker, commonly referred to as a “headhunter,” recruits workers for high-skilled positions. Unlike the brokers discussed here, many headhunters do not charge fees to the migrant and sometimes provide financial assistance to the potential migrant, in the form of signing bonuses and resettlement allowances. Much of our theory and hypotheses would apply to headhunters in the same way that they apply to migration brokers for low-skilled workers. Indeed, given that headhunters provide both logistical and financial assistance, it is likely that they might substitute for even more resources of social networks than do brokers of low-skilled migration. However, given our focus on low-skilled migrants, most of our discussion is on brokers who do not provide financial assistance.

⁴ Of course, it is possible that a migration event could make use of social networks and a broker at the same time, and some corridors might be composed of brokered and networked migrations. We present the contrast between brokered and networked as a simple dichotomy in this section for the sake of conceptual clarity in the process of theory development, in the sense of Weber’s “ideal types” (2002, 1905). These strict dichotomies between networked

brokered and largely networked corridors suggests the question — do brokers substitute for social networks, do they complement networks, or do the two have no relationship at all?

Informational and Logistical Resources for Migration and a Substitution Effect

While the question of whether brokers substitute for or complement social networks is important, one might answer it by noting simply that people use brokers where they are available and social networks where brokers are unavailable. Thus, to properly address this topic, we must take a step further back and examine — where do brokers come from, and in what cases are they available? In other words, if social networks provide such helpful resources for prospective migrants, why do brokers exist at all?

A look at some largely brokered corridors reveals a high degree of logistical difficulty for migration in these corridors, with requirements for pre-arranged employment contracts and housing, predeparture health checks and insurance, and even repatriation of remains (Paoletti et al. 2014). This perspective allows us to identify logistical support as a third type of resource (in addition to informational and material support) that is sometimes important or even necessary for migration. To clearly separate logistical from informational resources, we note that logistical resources help aspiring migrants meet requirements that they could not reasonably do on their own. Alternately, informational resources make it easier and less costly for migrants to meet requirements on their own. Thus, referring back to Dolfin and Genicot (2010) and Garip and Asad (2016), we end up with a mechanism through which social networks influence migration called “facilitation,” and this mechanism can include informational, material, *and* logistical resources.

Returning to some corridors’ logistical difficulties, we see that migration brokerage industries (private and government) have developed in South Asia and the Philippines for migration to the Persian Gulf (Hugo 2005; Arif 2009; Rodriguez 2010; Kern and Müller-Böker 2015). We see that “coyotes” provide the skills and logistical capacity to help Mexican and Central American people without documents reach and potentially cross the US border, a process that would otherwise be much too difficult for many people (Dolfin and Genicot 2010). Further, as US border crossing has become more difficult and dangerous, coyotes’ fees have increased (Cornelius 2008). We see increased numbers and complexity of human smuggling networks that support migration into Europe, again, in correlation with tighter migration restrictions and border security (Salt 2000; Doornik 2013). In short, we suggest that brokerage industries develop where the logistics of

and brokered can later be relaxed to better represent a more realistic spectrum of migration assistance.

arranging migrations are too difficult to undertake with only the resources of a social network.⁵

In addition, once brokerage services become available and widely accessible, they might render social networks' informational resources less vital or even unnecessary. Whereas social networks can provide information about how to find employment, enter the country, obtain work visas, or find housing, a broker can actually provide an employment contract, obtain passports and visas, and make actual housing arrangements. Thus, we argue, corridors characterized as difficult may render social networks insufficient for the facilitation of migration, providing a window of opportunity for the development of brokerage industries. Informational resources from family or community social networks might then become largely unnecessary. Under these circumstances, we expect that brokers will substitute for the informational capital obtained from social networks.

Material Resources for Migration and a Complement Effect

Our discussion above focused on the interplay between the informational and logistical resources that brokers and social networks can provide. However, as noted earlier, social networks (particularly families) can also provide financial assistance to prospective migrants. In contrast to families and similar to community networks, brokers do not provide financial resources. Indeed, using a broker *requires* additional financial resources to pay for their services, and these fees are often substantial (Graner and Gurung 2003; Kepes 2016). Thus, we expect that in corridors where migration is logistically difficult, brokers might entirely substitute for the informational capital obtained from family and community networks but will not substitute for the financial capital obtained from family networks.⁶

⁵Our discussion of the connection between regulatory difficulties of a migration corridor and brokers' availability is relatively simple. A more sophisticated analysis could be done to fully understand the confluence of factors that combine to influence the development of brokerage industries. Such a study is outside this article's scope. Instead, we use the basic correlation of the two (regulatory difficulty and brokerage industry) as a foundation upon which to develop our theory of the relationship between brokerage and social networks.

⁶In this discussion, we analytically separate the role of community networks from that of family/household networks. Prior research has shown that spouses, parents, and children each play a particular role in migration networks that is different from other household members, especially as they can decrease legal barriers in destinations with family reunification policies (Fussell and Massey 2004; Creighton and Riosmena 2013; Kern and Müller-Böker 2015). A careful consideration of how migrant spouses and specific family members affect brokered/nonbrokered migration will be valuable. As we describe below, in our setting, where the vast majority of migration is undertaken by single individuals, it is unlikely

In addition, the origin of family financial capital need not be destination specific. Money from family members may be used to support a migration to any number of destinations. In contrast, informational resources from family or community social networks can only be useful for migration to the same destination. Information on how to get a job in India, for example, is only useful for getting a job in India, not in South Korea. At the same time, while the *origin* of financial resources is not important, the *need* for financial resources is corridor specific. Because brokers charge fees, which are often quite high, migration along brokered corridors requires financial resources well above that required for migration along networked corridors. Thus, we expect that migrants' family networks to any place will complement brokers' services.

In our discussion of *facilitation*, then, we argue that some logistically difficult migration corridors will be characterized by a brokerage industry. In these cases, the informational resources obtained from family and community networks will be neither necessary nor sufficient for prospective migrants. However, the financial resources that can be obtained from family networks will be necessary but need not be specific to the destination. Thus, we expect brokers to substitute for some specific functions of social networks, but not all. We offer the following specific and testable hypotheses that adjust and sometimes contrast with hypotheses derived from the existing literature:

Existing H1: Migrants' family-based social networks will have a positive effect on migration.

Our hypotheses:

H1a: This positive effect will be bigger for migration to the **same** destination as the family social network than for migration to different destinations.

H1b: This positive effect will be smaller for migration to **brokered** destinations than for unbrokered destinations.

Existing H2: Migrants' community-based social networks will have a positive effect on migration.

Our hypotheses:

that the spouse or parents play an entirely different role than do other household members. As such, we leave the theorization of this issue to future research in settings where it is more consequential.

H2a: This effect will be smaller than for family networks.

H2b: This effect will be bigger for migration to the **same** destination as the community social network than for migration to different destinations.

H2c: Community-based social networks will not have any effect on migration to **brokered** destinations.

Setting

Our setting is the Chitwan Valley in south-central Nepal. It is a flat, low-elevation area that is topographically more similar to nearby India than to the Himalayan region that often characterizes Nepal in the popular imagination. Outside the one large city, Narayanghat, most people in the area subsist on agriculture and animal husbandry, with small additional income from wage labor and market-oriented agriculture (CBS 2012). Residences in rural Chitwan are organized into neighborhoods, or what we might think of as small villages surrounded by farmland. An example neighborhood is shown in Figure 1. Daily life involves intense interactions between neighborhood residents who share information about one another's families and lives (Thieme and Wyss 2005).⁷

Nepal has a centuries-old history of migration to India (Thieme 2006). A border treaty allows Nepalis to travel and work in India without restrictions or documentation. Much of this migration was seasonal and undertaken by individuals who sent remittances to other family members at home (Thieme and Wyss 2005; Kollmair et al. 2006). Today, India still dominates as a destination for Nepali migrants due to its open border, the maturity of its migration corridor, and its cultural and linguistic similarities to Nepal (NIDS 2011; Government of Nepal 2014).

In the last two decades, improvements in transportation, new migration policies, increasing labor opportunities, and newly available migration brokers have resulted in substantial increases in migration from Nepal to many countries worldwide, including those in the Persian Gulf, other parts of Asia, Europe, North America, and Australia (Graner and Gurung 2003; Kollmair et al. 2006; NIDS 2011; Government of Nepal 2014). Recent estimates suggest that as many as three million Nepalis, or about 10 percent of the population, now live abroad in more than 131 countries (Sharma and Gurung 2009; NIDS 2011; CBS 2012; Government of Nepal 2014). The Nepal Migration Survey 2009 estimates that 41 percent of Nepali international migrants were in India, 38 percent in the Persian Gulf countries, 12 percent in Malaysia, and 9 percent in other countries, largely dominated by South Korea, Japan, North America, the United Kingdom, and Australia (World Bank 2011). Despite rather large changes in destinations, much of this migration is still short-term, labor-oriented, and undertaken by individuals who remit money to their families

⁷ See <https://cvfs.isr.umich.edu/publications/> for authors' publications and dissertations on the Chitwan study area.



Figure 1. Photo of an Example Neighborhood in the Chitwan Study Area. Image from Google Earth, accessed May 4, 2018.

remaining in Nepal (Bhandari 2016). Migration of whole households is less common, and family reunification is not possible on employment visas to the Persian Gulf and several Asian countries (Bhandari 2016; Ghimire et al. 2017).

In recent decades, Nepal has also experienced an explosion of formal, registered migration brokerage agencies, commonly called “manpower agencies.” These agencies are almost entirely privately owned businesses that offer fee for service, and many (744 agencies in 2014–2015) are legally registered with the government (Government of Nepal 2014; Kern and Müller-Böker 2015). Contact with these brokers, which are primarily located in Kathmandu, is typically first initiated by subagents who work on commission and travel from village to village in rural areas to recruit migrants (Kern and Muller-Boker 2015; Kepes 2016). In 2012, there were an estimated 25,000–30,000 of these subagents throughout Nepal (Kepes 2016). While potential migrants could use their social networks to find and contact a brokerage agency, the subagents are so ubiquitous in Nepal that most migrants first contact agencies through them.⁸

Brokerage agencies assist migrants with destination-specific logistics, such as obtaining an employment contract, housing, and travel arrangements. They also help

⁸This process might be different in other countries where subagents are less common. For example, potential migrants in Mexico might use information from social networks to learn how to contact a coyote, who then helps them cross the US border. In these cases, it would be important to account for the possibility that previous household or community migration experience would also increase access to brokers, making a migration a joint broker–social network process.

migrants meet a dizzying array of government requirements, including obtaining a passport and/or visa, medical approval, and medical and repatriation (in the case of death) insurance (Government of Nepal 2007; Kern and Müller-Böker 2015). Indeed, some regulations governing migration to particular countries (especially those in the Persian Gulf) are so complex that it is almost impossible to migrate to these places without a broker's assistance, especially for the many Nepali migrants with low educational attainment and literacy.⁹ Reports indicate that these Nepali brokers do not provide any financial assistance (neither loans nor grants) to prospective migrants (Kepes 2016) and instead often require prospective migrants to start paying fees at the beginning of the recruitment process, well before they have an employment contract. Studies and our ethnographic experience in the area both suggest that it is common for prospective migrants of all wealth and income levels to borrow money from close and extended families, friends, and professional loan agents to finance these migrations, often at high interest rates (Graner and Gurung 2003; Thieme and Wyss 2005).

Data and Methods

Our empirical tests draw on panel data from the Chitwan Valley Family Study (CVFS)¹⁰ survey waves between 2008 and 2012. The survey was conducted on a stratified random sample of neighborhoods in the western Chitwan area (Barber et al. 1997). Residents in that neighborhood were included in the survey sample, which gives researchers the ability to record detailed neighborhood-level measures, such as neighborhood migration experience, with substantial accuracy. For residents aged 15–59 years, a baseline survey was administered in 2008, while those aged 12–14 years in 2008 were later administered a baseline survey (and entered the panel study) when they turned 15. The initial response rate was 97 percent of those contacted for an interview.

If respondents continued to reside in Nepal, in either Chitwan or elsewhere, they were recontacted and interviewed three times a year through the 2008–2012 study period. Those who moved internationally, prior to June 2011, were reinterviewed twice after their migration. The domestic and international migrant interviews were undertaken by phone or in person at their destination or in Chitwan if they returned shortly (Ghimire et al. 2017). Attrition in the whole CVFS was very low, and even with migrants, the response rate was 91 percent at the final follow-up interview (Ghimire et al. 2017).

⁹ Kern and Müller-Böker (2015) and Kepes (2016) provide exceptionally detailed, informative, and interesting descriptions of how migration brokers work in Nepal.

¹⁰ The Chitwan Valley Family Study data used in this article are publicly accessible through the Inter-University Consortium for Political and Social Research (ICPSR) at www.icpsr.umich.edu.

The CVFS also contains household-level interviews collected three times a year, which provide basic demographic information, including residential location, on all household members for every month from 2008 to 2012. Thus, the survey contains information on migration destinations and dates from both migrants themselves and their households. Internal consistency between individual and household reports on migration histories is 98 percent. We use the self-reported migration information when it is available (94% of the sample) and the household reports when the self-reports are not available. This procedure provides us with information on the migration destinations and dates for 97 percent of our original sample.

We also use a CVFS household agriculture and consumption survey from 2006. This study included items on household income, agriculture, livestock ownership, and house quality, which we use to measure economic resources. About 90 percent of respondents in the 2008 baseline lived in households for which these 2006 resource measures are available. The sample we use for presentation of results includes 4,251 people who lived in households with complete economic and other information. We also tested our models on the full 2008 sample (with a control variable to delineate those with missing economic information). The results were substantively equivalent.

Analytic Strategy

With these data, we used discrete-time event history models and multinomial logistic regression to model the monthly hazard of out-migration. Our unit of analysis is person-months. While using person-months substantially increases the sample size, it does not deflate standard errors and, thus, provides appropriate tests of statistical significance (Allison 2014). We account for clustering at the neighborhood level, using the SAS GLIMMIX procedure.

Our outcome measure—corridor-specific migration is calculated as the rate of a person making a transition in geographic location to a specific corridor. We analyze first migration during our study period (2008–2012). Analyzing first migration ever, in an individual's life, would be useful, particularly given that subsequent migrations will likely be less dependent on social networks' facilitation and financial resources and brokers' logistical resources. However, migration is so common in Nepal that many CVFS respondents had already migrated by the beginning of our study period in 2008. Thus, restricting our study to only people who had never before migrated would decrease the sample size substantially. Further, such a restriction would also decrease the number of migrants to more distant destinations (especially in the brokered and mixed categories) to such an extent that analyzing these destinations would be statistically problematic. As such, we analyze the first time respondents migrated during the study period, while controlling for previous individual migration experience.

Our analytic strategy, with corridor-specific migration outcomes, is designed to address whether migration-specific capital matters differently for brokered and

unbrokered corridors. It does not specifically test whether this effect might be due to substitution of information facilitation by brokers (as suggested in the theory section) or a consequence of another mechanism. There are other pathways that could produce the result of decreased network effects on migration to brokered corridors. One possibility is if migration to these specific corridors is new and if there are no prior migrants to those areas to provide information facilitation. This possibility is not likely in Nepal because migration to the brokered corridors (Persian Gulf, Malaysia, and South Korea) has been occurring at high rates for over a decade. Another possibility is that broker use is so expensive that families, or even communities, can afford only one migration to that destination. In this case, limited resources, not limited logistical capacity, would cause social networks to have decreased influence. Again, in Nepal, it is likely quite the opposite. Our extensive fieldwork leads us to believe that migrants often provide remittances to the household, which are then sometimes purposed to finance another family member's migration. While these alternative theoretical explanations for results from our analytical strategy are not viable in the particular context of Nepal, future studies in other areas might address these possible sources of unobserved heterogeneity.

Outcome Measures: Migration

Our outcome measures whether an individual migrated during the study period, 2008–2012. To examine how the influence of migrant social capital varies by migration corridor, we separate into different outcome categories those who did not migrate, those who migrated to destinations that are largely brokered, those who migrated to destinations that are generally not brokered, and those who migrated to destinations that are mixed. While it would be ideal to disaggregate our outcome into individual countries as corridors, we do not have the sample size. Instead, we group destination countries into corridor-based categories that allow for meaningful distinctions without compromising statistical power.

We delineated which destination countries should be placed in each outcome category (brokered, not brokered, and mixed), based on our own extensive field experience and publications that examine these patterns more systematically (Kepes 2016; Ministry of Labour and Employment 2018). We designate brokered corridors as those where the majority of migrations are organized through brokers and where it would be very hard to migrate without their logistical services. Using quantitative and qualitative data, Thieme and Wyss (2005) find that the majority of migrations to “the Gulf States, Malaysia, South Korea, and Singapore, or to certain other Asian countries obtain their job through . . . recruiting agencies” (p. 77). The Government of Nepal (Ministry of Labour and Employment 2018) reports that between 2008 and 2017, almost 90 percent of labor permits (which are obtained in Nepal and signify high logistical requirements) were for migrants to the Persian Gulf countries, Malaysia, and South Korea. These conclusions match our field experience. Thus, our

outcome category of *brokered corridor* includes countries of the Persian Gulf (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates), Malaysia, and South Korea. We also include Afghanistan, Iraq, Israel, and Lebanon, where only a small portion of migrants in our study moved. In these countries, control over migration is extreme, and predeparture requirements are high, including work authorization, passport, work visa, employment contract, health check-ups, travel and housing arrangements, various types of insurance, and even a language test in the case of South Korea. As shown in Table 1, 3.4% of respondents in our study migrated to brokered destinations.

The destinations we categorize as not brokered are Nepal and India. For both destinations, the predeparture organizational requirements are very low. Although we characterize both Nepal and India as unbrokered corridors, we do not put them in the same outcome category because there are sufficient numbers of migrants to each that we do not have to combine them for statistical power.

Our outcome category of mixed includes countries where a substantial portion of migrants use brokers and a substantial portion do not. In some of these countries, employment contracts can be obtained through brokers but are not required prior to departure. Others can gain employment contracts through negotiation with other migrants in their social network. In some of these countries, Nepali migrants first enter on tourist, student, or other short-term visas and overstay their visa. For this route, some people use brokers for the initial part of their migration and then resources from social networks for the later part. In this outcome category, we include Australia, the United Kingdom, the United States, Japan, and Thailand (these five countries comprise 81% of mixed-corridor migrants), as well as the less common destinations of Belgium, Belize, Canada, Finland, Germany, Iceland, China, the Maldives, Poland, Portugal, and Spain.

To be considered a migration event, the respondent needed to have resided in the new geographic area for at least three months during the observation period. Other specifications of time were tested in sensitivity analyses (one, six, and 12-month periods of being away), but no substantive differences were found.

Migration Experience and Social Capital Measures

We distinguish between three types of migration-specific capital: individual, household, and community. At the individual level, we measure migration experience from age of 15 years until the baseline interview as having none, only domestic, or international experience. At the household level, we measure migration-specific social networks as the natural log of the number of household members who have migrated¹¹ and create four variables, one for each outcome category (Nepal, India,

¹¹ Where no household members had migrated to a particular destination (and natural log of 0 cannot be calculated), we coded these values as 0.

brokered, and mixed). We use the same procedure to calculate four neighborhood-level migration-specific social network variables: the natural log of the number of neighborhood members who have migrated within Nepal, to India, to brokered, and to mixed corridors. The respondent was excluded from the calculation of the household and neighborhood variables, and the respondent's household was excluded from the neighborhood variables calculation.

Other Individual, Household, and Neighborhood Control Measures

We control for many other factors that are theoretically and empirically related to the likelihood of migration. Gender is a non-time varying control. Age, education, and marital status are time varying. We also control for non-family work experience (not time varying), with categories that include none, wage work experience only (such as daily or weekly labor on farms), and salary work experience (such as professional or service positions at businesses or public institutions earning a regular salary).

Household-level controls include number of household members (time varying) and advantaged or disadvantaged caste/ethnicity¹² (not time varying). Our measures of household economic status are not time varying and measured in 2006. *Household resources* is a continuous variable that is a composite of land ownership, livestock ownership, housing quality, and income. For each separate measure, we calculated a z-score that situates each household in the distribution for the whole study area. We summed the five z-scores for each household to create a magnitude of resources available. *Relative economic status* is a categorical variable that uses the summed z-score of resources from *household resources*, then places each household in a category relative to the other households in its neighborhood, where "poor" includes households that were more than one standard deviation below the neighborhood mean of the distribution of summed z-scores, "slightly poor" is households within one standard deviation below, "slightly rich" is those within one standard deviation above, and "rich" is those more than one standard deviation above the mean.¹³ We use one neighborhood-level control, the distance in miles to Narayanghat, the one urban area in the Chitwan study area.

Results and Discussion

We begin our discussion of results with our main focus, migration-specific social capital, measured through the migration experience of household and community members in different corridors. Looking first at household-level migration-specific

¹² Advantaged castes include Brahmin, Chhetri, and Newar. Disadvantaged castes include Dalit, Hill Janajati, and Terai Janajati.

¹³ We also tested models with simpler measures of household wealth that are more commonly used in the literature, such as amount of land and livestock units owned. Results presented here are substantively equivalent to those tests.

Table 1. Descriptive Statistics for CVFS Respondents (N = 4251).

1 st Migration Destination	% Distribution or Mean	Standard deviation
No Move	84.2 %	
within Nepal (unbrokered)	8.8 %	
India (unbrokered)	2.4 %	
Brokered destinations	3.4 %	
Mixed destinations	1.2 %	
Migration Specific Capital (time varying)^{a, b}		
# household members migration experience within Nepal	0.4	0.8
# household members migration experience to India	0.2	0.5
# household members migration experience to brokered destinations	0.3	0.5
# household members migration experience to mixed destinations	0.2	0.6
# neighborhood members migration experience within Nepal	6.1	4.4
# neighborhood members migration experience to India	2.5	2.9
# neighborhood members migration experience to brokered destinations	3.7	2.6
# neighborhood members migration experience to mixed destinations	2.6	2.7
Individual Characteristics		
Respondent migration experience:	62.8 %	
None		
Domestic migration only	23.2 %	
International migration	13.9 %	
Female	60.8 %	
Age: 14–19 years old ^c	27.7 %	
20–24	11.6 %	
25–29	10.7 %	
30–34	9.8 %	
35–39	9.5 %	
40+	30.7 %	
Caste: Disadvantaged caste	49.0 %	
Advantaged caste	51.0 %	
Ever married ^c	65.0 %	
Educational attainment: 0 years school completed ^c	25.4 %	
1–5 years completed	15.5 %	
6–8 years completed	26.7 %	
9–10 years completed	14.6 %	
11+ years completed	17.9 %	
Work experience: never worked outside the home	45.9 %	
Wage work experience only	34.9 %	

(continued)

Table 1. (continued)

1 st Migration Destination	% Distribution or Mean	Standard deviation
Salary work experience	19.2 %	
Household Characteristics		
Number household members ^c	3.4	1.5
Household Resources	0.4	2.5
Relative economic status: poor	16.0 %	
Slightly poor	29.4 %	
Slightly rich	34.7 %	
Rich	20.0 %	
Neighborhood Characteristics		
Distance to urban center	8.6	3.9

^aOur models use the natural log of the number of household or neighborhood members with migration experience. We present just the number of members here for the reader's ease of interpretation of the distribution of each of these variables.

^bMeans are calculated from the values of household/neighborhood member migration data appearing in month 8 of the study period because this is the first month that contains non-missing values for most households and neighborhoods.

^cFrequency or mean for time-varying variables (age, marital status, educational attainment, and number of household members currently resident) is calculated from the value of the variable at the respondent's baseline interview month.

capital in Table 2, our results generally support *H1a*. With one key exception, the more household members who have migrated to a specific corridor, the more likely one is to migrate to that corridor. The more people in the household who had migrated within Nepal, the more likely one was to migrate within Nepal (odds ratio of 1.75); the more household members who had migrated to India, the more likely one was to migrate to India (odds ratio of 4.33); the more household members who had migrated to mixed-corridor destinations, the more likely one was to migrate there (3.39). These results — that (with one important exception discussed below) the diagonal cells in the household capital section have large, positive, and statistically significant odds ratios — largely match existing research and social capital theory from which we derived *Existing H1* (Massey 1990a; Kandel and Massey 2002; Curran et al. 2005; Garip and Asad 2016).

Further examination of our results for household-level migration-specific social capital, however, are inconsistent with *Existing H1* and support *H1a*. With the exception of migration to brokered corridors (discussed next), we primarily find negative results off the diagonal of the four-by-four section of household capital

Table 2. Results from Multinomial Logistic Regression Models Predicting Migrations of Three Months or Longer (First Migration During the Study Period 2008–2012).

	Migration to:			
	Other Nepal (unbrokered)	India (unbrokered)	Brokered	Mixed
Migration specific capital (time varying)				
Logged # HH member migration from:				
Other Nepal (unbrokered)	1.75*** (5.73)	0.89 (0.53)	0.80 (1.12)	0.80 (0.81)
India (unbrokered)	0.75 + (1.54)	4.33*** (7.85)	1.55* (1.70)	0.62 (0.77)
Brokered	0.63** (2.97)	0.86 (0.59)	1.29 (1.08)	1.10 (0.23)
Mixed	0.71* (2.13)	0.33** (2.46)	1.42 + (1.43)	3.39*** (5.22)
Logged # NBH member migration from:				
Other Nepal (unbrokered)	1.00 (0.00)	0.86 (1.01)	1.04 (0.25)	0.82 (0.96)
India (unbrokered)	0.99 (0.04)	1.38** (2.30)	0.99 (0.07)	0.93 (0.31)
Brokered	0.99 (0.15)	0.91 (0.59)	1.22 (1.14)	0.78 (0.99)
Mixed	0.94 (0.75)	0.98 (0.13)	0.86 (0.99)	1.50** (2.51)
Individual Characteristics				
Migration experience Age 15-BL:	Ref	Ref	Ref	Ref
None				
Domestic migration only Age 15-BL	1.77*** (3.86)	0.72 (0.76)	1.10 (0.32)	1.36 (0.96)
International migration Age 15-BL	1.28 (1.03)	4.83*** (5.00)	2.27** (3.21)	1.49 (0.89)
Gender (Female = 1)	1.10 (0.80)	0.31*** (5.09)	0.05*** (10.42)	0.54 + (1.87)
Age (Time varying): 14–19	Ref	Ref	Ref	Ref
20–24	1.13 (0.91)	1.16 (0.52)	5.48*** (5.88)	5.99* (2.25)
25–29	0.55** (2.64)	0.65 (1.05)	3.42*** (3.27)	3.76 (1.46)
30–34	0.28*** (4.66)	0.29* (2.47)	1.64 (1.18)	3.33 (1.31)
35–39	0.24*** (4.85)	0.20** (2.90)	1.07 (0.15)	2.60 (0.98)
40+	0.15*** (7.09)	0.09*** (4.77)	0.13*** (4.08)	1.58 (0.49)

(continued)

Table 2. (continued)

	Migration to:			
	Other Nepal (unbrokered)	India (unbrokered)	Brokered	Mixed
Caste status: Advantaged	Ref	Ref	Ref	Ref
Disadvantaged	0.77* (2.22)	1.80** (2.68)	1.22 (0.95)	0.40 + (1.94)
Ever married (time varying)	0.63** (2.67)	0.99 (0.02)	1.50 (1.53)	1.99 (1.41)
Education (time varying): No school	Ref	Ref	Ref	Ref
1–5 years completed	1.30 (1.07)	0.89 (0.29)	0.90 (0.27)	1.00 (0.01)
6–8 years completed	0.91 (0.40)	1.21 (0.48)	1.70 (1.36)	0.42 (1.30)
9–10 years completed	1.61* (2.00)	1.15 (0.32)	1.28 (0.59)	1.55 (0.69)
11+ years completed	1.62* (2.02)	1.38 (0.73)	1.21 (0.46)	1.07 (0.14)
Work experience: Never worked	Ref	Ref	Ref	Ref
wage work only	1.05 (0.40)	1.07 (0.30)	1.28 (1.06)	0.07** (2.66)
any salary work	1.31 (1.62)	0.74 (0.96)	1.17 (0.65)	0.60 (1.25)
Household Characteristics				
# of HH members (time varying)	0.85*** (3.87)	0.84* (2.16)	1.01 (0.14)	0.98 (0.19)
Household resources	1.02 (0.37)	0.90 (1.03)	0.98 (0.16)	0.91 (0.59)
Relative economic status: Poor	Ref	Ref	Ref	Ref
Slightly poor	0.88 (0.56)	1.63 (1.13)	1.05 (0.12)	1.65 (0.55)
Slightly rich	0.72 (0.99)	2.29 (1.34)	0.89 (0.21)	2.76 (0.95)
Rich	0.71 (0.76)	2.46 (1.09)	1.05 (0.07)	4.09 (1.06)
Neighborhood Characteristics				
Distance to urban center	0.99 (0.60)	1.01 (0.52)	1.06* (2.28)	0.89** (2.81)
AIC	5,541.71	1,809.18	2,169.42	921.06
BIC	5,637.40	1,901.88	2,265.11	1,013.76
Number of person periods	174,884	174,584	174,621	174,521

Notes:

- Odds ratios shown. Z-statistics in parentheses.
- Significance: + $p < .10$ * $p < .05$, ** $p < .01$, *** $p < .001$.
- One-tailed test for predictor variables, two-tailed test for controls.
- Controls are fixed at baseline interview unless otherwise specified.

results presented in Table 2. For example, although household-level migration experience from mixed corridors has a large positive effect on migration to mixed corridors (odds ratio of 3.39), as noted above, it has a strong negative effect on migration within Nepal (0.71) and to India (0.33). This pattern exists for almost all corridors and suggests that the effect of household-level migration-specific social capital is strongly corridor- or destination- specific. Namely, if a person has migrant social capital from one destination, then he/she is more likely to go to that particular destination and at the same time less likely to go to other destinations.

The notable, and important, exception to this pattern is that the odds ratio for the effect of household-level migration experience to brokered destinations on subsequent migration to brokered destinations is positive, at 1.29, but not statistically significant. This 1.29 is certainly much smaller than the odds ratios for other destinations on the diagonal in Table 2, and the 95 percent confidence intervals around 1.29 and the destination-specific odds ratios for India and mixed destinations (4.33 and 3.39) do not overlap, suggesting that these results are very likely different.¹⁴ However, the confidence intervals around 1.29 for brokered to brokered destinations and 1.75 for Nepal to Nepal do overlap, giving us some, but slightly less, confidence in the difference between these two odds ratios.

Taken together, these results show general support for *H1b* that household-level migration-specific social capital had less effect on migration to brokered than to nonbrokered destinations. Indeed, this result speaks to this article's central premise — that the services provided by migration brokers can largely substitute for much of the information facilitation that might otherwise be provided by household-level migrant capital. Recall, however, that households can also provide financial assistance to the potential migrant, a resource for which brokers do not substitute, as is discussed in more detail below.

Although household networks from one destination generally have a negative effect on migration to another destination, there are two key exceptions, where the coefficients for social capital from India and mixed destinations have a positive (odds ratios 1.55 and 1.42, respectively) and statistically significant effect on migration to brokered destinations. It is notable that these exceptions to the broader pattern were to brokered destinations. In other words, it is only with migration to brokered destinations that we find a pattern of positive coefficients off the main diagonal of the four-by-four household-capital section of Table 2. While we cannot test this interpretation with our survey data, we understand from our field experience in Nepal that some people first migrate to India or another place, with the dual intention of earning enough liquid cash to support household expenses *and* finance a

¹⁴We cannot directly test the statistical significance of the difference between coefficients because they refer to different outcome categories and different independent variables. As such, 95 percent confidence intervals are the best way to get a sense of the difference between key coefficients of interest.

subsequent brokered migration, which is more expensive initially but better remunerated in the long term.

Moving to neighborhood-level social capital, presented in the next section of Table 2, we also find support for our hypotheses. Recall that *H2a* was that community-level migration-specific social capital would have a smaller influence than family-level capital. We find the odds ratio for India–India is 1.38, which is much smaller than the family-level India–India odds ratio of 4.33 (with no overlap of 95% confidence intervals). It is also demonstrated with the community-level mixed–mixed odds ratio of 1.50, compared to the household-level odds ratio of 3.39 (again, with no confidence interval overlap). The effects of different destination social capital at the neighborhood level (results that are off the main diagonal) are also all weaker than for the family-level measures, and many do not have overlapping confidence intervals.

These same odds ratios, for the India–India and mixed–mixed corridors, also support *H2a* hypothesis, which proposes that the influence of neighborhood-level social capital is greater for migration to the same destination than to different destinations. Our result for Nepal-based social capital leading to Nepal migration is 1.0, meaning there is essentially no effect in this regard. Thus, in general, we find that social capital's influence is strongest for same destinations at both the family and neighborhood levels.

Moving to *H2b*, that neighborhood-level social capital will have no effect on migration to brokered destinations, our results support this proposition. Indeed, we found no appreciable effects of neighborhood-level social capital from any destination on the likelihood of migration to brokered corridors. This pattern supports the idea (on which *H2b* was based) that the services that brokers provide can entirely substitute for the information that neighborhood-level social capital provides to prospective migrants, but not the financial assistance that often comes from families.

We also examined models that include only male respondents. We do not show the results here because they are substantively similar to that for the pooled model shown in Table 2. We are not able to test models on only female respondents because there were not enough female migrants to brokered destinations to allow for statistical confidence in results.

Other Social and Demographic Characteristics

We now turn to our results for how other social and demographic characteristics (our control variables) influence migration. As shown in Table 2, gender's effects on migration vary substantially between corridors. There is no notable effect of female gender on migration within Nepal (compared to not migrating), a large negative and statistically significant effect to India, an even larger negative and significant effect to brokered destinations (with an odds ratio of 0.05), and a large negative effect on migration to mixed destinations. Age has a relatively consistent effect on migration to all destinations, with positive odds ratios for the 20–24-year-old cohort and

quickly decreasing odds ratios with age after 24. Particularly notable are the odds ratios for 20–24 year-olds going to brokered and mixed destinations, 5.48 and 5.99, respectively, indicating that people in this age group are about five times more likely to go to countries where migration is mostly or partially organized by brokers.

Personal migration experience generally has a positive effect on migration. Our results show that people who have migrated domestically are more likely to migrate again, with particularly strong and significant results for migration within Nepal. We find even stronger positive results for those who have migrated internationally in the past, especially for migration to India and brokered corridors, with odds ratios of 4.83 and 2.27. Other key characteristics — caste, marriage, household size, work experience, education, rural residence, and socioeconomic resources — all had varying influences on migration, depending on destination. These results lead to an additional (methodological) conclusion that there is distinct value in disaggregating migration outcomes to separate corridors (or destinations or groups of destinations). This conclusion is further supported by our results for migrant social capital, discussed above. Even with these control variables, however, it is clear from our empirical results that the theoretical connections between these measures and migration must be considered carefully by destination. These results beg for theoretical consideration of questions like — why does gender have the expected negative effects for migration to brokered and mixed destinations but no notable effect for migration within Nepal? Similarly, why does age have negative influences on migration to Nepal and India, but positive influences on migration to brokered and mixed corridors?

In advocating for a corridor-specific approach to future migration studies, we acknowledge that this study is subject to unobserved heterogeneity. Just as almost all other social-science research faces this concern at the individual or group level, there are likely other corridor characteristics that influence migration in Nepal and that we have not measured. Such characteristics could be distance, shared borders, availability of low- and high-skilled employment, cultural similarities, or age of migration stream. As such, our results cannot be taken as the final conclusion on how migration corridors function in Nepal. That said, our detailed and time-varying measurement of brokerage, logistical requirements, and migration increases our confidence that we have addressed our topic of interest in a convincing manner. We leave it to future studies to improve our knowledge of how other corridor characteristics influence migration.

Conclusion

This article has focused on how migration brokers influence the relationship between migrant social capital and migration behavior. We expect that migration brokers are a consequence of (and an indicator for) logistical difficulties for migration in some corridors. Our main theoretical proposition is that with the services they provide, brokers can provide logistical support that will substitute for the

informational resources often obtained from social networks. Alternately, brokers cannot substitute for the financial assistance, most often from family.

Our empirical results, tested with detailed panel data from Nepal's Chitwan Valley, indicate support for this narrative. We find that migrant social capital from corridors that are primarily organized *without* brokers' assistance has a consistently positive influence on migration to those same destinations. Alternately, for corridors that are largely brokered, such as those to the Persian Gulf, our results suggest that brokers substitute for some functions of social networks, but not others. Specifically, the pattern that emerged from multiple results at the family- and community-level indicates that brokers' logistical services likely do substitute for the informational facilitation provided by social networks. At the same time, we conclude that the financial assistance from families still matters, even when brokers are available.

This evidence adds to existing social capital theory by better defining when or where the theory is applicable. In this case, we argue that social capital theory is only partially applicable for migration corridors characterized by logistical difficulty and brokerage industries. Contextual variation in logistical difficulty and where brokers are available might be one reason why existing studies have found notable variance in social capital's effects on migration. At the same time, our theoretical contributions help broaden the scope of social capital theory in migration to better encompass the variety of migration strategies that are emerging around the world. In particular, in addition to informational and material resources (Garip 2008; Dolfin and Genicot 2010; Garip and Asad 2016), we add *logistical resources* as a key piece that is necessary for migration in some cases.

Beyond our focus on social capital theory, our corridor-specific approach also contributes to migration studies in general. Migration corridors vary in terms of how they are organized (brokered or not), but also by many other characteristics. Each corridor's specific character likely influences the pathways that relate predictors with actual migration behavior. For example, we find that social capital theory is only partially applicable at the community level for corridors where logistical difficulties are high but very applicable for corridors where logistics are less difficult. In addition, the substantially different coefficients we find for our control variables (age, sex, land ownership) for different destinations suggest that other theoretical pathways linking these predictors with migration also vary by corridor, as has been found in other studies as well (Funkhouser and Ramos 1993; Mora and Taylor 2005; Pedersen, Pytlikova, and Smith 2008; Funkhouser 2009). For this reason, we argue for a refinement of migration theories, based on the many different characteristics of singular migration corridors. We cannot expect that all migration within a certain system or all migration from a particular country is influenced in the same way. Along with theoretical refinement, our study also indicates a need for empirical analyses to disaggregate migration outcomes by corridor, destination country, or region. Of course, such disaggregation is not always possible with available data, in turn, suggesting that future collection of migration data should record migrants' specific destinations.

While this study highlights brokers' role in seeking to better understand social capital's influence on migration, it also brings up the topic of brokers more generally. In addition to our demonstration of the relationship between brokers and social networks, one must also wonder how else this burgeoning industry might influence migration and other aspects of social life in many countries. For example, how might the hundreds of agencies and 25,000 subagents in Nepal influence remittances, the economy, gender and caste discrimination, and politics? In this regard, Portes and Landolt (2000, 544) write, "[M]igration is a network-creating process that prompts individuals to construct new social roles and relationships." Others also describe and analyze how the use of social networks to facilitate migration creates trust, reciprocity, and bridging-type ties that would not otherwise be developed (Putnam 2007). These relationships built through migration's social facilitation can develop into social support for migrants at destinations, as well as connect households that remain behind at the origin (Ryan et al. 2008). In this study, we find that brokers marketize some of social capital's functions in migration, trading logistical resources for money instead of for strengthened social ties, trust, and reciprocity. This pattern could influence migrants' well-being and assimilation trajectories at destinations and have broad-ranging effects on the origin societies where brokers are commonly used. While these issues are clearly far outside this article's scope, we wish to highlight that we consider this study the beginning of a broader agenda that should carefully analyze all the ways in which migration brokers expand, change, and influence local, national, and global economic and social relations.

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