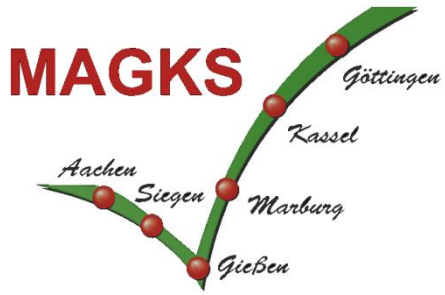

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International Marriage for Homogeneity?
- Evidence from Marriage Migration in South Korea

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Abstract: This paper investigates empirically whether cultural, racial, and linguistic similarities increase marriage migration. By using marriage migration data from South Korea, I find that the similarities between an origin country and South Korea pull more marriage migration, but the positive effects of the similarities are mainly driven by female marriage migrants from middle and low income countries. The pulling effects of the similarities can be explained by female deficits in the marital age group in South Korea that motivate Korean men to seek foreign brides who share similar traits with locals.

Keywords: Marriage Migration, Similarities, Sorting Traits, Demographic Changes, and South Korea

JEL-codes: F2, J1, O5

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1. Introduction

Globalization facilitates human movements across borders. As a growing number of people go abroad for study, work, and holidays today, cross-border marriages also increase. International marriage evidently results from increasing contact with and exposure to foreigners ï people meet, fall in love, and marry globally. Besides the personal choice of love matches across borders, there is another aspect of international marriage that needs to be considered in order to understand this growing phenomenon. This often-overlooked aspect that is being referred to is international marriage with the intent of migrating somewhere else. In other words, some people pursue marriage outside of their country of origin as an instrument to migrate, mainly because of economic motivations combined with the possibility of bettering their quality of life from their current situation.

With such migratory motivations, the economic wealth and conditions of a destination country can be an important pull factor of international marriage migration. That being said, the migratory aspect of international marriage implies that the choice of a destination country for marriage migration can be deliberately selected. To address this issue of country selection, the economic theory of marriage provides some insightful applications. This theory proposes two types of sorting to explain the choices of spouses: positive and negative assortative sorting (Becker 1974). The former indicates that people tend to prefer others with similar traits (i.e. horizontal sorting) ï particularly in racial and cultural backgrounds ï, while the latter refers to vertical sorting that is often evident in income differences between husbands and wives (for instance, men marrying down to women with lower income, and women marrying up to wealthier men). When it comes to international marriage migration, the choice of the nationality of foreign spouses may reflect oneôs preference towards certain traits ï for instance, preferring someone who is culturally and ethnically similar to oneself (horizontal sorting), and/or marrying and migrating to a wealthier country (vertical sorting).

In this paper, I investigate the horizontal and vertical sorting patterns in marriage migration. In doing so, I select South Korea as a country case study because the country currently experiences a high growth rate of marriage migration (see figure 1), and the integration of foreign spouses into the local society has recently become an important issue (Lee et al. 2006; Kim 2009; Bélanger et al. 2010). Furthermore, there is one interesting feature of South Korea concerning marriage migration. The country currently faces the lack of young women in the

marital age group (see figure 2), which lead men to search for wives abroad. Consequently, this demographic change of the female deficits in South Korea affects the patterns of marriage migration into the country (Lee 2010).

In my empirical investigation, I first construct four similarity indicators that reflect cultural (Buddhism and Christianity religion indicators), racial (East/Southeast Asia indicator), and linguistic (Altaic-Turkic language indicator) similarities, and test for horizontal sorting towards similar traits by using these indicators. Second, to investigate vertical sorting behaviors, I employ two approaches: estimating the income effect of an origin country on marriage migration; and identifying whether the determinants of marriage migration vary across different income levels of origin countries.

The empirical findings of my paper show that similarities are important determinants of marriage migration in South Korea, particularly for women from middle and low income countries. On the other hand, similarities matter less for the marriage migration of men and women from high income countries. The importance of similarities for female marriage migration from lower income countries can be, presumably, explained by the lack of Korean women in the marital age group. In other words, the lack of local brides leads Korean men to seek foreign wives particularly from low and middle income countries because their migratory motivations are arguably greater, given larger income differences with South Korea. In seeking foreign brides as an alternative to local ones, Korean men are likely to prefer women who are similar to Koreans. Concerning income effects, there is no robust evidence that income is a direct cause of marriage migration. However, the determinants of marriage migration vary significantly across the different income levels of origin countries, indicating that income is still an important factor in explaining the patterns of marriage migration.

My paper continues with the following structures. The snapshots of marriage migration in South Korea are described in section 2. Section 3 presents the working hypotheses, data, and estimation models. In section 4, I discuss the empirical results, and also address the endogeneity concerns of the empirical models by applying an instrumental variable method. Section 5 concludes the paper with some suggestions for future studies.

2. Demographic Changes and Patterns of Marriage Migration in South Korea

For the last ten years, South Korea has experienced a sharp increase in international marriage and marriage migration of foreign wives and husbands who married to Korean nationals. According to the Korean Immigration Service Statistics (KIS 2012), marriage migration has increased by appropriately 28% every year between 2002 and 2007. Afterwards, the growth rate of marriage migration declined due to stricter marriage migration policy in Korea,[1] however, the number of marriage migrants increases consistently up to the present (see figure 1). In 2012, the number of marriage migrants in South Korea was 148,498 and, among them, females were 85.9% (127,540), while males made up 14.1% (20,958). Also, international marriages (excluding marriages between South Koreans and foreign nationals with Korean ethnicity) constitute more than 9% of all marriages of South Koreans in 2012.

Concerning the nationalities of foreign spouses, the majority of female marriage migrants come from other Asian countries. The top five origin countries consists of China, Vietnam, Japan, the Philippines, and Cambodia that provide more than 85% of foreign wives (see figure 3). The second largest group consists of Thailand, Mongolia, Uzbekistan, and Russia, each of which has sent more than 1,000 female marriage migrants to South Korea. On the other hand, the distribution of male marriage migrants by nationality is more diverse across different regions. The major origin countries are China, the United States, Japan, Canada, and Pakistan, taking about 80% of the male marriage migrants (see figure 4). The second largest group of countries includes Great Britain, Bangladesh, Vietnam, Australia, the Philippines, New Zealand, and France ï each of which provides more than 200 male marriage migrants. For both males and females, China provides the largest number of marriage migrants. Among them, ethnic-Korean Chinese make up about 40% of the total female Chinese marriage migrants and 65% of the male counterparts ï i.e. for females, 20,196 out of 51,220, and, for males, 7,699 out of 11,815. Besides, the numbers of non-ethnic Korean Chinese are also large ï 31,024 females as the second largest group after Vietnam, and 4,116 males also being the second largest group after ethnic-Korean Chinese.

[1]The government of South Korea currently imposes the minimum requirements on Korean language proficiency of foreign spouses (TOPIK test level 1) and the income level of Korean spouses (minimum USD 14,520 per annum for two personsô households) as conditionality to issue a marriage visa (Ministry of Justice, Announcement No. 2014-29).

There are several potential reasons for the recent increasing trends of marriage migration in South Korea. First, increasing human mobility across countries likely promotes international marriage and marriage migration. Seemingly, the numbers of foreign residents and visitors in South Korea that can facilitate personal contacts between foreigners and locals have doubled since 2000, alongside the increasing marriage migration (KIS 2012). In addition, a large income gap between South Korea and developing countries in the region also contributes to increasing marriage migration. The GDP p.c. of South Korea was USD 33,440 in 2013 and, for the developing world in East Asia and Pacific, the average income was USD 5,536 in the same year (World Bank 2013). Such an income gap likely induces the marriage migration of individuals who take international marriage as an instrument to migrate.

Besides, there is a demographic change in South Korea that likely influences the patterns of marriage migration. Currently, South Korea lacks young female populations (see figure 2). Since 2000, the number of women in the age group between 25 and 34 has been substantially smaller than that of men in the same age group, and the gap is increasing. For instance, in 2000, there were about 60,000 women less than men in this age group (sex ratio 1.015), but, in 2010, the gap increased to 142,000 (sex ratio 1.04 or female deficits by 4%). Given that the average age of first marriage in South Korea is about 32 for men and 29 for women (World Bank 2005), the female deficits in this age group can be translated into the lack of brides. The imbalanced sex ratio is presumably triggered by so-called óson preferenceô and sex-selective abortion that were common in South Korea in the 1970s and 1980s (Park and Cho 1995). The lack of local women in the marital age group leads Korean men to search for spouses outside the country, and, as a result, increases the marriage-based migration of foreign women into the country.

Additionally, there is another cause of bride deficits in South Korea: womenôs empowerment. As female education has been improved and more women now pursue their own career than before, this development also leads to prolonged singlehood and late marriage of women, a phenomenon so-called ómarriage strikesô in South Korea (The Economist 2011). For instance, a third of South Korean women remain unmarried between age 30 and 34 today (KIS 2010). These trends further add up to the female deficits in the marriage markets, particularly worsening the marriage perspectives of certain groups of men ï for instance, men who live in rural areas and have a low level of education and income ï and, as a result, these groups of

men tend to seek foreign brides via international marriage brokers or other means abroad (Seol 2006).

3. Research Design

3.1. Hypotheses

Becker (1974) argued in his seminal work on the economics of marriage that marriage choice can be explained by preference, which leads to the sorting of spouses by traits in order to maximize oneôs utility level. Sorting patterns are observed in two different ways: positive assortative mating (horizontal sorting) and negative assortative mating (vertical sorting). The first refers to a positive correlation between the values of traits between husbands and wives, while the latter indicates a negative correlation. Empirical studies (Abramitzky et al. 2011; Hitsch et al. 2010; Lee 2007; Wong 2003) have further elaborated the theoretical discussions of Becker, and suggested that people tend to have horizontal (positive) sorting for appearance and ethnic origin preferring a spouse with similar traits in these aspects. On the other hand, income is a typical trait of vertical sorting. For instance, there tends to be a negative correlation between the earnings (temporal income) of husbands and wives (i.e. high male and low female earnings). Also, women tend to prefer better educated men (permanent income). Vertical sorting is closely related to marrying up (for women) and down (for men) practice that is often observed in many country case studies ï for example, Abramitzky et al. (2011) for France, and Lee (2007) for South Korea).

The theoretical and empirical findings on marriage choices can be further applied to explain the choices of marriage migration. First, the choice of marriage migration is based on individual preference to increase utility. It means that one chooses to marry internationally and migrate (or receive a marriage-migrant spouse) instead of remaining single and/or staying in the home country because this choice maximizes oneôs utility. With this respect, macro-level environments that affect decisions to marry and migrate to a specific country can be as important as micro-level individual characteristics that determine the choice of a specific person as a spouse. Second, sorting patterns can be used to explain the selection of a destination country for marriage migration. For instance, marriage migration can be determined by horizontal sorting preferring similar ethnic, cultural, linguistic backgrounds, and/or vertical sorting based on income differences between origin and destination countries.

In this paper, I investigate the determinants of marriage migration in South Korea by examining these horizontal and vertical sorting behaviors at the macro-level. To do so, I develop the following working hypotheses that can be empirically tested.

H0: Racial, cultural, and linguistic similarities increase marriage migration.
This hypothesis is proposed to test for the horizontal sorting based on preference towards similar physical, cultural, and ethnic traits. The central question here is whether or not marriage migration across borders reflects such preference towards similarity. While physical and ethnic similarities are an important determinant of match-making, individuals who are willing to marry internationally may have different preferences ï for instance, favoring exotic traits different from their own. In this case, similarity may have a negative effect on international marriage. On the other hand, similarity can still provide a positive linkage with marriage migration not only because people may generally prefer spouses with similar traits, but also because people tend to migrate to another country which share similarities with their homeland.

H0: The effect of similarity is stronger for female marriage migrants.
Above, I constructed a hypothesis that racial, cultural, and linguistic similarities between an origin country and South Korea promote marriage migration. Here, I further argue that the preference towards similarity is stronger for marriage between Korean husbands and foreign wives because of the female deficits in the marriage markets in South Korea. Korean men may marry foreign women because local brides are not available. Under these circumstances, foreign wives may play a role as a substitute for local spouses and, therefore, their personal traits that are similar to Korean women can be crucial criteria for the marriage choice of Korean men.

H0: The effect of similarity is stronger for female marriage migrants from lower income countries.
As discussed in section 1, international marriage is sometime used as an instrument to migrate for economic betterment. In this case, women from lower income countries are likely to have stronger migratory motivations and thus, can be more willing to accept their role as an alternative to local wives who are currently lacking in the Korean marriage markets. If so, personal traits that are similar to Koreans would be more important for female marriage migrants from these countries than other groups. In fact, there is evidence that international

marriage brokers operate in low-middle income countries in Asia, and match women in these countries with Korean men (Seol 2006).

H0: A low level of income of an origin country increases marriage migration ï particularly, for women.

National income can be crucial to determining marriage migration for two reasons. First, the vertical sorting that women prefer men with a higher level of income (and vice versa) can be observed in the patterns of international marriage, if foreign wives prefer foreign husbands from higher income countries than their own (and vice versa). Second, as income is an important factor of migration flows, the income level of a country can determine the direction of marriage migration. In other words, low income (of an origin country) is often a push factor of emigration, while high income (of a destination country) is a pull factor of immigration. Thus, it is likely that a foreign spouse from a poorer country moves to the wealthier one. In this case, the low income of an origin country may increase marriage migration outflows, and this effect is expected to be more evident for female marriage migrants because they are likely to marry up and move to a wealthier country. On the other hand, the effect may not be straightforward for the male counterparts because their marriage decision is presumably based on the vertical sorting of marrying ódownô, while their migration decision is, in contrast, motivated by moving óupô to a wealthier country.

3.2. Data

In order to measure the magnitudes of marriage migration into South Korea, I use the data on marriage visa holders, taken from the Korean Immigration Service (KIS). Marriage visas (F-6) are issued to foreign spouses of Korean nationals, and holding the visa enables them to legally reside and work in South Korea. After two years upon the issuance of the marriage visa, foreign spouses can also apply for permanent residency or Korean citizenship. In this paper, I take the number of marriage visa holders as the measurement of marriage migration, instead of foreign spouses with permanent residency, because marriage visas reflect the flows of new foreign spouses. The marriage visa data has a panel structure providing yearly variations in the number of marriage migrants from each origin country. The data is also decomposed by sex that makes it possible to investigate male and female marriage migration separately.

As this paper focuses on the effects of racial, cultural, linguistic similarities on marriage migration (ôhorizontal sortingõ), the main explanatory variables of interest are the similarity indicators measuring bilateral resemblance between an origin country and South Korea in these three aspects. To account for the similarities, I make a use of four measurements. First, cultural similarities are captured by religion indicators, because religion reflects long-lasting, rooted cultural backgrounds and norms of people (Alesina et al. 2003). For the religion indicators, I take the shares of Buddhists and Christians in the population of an origin country ï respectively ï because these two religions are by far the largest, most influential religions in South Korea. Christianity has the greatest share of believers, constituting about 32% of the total population in South Korea, and comprises of Protestants with a share of 24% and Catholics with 8% (CIA 2014). Buddhists make up about 24% of the total population, and the rest are mostly atheists (43%). Between the two religions, Christianity is arguably the most influential religion for daily practice today given that it is the most populous religion in the country, while Buddhism provides cultural roots and backgrounds as it is the oldest religion that has been practiced since the 4th century (Britannica 2014). With this in mind, foreign spouses from countries where Christianity and Buddhism are influential likely experience less cultural barriers in South Korea.

Second, language is also an important indicator of similarities reflecting cultural and communicational sharing. To measure linguistic similarities, I use the percentage of Altaic-Turkic language users in the population of an origin country because Korean belongs to the Altaic-Turkic language family, sharing grammatical and vocal similarities with other languages inside the same family. Logically, an Altaic-Turkic language speaker would have a comparative advantage in learning and mastering Korean, thus making it easier for them to be integrated into the Korean society. In addition to that, linguistic similarities also likely capture cultural similarities to some extent. The Altaic-Turkic language family consists of Mongolian, Tungstic, Turkic, Korean, and Japanese that are widely spoken in several countries in East and Central Asia, as well as in Turkey (Britannica 2014).

Third, as discussed above, racial origin and physical similarities increase likelihoods for matching between men and women. Also, some studies suggest that people tend to have more sympathy and solidarity with others who look similar and share ethnic origin (Guiso et al. 2009; Glaeser et al. 2000). Thus, this feeling of being close can affect the decision of marriage migration positively. To measure racial and physical similarities, I construct a regional

indicator of being located in East and Southeast Asia because people from this region share physical traits (eye and hair colors, facial shapes, heights, etc.) with Koreans to the greatest extent, compared to any other races. The East and Southeast Asian countries include China, Japan, Cambodia, Indonesia, Myanmar, the Philippines, Laos, Thailand, Malaysia, Mongolia, and Vietnam (World Bank 2014). Admittedly, this indicator may not be a perfect measurement of racial origin because the nationality-based indicator does not always correspond with individual racial backgrounds. However, the majorities of nationals in these countries have Asian ethnic origins and thus, this measurement can fairly-well serve the purpose of my investigation.

Table 1 shows binary correlations across the four similarity indicators. Among them, Christianity is negatively correlated with the other three indicators, while Buddhism, Altaic-Turk, and East/Southeast Asia are positively correlated to each other. The correlations among them are between -0.44 and 0.40, indicating that each of the indicators captures its own dimension of similarities to a large extent, and therefore, can be used in the estimation model together without causing a high degree of multi-collinearity problems.

3.3. Estimation Model

The main focus of my investigation is whether or not linguistic, cultural, and racial similarities increase marriage migration. The following equation provides a baseline specification to estimate the effects of the similarities on marriage migration.

$$MM_{it} = \breve{U}_i + \mathfrak{b}_k * S_i + \mu_n X_{it} + t + u_{it} \qquad (1)$$

The model has a cross-country time series structure, and covers up to 179 countries during the period between 2002 and 2012. The dependent variable, MM, is a logarithm of the number of marriage migrants from country i who reside in South Korea for a given year t. MM is decomposed by sex ï i.e. male and female marriage migrants, respectively ï so that potentially different effects of the similarities across sex can be identified.

S is a vector of the similarity variables, namely S {k = 1, 2, 3, 4} = {Buddhism, Christian, Altaic-Turk, East/Southeast Asia}. *Buddhism* and *Christian* variables are constructed to capture the effects of cultural similarities, and take the shares of Buddhists and Christians in

the population of country i, respectively. *Altaic-Turk* variable is an indicator of linguistic similarities, and measures the share of Altaic-Turkic language speakers in the population of country i. *East/Southeast Asia* variable is a dummy variable indicating whether or not the origin country of a marriage migrant is located in the East or Southeast Asian regions, reflecting racial similarities.

X is a vector of other explanatory variables that also likely affect marriage migration. This set of variables includes the income level (GDP p.c.) of an origin country, foreign exposure ï proxied with the number of international arrivals in an origin country ï, and a dummy variable indicating whether English is an official language in an origin country. The first two variables have annual variations, while the last variable is time-constant. Income level is controlled for in order to find whether marriage migration can be explained by economic motivations. Foreign exposure can be potentially important because contacts with foreigners likely increase possibilities for international marriage and migration. The English variable is included because speaking English likely makes life easier in a foreign country ï particularly for individuals who do not speak the local language. In South Korea, English is the first foreign language that students learn from the 4^{th} to the 12^{th} grade in school as an obligatory course, and it is the most widely understood language beyond Korean. The descriptive statistics and data sources of the variables are presented in appendix A.

t is a year dummy variable controlling for time trends that are common to all countries. With this respect, t captures the effects of demographic changes (e.g. annual variations in the sex ratio of the marital age group) and changes in migration policies in South Korea that are supposedly important to marriage migration into the country. Ŭ captures country-specific heterogeneity that will be explained in detail below, and u_{it} is the idiosyncratic error term. Robust standard errors are applied in order to control for potential heteroscedasticity and serial correlation.

To account for unobserved country-heterogeneity that is denoted as Ŭ in equation 1, country-specific random effects are applied. Random effect estimation provides several advantages for my analysis. First, by using this method, it is possible to estimate the effects of the time-invariant similarity variables ï the main interest of my investigation. Second, random effect estimation corrects for serial correlations across different time-dimensions, and produces efficient estimation (Woodbridge 2013, see chapter 14). On the other hand, the random effect

approach may result in biased estimation if the explanatory variables are correlated to unobserved country-specific heterogeneity. To control for such unobserved-country heterogeneity that is presumably correlated with the similarity variables, a fixed effect method is more appropriate. However, fixed effect estimation will cancel out time-invariant variables through the demeaning of all factors that do not vary across time, and therefore, making it impossible to estimate the effects of the similarities. Therefore, the random effect method is still chosen over the fixed effect one in my analysis. The remaining issue of endogeneity is addressed below.

Among the four similarity indicators, *East/Southeast Asian* variable is assumed to be exogenous because this variable refers to a geographical location. Also, the linguistic variable of Altaic-Turk can be fairly exogenous because language is widely predetermined, having the linguistic roots of countries defined some thousand years ago, if not longer.[2] On the other hand, the choice of religion is possibly correlated to other cultural factors that are unobserved. Normally, religious practice is constant for a short-time period ï for instance, some decades ï , and therefore treated as a time-invariant variable for the period of my investigation (10 years). However, the choices and patterns of religions can vary in a mid-long term. In Korea, for instance, Buddhism was the main religion until the early-mid 20th century, but since then, Christianity has become the most populous religion in the country. This change signals that the patterns of religion interact with other cultural factors, and therefore the religion variables ï *Buddhism* and *Christian* ***ï*** are likely subject to omitted variable biases.

In order to account for the potential biases discussed above, I employ two additional methods. First, an interaction term between country and time dummy variables is additionally included in the model. The interaction term captures country-specific time trends that reflect socioeconomic and demographic trends of an origin country.

$$MM_{it} = Ŭ_i + ɓ'_k*S_i + ƐCountry_i*Time_t + t + u'_{it} \qquad (2)$$

[2] On the other hand, I acknowledge that the share of Altaic-Turkic language speakers in a country can be altered by inflows of migration. However, countries generally maintain their linguistic identify for a long time, except some former colonies.

In this equation, the interaction term is denoted as $Country_i$*$Time_t$, and the other notations are the same as equation 1. This model is also estimated by a random effect technique because fixed effects will be dropped out due to perfect collinearity with the similarity variables.[3]

Second, I employ an instrumental variable approach to address the endogeneity of the model by exploiting external instruments that are exogenous. In section 3.4., I will discuss this approach in more detail.

Turning to the sampling of countries, I utilize the full country sample covering up to 179 countries to estimate the models above. In addition to the full-sample, countries are further grouped by their income level in order to test for the different effects of the similarities across income groups. In doing so, countries are first sub-sampled into high (GDP p.c. > USD 12,747), middle (USD 1,046 < GDP p.c. < USD 12,747), and low (GDP p.c. < USD 1,046) income countries based on the World Bank economy classification. Second, countries are sorted into two groups: above and below the income level of South Korea in 2000 that is USD 14,428. The income level of South Korea is taken as a reference because this approach may disentangle the different economic motivations of marriage migrants based on the relative economic wealth of their origin country.

3.4. Endogeneity Concern

To identify the causality running from the similarities to marriage migration, the explanatory variables of interest must be uncorrelated with unobserved factors that are excluded in the estimation model. Some potentially excluded variables are, for instance, social, demographic, and cultural factors that likely affect marriage migration into South Korea. Among them, the related trends that are specific to each origin country are addressed by including the interaction term between country and time dummy variables (see equation 2). In addition, some cultural and demographic changes in South Korea may also affect marriage migration into the country. These changes are captured by time-fixed effects that reflect trends common to all origin countries. However, omitted variable biases may still be present in the model, if certain time-invariant characteristics of origin countries that influence marriage migration into South Korea are systematically correlated with the similarity indicators. Such country-specific

[3] In addition, the control variables in vector X are also excluded due to high multi-collinearity with the interaction term.

heterogeneity can be addressed by controlling for country-fixed effects. However, this method is not applicable for my analysis because the similarity indicators are time-invariant and thus, will have perfect collinearity with fixed effects. Having this in mind, I try to reduce biases that omitted variables may cause by employing an instrumental variable approach.

As discussed in section 3.3, Buddhism, Christianity indicators might be endogenous to omitted factors (e.g. cultures), as religious practice is often closely associated with shared morals, thought processes, and cultural patterns. On the other hand, the indicators of Altaic-Turkic language and East/Southeast Asia are less likely subject to endogeneity, given that geographies and languages are largely pre-determined. Taking into account these endogeneity concerns, I exploit external variables to instrument *Buddhism* and *Christianity* indicators ï the likely endogenous variables. Selecting an instrument that has high explanatory power over an endogenous variable but is exogenous to omitted factors is a challenging task. In this study, my choices of instruments are (i) the distance between an origin country and India, instrumenting Buddhism; and (ii) the distance between an origin country and Israel, instrumenting Christianity.[4] India is the birth place of the Buddha (Siddhartha Gautama) ï the main god of Buddhism, while Israel is the origin country of Jesus Christ ï the central figure of Christianity. The main idea connecting Buddhism with the distance from India, and Christianity with the distance from Israel is that neighboring countries are more likely influenced by the respective religion that originated from each country (although neither India nor Israel adopts the respective religion as the main belief today).

The results of the first stage regressions presented in table 4.1 suggest the high explanatory power of the chosen instruments towards Buddhism and Christianity, having the coefficients of the external instruments statistically significant at the 1%-level. In addition, Cragg-Donald Wald F-statistics testing for the joint significance of the instruments provide further evidence of strong instruments. On the other hand, there is no reason to believe that distances between an origin country and India/Israel have a direct effect on marriage migration to South Korea. This argument is also supported by the statistical evidence of Hansen-J statistics that refer to

[4] I use four distance measurements to increase the validity of the instruments: (i) distances between the largest cities of an origin country and India (Mumbai), weighted by population; (ii) unweighted distances between the capitals of an origin country and India (New Delhi); (iii) distances between the largest cities of an origin country and Israel (Jerusalem), weighted by population; and (iv) unweighted distances between the capitals of an origin country and Israel (Tel Aviv).

the results of testing for the overidentifying restrictions of the instruments. The joint null-hypothesis of the test is that the instruments are uncorrelated with the error terms, and excluded instruments are correctly excluded from the estimated equation (Hayashi 2000, pp. 227-8). The p-values of the Hansen-J test lie between 0.93 and 0.94 (see table 4), indicating that the null-hypothesis of the exogeneity of the instruments cannot be rejected at the conventional level. Also, appendix B presents additional evidence that none of the external instruments turns out to have a significant effect on marriage migration when they are included in the second stage regressions. Moreover, the R^2 of the estimations including the instruments are almost identical to the R^2 excluding them, which implies no additional explanatory power of the instruments.

4. Results

4.1. Baseline Results with the Full Sample

Table 2 presents the results of the full-country sample. Columns 1-5 stand for female marriage migrants as the dependent variable and columns 6-10 for male marriage migrants. Columns 1-3, 5-8, and 10 show the results by controlling for random effects and time-fixed effects. Column 4 and 9 present the results accounting for country-specific time trends by including the interaction term between country- and time-fixed effects.

The sample of countries covers up to 179 countries. Also, I use different country samples to account for possibilities that the results might be driven by ethnic Koreans with different nationalities ï if this is the case, the effects of the similarities would rather reflect the size of Korean-diaspora abroad, instead of horizontal sorting in intercultural marriage migration. To identify this issue, I first exclude the numbers of ethnic Koreans from the country-samples of China and Russia (columns 2 and 7). China and Russia have large ethnic Korean communities, and thus the Korean Immigration Service (KIS) statistics provide data separating ethnic Koreans from others in these countries that enables the sub-sampling. In addition to China and Russia, Japan and the United States also host large Korean populations. However, the KIS statistics do not provide separate data for these countries. Thus, in columns 3 and 8, I exclude these two countries from the sample in addition to ethnic Koreans with Chinese and Russian nationalities. Comparing the results between the inclusion and exclusion of these four groups, there is no significance difference (compare columns 1 and 6 for the full-sample estimations; 2 and 7 for excluding Korean Chinese and Russians; 3 and 8 for

excluding the four groups). This suggests that the results are not driven by ethnic Koreans who had different nationalities and married Korean nationals. Additionally, I exclude countries that do not send any marriage migrant to South Korea, as an alternative sample, and this approach reduces the sample size to 100 (columns 5 and 10). The results are qualitatively similar to those of the other samples.

Regarding the effects of the similarities, the results show that Buddhism, a proxy to cultural similarities, has a positive effect on both male and female marriage migration at the 1ï 10% significance level in all the regressions. A 1%-point increase in the proportion of Buddhists in an origin country increases the number of marriage migrants into South Korea by 4ï 8%-points for women and 1.3ï 1.8%-points for men. On the other hand, Christianity ï the other indicator of cultural similarities ï does not have any significant effect on female marriage migration, while it turns out to have a negative effect on males. These results signal that marriage migration is motivated by the traditionally rooted cultural similarities rather than the contemporary religious practice.

Linguistic similarities ï the share of Altai-Turkic language users in population ï matter for female marriage migration. A 1%-point increase in the share of Altaic-Turkic language users increases the marriage migration of women into South Korea by 3ï 10%-points. However, the effect of the linguistic similarities is mostly insignificant for males, except in column 9. Coming from another East/Southeast Asian country (racial similarities) does not turn out to be a robust determinant for both male and female marriage migration, as the coefficients are insignificant in most regressions.

On the other hand, income does not have a significant effect for both males and females. This is different from the expectation discussed in section 3.1 that lower income increases female marriage migration. In the following section, I will further discuss the income effect by investigating how the determinants of marriage migration differ across income groups.

Among the control variables, exposure to foreign contacts ï measured by the number of international arrivals in an origin country ï turns out to have a significant effect on marriage migration. A 10%-point increase in international arrivals increases marriage migration by 2.4ï 3%-points for women and 1.3ï 2.2%-points for men. Coming from an English speaking country does not have any association with marriage migration for women, however, it

increases male marriage migration by 34ï 75%-points, compared to non-English speaking countries. Lastly, the time effects are jointly significant at the 1%-level, suggesting that there are time-trends common to all origin countries. More specifically, demographic changes in South Korea (e.g. the lack of women in the marital age group) that are captured by time-effects likely influence marriage migration into the country.

Overall, the results show that similarities between an origin country and South Korea induce more marriage migration. Furthermore, similarities matter more for female marriage migration given the positive effects of both cultural (Buddhism) and linguistic (Altaic-Turk) similarities, while, for men, only Buddhism has a positive and significant effect. The results are mostly consistent across the different sample sizes and models including/excluding the interaction term (with an exception of East/Southeast Asia for females and Altaic-Turk for males).

4.2. Results of Different Income Groups

In addition to the full-sample estimations above, I further investigate the effects of the similarities in different income groups. One of the questions to be tested is whether the effects of the similarities are stronger for female marriage migrants from lower income countries because they are more likely to provide alternatives to local wives who are currently lacking in the marriage markets in South Korea.

Table 3 presents the results of the sub-sample estimations based on the income levels of origin countries. In columns 1-6, countries are sub-grouped into: high income (higher than USD 12,747), middle income (between USD 1,046 and 12,747), and low income (lower than USD 1,046) countries, following the World Bank classification. In order to check for the robustness of the findings, countries are also sub-sampled in an alternative way: above and below the income level of South Korea in 2000 (USD 14,428). Through this approach, whether the effects of the similarities vary depending on the relative economic wealth of an origin country can be identified. The results of this alternative sub-sampling are presented in columns 7-10.[5]

[5] In the sub-sample estimations, ethnic Koreans with Chinese and Russian nationalities, Japan, and the United States are included in their respective income groups, because the results of the different samples are qualitatively identical to a great extent. The interaction term between country and time dummies is excluded in the sub-sample estimations because the inclusion of

For female marriage migrants, Buddhism provides a positive linkage in middle and low income countries, while the effect of Buddhism is insignificant for women from high income countries. Quantitatively, a 1%-point increase in the proportion of Buddhists increases female marriage migration from middle and low income countries by almost 4%-points. Similar to the result of the full sample, Christianity does not play a significant role in determining marriage migration for women in any income group.

On the other hand, Altaic-Turkic speaking is important for female marriage migration from high and low income countries, and the magnitude of the effect is larger for high income countries. A 1%-point increase in Altaic-Turkic language users leads to increasing female marriage migration from high income countries by 7.2%-points, while it is 3.9%-points for low income countries. The linguistic similarity does not seem to affect female marriage migration from middle income countries. Concerning racial similarities, coming from another East/Southeast Asian country turns out to have a positive effect on female marriage migration in the middle income group ï increasing the number of female marriage migrants by 6 times more than that of the other regions, holding all other factors equal.

Turning to male marriage migration, Buddhism induces more marriage migrants from middle income countries only, while it decreases marriage migration from high income countries. Quantitatively, a 1%-point increase in the proportion of Buddhists increases marriage migrants from middle income countries by 1.4%-points. In high income countries, the same increase in the share of Buddhists reduces male marriage migration by 2%-points. There is no significant effect of Buddhism in low income countries. Concerning Christianity, it tends to decrease male marriage migration ï particularly from middle and low income countries. It seems that cultural similarities, proxied with religions, are at best irrelevant or sometimes constraining male marriage migration, with an exception of Buddhism in middle income countries.

Altaic-Turkic language matters for male marriage migration from high income countries only ï i.e., a 1%-point increase in the share of Altaic-Turkic language users increases male marriage migrants from these countries by 6.5%-points. In middle income countries,

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the interaction term does not produce a convergence due to the small numbers of observations.

East/Southeast Asian backgrounds are important, increasing male marriage migration by more than 6 times, holding all other factors equal ï the finding is similar to that of females in the same income group presented above.

Concerning the effects of the control variables, the effects of foreign exposure are positive and significant for both males and females in all income groups. Coming from an English speaking country increases both male and female marriage migration for high income countries only. On the other hand, English rather constrains female marriage migration from low income countries.

Overall, there is strong evidence that traditional cultural, linguistic, and racial similarities are important for female marriage migration from middle and low income countries. For men, the similarities produce mixed effects. For middle income countries, the traditional cultures of Buddhism and Asian backgrounds increase marriage migration, while sharing the contemporary religious practice of Christianity constrains. In low income countries, the similarities do not affect male marriage migration, contrary to their positive effects on females. On the other hand, cultural and racial similarities are not relevant for both male and female marriage migration from high income countries. It is rather communicational means, such as linguistic similarities and English speaking, which are the strong driving forces of marriage migration from these countries.

The results of the sub-sample estimations by income groups suggest that the effects of the similarities vary across different income groups and the effects are stronger for female marriage migration from middle and low income countries. These findings basically support my hypotheses presented in section 3.1. To check for the robustness of these findings, I further implement an analysis through an alternative sub-sampling of countries ï above and below the income level of South Korea in 2000 ï , as described above.

Columns (7)-(10) show the results of this alternative sample. They are basically in line with the findings of the other sub-sample estimations with three income groups. Sharing traditional cultures, linguistic roots, and racial traits increase female marriage migration from countries where the income level is below USD 14,428. On the other hand, cultural and racial similarities do not matter for women from countries wealthier than South Korea. Instead, linguistic similarities and English speaking are the important determinants in these countries.

Also, for male marriage migration, the findings of the three sub-group estimations widely hold. There are mixed effects of the similarities for countries below the Korean income level ï namely, Buddhism (+), Christianity (-), and Asian backgrounds (+). For those from wealthier countries, language effects (Altaic-Turk and English) are positive and significant, while cultural and racial similarities are either irrelevant or constraining.

4.3. Results of the Instrumental Variable Approach

As discussed in section 3.4, my model may be endogenous because the similarity variables might be correlated with unobserved heterogeneity. To account for potential endogeneity, the model is estimated by an instrumental variable (IV) approach that is presented in table 4.

Columns 1 and 2 show the results of the full-sample. The results of female marriage migration basically support the baseline estimations presented in table 2. The effects of Buddhism and Altaic-Turk remain positive and significant as before. However, for male marriage migration, the positive effect of Buddhism that was found in the baseline estimations does not hold anymore after controlling for endogeneity. Among the other similarity indicators, the coefficients of East/Southeast Asia, which were mostly insignificant in the baseline estimations, turn out to be positive and significant for both males and females in the IV estimations, possibly because controlling for the endogeneity of the religion variables reduces multi-collinearity between the religion and the East/Southeast Asia variables. The negative effect of Christianity on male marriage migration that was found in the baseline estimations remains consistent.

Among the control variables, the positive effects of foreign exposure on both male and female marriage migration hold as before. Also, English speaking continuously has a positive effect towards male marriage migration. Interestingly, the income variable turns out to increase male marriage migration in the IV estimation, different from the baseline finding, while it remains to have no impact on females.

Turning to the sub-sample estimations based on income groups, the results (see columns 3-8 in table 4) are in line with the findings presented in table 3. Specifically, for high income countries, cultural and racial similarities do not have any effect, while linguistic similarities increase male and female marriage migration from these countries. On the other hand, cultural

similarities (Buddhism) are important for female marriage migration from both middle and low income countries. Additionally, racial similarities pull female marriage migrants from the middle income group, while linguistic similarities have a positive effect on women from low income countries. For male marriage migration, there are the positive effects of cultural (Buddhism) and racial similarities on individuals from middle income countries, while the effect of Christianity is negative for them. The similarities are not significant factors when it concerns male marriage migration from low income countries, contrary to their female counterparts. Among the control variables, foreign exposure and English speaking robustly explain marriage migration from high income countries ï both for men and women, while their effects are rather limited in the middle and low income groups.

Overall, the results of the instrumental variable estimations provide further evidence on the effects of the similarities. Particularly, the similarities have strong, positive influence on female marriage migration from middle and low income countries. On the other hand, in the other groups, the effects of the similarities are either limited (male and females from the high income countries; and males from low income countries), or mixed (males from the middle income group). There are two implications out of these findings. First, the positive effects of the similarities on female marriage migrants from lower income countries may suggest their presumed role as an alternative to local brides, given the importance of the similarities with Koreans in this group. Second, the finding that the determinants of marriage migration vary across different income groups indicates that the income level of an origin country affects marriage migration via channeling the effects of the similarities and other factors differently.

5. Conclusion

In this paper, I investigated the effects of cultural, linguistic, and racial similarities on marriage migration in South Korea. My empirical findings suggest that bilateral similarities between two countries are strong pull factors of marriage migration, despite the international and intercultural nature of such matches. My study further attempted to decompose the effects of the similarities by sex and unbundle the effects across different income groups. By doing so, I find that the effects of the similarities are particularly strong for females from lower income countries that might be explained by the demographic changes in South Korea ï i.e. the shortage of young women. One remaining, interesting question to be investigated is the effects of the similarities on the male side ï in particular, more significant effects on men

from middle income countries than the other income groups need to be further examined. This question calls for a future study on the motivations and characteristics of male marriage migrants from different income groups.

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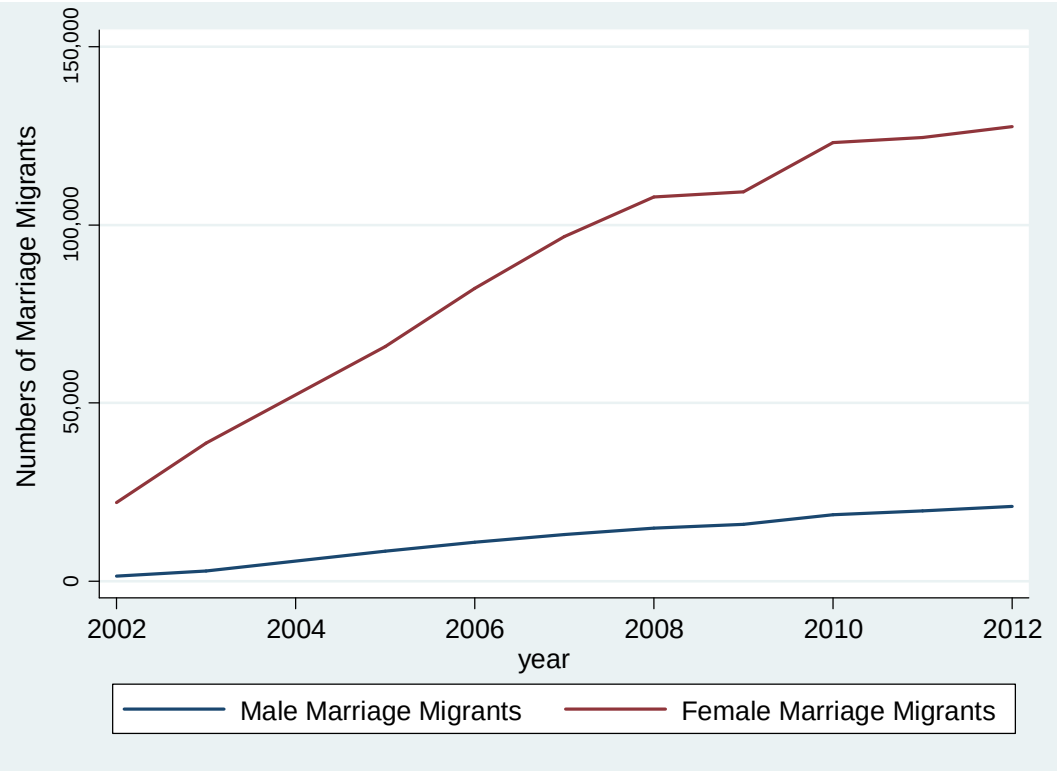
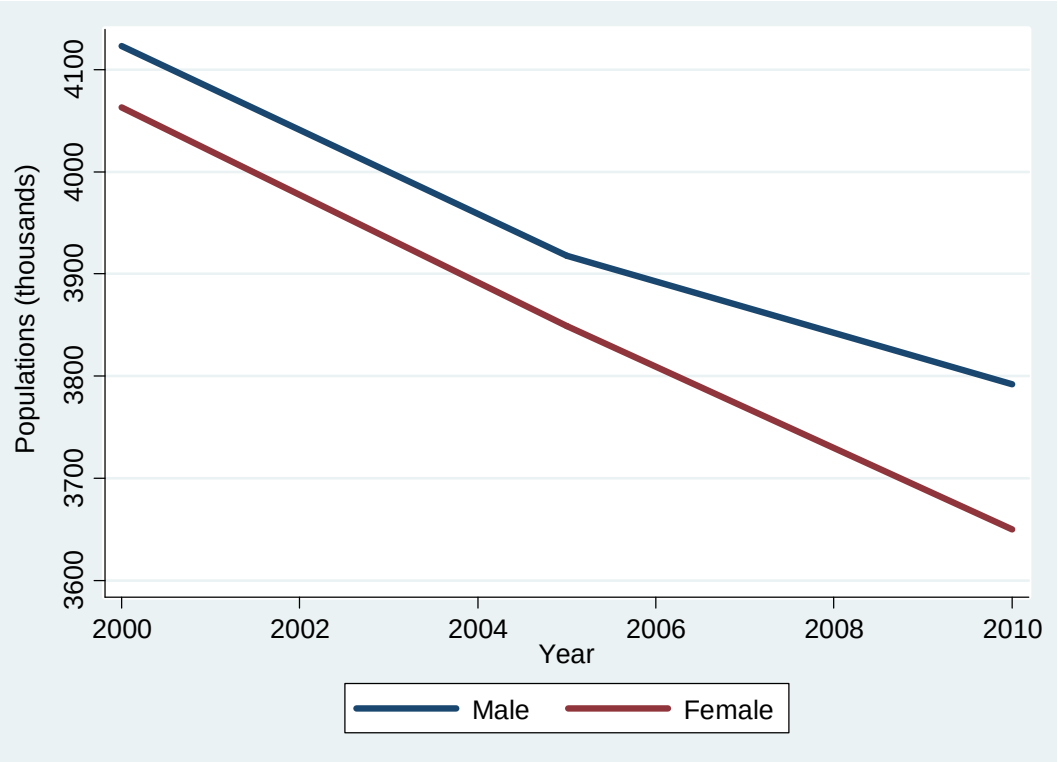
Figure 1. Trends of Marriage Migration in South Korea, by sex



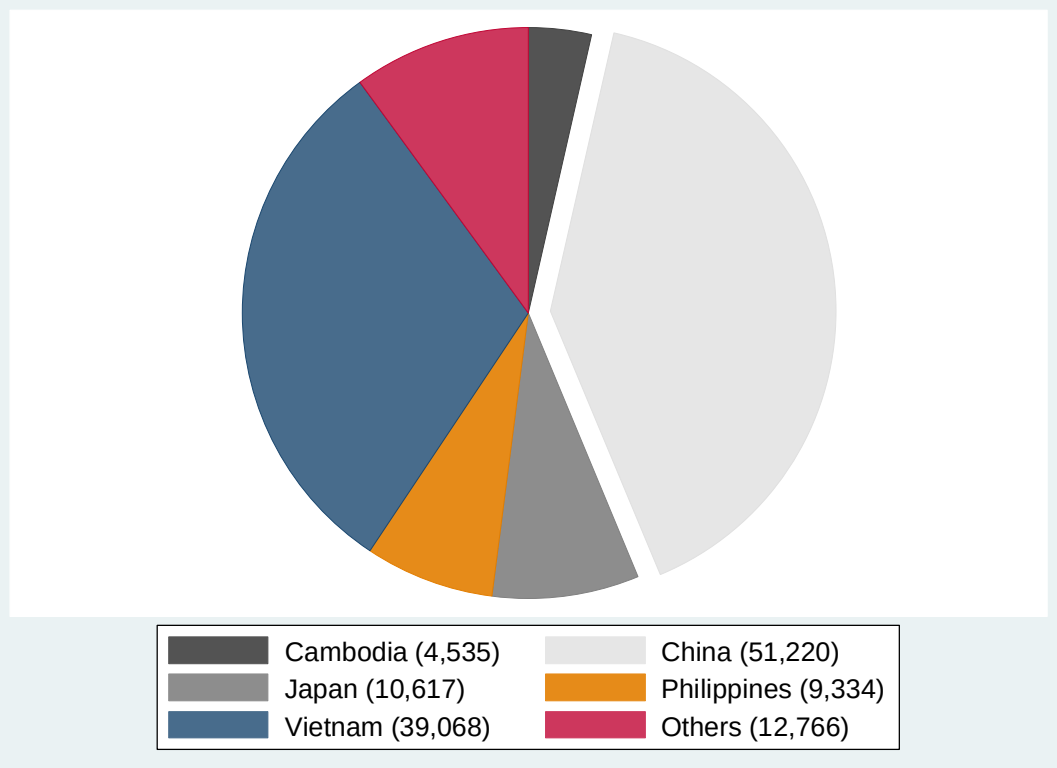
Source: Korea Immigration Service, KIS Statistics

Figure 2. Male and Female Populations in South Korea, age group 25-34



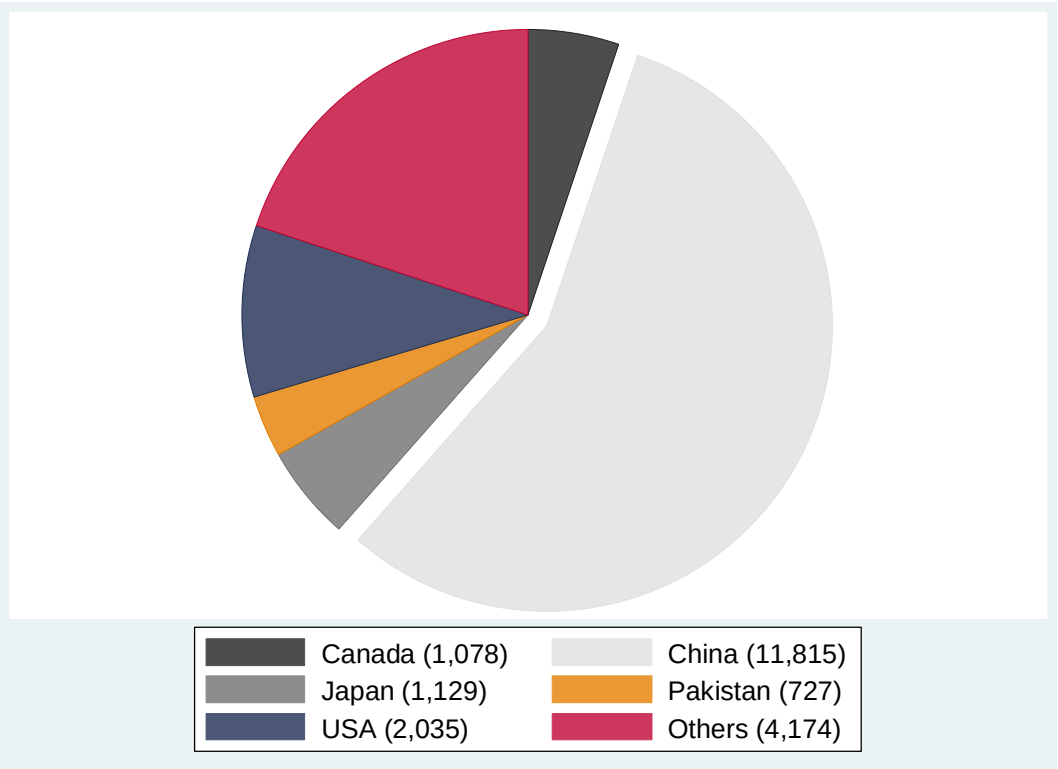
Source: United Nations, World Population Prospects: The 2012 Revision

Figure 3. Major Origin Countries of Female Marriage Migration in South Korea (2012)



Source: Korea Immigration Service, KIS Statistics

Figure 4. Major Origin Countries of Male Marriage Migration in South Korea (2012)



Source: Korea Immigration Service, KIS Statistics.

Table 1

Binary Correlation across the Similarity Indicators (171 countries)

	Christianity	Buddhism	Altaic-Turk	East/Southeast Asia
Christianity	1.00			
Buddhism	-0.44	1.00		
Altaic-Turk	-0.31	0.18	1.00	
East/Southeast Asia	-0.27	0.30	0.40	1.00

Note: Pearsonôs linear correlation applied.

Table 2

Marriage Migration and Similarities in South Korea (2002 ï 2012), full sample

Panel Analysis with Random Effect

DV	(log) Female Marriage Migrants					(log) Male Marriage Migrants				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Buddhism	3.88	3.93	3.95	8.51	4.72	1.77	1.83	1.64	1.29	1.78
	(0.71)***	(0.69)***	(0.71)***	(4.75)*	(0.77)***	(0.81)**	(0.80)**	(0.81)**	(6.3e-11)***	(0.87)**
Christianity	0.06	0.06	0.08	3.37e-13	0.06	-0.55	-0.54	-0.58	-8.74e-12	-0.69
	(0.32)	(0.33)	(0.32)	(8.99e-12)	(0.58)	(0.28)**	(0.27)**	(0.27)**	(9.80e-08)	(0.42)*
Altaic-Turk	3.16	3.23	3.28	10.23	2.35	0.67	0.76	0.46	2.42	-0.02
	(1.22)***	(1.20)***	(1.25)***	(5.1e-12)***	(1.42)*	(0.72)	(0.69)	(0.58)	(2.1e-10)***	(0.77)
East/Southeast Asia	2.01	1.79	1.96	5.95	3.20	1.49	1.23	1.03	0.57	2.38
	(1.76)	(1.61)	(1.75)	(2.52)**	(1.65)*	(1.45)	(1.27)	(1.37)	(2.69)	(1.42)*
Income	-0.08	-0.06	-0.08		-0.06	0.06	0.07	0.03		0.11
(log)	(0.08)	(0.07)	(0.07)		(0.12)	(0.06)	(0.06)	(0.06)		(0.10)
Foreign Exposure	0.30	0.29	0.28		0.24	0.21	0.21	0.22		0.13
(log)	(0.07)***	(0.07)***	(0.07)***		(0.09)***	(0.05)***	(0.05)***	(0.05)***		(0.07)*
English	0.12	0.12	0.04		0.22	0.41	0.42	0.34		0.75
	(0.24)	(0.23)	(0.22)		(0.44)	(0.25)*	(0.25)*	(0.24)		(0.41)*
Time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time*Country	No	No	No	Yes	No	No	No	No	Yes	No
No. Countries	171	171	169	179	110	171	171	169	179	110
No. Observations	1,169	1,169	1,149	1,404	742	1,169	1,169	1,149	1,404	742
R^2 (within)	0.33	0.33	0.33	0.99	0.46	0.50	0.50	0.50	0.99	0.68

Note: Robust standard errors are in parenthesis. * $p<.10$, ** $p<.05$, *** $p<.01$.
The dependent variables in columns 2 and 7 exclude ethnic Koreans with Chinese and Russian nationalities, and, in columns 3 and 8, Japan, the United States, as well as ethnic Koreans with Chinese and Russian nationalities are excluded. The samples used in columns 5 and 10 exclude countries that do not send any marriage migrant to South Korea.

Table 3

Marriage Migration and Similarities in South Korea (2002 ï 2012), by income-group

Panel Analysis with Random Effect

	High Income		Middle Income		Low Income		Above Korean Income		Below Korean Income	
DV	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Buddhism	-0.22	-2.03	3.95	1.40	3.74	1.83	-0.44	-2.36	3.98	1.65
	(1.51)	(0.71)***	(1.29)***	(0.69)**	(0.94)***	(1.77)	(1.44)	(0.75)***	(0.70)***	(0.85)*
Christianity	-0.36	-0.04	0.44	-0.94	-0.30	-0.86	-0.52	-0.28	0.18	-0.76
	(0.37)	(0.52)	(0.41)	(0.38)**	(0.57)	(0.49)*	(0.43)	(0.59)	(0.36)	(0.30)**
Altaic-Turk	7.23	6.52	0.80	0.67	3.90	0.29	7.36	6.60	2.63	-0.17
	(0.90)***	(0.41)***	(1.48)	(0.74)	(1.91)**	(1.10)	(0.86)***	(0.43)***	(1.32)**	(0.64)
East/Southeast Asia	0.50	-0.25	6.17	4.09	0.06	0.53	0.45	-0.28	4.67	3.75
	(0.68)	(0.43)	(1.77)***	(1.39)***	(1.70)	(1.30)	(0.65)	(0.46)	(2.05)**	(1.64)**
Foreign Exposure	0.35	0.40	0.13	0.21	0.33	0.19	0.33	0.34	0.31	0.21
(log)	(0.11)***	(0.12)***	(0.07)*	(0.06)***	(0.14)**	(0.09)**	(0.12)***	(0.12)***	(0.07)***	(0.04)***
English	1.14	1.15	-0.36	0.32	-0.75	0.28	1.13	1.13	-0.26	0.16
	(0.39)***	(0.48)**	(0.38)	(0.33)	(0.44)*	(0.36)	(0.40)***	(0.51)**	(0.24)	(0.221)
Time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. Countries	51	51	91	91	48	48	48	48	134	134
No. Observations	326	326	591	591	278	278	311	311	884	884
R^2 (within)	0.38	0.72	0.36	0.38	0.38	0.51	0.38	0.74	0.32	0.42

Note: Robust standard errors are in parenthesis. * $p<.10$, ** $p<.05$, *** $p<.01$.
The dependent variables are the (log) numbers of female and male marriage migrants including ethnic Koreans with Chinese and Russian nationalities, as well as Japan and the United States.

Table 4

Marriage Migration and Similarities in South Korea (2002 ï 2012)

Instrumental Variable Approach (Two Stage Least Squares), Random Effects

	Second Stage (instrumented: Buddhism and Christianity) Hansen J-Sat. (p-value): 0.94 (female) and 0.93 (male)							
DV	Full Sample		High Income		Middle Income		Low Income	
	Female	Male	Female	Male	Female	Male	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Buddhism	9.67	0.44	-2.33	-6.84	6.68	2.79	8.81	5.75
	(3.42)***	(1.82)	(5.53)	(5.53)	(2.38)***	(1.57)*	(5.39)*	(3.91)
Christianity	1.31	-1.83	-2.65	-1.97	0.55	-1.41	-0.29	-2.98
	(1.41)	(0.76)**	(2.07)	(2.07)	(0.98)	(0.65)**	(3.17)	(2.07)
Altaic-Turk	2.94	-0.28	8.41	10.64	0.69	-0.99	4.62	0.24
	(0.96)***	(0.60)	(4.51)*	(4.51)**	(1.14)	(0.77)	(2.79)*	(2.11)
East/Southeast Asia	2.15	2.74	-0.46	-2.13	5.49	3.61	-2.66	-1.68
	(1.19)*	(0.74)***	(1.88)	(1.88)	(1.24)***	(0.82)***	(4.74)	(3.65)
Income	0.07	0.15						
(log)	(0.09)	(0.06)**						
Foreign Exposure	0.20	0.14	0.44	0.65	0.08	0.17	0.20	0.04
(log)	(0.05)***	(0.04)***	(0.12)***	(0.12)***	(0.06)	(0.05)***	(0.11)*	(0.07)
English	0.02	0.46	1.54	1.81	-0.36	0.43	-0.13	1.34
	(0.34)	(0.22)**	(0.53)***	(0.53)***	(0.36)	(0.25)*	(1.24)	(0.96)
Time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. Countries	165	165	45	45	88	88	48	48
No. Observations	1,148	1,148	310	310	578	578	278	278
R^2 (centered/within)	0.34	0.52	0.39	0.73	0.36	0.40	0.38	0.52

Note: Standard errors are in parenthesis. * $p<.10$, ** $p<.05$, *** $p<.001$.

Table 4.1. Instrumental Variable Approach

	First Stage			
Instruments/DV	Buddhism	Christianity	Buddhism	Christianity
Distance from India, weighted	-0.27 (0.03)***	0.34 (0.05)***	-0.11 (0.01)***	0.33 (0.01)***
Distance from Israel, weighted	0.04 (0.01)***	-0.04 (0.02)***	-0.03 (0.02)*	-0.11 (0.03)***
Distance from Capital, India	0.00002 (3.83e-06)***	1.53e-06 (6.66e-06)		
Distance from Capital, Israel			0.00002 (3.02e-06)***	0.00001 (5.24e-06)***
Control variables	Yes	Yes	Yes	Yes
Wald-chi Test	430***	925***	441***	944***
Cragg-Donald Wald F-stat.	20.67***		46.39***	

Note: Standard errors are in parenthesis. * $p<.10$, ** $p<.05$, *** $p<.01$

Appendix A. Descriptive Statistics and Data Sources

Variables	Observations	Mean	Std. Dev.	Minimum	Maximum	Data Sources
Male Marriage Migrants in Korea	1,169	102.40	840.49	0	15,446	KIS (2002-2012)
Female Marriage Migrants in Korea	1,168	750.08	5,133.80	0	88,048	KIS (2002-2012)
Income (GDP p.c.)	1,169	11,350.38	16,608.04	119.4	147,141	World Bank (2013)
Foreign Exposure (No. tourist arrival)	1,169	6,266,970	1.23e+07	3,900	8.30e+07	World Bank (2013)
Christians, share	1,169	0.54	0.37	0	0.99	CIA (2014)
Buddhists, share	1,169	0.07	0.21	0	0.97	CIA (2014)
Altaic-Turk Language, share	1,169	0.05	0.19	0	1	CIA (2014)
East/Southeast Asia, dummy	1,169	0.04	0.19	0	1	CIA (2014)
English (official language), dummy	1,169	0.27	0.45	0	1	CIA (2014)
Distance from India, weighted	1,148	7,720.36	4,327.52	868.57	16,916.32	Mayer and Zignago (2011)
Distance from Israel, weighted	1,148	7,000.84	3514.88	76.60	17,078.86	Mayer and Zignago (2011)
Distance from Capital, India	1,154	7,504.56	4,300.07	681.98	16,936.54	Mayer and Zignago (2011)
Distance from Capital, Israel	1,154	6,997.40	3,542.42	120.61	17,586.27	Mayer and Zignago (2011)

Appendix B. Test for the Exogeneity of Instruments (2002-2012)

Panel Analysis with Random Effects

DV	(log) Female Marriage Migrants	(log) Male Marriage Migrants
Buddhism	3.45	1.76
	(0.80)***	(0.87)**
Christianity	0.31	-0.19
	(0.38)	(0.32)
Income, log	0.002	0.07
	(0.08)	(0.08)
Altaic-Turk	2.52	-0.02
	(1.20)**	(0.69)
East/Southeast Asia	3.46	2.84
	(1.58)**	(1.34)**
Foreign Exposure, log	0.30	0.19
	(0.07)***	(0.05)***
English	-0.08	0.42
	(0.23)	(0.29)
Distance from India, weighted	-0.89	-0.39
	(0.71)	(0.26)
Distance from Israel, weighted	0.35	0.001
	(0.23)	(0.40)
Distance from Capita, India	0.0001	
	(0.0001)	
Distance from Capital, Israel		-0.00002
		(0.0001)
Time	Yes	Yes
No. Countries	165	165
No. Observations	1148	1148
R^2 (within)	0.33	0.51

Note: Robust standard errors are in parenthesis. * $p<.10$, ** $p<.05$, *** $p<.01$.