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Restrictive Marriage Migration Policies
and Family Outcomes[*]

So Yoon Ahn[†]   Darren Lubotsky[‡]

Abstract

As cross-border marriages rise, many governments have tightened rules on who can marry across borders, often in the name of promoting integration. Cross-border couples tend to have high divorce rates, which hinders successful assimilation. This paper provides the first evidence on how restrictive marriage migration policies affect family outcomes of migrants. We exploit a 2014 reform in South Korea that introduced pre-entry requirements for marriage visas, with language proficiency as the key component. Using rich administrative and survey data, we show that the reform led to a sharp temporary decline in cross-border marriages, improved migrants' language skills, and increased educational attainment among both migrants and their Korean spouses. Comparing marriage cohorts immediately before and after the reform cutoff date, we find that cumulative divorce rates fell by 37% in the first 12 months and by 12% in the first 48 months, primarily due to language-based selection rather than demographic factors. Our evidence indicates that improved communication enhanced marital surplus and highlights the potential positive impact of selective admission policies that target civil and cultural assimilation.

[†]University of Illinois Chicago, Department of Economics, Chicago, IL, USA. Contact: syahn@uic.edu.

[‡]University of Illinois Chicago, Department of Economics, Chicago, IL, USA. & NBER, Cambridge, MA, USA. Contact: lubotsky@uic.edu.

1 Introduction

Marriage migration has become a significant driver of migration in many OECD countries, raising concerns among policymakers about the social and cultural integration of marriage migrants. Family-related migration made up nearly 40% of total permanent migration in the OECD area, with over 1.6 million residence permits granted in 2015.[1] Although data specific to marriage migration are limited, available figures show its importance: spouses of citizens account for nearly half of family migrants in France, and over a quarter in Germany and Japan. In many OECD countries, including South Korea, around one in ten marriages are between a citizen and a foreign spouse, highlighting the growing role of cross-border unions in shaping migration flows [OECD, 2017].

In response, many governments have adopted policies to regulate spousal migration and promote integration. These often combine measures such as minimum income thresholds, age requirements, and language proficiency tests to both control eligibility for migration and influence integration trajectories after arrival. A prominent example is the introduction of admission-stage, or "pre-entry," integration requirements, which oblige prospective migrants—or their sponsors—to demonstrate basic language skills or financial capacity before entry. Since the early 2000s, such measures have gained traction across Europe and parts of Asia, reflecting a broader shift toward more selective and conditional family migration regimes.[2] Despite their growing prevalence, little is known about how these restrictions affect family-related outcomes such as marriage formation, marital stability, and fertility. Understanding these effects is critical, as restrictive policies may improve integration outcomes but also limit the partnership opportunities of native-born citizens who seek spouses across borders.

In this paper we examine the 2014 amendment to the screening standards for marriage migrant visas in South Korea, which offers a unique opportunity to evaluate the effects of restrictive marriage migration policies. The amendment generated a discrete and unanticipated change in the marriage migration regime, with cross-border marriages falling by roughly 35 percent within the first month. This abrupt and substantial contraction provides a rare op-

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[1]The subcategories of family migration include family formation, accompanying family, family reunification, and international adoption. When we refer to marriage migration, we specifically mean family formation, defined as "A resident national or foreigner marries a foreigner and sponsors that individual for admission or for status change." [OECD, 2017]

[2]As of 2011, five European countries—namely, the Netherlands, France, Germany, Denmark, and the UK—practice "integration-from-abroad" or "pre-entry integration requirements" policies. Although the specifics of these policies vary, they share common features: they all require a basic level of language proficiency and primarily target family migrants seeking temporary residence permits through family formation (marriage) or family reunification. The language requirements are at the A1 level, as defined by the Common European Framework of Reference for Languages. This level encompasses "very basic phrases" and the ability to "interact in a simple way" [Goodman, 2011].

portunity to study how selective admission policies affect subsequent family outcomes. The reform introduced a set of new eligibility requirements for foreign spouses and their Korean sponsors, including conditions related to income, housing, language ability, and other criteria. While the policy included multiple restrictions, the language requirement emerged as the most binding in practice, as the income threshold was relatively low and subject to several exemptions. As such, the reform effectively functioned as a pre-entry civic integration measure—an approach that has gained popularity in many European countries—making it well-suited for assessing the broader consequences of this increasingly common policy tool.

South Korea offers an especially relevant context for studying the effects of marriage migration policies. The country has experienced a rapid rise in international marriages over the past several decades. At the same time, the divorce rate among intermarried couples is strikingly high—more than three times than that of native couples—a pattern also observed in other countries, and one that may hinder successful integration.[3] Divorce is associated with poor integration outcomes for migrant spouses, including involuntary return migration and greater reliance on public support systems. Due in part to imbalanced sex ratios in the marriage market, many of these international unions are arranged or facilitated through intermediaries, and often involve limited shared language or cultural familiarity among spouses at the time of marriage. Survey evidence suggests that communication difficulties are a leading cause of marital breakdown among international couples, as documented in Figure 1.[4] In this context, pre-entry language requirements may help prevent marital instability by improving communication within households and reducing the risk of relationship failure.

Indeed, as shown in Figure 2, Korea experienced a sharp decline in the number of divorces among marriages between Korean-born men and foreign-born women following the policy change. Taiwan, whose demographic structure closely resembles that of Korea and whose divorce trends had previously moved in parallel, did not exhibit a comparable decline. This contrast suggests that the policy may have contributed to the reduction in divorce rates. However, the yearly number of divorces is difficult to interpret, as it reflects multiple marriage cohorts, some affected by the policy and others not, as well as marriages of varying durations, and thus the evidence remains only suggestive. To address this limitation—common in datasets that record only current marital status or the annual stock of marriages and divorces—we draw on rich administrative data that identify marriage cohorts

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[3]In Italy, interethnic marriages face a 15-percentage point higher risk of separation compared to homogamous ones [Tura, 2016]. For more on higher divorce rates among intermarriages, see, for instance, Jones [1994]; Kalmijn et al. [2005]; Zhang and Van Hook [2009]; Milewski and Kulu [2014]; Choi et al. [2021].

[4]While basic communication may suffice at the outset, more complex interactions—around finances, parenting, or conflict—often expose deeper language-related challenges that can strain relationships over time.

and allow us to account for differences in marriage duration.

Figure 1: Marital conflict reasons among cross-border couples
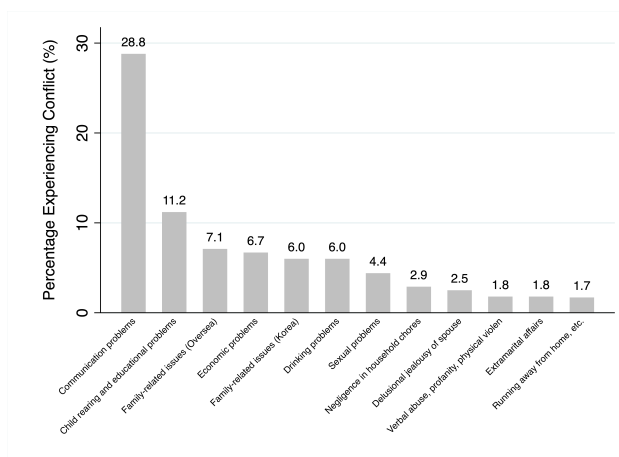
Figure 2: Number of divorces in Korea and Taiwan
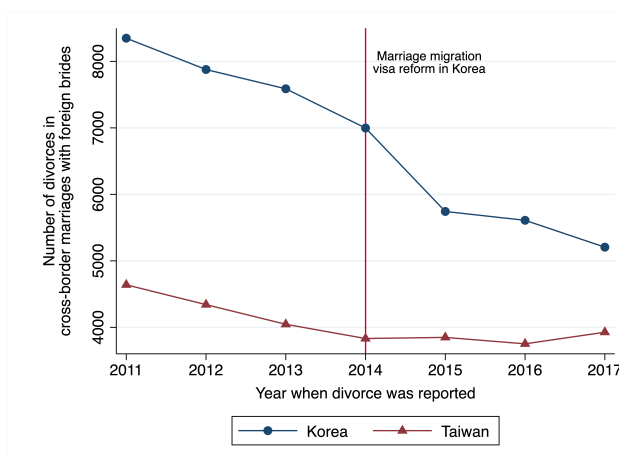
Restrictive marriage migration policies can influence family outcomes primarily through selection. By raising the costs of migration, these policies alter who migrates. Migrants who overcome higher barriers tend to have made greater pre-migration investments and exhibit stronger commitments to migrate—a group we refer to as high-intent migrants. At the same time, such policies can change the observable characteristics of migrants, for instance their educational attainment, language ability, or country of origin. The net impact of these selection processes on marital stability is theoretically ambiguous: enhanced language skills and

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preparedness may strengthen marriages, while improved outside options and compositional changes could increase divorce risks. This ambiguity motivates our empirical analysis of how the 2014 marriage visa reform in South Korea shaped the subsequent family outcomes of marriage migrants.

Using administrative data covering all marriages that began between 2010 and 2017, we begin our empirical analysis by examining selection into marriage—specifically, who drops out of the cross-border marriage market following the policy change. Due to limited language abilities among a large share of marriage migrants in Korea—most of whom are women—the number of cross-border marriages declined sharply, by 35 percent in the first month after the policy was implemented. Furthermore, the amendment had a significant positive impact on the language abilities of incoming migrants, while we find no evidence that it affected other targeted dimensions, such as income or housing arrangements. The education distribution shifted upward for both migrant women and sponsor men.

Our key empirical result is that the visa policy led to meaningful declines in divorce rates among Korean men–foreign women couples. Leveraging the sharp policy shock and rich administrative data, we are able to compare divorce outcomes across marriage cohorts on either side of the policy cutoff, while holding marriage duration constant. The divorce rate within the first year of marriage fell by 2.5 percentage points, a large effect relative to the baseline rate of 6.7%. The divorce rate within the first four years of marriage fell by 1.9 percentage points, still quite large relative to the baseline rate of 15.6%. This decrease in divorce rates is not driven by national trends, as we observe a sharp drop among cohorts who married immediately after the policy change, with virtually no impact observed among Korean natives or Korean women–foreign men couples, who face much smaller language barriers. These estimates are quite stable across specifications and robust to estimates that base identification across sending countries based on the fraction of brides who spoke Korean badly-and are therefore more likely to be affected by the policy change-prior to the enactment of the law. Finally, our back-of-the-envelope calculations based on our estimates suggest that the decline in divorces shown in Figure 2 primarily reflects a reduction in divorce rates rather than a mechanical decrease due to the decline in the number of marriages.

Regarding selection, using various methods, including controlling for these characteristics and decomposition analyses, we show that the decline in divorce is, for the most part, not explained by changes in migrants' educational attainment or country of origin following the policy change. Instead, our survey data suggests language ability appears to play a more prominent role, particularly in reducing early divorces. We provide suggestive evidence that the policy increased marital surplus by improving communication: the likelihood of spousal quarrels arising from language barriers declined significantly, whereas quarrels due to other

causes remained unchanged. In contrast, we find little support for the outside-option channel, as there are no significant changes in labor market outcomes or reported experiences of discrimination. Taken together, our results suggest that the language requirement enhanced marital stability primarily by increasing marital surplus. Consistent with this interpretation, we also find that couples who married after the policy change had more children.

In the longer term, we find that the initial decline in cross-border marriages was temporary. The number of cross-border marriages rebounded to near pre-policy levels within five years after the policy was enacted. This recovery was accompanied by sustained improvements in the language abilities and educational attainment of both migrant women and sponsor men. Our analysis suggests that the policy generated a lasting increase in marital surplus, reflected in persistently lower divorce rates and rising fertility among more recent cohorts. These patterns may reflect lowered costs for language education and administrative burdens over time, as well as general equilibrium effects in which enhanced marital surplus—facilitated by improved language skills—attracts individuals with higher human capital into the cross-border marriage market. Overall, our results suggest that the long-term welfare effects of the policy are likely to be positive.

We make several contributions to the literature. First, we provide the first evidence on the impacts of restrictive marriage migration policies on a comprehensive set of family outcomes, including both the formation and evolution of families among native–migrant families. While existing studies have examined the effects of general civic integration policies—typically not specifically targeted at marriage migration—most have focused on labor market outcomes or social participation (e.g., voting), rather than family outcomes. This is a critical gap, particularly in the context of migration-based families, as adult family migrants tend to integrate more slowly into the host country's labor market compared to other migrant groups, making family outcomes especially relevant for understanding their integration trajectories [OECD, 2017]. Moreover, pre-entry requirements, an increasingly common policy approach, have received little to no attention in the existing literature.[5]

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[5] While not specific to pre-entry integration policies, there have been studies evaluating the efficacy of immigrant civic integration measures, such as language training, at various stages of the integration process [Sarvimäki and Hämäläinen, 2016; Lochmann et al., 2019; Pont-Grau et al., 2023; Heller and Mumma, 2023; Foged et al., 2024a,b; Foged and Van der Werf, 2023; Pesola and Sarvimäki, 2024; Emeriau et al., Forthcoming]. However, the impacts on family outcomes have not been studied. Our work complements recent findings by Farahzadi [2024], who shows that Muslim marriage migration in the UK is primarily driven by endogamy preferences and suggests—based on a counterfactual analysis of a general increase in the marriage migration tax, encompassing various restrictive measures—that stricter policies are more likely to increase singlehood than to foster integration through intermarriage. In contrast, our study examines the effects of a specific policy centered on civic integration requirements, leveraging variation from an actual policy change. Edlund et al. [2013b] and Ahn [2025] study visa-tightening policies in Taiwan. However, the former focuses on impacts on natives in the receiving country, while the latter examines intra-household allocation outcomes among couples in the sending country, rather than among migrant families in the receiving country.

Second, we contribute to the literature on the determinants of divorce [e.g., Wolfers, 2006; Kneip and Bauer, 2009; Charles and Stephens, 2004; Hellerstein and Morrill, 2011; Cherchye et al., 2021], and more broadly, to work on immigrant integration and assimilation, which are key policy concerns in many migrant-receiving countries. Specifically, we add to the growing literature on marital dissolution among intermarriages, which are increasingly common due to globalization and evolving norms that promote diversity in partner selection.[6] Existing studies show that among intermarried couples involving immigrants, legal status and cultural traits shape divorce outcomes [Adda et al., 2025; Furtado et al., 2013; Tura, 2016]. Our study sheds light on marriage migration policies in Asia, where severe sex ratio imbalances have made cross-border marriages an increasingly prominent demographic phenomenon [e.g., Ahn, 2025]. We show that such policies can shape divorce and fertility outcomes, particularly when they affect language abilities—an essential cultural trait tied to assimilation. Policies that improve language skills can reduce frictions in cross-border marriages and promote family stability, thereby supporting integration.

Finally, we contribute to the literature on the impact of language skills of immigrants [e.g., Dustmann and Fabbri, 2003; Bleakley and Chin, 2004; Chiswick and Miller, 2010].[7] While most existing studies focus on human capital outcomes, evidence on marital outcomes remains limited [Bleakley and Chin, 2010; Fouka, 2020].[8] Our findings extend this literature by showing that marriage migration policies imposing language requirements can enhance family stability and promote integration through language-based selection.

2 Marriage migration to Korea and the amendment to entry visa standards

Primarily due to male-biased sex ratios in the marriage market, some Korean men end up finding spouses from foreign countries. Cross-border marriages have rapidly increased since the early 1990s. The share of cross-border marriages peaked at 13.6% in 2005, then somewhat decreased afterward, and has remained steadily around 8-10% since 2010. As

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[6]For interracial marriages, see Monahan [1970]; Bratter and King [2008]; Zhang and Van Hook [2009]; Koh [2024]. For general divorce, much of the literature focuses on the role of divorce laws on divorce outcomes [Friedberg, 1998; Wolfers, 2006; González and Viitanen, 2009].

[7]See Aparicio-Fenoll and Di Paolo [2023] for further discussion.

[8]Bleakley and Chin [2010] uses age at arrival as an instrument for language skills and finds that better language proficiency is associated with higher divorce rates. However, their cross-sectional data lack information on spousal background (e.g., native vs. migrant) and marriage timing, limiting insight into underlying mechanisms and dynamics—especially given that migrant-native and migrant–migrant marriages differ significantly in stability [Tura, 2016]. Fouka [2020] studies the effects of forced assimilation policies, specifically German language restrictions in U.S. schools after World War I, and finds that affected individuals were more likely to marry within their ethnic group and give their children German names, highlighting the policy's adverse effects on integration.

suggested by the sex ratio imbalances, most cross-border marriages – more than 70% – involve Korean men marrying foreign women.[9] The largest bride-sending countries are China and Vietnam, followed by the Philippines, Japan, and Cambodia. A large number of cross-border marriages, particularly those involving brides from less developed countries than Korea, are arranged through marriage brokerage agencies. In these cases, Korean men typically travel to meet potential brides, and the couples subsequently settle in Korea. This results in the year of marriage and year of migration almost coinciding.

Chinese migrants—one of the largest groups in Korea's marriage migration flows—consist of Korean-ethnic Chinese (Choseonjok), individuals of Korean descent who are Chinese citizens, and non Korean-ethnic Chinese. As of 2021, 53% of married couples with Korean men and Chinese women were of Korean ethnicity. Choseonjok typically have stronger Korean language skills compared to other migrants from China, a fact that we study in more detail below. Ahn and Lubotsky [2024] shows that differences in language abilities between these two groups contribute to differences in intrahousehold decision making power of migrants.

In 2014 the Korean government tightened visa requirements to support for marriage migrants to settle stably in the country after their arrival. Specifically, the government imposed several additional requirements for the marriage visa (F-6). These requirements apply to incoming migrants, while visa extensions do not require them. The government announced the changes for visa requirements for foreign brides on February 6th, 2014.[10] The new law went into effect on April 1st, 2014. As of 2013, among all Korean men-foreign women cross-border couples residing in Korea, 72.5% are on marriage visas, 10.6% have residency through marriage, and 6.7% are Foreign Nationals of Korean Descent, suggesting that more than 80% of new cross-border couples are subject to these changes, as residency is granted at least after two years after arriving in Korea.

The most salient and binding change was the requirement for Korean language ability. To obtain an F-6 visa, a foreign spouse should have a basic level of Korean speaking capabilities, which can be supported by the certificate of TOPIK (Test of Proficiency in Korean) equivalent to Level 1 or higher, or the certificate demonstrating the completion of a basic level Korean language course in an education center designated by the Ministry of Justice. Level 1 proficiency for the TOPIK requires a vocabulary of around 800 words, with test-takers able to introduce themselves, purchase items, and engage in other basic daily language activity. The minimum number of hours required to obtain the certificate for completing a basic-level Korean language course is 120 hours. The fee for taking the TOPIK is 40,000

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[9]Note that marriage statistics in Korea do not account for individuals who are married abroad, even if one of the spouses is a Korean citizen, unless the marriage is registered in Korea.

[10]The law was amended on October 10th, 2013.

KRW (approximately 27 USD) in Korea, but it varies depending on the location of the exam, based on the price levels in different countries. The Korean language course is offered at a low cost at official education centers run by the Korean government. As of February 2014, 118 such centers existed in 52 countries.[11] If a couple can prove that they can communicate in other languages other than Korean, a F-6 visa can be issued.

The visa amendment also required that the sponsor must have income above a minimum threshold, which is based on the number of people in their household. Income requirements are announced annually by the Minister of Justice. The 2014 income requirement for a two-person household was 14,794,804 KRW (approximately US$14,000). This amount rises by about $4,000 for each additional dependent. If a sponsor does not have any family members living with them, the household size is considered to be two people (the sponsor and the marriage migrant). We show that the household income requirement was quite low and therefore had little to no impact on marriage migration.[12]

Three additional minor changes to the visa requirements were instituted that also did not have a significant impact on the outcomes that we study. First, a sponsor must have a residential space where a marriage migrant can reside upon entering Korea. The space must be owned or rented under the name of the sponsor or a member of his/her immediate family living with him/her represented on the resident registration. Second, if a sponsor is a naturalized Korean through marriage, sponsorship of a subsequent foreign spouse is allowed three years after the sponsor acquired the Korean nationality. Lastly, sponsoring a foreign spouse is limited to once every five years. However, this limitation is unlikely to be enforced immediately, as the five-year period would start from the implementation date of the new policy, rather than applying retroactively.

3   Conceptual Framework

Marriage migration policies can affect family outcomes two channels: first by inducing some potential migrants to undertake investment in language and other skills, and second by changing the selection of who chooses to migrate. However, because we do not observe pre-migration investments, our analysis focuses on post-investment selection.

Importantly, selection can be on both observable dimensions like educational attainment, language ability, and country of origin, and on unobserved dimensions, such as intent and commitment to remain in Korea. Migrants who arrive after the implementation of

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[11]These official education centers are called the King Sejong Institute. According to their website, "The King Sejong Institute Foundation is a public institution under the Ministry of Culture, Sports and Tourism, responsible for managing overseas Korean language education and promoting Korean culture. It introduces the Korean language and culture to foreigners, working to turn their interest in Korea into a deeper understanding and love for the country."

[12]We present evidence in Appendix Section A that the additional requirements were likely not binding.

more restrictive policies are more likely to have undertaken substantial pre-migration invest-ments—such as acquiring Korean language skills or cultural familiarity—and are therefore more motivated to remain in Korea and to sustain their marriages. Parallel to the concept of "unwantedness" in the literature on abortion and fertility control (e.g., Donohue III and Levitt [2001]; Pop-Eleches [2006]), we refer to those who do not migrate due to the higher costs imposed by migration control and are thus screened out by the policy as "low-intent individuals", while those who migrate despite the increased costs represent a more moti-vated, high-intent group. Both theoretically and empirically, it is difficult to disentangle the role of selection on observables and unobservables because "intent" is inherently hard to define, quantify, or observe, and because intent is likely correlated with many observable characteristics. Nonetheless, we attempt to separate selection on observable characteristics to assess the relative importance of observable versus unobservable factors, thereby shedding light on the role of selection operating through pure intent.

The direction of these selection effects is, however, ambiguous and calls for empirical investigation. On one hand, selection on language skills is likely to enhance marital "produc-tion," facilitating communication and integration within the household, and may therefore reduce the likelihood of divorce. On the other hand, stronger language proficiency can also expand migrants' outside options in the labor and marriage markets, potentially increasing the likelihood of marital dissolution [Bleakley and Chin, 2010; Houseworth and Chiswick, 2020]. Other compositional shifts may have similarly mixed effects. For instance, higher-educated individuals face greater opportunity costs of migration-related investments, which could reduce their share among marriage migrants and increase marital instability among those who remain. Conversely, higher-educated individuals may find it easier to meet lan-guage requirements, increasing their representation and potentially lowering divorce rates, given that higher education is generally associated with greater marital stability. In addi-tion, while high-intent migrants may be more motivated to remain in Korea, their primary goal may center on securing residence rather than maintaining the marriage itself. In such cases, divorce rates may decline in the short term but rise after permanent residency is obtained—typically around two years after arrival.

4 Data

4.1 Marriage, divorce, and birth registry data

We utilize individual-level administrative data on marriages and divorces, which covers the universe of these events in South Korea. For our main analysis, we examine marriage data from 2010 to 2017 and divorce data from 2010 to 2021, which allows us to track marriages over a period of up to four years. The richness of these administrative data is particularly

valuable, as most large-scale datasets (such as the census) provide only current marital status, making it difficult to study marital dynamics over time. For longer-term analysis, we extend the marriage data to 2019. The marriage and divorce data sources include characteristics of both husbands and wives, such as their education, ages, and countries of origin.

Although the marriage and divorce data are at the individual level, we do not have identifiers that allow us to link marriages and divorces. We therefore aggregate the data to link the two datasets. Specifically, we create cells based on marriage cohorts (year and quarter), husband's education (less than high school, high school, college or more), wife's education, husband's age group at the time of marriage (under 30, 30-39, 40-49, 50-59, 60 or more), wife's age group at the time of marriage, and the migrant's country of origin (top 10 sending countries and "others"), and then calculate the divorce rate as the number of divorces divided by the number of marriages in each cell. We use the number of marriages in each cell as weights throughout our analysis.

The divorce data also includes a reason for divorce (infidelity, abuse, family conflicts, financial problems, incompatibility, health issues, others), and divorce types (uncontested vs. contested). Data on the reasons for divorce are only available up to 2017. Thus, our analysis of this outcome is restricted to marriage cohorts from 2010 to 2015 and we track their divorces over a period of up to two years.

To study fertility, we use birth registry data covering all births in Korea from 2010 to 2021. The data include information on parents' date of marriage, age, education, and their nationality. We construct aggregated cells in the same manner as with the marriage and divorce data and link them to the marriage data.

4.2   Survey data on marriage migrants

To obtain measures of language proficiency and to better understand the mechanisms underlying our main findings, we supplement our analysis with the National Survey of Multicultural Families (NSMF). This survey began in 2009 and is conducted every three years. The 2009 NSMF attempted to survey all marriage migrants (approximately 131,000 individuals) who reside in South Korea, with a completion rate of 55.9 percent.[13] The subsequent surveys were smaller, with approximately 15,000 to 17,000 marriage migrants in each wave between 2012 and 2021.

The NSMF provides rich information on marriage migrants' demographic, social, and economic characteristics. In particular, it includes several measures of Korean language ability—such as self-assessed proficiency in different areas (e.g., speaking, reading, and writ-

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[13]Marriage migrants are individuals who are foreign nationals that have married Korean citizens or have obtained Korean nationality through marriage to a Korean.

ing), whether respondents have taken the Test of Proficiency in Korean (TOPIK), and their achieved level. These measures are especially valuable because most studies of migrant integration policies using administrative data lack direct indicators of language proficiency, making it difficult to examine the first-stage effects of those policies (as noted by Dang [2025]). The survey also collects data on family background, employment, experiences of discrimination, and aspects of marital life, making it a key source for analyzing the mechanisms underlying our main findings.

4.3 Sample selection

We focus on samples that the amendment primarily targeted, namely, marriages between a Korean-born man and foreign-born woman. These couples typically come from less developed countries and are often those who were arranged through marriage brokerage companies. We examine all marriages between Korean-born men and foreign-born women who were married between 14 quarters before and after the amendment, which corresponds to the 4th quarter of 2010 through the 4th quarter of 2017. This results in a sample of 126,637 marriages and 14,642 cells. We focus on a relatively narrow time window to minimize the impacts of other confounding factors.[14] In the official Q&A regarding the improvement of marriage immigration visa issuance review standards, it is specifically mentioned that imposing language level requirements would help cross-border couples involving Korean men who married foreign women in a short period of time through marriage agencies, due to their difficulties in finding domestic spouses.[15]

Although our primary analysis focuses on marriages between Korean men and foreign women, we also examine marriages between two Korean natives and between Korean women and foreign men as comparison groups.

5 The effect of the visa requirements on migration, selection, and matching

In this section we document how the amendments to the visa requirement affected the number of cross-border marriages, the characteristics of migrants, and the matching patterns with Korean-born spouses. Understanding how the flow of marriage migrants changed is important both for characterizing the impact of the policy and for interpreting effects of the policy on divorce probabilities.

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[14]We repeat the analysis over longer time periods as a robustness check and find consistent results.

[15]Marriages between Korean women and foreign men are primarily with men from developed countries, with a large share involving men from English-speaking countries or Japan. These couples are also less likely to have basic communication barriers as English is taught in official school curricula in Korea, and the dating process is unlikely to be as quick as in marriages arranged by agencies.

The amendment to the visa requirements significantly reduced the number of cross-border marriages, with the number of marriages decreasing by 35% within the first month, as documented in the top panel of Figure 3. However, the number of marriages gradually rebounded in later years. This decrease in the number of marriages is not observed among Korean native couples, shown in the bottom panel, consistent with the decline in marriage migration being caused by the visa policy change rather than broader national trends related to marriage.

The amendment had a significant and substantial impact on the language abilities of incoming migrants. To investigate its effects, we compare the language ability distributions of incoming migrants before and after the amendment in Figure 4. These data are from the National Survey of Multicultural Families (NSMF). The first panel shows that the share of migrants with very bad Korean speaking abilities decreased sharply between the 2011-12 and 2014-15 cohorts, dropping by almost 20 percentage points and bringing the share close to zero. The second panel shows that the share of migrants who have ever taken TOPIK increased sharply after the amendment. The third panel shows that the share of test-takers with at least Level 1 somewhat increased after the amendment. However, since Level 1 is the lowest possible passing level, the 83 percent passing rate was already quite high before the amendment. Combining the two figures, the unconditional share of migrants holding TOPIK Level 1 or above increased substantially after the amendment.[16]

We supplement the graphical evidence with bivariate regression estimates. We regress various measures of the language ability of new migrants on an indicator for whether they arrived after the language requirement went into effect. The estimates are presented in Table 1. The share of migrants with bad or very bad Korean abilities decreased significantly after the amendment, dropping by 15 percentage points, or 26% of the baseline mean. The result in column (5) presents the results for the ordinal measure of Korean speaking skills, ranging from 1 to 5, and shows an increase of 0.4 units. Additionally, the share of people holding TOPIK Level 1 or above also increased by about 10 percentage points, nearly half of the baseline mean of 20 percent. We conclude from this evidence that the amendment had the effect of raising the language skills of new migrants.

Further evidence on the important role of the language requirement in affecting migration is presented in Figure 5. The horizontal axis captures the fraction of recent migrant in the 2009 and 2012 rounds of the NSFM data who report that they speak Korean bad or very bad. The vertical axis is change in the proportion who speak bad or very bad between the 2009

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[16]In Figure A1 we document that these language disparities between cohorts who married before and after the amendment persist for two years after arrival in Korea. After that time the share of migrants who report a 'very bad' ability to speak Korean is effectively zero.

and 2012 rounds and the 2015 and 2018 rounds. The negatively sloped regression line has a slope of -0.38 (0.14) and indicates that the average language skills of migrants improved after the policy among countries where past migrants had particularly poor language skills.

The NSFM data allows us to separate Chinese migrants who are of Korean ethnicity (*Choseonjok*) and others, and these are plotted separately in Figure 5. As detailed in Ahn and Lubotsky [2024], Choseonjok and non-Choseonjok migrants from China are quite similar along most dimensions, such as educational attainment, but many Choseonjok individuals learn both Mandarin and Korean languages in school. As a result, Choseokjok migrants generally have quite good language skills and they were far less affected by the policy amendment than non-Choseonjok migrants from China and from other countries. In Section 7 we contrast outcomes between Choseonjok and non-Choseonjok migrants to better understand the mechanisms that relate the visa amendment, language, and divorce.

We next assess how the visa amendments impacted the educational attainment and country of origin of migrants and Korean-born husbands. Table 2 uses the marriage registry data to document how the composition of marriage migrants and their spouses changed following the amendment. The first two columns show unconditional averages in the pre-period (2010:4 to 2014:1) and post-period (2014:3 to 2017:4). Note that we exclude the second quarter of 2014 from our analysis because it was a transition period.[17] The third and fourth columns show the coefficient and standard error from a regression of the demographic characteristic on a post-period indicator, while also controlling for separate linear trends before and after the amendment. For both husbands and wives, the average education level increased after the amendment. For instance, the share of marriage migrants and their husbands who have a college degree or more education increased by 4.4 and 2.4 percentage points, respectively. On the other hand, the share of individuals with less than a high school education or a high school education decreased for both migrants and their spouses. After accounting for trend changes, the country of origin of the wife shifted away from Southeast Asian countries (Philippines, Vietnam, and Cambodia), which tend to have lower language abilities.

Changes in education composition may have also affected the relative education within households, which has been shown to influence household dynamics [Browning et al., 2014]. We do not find evidence of this, however. Table A1 reports the impacts of the amendment on spousal matching outcomes, specifically along the education dimension. For each outcome the first column presents the estimates after accounting for separate linear trends before and after the amendment, while the second column reports estimates conditioned also on the

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[17]For example, the language exam was offered only 4-5 times a year, and individuals had to sign up for it at least a month in advance to take it. The results were typically available about a month after the exam. Therefore, although the policy officially began on April 1st, 2014, it did not become fully effective until the following quarter.

husband's characteristics and the wife's age and country of origin. The estimates indicate that both the probability of the husband being more educated than the wife decreased after the amendment, although these estimates are all statistically insignificant.

6   The impact of the visa amendment on marital surplus

In this section we investigate two outcomes related to marital surplus: divorce and fertility. We begin with an assessment of whether divorce rates among cross-border couples changed as a result of the visa policy change. We use two identification strategies: the first is a standard pre-post comparison; the second leverages heterogeneity across countries in the Korean language skills of migrants who arrived prior to the policy change. After documenting robust evidence of a decline in divorce rates among cross-border couples who married after the policy change, we assess whether the decline in divorce rates can be explained by changes in observable characteristics, such as the wife's country of origin, educational attainment or language ability. The section concludes with an analysis of the effect of the policy change on fertility rates.

6.1   Divorce

We begin with some descriptive figures to motivate our analysis. Figure 6 depicts cumulative divorce probabilities for cross-border and native couples before the amendment.[18] Cross-border couples exhibit significantly higher divorce rates, consistent with earlier studies on this topic [Kim, 2010]. Approximately 5% of Korean native couples divorced within four years, whereas 17% of cross-border couples have divorced–a difference of more than three-fold. Divorce probabilities are particularly high for marriages in which the wife is from Cambodia, China, and Vietnam. Marriage migrants can apply for residency or Korean citizenship after two years of residing in Korea, which grants the right to stay in the country even after divorce. However, we do not observe a noticeable increase in divorce at the two-year mark.[19]

To what extent are divorce rates different between couples who married before and after the visa policy change? We address this first in Figure 7, which presents average cumulative divorce rates for cross-border couples, by marriage cohorts, over 12, 24, 36, and 48 months. The red dots represent the number of divorces divided by the number of marriages in each cohort among Korean men and foreign women couples; simple bivariate regression lines

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[18]Another way of representing this is using marriage survival probabilities instead of divorce probabilities. The current graph uses the empirical distribution function, and since there is no censoring with the registry data, it is equivalent to the complement of the Kaplan-Meier curve [Kaplan and Meier, 1958].

[19]This is consistent with the findings in Adda et al. [2025] in Italy, where no systematic change in the hazard rate of separation is observed after two years of marriage, when the foreign spouse can apply for Italian citizenship.

overlay the dots. Each panel shows a clear and sharp drop of about three percentage points in cumulative divorce rates for couples consisting of Korean men and foreign women who married after the change in the visa policy. This decline is not observed among native couples or among Korean women–foreign men couples, whose divorce rates are represented by green and blue dots, respectively. Notably, we do not observe a similar drop in divorce rates for Korean women–foreign men couples, despite their pre-policy divorce trends being similar to those of Korean men–foreign women couples and the comparable share of couples likely to have been constrained by the income requirement before the policy change.[20] This pattern is consistent with our earlier finding that the income requirement had minimal or no impact on marriage-migration.

We augment the figure with two model specifications that allow us to control for additional covariates and explore the role of language in producing these effects. We first estimate a simple difference equation that contrasts divorce rates among couples who married before and after the enactment of the visa policy change. Later, we estimate a second model that allows for heterogeneity in the effect of the policy change by the pre-reform fraction of migration who speak Korean poorly. This specification more directly assesses our hypothesis that the reform worked through reducing marriages among foreign women who likely had worse command of the Korean language.

Our first regression model is given by

$$y_{ct}^m = \beta Post_t + \gamma q_t + \delta(q_t \times Post_t) + X_c'\phi + \varepsilon_{ct} \qquad (1)$$

where c represents cells defined by husband's education, wife's education, husband's age group at the time of marriage, wife's age group at the time of marriage, and wife's country of origin, and t denotes marriage cohorts (by quarter of each year). The dependent variable, y_{ct}^m, is the cumulative divorce probability within group c who married in period t in the first m months of marriage. We present estimates for models of divorce within the first 12 months, 24 months, 36 months, and 48 months of marriage. q_t refers to the marriage cohort quarter centered around the amendment. $Post_t$ is an indicator variable that takes the value one for marriage cohorts after the amendment, and zero otherwise ($Post_t = 1(q_t \geq 2014q3)$). Linear marriage cohort trends are included separately for the cohorts before and after the amendment. As a robustness check, we also estimate the model with quadratic trends and the Weighted Least Squares model with triangular kernel, which gives more weight to

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[20]Table A2 shows that pre-policy characteristics were similar between couples consisting of Korean men and foreign women and those consisting of Korean women and foreign men, in terms of income and housing arrangements. However, the language requirement was much more binding for the former, as Korean wives in the latter group were generally able to communicate in their spouses' languages.

observations closer to the policy implementation. X_c is a vector of covariates which include dummy variables for husband's education, wife's education, husband's age group, wife's age group, and wife's country of origin. We estimate this equation separately for each m. Each regression is weighted by the number of marriages in each cell. Robust standard errors are used.[21]

Our main coefficient of interest is β, which estimates the impact of the amendment to the marriage visa policy on cumulative divorce rates, after accounting for linear cohort trends and non-language covariates. Because language information is not available in the registry data, we cannot include it as a control at this granular level. However, we later explore its role using aggregated data that incorporate language measures. The inclusion of linear cohort trends controls for smooth, time-varying changes across marriage cohorts that are unrelated to the policy, such as gradual shifts in social perceptions of divorce, or broader marriage market conditions. Moreover, no other major policy or institutional change occurred around the time of the marriage migration visa reform that could confound our estimates. However, because divorces within the first m months for a given cohort occur at different points in calendar time, period-specific shocks could bias the estimates. To address this, as a robustness check, we compare Korean men–foreign women marriages with Korean women–foreign men marriages to difference out period-specific shocks. This comparison yields similar results, reinforcing our main conclusion.

Regression estimates of Equation 1 are shown in Table 3 and confirm the sharp drops in cumulative divorce rates evident in Figure 7. The four columns in this table correspond to models of divorce within 12, 24, 26, and 48 months. The rows correspond to alternative regression specifications. The first specification, Panel a, corresponds to equation 1. These estimates indicate that cumulative divorce rates over the first 12 months of marriage decrease by 2.5 percentage points after the amendment, which corresponds to a 37 percent drop relative to the baseline mean. This impact size is economically substantial, indicating a significant reduction in divorce rates among cross-border couples. The estimates for 24, 36, and 48 months are 2.3, 2.1, and 1.9 percentage points, respectively, indicating that the major decrease occurs in the first 12 months. This finding that the divorce decreases by the largest amount in the first 12 months aligns with Becker et al. [1977]'s observation that marriage decisions entail substantial uncertainty and that most divorces occur early in marriage.[22] Most marriage migrants in Korea experience relatively short dating periods and do not

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[21]The results are robust to clustering standard errors by cell; if anything, the clustered standard errors are slightly smaller. These results are available upon request.

[22]If people could fully anticipate divorce with the existing information, they would likely avoid entering a marital relationship given the significant emotional and financial costs associated with divorce [Becker et al., 1977].

cohabit before marriage, making the information shock more likely and acute.

The remaining rows indicate that the estimates are quite stable across specifications. The second row presents estimates from a model without control variables (X_c in Equation 1). The similarity of the estimates with and without controls indicates that the effects on divorce do not seem to work through changing the age, education, and country of origin of wives (or the age and education of husbands). Furthermore, allowing for a quadratic, rather than linear, trend across marriage cohorts does not affect the estimates, nor does using weighted least squares.

Revisiting Figure 2, we conduct a back-of-the-envelope calculation to assess how much of the decline in divorces among cross-border couples is driven by reductions in divorce rates for post-reform cohorts. Our calculation suggests that, after accounting for linear trends, approximately 79% of the decline in the number of divorces between 2014 and 2015 is attributable to reductions in divorce rates among the 2014 marriage cohorts, whereas the mechanical decrease due to the decline in the number of marriages explains about 18%.[23] This shows that the decline is not merely a reflection of fewer marriages, but rather a significant policy effect in reducing divorce rates—an effect that we do not observe in Taiwan, which did not implement a similar policy.

Finally, we estimate similar models for two additional groups: couples in which both spouses are native-born Koreans and couples composed of Korean women and foreign men. In both cases, we find no significant changes in divorce rates, indicating that the observed effects among marriage-migrant couples do not reflect broader national trends (Table A3 and Table A4).[24] A double-difference specification comparing Korean men–foreign women marriages to Korean women–foreign men marriages, which differences out period-specific shocks, yields results consistent with our main estimates, further supporting the interpretation that the policy reform reduced divorce rates among marriage-migrant couples through mechanisms related to language ability (Table A5).

Figure 8 further shows the dynamics of the estimated changes in cumulative divorce rates over the 48-month period. Here we estimate Equation 1 separately for each month following marriage. The dependent variable in Panel A is the ratio of divorces to the number of marriages in the cohort. As suggested by the regression results in Table 3, the pattern shows that most of the decrease in divorce rates occurs during the first 15 months; the impact on cumulative divorce rates remains relatively flat after that point. Panel B shows shows

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[23]We use 0.06 as the first-year divorce rate based on Figure 6 and apply a 37% reduction (i.e., 0.06×0.37) to capture the estimated policy effect on divorce rates.

[24]Among couples of Korean women and foreign men—a group in which a large share of husbands are from English-speaking countries—language barriers are much less likely to exist, as English is part of the standard school curriculum in Korea.

the estimates in percentage terms. These estimates are obtained using dependent variables scaled by the average pre-amendment cumulative divorce rates. Consistent with the level effects shown in Panel A, the impacts are largest in percentage terms during the first year of marriage, with a decrease of approximately 40% in cumulative divorce rates. Given that baseline cumulative divorce rates naturally increase over time in marriage and the level effects of the amendment flatten after the first year, the percentage impacts diminish over time, with a 12% reduction in cumulative divorce rates at 48 months.

6.2 Identification across sending countries

Our second specification estimates heterogeneity in the effect of the law across sending countries characterized by the fraction of migrants who speak Korean bad or very bad. This specification is motivated by Figure 5, discussed above, that documents that the pre-period fraction of migrants who have particularly poor language skills is a strong predictor of subsequent increases in language skills after the amendment goes into effect. To capture this cross-country heterogeneity, we estimate the following regression model:

$$y_{oct}^m = \beta Post_t + \alpha KoreanSkills_{Pre,o} \times Post_t + \gamma q_t + \delta q_t \times Post_t + X_c'\phi + \varepsilon_{oct} \qquad (2)$$

where o indicates migrant's country of origin and $KoreanSkills_{Pre,o}$ represents the share of new migrants from country o whose Korean language proficiency is classified as bad or very bad during the pre-period. The rest of the variables, weighting, and robust standard errors are specified the same way as in Equation 1.[25]

This specification allows us to capture the differential impacts of the amendment that vary based on the baseline language skills at the country level. The coefficient β captures the impacts of the amendment for countries where no migrants have bad or very bad Korean speaking skills, which we expect to be small, given that the main policy target was migrants who do not have basic Korean proficiency. α is the coefficient of interest and represents the differential effect of the amendment for countries with higher shares of migrants with poor Korean skills. In addition, we expand this specification into an event-study framework, which allows us to test for the presence of differential pre-trends. We do this by interacting the pre-amendment language skills with marriage cohort fixed effects, rather than using the $Post$ dummy.

In Table 4 we present estimates of β, the main effect of $Post_c$, and α, the interaction between $Post_c$ and the fraction of migrants in the pre-period from each country whose Korean language skills are bad or very bad. The columns correspond to estimates of divorce within

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[25]An alternative specification includes quarter fixed effects to absorb quarter-specific shocks. The results are similar under this approach, although β is not separately identified.

12, 24, 26, and 48 months of marriage. Panel (a) omits the controls for the husband and wife's education and age. Panel (b) includes these controls. The coefficient on the *Post* dummy is small and statistically insignificant in all models, indicating that, in the absence of migrants with bad or very bad speaking skills, the amendment does not influence divorce rates. By contrast, the interaction terms between the pre-amendment probability of a migrant having bad or very bad Korean speaking skills and *Post* are all negative and statistically significant, indicating that as the proportion of migrants with poor Korean speaking skills increases, the negative impact of the amendment on cumulative divorce rates becomes more pronounced. Note that the average pre-amendment probabilities of Korean speaking skills to be bad or very bad is 0.567. This suggests that for the country with the average level of baseline language skills, the impacts of amendment decreased the cumulative divorce rates by 2.6 and 1.5 percentage points over 12 and 48 months, respectively.

Figure 9 presents event-study versions of our heterogeneity analysis. We modify Equation 2 to include interactions between marriage cohort indicators and the fraction of pre-period migrants who have bad or very bad Korean language skills. The coefficients on these interactions are presented in the figure, with the first quarter of 2014 normalized to zero. The estimates show that there is not a statistically significant relationship between the interaction terms prior to enactment of the visa policy change. However, after the amendment goes into effect cumulative divorce rates fell among migrants from countries where language skills were more limited.

To conclude this section we break down the effects on divorce rates by the stated reason for the divorce. We estimate versions of Equation 1 where the dependent variables are now the cumulative divorce rates for seven different reasons: infidelity, abuse, family conflicts, financial problems, incompatibility, health issues, and others. The estimates are presented in Table 5. With the exception of the financial problems category, all coefficients are negative. The level effects are largest for the incompatibility and "others" categories, the two most common reasons for divorce. Relative to the average pre-amendment levels, the largest relative impacts come from the abuse and family conflicts categories, corresponding to a 61% and 54% drop, respectively, by 24 months of marriage duration. The decreases in within-household and family conflicts are consistent with an increase in marital surplus among cross-border couples who married after the amendment went into effect. Furthermore, abuse—the most socially costly reason for divorce—also decreased substantially.

6.3 Do compositional changes explain the decline in divorce rates?

A. Characteristics other than languages

To what extent did changes in the composition and characteristics of marriage migrants

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and their Korean husbands lead to changes in divorce rates? We showed above that, as a result of the visa policy amendments, the educational attainment, and country of origin of migrants and spouses changed. To assess the degree to which changes in these observable variables contributed to the decrease in divorce rates, we first run the following regression using the pre-amendment data.

$$y_i = \beta_0 + \mathbf{x}_i\beta_1 + \gamma q_i + \varepsilon_i$$

where i represents individual marriages, $\mathbf{x}_i$ denotes the observable characteristics of marriage i (such as the education and age groups of husbands and wives, and the country of origin of wives), and q_i represents the marriage cohort for marriage i. We run this regression using aggregated data, but the same coefficients can be obtained as those from individual regressions using data aggregated by $\mathbf{x}_i$ and q_i.[26] Table A7 reports the coefficients showing how the education, age, country of origin of wives, relative education and relative ages affect divorce probabilities. At first glance, it is unclear how the overall cumulative divorce rate would change. For instance, while the amendment's effect of higher education among wives predicts lower divorce rates, wives having more education than their husbands predicts higher divorce rates. Additionally, the country of origin coefficients suggest that the composition shifted in a way that would increase cumulative divorce rates. Overall, the impacts of compositional changes would depend on the relative magnitude of changes in each characteristic and the direction of their effects prior to the policy change.[27]

Using the coefficients estimated from the pre-amendment data as above, we calculate the predicted divorce rates post-amendment based on the new characteristics of marriage migrants and their husbands. The blue lines in Figure 10 show these predicted values. For all the marriage durations we consider here, compositional changes predict steady declines in cumulative divorce rates, with perhaps small discontinuous declines after the policy is implemented. However, these predicted drops are much smaller than the actual drops observed post-amendment. The red lines show the actual divorce rates in the post-amendment period. The differences between the pre-amendment fitted values (blue dots to the left of the red vertical line) and the post-amendment values (red dots) are much larger than what compositional changes would predict for changes in divorce rates. Specifically, the compositional changes explain 14, 21, 26, and 28 percent of total changes for 12, 24, 36, and 48 month divorce duration models. Notably, observable characteristics do a better job at explaining

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[26]More specifically, the equation we estimate is: $E(y_i|\mathbf{x}_i, q_i) = \beta_0 + \mathbf{x}_i\beta_1 + \gamma q_i + E(\varepsilon_i|\mathbf{x}_i, q_i)$.

[27]These estimates are not sensitive to omitting the cohort linear trends or adding cohort fixed effects, as shown in Table A6 and Table A8, which suggests the impacts of observable characteristics are relatively stable over time.

the observed impacts on divorce rates as the marriage progresses.[28] These results are almost identical when we include all the interactions with education pairs and those with age group pairs to capture matching effects instead of including dummies for relative education and ages for husbands and wives.

We also conducted a Gelbach decomposition [Gelbach, 2016], which nests the Oaxaca-Blinder decomposition [Oaxaca, 1973; Blinder, 1973], to understand the compositional effects from education, age, country of origin, relative education, and relative age.[29] We find qualitatively similar results; however, the Gelbach decomposition analysis shows that compositional effects tend to explain slightly smaller shares of the observed reductions in divorce rates Figure A2. Overall, our analyses including controlling for observables, subtracting the predicted portions from the divorce variable, and Gelbach decomposition, show that compositional effects from non-language characteristics can explain at most 30 percent of the changes in the cumulative divorce rates. This highlights the potentially important role of improvements in the language ability of migrants, as opposed to a shift towards more educated migrants or shifts in the country of origin of migrants, in driving the decline in divorce rates.

B. Language abilities

In this section, we assess the relative importance of language by adding language measures as additional controls to isolate its contribution from that of high-intent selection. As noted in the previous section, our measure of language proficiency comes from survey data, which prevents us from constructing language measures at the same level of granularity as the divorce outcomes. We therefore aggregate the divorce data to the annual level and define cells by two education groups (middle school or below / high school or above) and four country-of-origin groups (China, Vietnam, other Southeast Asian countries, and others). Even at this level of aggregation, using only new migrants (those who migrated less than a year prior to the survey) yields a small number of observations per cell. To reduce measurement error, we use migrants who have resided in Korea for up to three years as our measure of initial language proficiency.[30] We compare marriage cohorts from 2012 and 2018, for which we can construct this language proficiency measure using the 2012 and 2018 survey waves.[31]

Table 6 presents the results. The baseline estimates in column (1), which exclude any controls, are larger because they compare two years without accounting for the underlying

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[28] This is consistent with an increasing R-squared as the marriage duration grows, documented in Table A7.

[29] The details of this decomposition are presented in Appendix Section B.

[30] In principle, it is possible to extend the window beyond three years. However, as noted earlier, the share of migrants reporting "very bad" Korean proficiency almost disappears after two years in the country, so we prefer to maintain a relatively short window.

[31] We do not use the 2015 survey because the three-year window includes both pre-policy and post-policy cohorts.

downward linear trend due to data limitation. This is consistent with the pattern that estimates are larger when linear trends are not accounted for in our main specification. Column (2) adds controls for migrants' education and country of origin. Again consistent with our earlier results, non-language demographic composition becomes somewhat more important as marriages progress but still explains less than 20 percent of the overall decline in divorce. Column (3) additionally controls for the share of migrants with very poor Korean proficiency. Across all marriage durations, language appears to play a larger role than non-language demographic composition. The contribution of language improvements is greatest within the first 12 months, when the decline in divorce rates is most pronounced, explaining more than 70% of the decline. The portion of the divorce decline that cannot be explained by demographic composition or language ability is larger at longer marriage durations, suggesting a greater role for high-intent selection. While fully disentangling these channels is inherently difficult, this exercise provides a useful first step toward understanding the relative importance of language-based versus intent-based selection.

6.4 Fertility

Fertility proxies for higher marital surplus [e.g., Becker, 1973, 1974], and it is particularly relevant in the Korean context because Korea has the lowest total fertility rate in the world [Hwang, 2023]. Using birth registry data, Table 7 presents the impacts of the visa policy change on fertility outcomes. Unlike divorce, fertility exhibits a national decreasing trend. To account for this, we incorporate data from native couples into our fertility analysis and estimate the following regression model:

$$y_{ct}^m = \beta Post_t \times Migrant_c + \gamma q_t + \delta(q_t \times Post_c) + X_c'\phi + \varepsilon_{ct}$$

where c represents cells defined by husband's education, wife's education, husband's age group at the time of marriage, wife's age group at the time of marriage, wife's country of origin, and migrant status, and t denotes marriage cohorts (by quarter of each year). X_c is a vector of covariates which include dummy variables for husband's education, wife's education, husband's age group, wife's age group, and wife's country of origin (including Korea). The remaining variables are defined in the same way as in Equation 1.

We also estimate a interaction model that is similar to Equation 2:

$$y_{oct}^m = \beta Post_t + \alpha KoreanSkills_{Pre,o} \times Post_t + \eta_o + \gamma q_t + \delta q_t \times Post_t + X_c'\phi + \varepsilon_{oct}$$

In this model, Korean natives are coded with $KoreanSkills_{Pre,Korea}$ (the share with poor or very poor Korean speaking ability) as zero. For both models, we reweight the native samples

within each cell to match the distribution of migrants [Card et al., 2008].

Consistent with the channel of higher marital surplus among cross-border couples after the amendment, the estimate in column 1 indicates that the number of children increases by 0.05 children (6.8 percent of the baseline mean) after the amendment. The double-difference model in column (2) yields qualitatively similar results. Given the lower divorce rates among marriage cohorts after the amendment, this result is perhaps not surprising. However, the magnitude of the fertility effect larger than the 1.9 percentage point decrease in divorce rates, suggesting that it reflects higher marital surplus among non-divorced couples.

7 Understanding Mechanisms: Why Language Affects Marital Outcomes

In the previous section, we demonstrated that the marriage migration policy reform enhanced marital stability and that language plays an important role in explaining this change. A key mechanism driving this result is the increase in marital surplus due to improved language proficiency. However, alternative channels may also be at play. For instance, stronger language skills can improve outside options by enhancing labor market opportunities, which may, in turn, influence marital outcomes. To better understand these underlying mechanisms, we use data from the National Survey of Multicultural Families (NSMF) to examine changes in household outcomes related to marital surplus, as well as potential alternative channels such as labor market participation and experiences of discrimination.

We use two complementary empirical models. The first contrasts outcomes across migrants from sending countries with different levels of Korean-speaking ability, as in equation 2 above. The second model contrasts outcomes between Chinese migrants who are of Korean ethnicity (Choseonjok) and others. We estimate models of the form:

$$y_{ioct} = \alpha KoreanSkills_{Pre,o} \times Post_c + X'_{ict}\phi + \eta_o + \mu_c + \sigma_t + \varepsilon_{ioc} \tag{3}$$

and

$$y_{ioct} = \alpha NonChoseonjok_{ioct} \times Post_c + X'_{ict}\phi + \eta_o + \mu_c + \sigma_t + \varepsilon_{ioc} \tag{4}$$

where i, o, c, and t represent individual, country of origin, marriage cohort (in years), and survey year, respectively. As in equation 2, $KoreanSkills_{Pre,o} \times Post_c$ in equation 3 represents an interaction between the share of new migrants from country o whose Korean language proficiency is classified as bad or very bad during the pre-period and an indicator for migrants who arrived after the amendment is in place. In equation 4, $NonChoseonjok_{ioct} \times Post_c$ is an interaction between an indicator that the migrant wife is not of Korean ethnicity

and an indicator that she arrived after the amendment is in place. X_{ict} is a vector of control variables, which includes the husband's and wife's education, their ages and age squared, wife's years since migration, its squared term, and the main effect of $NonChoseonjok$. Fixed effects for country of origin, marriage cohort, and survey year are included in the model (η_o, μ_c, and σ_t, respectively). Therefore, our estimates capture the impact of the policy reform after accounting for demographic characteristics.

We begin in Table 8 and present estimates of the effect of the amendment on the policy-targeted variables (income, housing, and language). For income and housing arrangements, the interaction terms between baseline Korean speaking abilities and the post-amendment dummy are statistically insignificant, indicating that these variables were not differentially affected by baseline Korean language skills. We find similar results in when we contrast Choseonjok and non-Choseokjok migrants. However, consistent with the visual evidence in Figure 5, the likelihood of having very poor or poor Korean speaking skills decreased more, and the probability of achieving TOPIK level 1 or above increased more, for migrants from countries with lower baseline Korean language abilities. We also find that after the amendment went into place, the probability of a non-Choseonjok migrant having poor language skills decreased relative to that of Choseonjok migrants.

7.1 Marital surplus channel

Language skills can influence marital surplus by improving communication and reducing misunderstandings between partners, potentially leading to lower divorce rates and higher fertility rates. Furthermore, better language skills are likely to reduce the negative impact of a match quality shock that may arise from realizing communication issues after marriage, particularly through more frequent joint decision-making and intensive communication in marriage. To better understand this, we model several new household outcomes: whether the couple report quarreling, whether they quarrel due to a language barrier, whether they experience cultural differences, and their self-reported satisfaction with their spouse. The latter two outcomes are reported separately by each spouse. Self-reported satisfaction is coded as 1 if they report that are "Very satisfied" or "More or less satisfied"; zero otherwise.

Table 9 reports the impacts of the amendment on marital surplus-related household outcomes.[32] These measures were impacted by the policy amendment. Although the overall probability of spouse quarrels did not change, the likelihood of quarrels due to language

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[32]Our estimates may be subject to sample selection bias since divorce rates are affected by the policy change and divorced families do not appear in the NSFM data. Under the assumption that the most unhappy marriages are more likely to end in divorce, and that groups more affected by the policy experience fewer divorces, our estimates understate what would obtain if we were able to include responses among divorced respondents.

barriers decreased. For example, when the probability of baseline Korean speaking ability being poor or very poor increases by 10 percentage points, the probability of spouse quarrels due to language barriers decreases by 0.85 percentage points, which represents approximately five percent of the baseline mean. In Table A9, we find no effect on quarrels related to other matters, such as finances, children, drinking, or incompatibility. These results suggest that language is the primary mechanism, with no evidence that other divorce-related risk factors are affected. Columns (3) through (6) of Table 9 show that self-reported cultural differences diminished as a result of the amendment; and marital satisfaction increased among both spouse. These patterns hold when we contrast migrants from sending countries with different pre-period language abilities (Panel A) and when we contrast Choseonjok and non-Choseonjok migrants (Panel B). These results are consistent with the policy enhancing marital surplus through language improvements.

7.2   Alternative explanations

An alternative channel through which language may affect divorce and fertility decisions is through improved labor market opportunities. Better labor market opportunities may increase financial independence, which makes it easier to walk away from an unhappy marriage. Conversely, higher earnings may enhance marital stability by contributing to household income and reducing financial strain. Improved labor market opportunities may also impact fertility, through either an income effect that increases fertility or a time cost effect that decreases fertility.

Table 10 reports the effect of the policy amendment on employment, monthly income, weekly hours of working, and the skill-level of the jobs. The coefficients on the interaction terms are generally small and not statistically different from zero, which suggests that the impacts of the amendment on labor market outcome are limited. (If anything, the estimated employment effects are negative.) The fact that the amendment led to an improvement in language skills among migrants without any commensurate improvement in labor market outcomes is consistent with evidence in Ahn and Lubotsky [2024].

One possible explanation for the lack of effect on labor market outcomes is that the language requirement is quite low. The language requirement is about 800 words and requires about 120 hours of training. The required training hours are indeed lower than those in most studies that find positive impacts of language training on labor market outcomes. Pont-Grau et al. [2023] shows that training duration matters for immigrant employment outcomes in France. In Korea, more than half of marriage migrants work in low-skilled jobs; Damas de Matos [2017] document that language proficiency plays a limited role in driving economic assimilation among low-skilled workers in Portugal. We conclude from this analysis that

labor market success does not play a meaningful role in connecting the policy change to reduced divorce rates.

Finally, changes in outside options beyond the labor market may also affect marital outcomes. Experiences with discrimination can have significant psychological and emotional effects, potentially impacting marital relationship. When migrants face discrimination, particularly in public or labor market settings, they may experience increased stress, which can spill over into their marital dynamics. These negative experiences could contribute to dissatisfaction within the marriage, or with life in Korea more generally, potentially influencing divorce decisions.

In Table 11 we present estimates of the effect of the visa requirement on reported discrimination experiences. The interaction coefficients are all small and statistically insignificant, indicative that discrimination experiences did not meaningfully change after the amendment for the group more affected by it. Taken together, we find little evidence to suggest that changes in divorce or fertility are driven by shifts in outside options, supporting our interpretation that marital surplus was enhanced through improved language proficiency.

8 Long term impacts and overall welfare

The marriage squeeze in South Korea, and more broadly in other East Asian countries, due to male-biased sex ratios, is a widely documented demographic problem [e.g., Gupta, 2005]. A consequence of this has been an increase in cross-border marriages. Our findings indicate that the language requirement imposed on cross-border couples increased the marital surplus of cross-border couples, leading to lower divorce rates and increased fertility. However, at the same time, overall marriage rates decreased following the policy implementation due to the higher costs required for these marriages. This may limit the potential partner pool for men in South Korea, exacerbating the marriage squeeze problem, and could lead to higher crime rates and other social challenges [e.g., Edlund et al., 2013a; Cameron et al., 2019]. In light of this, what are the welfare implications for the visa amendment policy?

To answer this question, it is important to know whether the decrease in marriage is temporary or long-lasting. If potential marriage migrants find the costs of investment in language skills too high, the supply of brides would decrease, leading to a long-lasting reduction in marriages. Alternatively, the perceived burden of the policy could diminish over time—for example, as language acquisition becomes more accessible through improved educational resources (evidenced by a 30% increase in official Korean language education centers in foreign countries between 2014 and 2019), or as administrative processes become more streamlined through the growing involvement of experienced marriage agencies. These developments may relax participation constraints for both prospective grooms and brides, facilitating adapta-

tion to the new policy environment. Over time, a new equilibrium could emerge in which marriage rates stabilize and marital outcomes improve, thus reducing the long-term welfare costs associated with the initial decline in marriages.

The data indicate that the reduction in marriage rates was temporary. While marriage rates remained lower during the first three years after the policy enactment, the number of cross-border marriages rebounded to more than 91% of the pre-policy level in 2018, and reached 98% in 2019 (Figure 3).[33] Importantly, these migrants now possess language skills significantly better than those of migrants who arrived in Korea before the policy change.

To assess longer-term effects, in Table 12 we compare the distribution of educational attainment among cohorts married before the policy, those married in 2014-2017, and those who married in 2018-2019. The educational distributions of the latter two groups are quite similar to one another. Thus, even though the number of marriages rose in 2018 and 2019, the selectivity that was evident among the 2014-2017 cohorts persisted. This may reflect general equilibrium effects, whereby improvements in marital surplus attract more highly educated individuals into the cross-border marriage market. Indeed, the impacts on divorce rates remain consistent across marriage cohorts.[34]

Finally, we conduct a back-of-the-envelope calculation to assess the policy's impact on overall fertility levels, given the country's strong policy interest in addressing low fertility. This calculation indicates that there was an 8.9% decline in fertility among the 2015 to 2018 marriage cohorts driven by the decline in the number of cross-border marriages during this period. However, fertility increased by 6.3% each year (relative to the 2013 level) beginning with the 2019 marriage cohort due to the rebound in the number of marriages and the estimated higher fertility rate among cross-border couples.[35] In addition, the enhanced marital surplus following the policy change may also improve the quality of children's outcomes in the future.

9   Conclusion

This paper provides new evidence on the effects of restrictive marriage migration policies by examining a 2014 reform in South Korea that introduced pre-entry language and eligibility requirements for marriage migrants. Using administrative registry data covering all marriages and divorces between 2010 and 2017, we document significant shifts in the com-

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[33]There was a drop in marriage rates in 2020 due to Covid-19.

[34]These estimates are presented in Table A10 and Figure A7.

[35]The calculation is as follows: Normalizing the number of marriages in 2013 to 100, the number of marriages in 2018-2019 is 94 each year. Using the numbers in Table 7, predicted fertility within four years in 2013 is 100×0.6, whereas the predicted fertility for the 2019 marriage cohorts is $98 \times (0.6 + 0.051)$, giving a 6.3% increase in fertility each year. For the 2015-2018 period, predicted fertility is $84 \times (0.6 + 0.051)$, resulting in a 8.9% decline in fertility each year.

position and outcomes of cross-border marriages. The policy led to an immediate decline in international unions, reflecting the tightening of entry standards. At the same time, it improved the average language proficiency and educational attainment of both migrant women and their Korean sponsors—shifts that persisted even as marriage numbers recovered to pre-policy levels within four years.

Beyond selection effects in migration, we find meaningful improvements in family stability and fertility, consistent with a rise in marital surplus. Cumulative divorce rates among couples of Korean men and foreign women declined by 12% within the first four years of marriage, with the most pronounced gains occurring in the first year. While demographic shifts—such as in education, age, and origin country—partially explain these improvements, they account for no more than 30% of the overall effect. By contrast, language plays a substantially larger role. Migrants from countries with greater pre-policy language barriers experienced larger declines in marital conflict and reported higher spousal satisfaction. Fertility also rose, with a 7% increase in childbirth within the first four years. These patterns point to improved communication and relationship quality as key mechanisms, rather than changes in labor market opportunities or perceived discrimination, for which we find little evidence of change.

More broadly, this study underscores the value of language training for intermarried couples. It demonstrates that investments in language proficiency for marriage migrants can have substantial returns, not only in terms of marital stability but also in enhancing the overall integration process, especially considering that divorced individuals are more likely to return to their home country or face greater social costs, such as dependence on social benefits. Furthermore, as we have demonstrated, there is also an inter-generational benefit (increased fertility) through stronger and more stable marriages. Although we did not measure the improvement in child quality, the benefits may extend beyond just the quantity of children, as a mother's language ability is likely to influence her children's language development.

Taken together, these findings highlight the potential of selective admission policies that emphasize civic integration requirements—such as basic language proficiency—to improve family outcomes and promote immigrant integration. While the policy initially reduced access to the international marriage market, the long-run rebound in marriage rates suggests that such costs may be temporary, particularly if language acquisition becomes more accessible. In this context, the net welfare effects appear positive: better-matched couples, fewer divorces, and more stable family environments that may support longer-term integration for both spouses and children.

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Figure 3: Number of registered marriages

All marriages between Korean men and foreign women
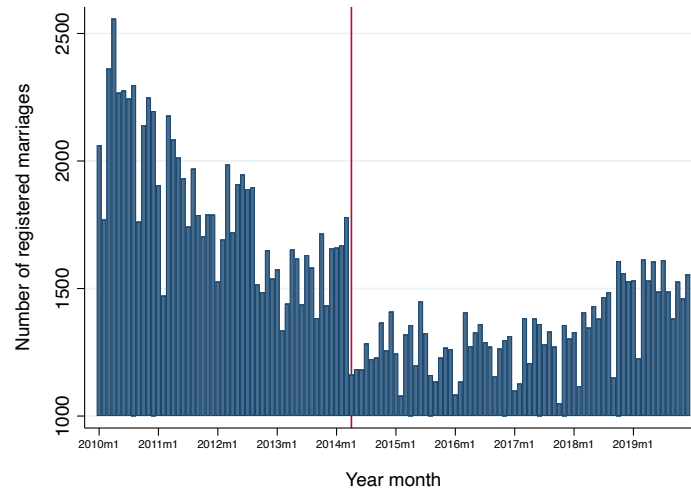
All marriages in between Korean men and Korean women
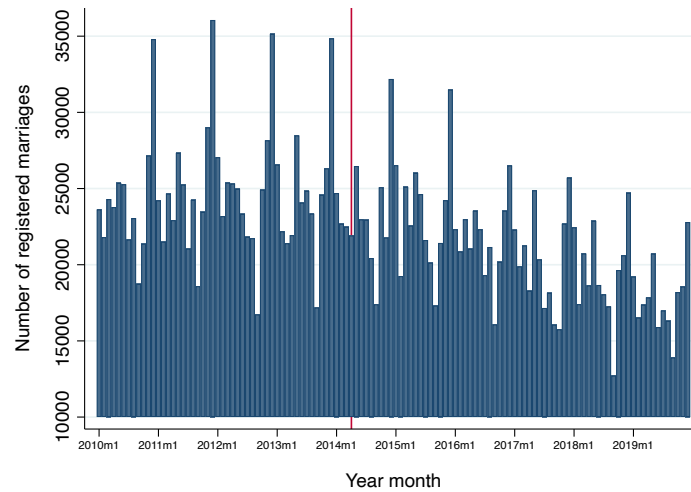
Notes: The top figure plots the number of registered marriages for cross-border couples comprising of Korean men and foreign women. The bottom figure plots the number of registered marriages for Korean native couples. The red lines indicate the amendment to the screening standards for issuing marriage visas.

Figure 4: Language requirement: the impacts on language abilities

Korean speaking ability at the time of migration
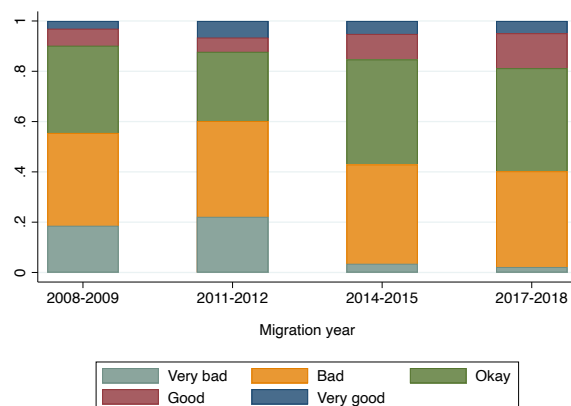
% Have ever taken TOPIK
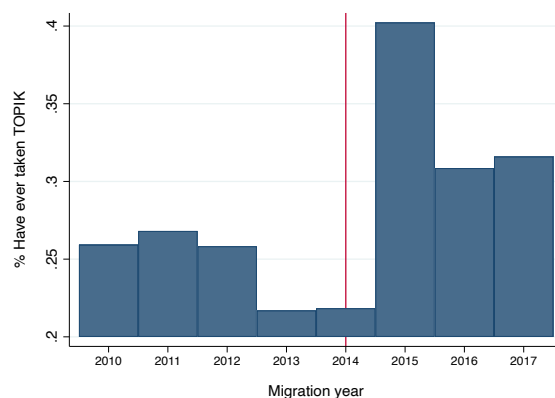
% Level 1 or above
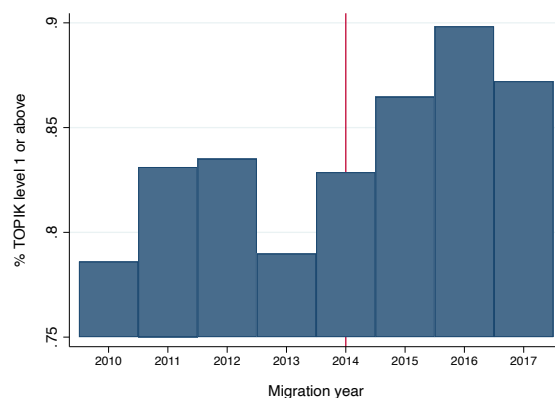
Notes: The first figure shows the distribution of Korean speaking abilities among new migrants. The second figure displays the probability that migrants have taken the TOPIK (Test of Proficiency in Korean). The third figure shows the share of migrants who obtained a level 1 or above on the TOPIK, conditional on taking the test.

Figure 5: Relationship between Baseline Korean speaking abilities and change in language abilities
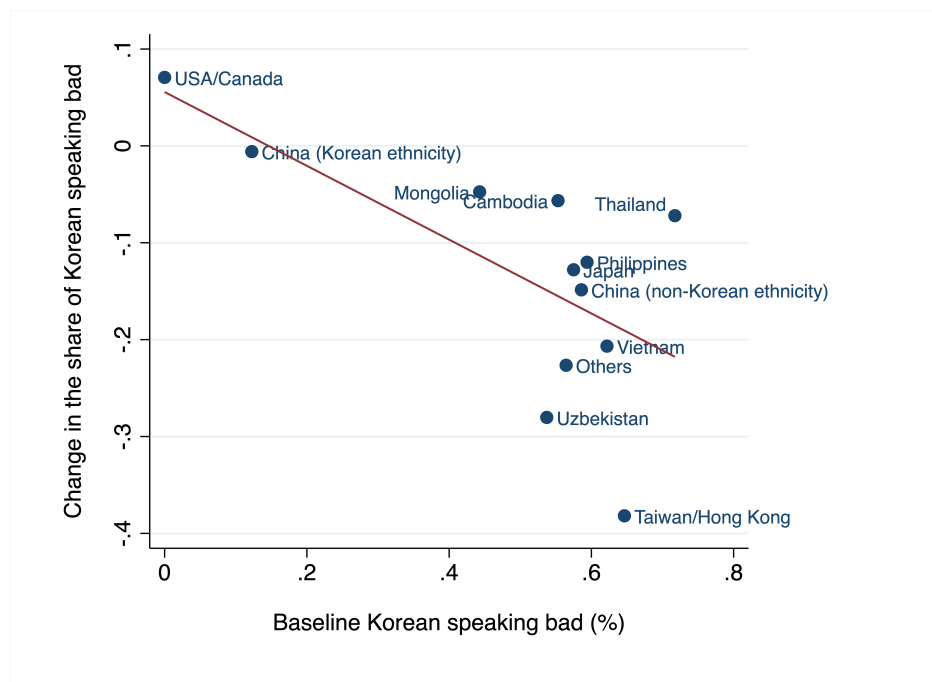
Notes: This figure plots the relationship between baseline share of migrants with bad or very bad Korean speaking abilities and the change in the share of migrants who have bad speaking skills after the amendment.

Figure 6: Pre-policy divorce rates
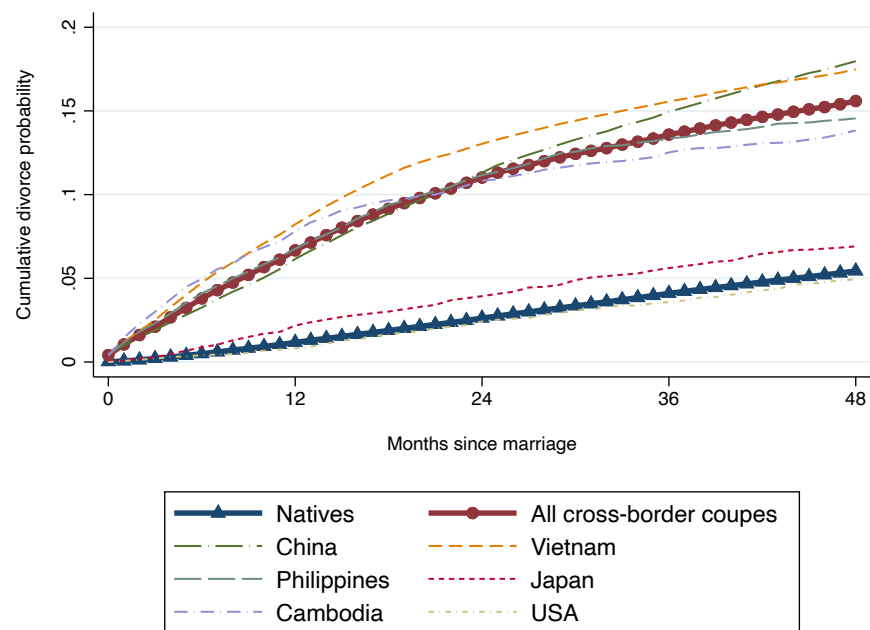
Notes: This figure presents divorce rates by months since marriage, prior to the amendment of the screening standards for marriage migrant visas. All cross-border couples refer to Korean men-foreign women couples.

Figure 7: Cumulative divorce probabilities
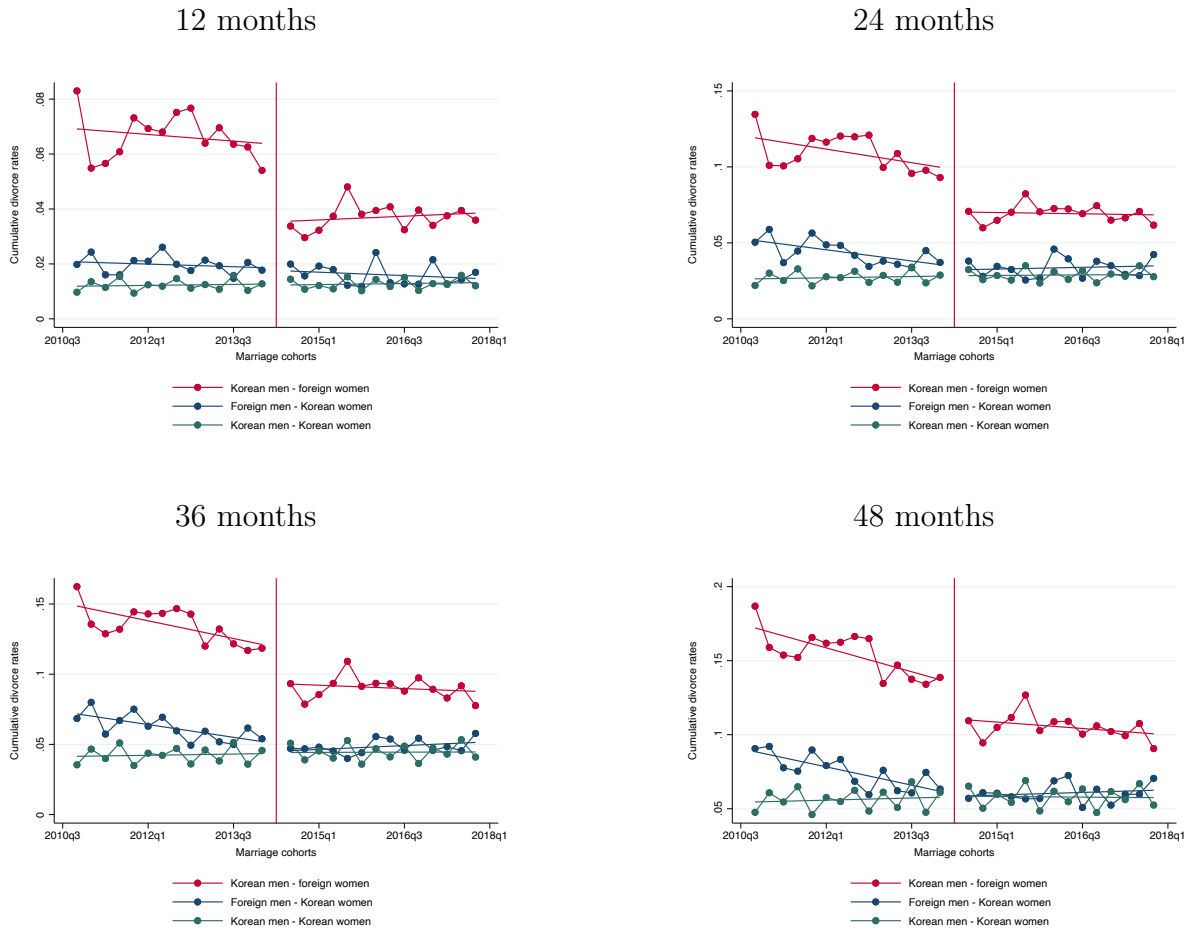
12 months

24 months

36 months

48 months

Notes: These figures plot cumulative divorce probabilities of cross-border couples within 12, 24, 36, and 48 months, respectively. The red lines indicate the amendment to the screening standards for issuing marriage visas.

Figure 8: The impacts of the amendment on cumulative divorce probabilities

Panel A. Level effects

Panel B. Percent effects
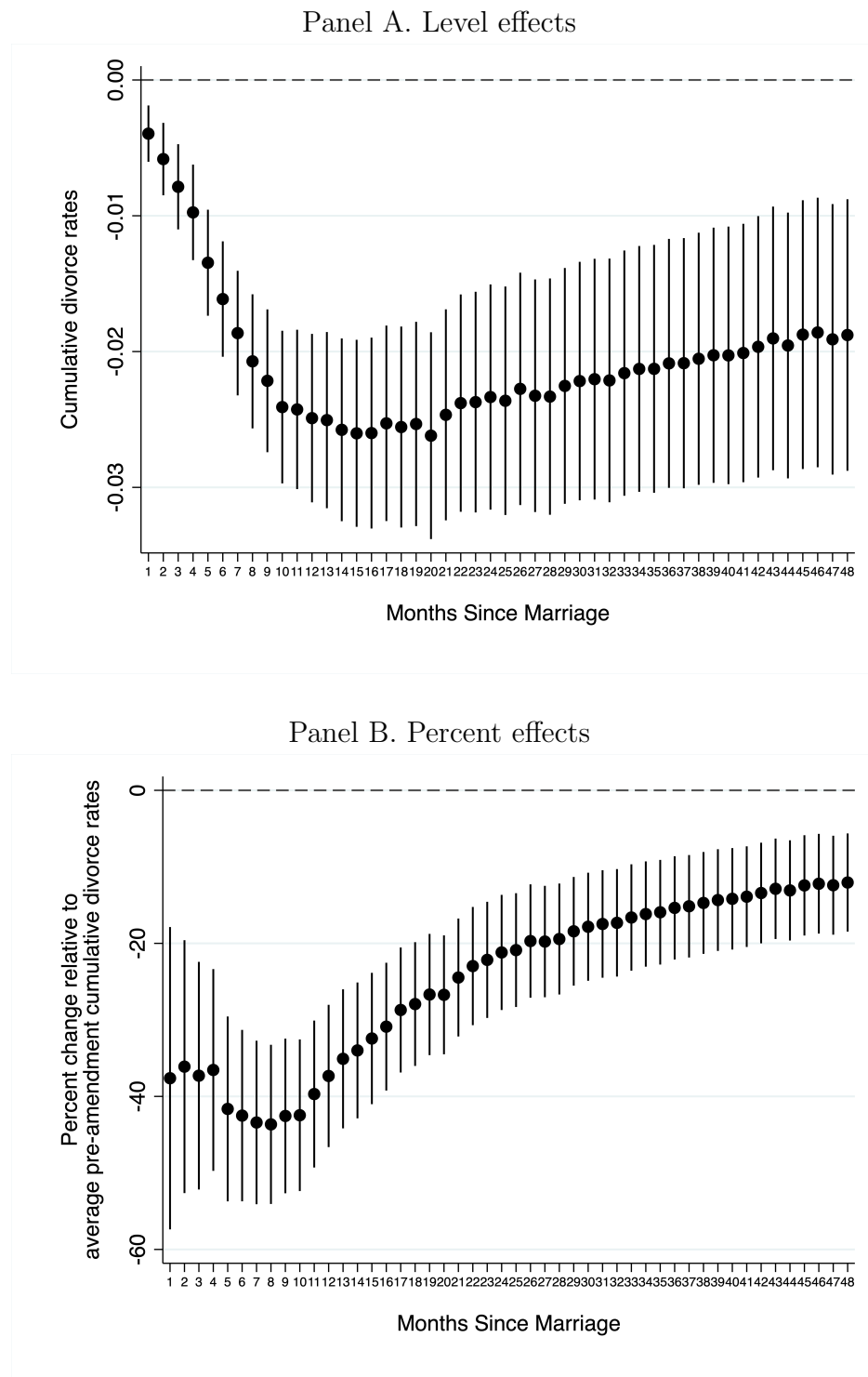
Notes: This figure plots regression estimates of the impacts on the amendment on cumulative divorce probabilities. Linear specification is used. Controls include husband education, wife education, husband age group, wife age group, and wife's country of origin. Robust standard errors are used. The samples consist of cross-border couples, comprising Korean men and foreign women.

Figure 9: The impacts of the amendment on cumulative divorce probabilities
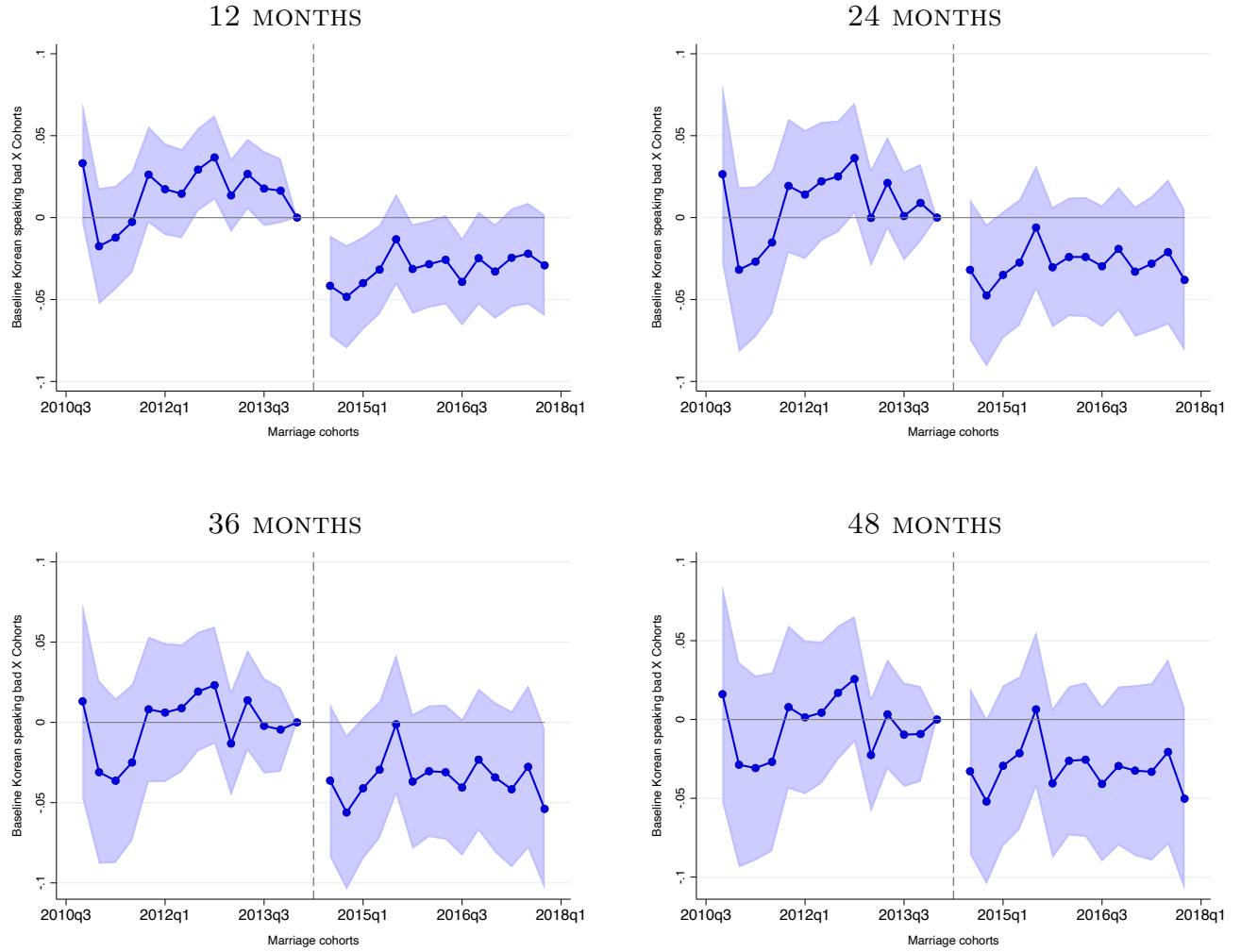
Notes: These figures plot event study coefficient estimates of the interaction between the baseline probability of Korean speaking being bad at the country level and the post dummy. Controls include husband education, wife education, husband age group, wife age group, and wife's country of origin. Robust standard errors are used. The samples consist of cross-border couples, comprising Korean men and foreign women.

Figure 10: The impacts of the amendment on cumulative divorce probabilities, fitted values based on observable characteristics
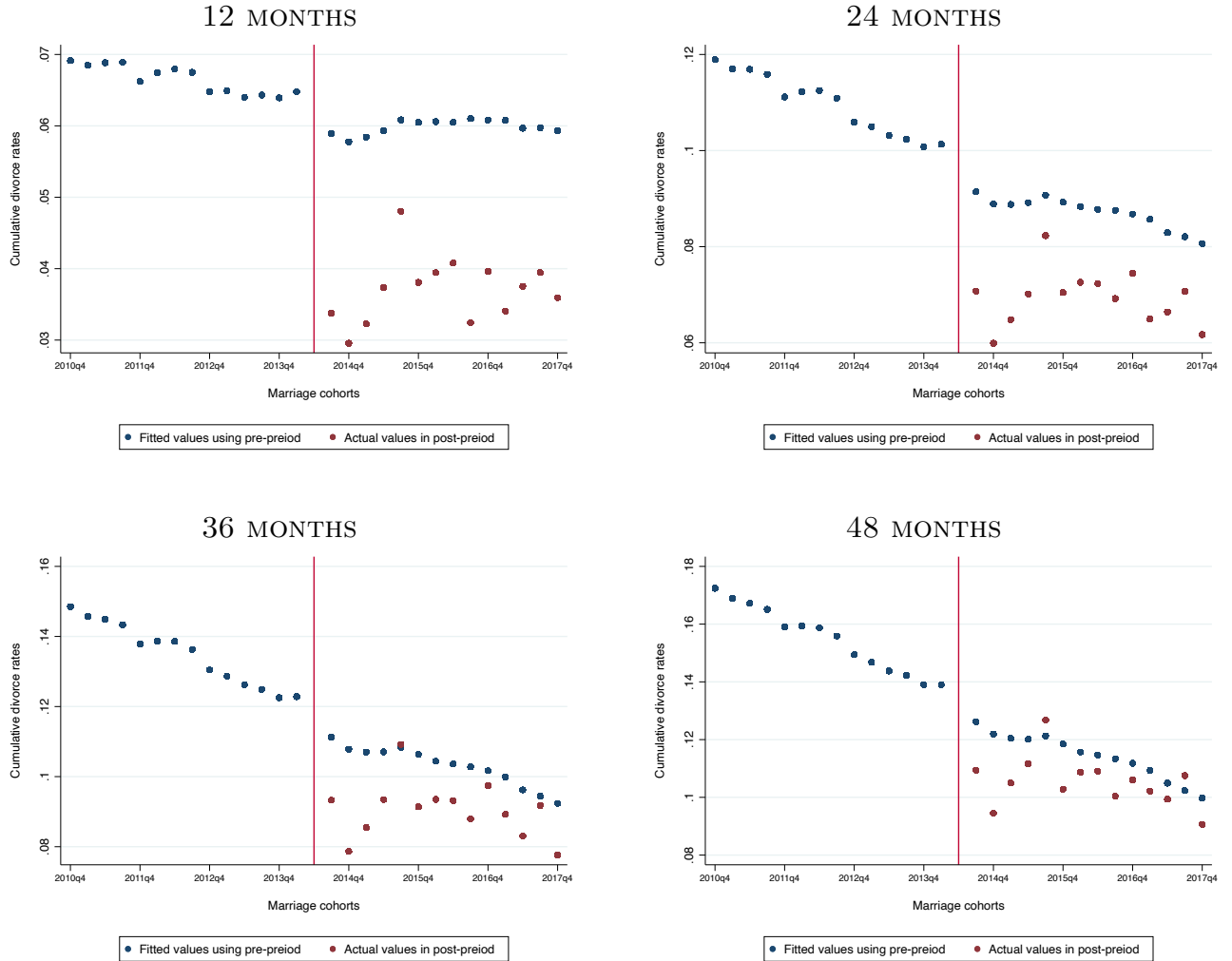
Notes: These figures plot the fitted values of cumulative divorce probabilities. The blue series represent fitted values using pre-period data, while the red series represent actual divorce rates using post-period data. The fitted values include the same covariates: husband's education, wife's education, husband's age at marriage, wife's age at marriage, wife's country of origin, dummies for relative education (husband has more education than wife, and husband has same education as wife), relative ages (husband is in older age group than wife, and husband and wife are in same age group) and linear quarterly trends.

Table 1: The impacts of the amendment on language

	(1) Korean speaking very bad (= 1)	(2) Korean speaking bad or worse (= 1)	(3) Korean speaking okay or worse (= 1)	(4) Korean speaking good or worse (= 1)	(5) Korean speaking skill (ordinal)	(6) Have TOPIK level 1 or above (= 1)
Post	-0.170***	-0.150***	-0.048***	0.009	0.395***	0.098***
	(0.010)	(0.024)	(0.018)	(0.011)	(0.044)	(0.016)
Baseline mean	0.20	0.57	0.88	0.94	2.38	0.20
Observations	12,641	12,641	12,641	12,641	12,385	8,418

Notes: This table presents pre-post comparisons of language. These estimates are weighted by survey weights. Migrants who spent a year or less are included as samples for columns (1)-(5). The TOPIK variable exists only from 2015 and all migrants in 2015 and 2018 survey are included as samples. Sources: The NSMF 2009, 2012, 2015, 2018.

Table 2: Composition of marriage migrants and their spouses

	Pre	Post	Post-Pre	
	Mean	Mean	Coefficient	SE
Husb edu: less than high school	0.116	0.079	-.006	0.004
Husb edu: high school	0.517	0.466	-0.019***	0.006
Husb edu: college	0.367	0.454	0.024***	0.006
Wife edu: less than high school	0.236	0.159	-0.021***	0.005
Wife edu: high school	0.471	0.458	-0.023***	0.006
Wife edu: college	0.293	0.383	0.044***	0.006
Wife origin: Taiwan/HK	0.010	0.019	0.004***	0.002
Wife origin: Philippines	0.095	0.060	-0.019***	0.003
Wife origin: Vietnam	0.333	0.343	-0.039***	0.006
Wife origin: Cambodia	0.038	0.033	0	0.002
Wife origin: Thailand	0.017	0.052	.001	0.002
Wife origin: Mongolia	0.011	0.010	0	0.001
Wife origin: China	0.333	0.291	0.042***	0.006
Wife origin: Japan	0.059	0.063	0.006*	0.003
Wife origin: Uzbekistan	0.016	0.016	-0.003**	0.002
Wife origin: USA	0.036	0.050	0.008***	0.003
Wife origin: Others	0.052	0.063	.001	0.003
Number of observations	70478	47542	118020	-

Notes: This table presents summary statistics for marriages among marriage cohorts from 2010q4 to 2017q4. For the "Post-Pre" columns, regression estimates for the coefficients of the Post dummy are presented. These estimates include quarterly linear trends (separately for pre and post periods) in the models. Robust standard errors are used.

Table 3: The impacts of the amendment on cumulative divorce probabilities

Up to:	12 months (1)	24 months (2)	36 months (3)	48 months (4)
Panel a. Linear regression with controls				
Post	-0.025***	-0.023***	-0.021***	-0.019***
	(0.003)	(0.004)	(0.005)	(0.005)
Mean of Untreated	0.067	0.110	0.136	0.156
Panel b. Linear regression without controls				
Post	-0.028***	-0.029***	-0.027***	-0.025***
	(0.004)	(0.005)	(0.006)	(0.007)
Mean of Untreated	0.067	0.110	0.136	0.156
Panel c. Quadratic regression with controls				
Post	-0.022***	-0.020***	-0.022***	-0.021**
	(0.005)	(0.007)	(0.007)	(0.008)
Mean of Untreated	0.067	0.110	0.136	0.156
Panel d. Quadratic regression wihtout controls				
Post	-0.027***	-0.028***	-0.031***	-0.031***
	(0.006)	(0.008)	(0.009)	(0.010)
Mean of Untreated	0.067	0.110	0.136	0.156
Panel e. Weighted least squares with controls				
Post	-0.024***	-0.022***	-0.021***	-0.019***
	(0.004)	(0.005)	(0.005)	(0.006)
Mean of Untreated	0.067	0.110	0.136	0.156
Panel f. Weighted least squares without controls				
Post	-0.028***	-0.028***	-0.028***	-0.027***
	(0.004)	(0.006)	(0.006)	(0.007)
Mean of Untreated	0.067	0.110	0.136	0.156
N	14149	14149	14149	14149

Notes: This table presents regression estimates of the impacts on the amendment on cumulative divorce probabilities up to 12, 24, 36, and 48 months. Controls include husband education, wife education, husband age group, wife age group, and wife's country of origin. The weighted linear regressions use triangular kernel. Robust standard errors are used. The samples consist of cross-border couples, comprising Korean men and foreign women.

Table 4: The impacts of the amendment on cumulative divorce probabilities

Up to:	12 months (1)	24 months (2)	36 months (3)	48 months (4)
	Panel a. Linear regression			
Post	-0.000	-0.003	-0.002	-0.003
	(0.005)	(0.008)	(0.009)	(0.010)
Baseline Korean speaking bad × Post	-0.049***	-0.043***	-0.042***	-0.036**
	(0.008)	(0.011)	(0.013)	(0.015)
	Panel b. Linear regression with controls			
Post	-0.000	-0.004	-0.003	-0.004
	(0.005)	(0.007)	(0.008)	(0.009)
Baseline Korean speaking bad × Post	-0.045***	-0.036***	-0.033***	-0.027**
	(0.007)	(0.011)	(0.012)	(0.014)
Mean of Untreated	0.067	0.110	0.136	0.156
N	14149	14149	14149	14149

Notes: This table presents regression estimates of the impacts on the amendment on cumulative divorce probabilities up to 12, 24, 36, and 48 months. All specifications include wife's country of origin dummies as controls. Controls include husband education, wife education, husband age group, and wife age group. Robust standard errors are used.

Table 5: The impacts of the amendment on cumulative divorce probabilities by different reasons

Up to:	12 months (1)	24 months (2)
Reason: infidelity		
Post	-0.0036***	-0.0020
	(0.0010)	(0.0015)
Mean of Untreated	0.0064	0.0102
N	10170	10170
Reason: abuse		
Post	-0.0007*	-0.0014**
	(0.0004)	(0.0006)
Mean of Untreated	0.0013	0.0023
N	10170	10170
Reason: family conflicts		
Post	-0.0020***	-0.0027***
	(0.0007)	(0.0009)
Mean of Untreated	0.0029	0.0050
N	10170	10170
Reason: financial problems		
Post	0.0002	0.0009
	(0.0006)	(0.0009)
Mean of Untreated	0.0013	0.0026
N	10170	10170
Reason: incompatibility		
Post	-0.0104***	-0.0101***
	(0.0021)	(0.0028)
Mean of Untreated	0.0198	0.0322
N	10170	10170
Reason: health issues		
Post	-0.0005*	-0.0006
	(0.0003)	(0.0004)
Mean of Untreated	0.0006	0.0009
N	10170	10170
Reason: others		
Post	-0.0125***	-0.0103***
	(0.0029)	(0.0039)
Mean of Untreated	0.0332	0.0546
N	10170	10170

Notes: This table presents regression estimates of the impacts on the amendment on cumulative divorce probabilities up to 12, and 24 months. Note that the variable for divorce reasons is available in 2010-2017 data. We use cohorts up to 2015q4 for this analysis. Linear specifications are used in this table. Controls include husband education, wife education, husband age group, wife age group, and wife's country of origin. The samples consist of cross-border couples, comprising Korean men and foreign women. Robust standard errors are used.

Table 6: Selection effects

	(1) Cumulative divorce rate	(2) Cumulative divorce rate	(3) Cumulative divorce rate
Panel A: 12 months			
Post	-0.037**	-0.033***	-0.007
	(0.013)	(0.006)	(0.010)
Baseline mean	.074	.074	.074
Demographic controls	No	Yes	Yes
Language control	No	No	Yes
Observations	16	16	16
Panel B: 24 months			
Post	-0.053**	-0.045***	-0.018
	(0.020)	(0.007)	(0.013)
Baseline mean	.123	.123	.123
Demographic controls	No	Yes	Yes
Language control	No	No	Yes
Observations	16	16	16
Panel C: 36 months			
Post	-0.055**	-0.045***	-0.015
	(0.023)	(0.008)	(0.014)
Baseline mean	.149	.149	.149
Demographic controls	No	Yes	Yes
Language control	No	No	Yes
Observations	16	16	16

Notes: This table presents regression estimates of the impacts on the amendment on cumulative divorce probabilities up to 12, 24, and 36 months with different controls. Each observation represents a wife's education (middle school or below / high school or above)–country of origin (China, Vietnam, other Southeast Asian countries, and others)–year cell. Demographic controls include education and country of origin. The language control is the share of migrants who report very poor Korean proficiency. The cumulative divorce rate compares the 2012 and 2018 cohorts, for which we can obtain estimates of language abilities during the first three years after migration from survey data. Robust standard errors are used. The samples consist of cross-border couples, comprising Korean men and foreign women.

Table 7: Fertility outcomes within four years of marriage

Dependent variable:	Number of children	
	(1)	(2)
Migrant × Post	0.051**	
	(0.023)	
Baseline Korean speaking bad × Post		0.092***
		(0.028)
Baseline mean	0.60	0.60
Controls	Yes	Yes
Observations	17,968	17,968

Notes: This table presents the effects of the amendment on fertility outcomes within the first four years of marriage. Controls include husbands and wives' education, age groups, and wives' origin country. We reweight the sample of native couples to have the same distribution of education and age as migrant couples (Card et al. [2008]). The samples include Korean natives and migrants. Robust standard errors are used.

Table 8: The impacts of the amendment on policy-targeted variables

	(1) Household income	(2) Other housing arrangements (= 1)	(3) Korean speaking very bad (= 1)	(4) Korean speaking bad or worse (= 1)	(5) Have TOPIK level 1 or above (= 1)
Panel A					
Non-Choseonjok × Post	21.386	0.009	-0.024***	-0.041***	0.073**
	(148.779)	(0.021)	(0.005)	(0.015)	(0.035)
Baseline mean	3021.25	0.03	0.03	0.23	0.22
Controls	Yes	Yes	Yes	Yes	Yes
Origin FE	Yes	Yes	Yes	Yes	Yes
Marriage year FE	Yes	Yes	Yes	Yes	Yes
Survey year FE	Yes	Yes	Yes	Yes	Yes
Observations	15,221	15,221	15,221	15,221	13,116
Panel B					
Baseline Korean speaking bad × Post	154.058	0.018	-0.048***	-0.067*	0.163***
	(266.753)	(0.038)	(0.015)	(0.037)	(0.062)
Baseline mean	3021.25	0.03	0.03	0.23	0.22
Controls	Yes	Yes	Yes	Yes	Yes
Origin FE	Yes	Yes	Yes	Yes	Yes
Marriage year FE	Yes	Yes	Yes	Yes	Yes
Survey year FE	Yes	Yes	Yes	Yes	Yes
Observations	15,045	15,045	15,045	15,045	12,951

Notes: This table presents double-difference model estimates of the impacts on the amendment on policy-targeted variables. Household income is monthly income in 1000KRW. Other housing arrangements refer to housing types that are not single-family houses, multi-family houses, multiplex houses, or apartments. Controls include country of origins, husbands' and wives' education and ages, migrants' year spent in Korea and its squared. Robust standard errors are used. Significance levels: * 10%, ** 5%, *** 1%. Sources: NSMF 2012, 2015, 2018, 2021. The TOPIK variable exists only from 2015.

Table 9: The impacts of the amendment on marital surplus

	(1) Spouse quarrel (= 1)	(2) Spouse quarrel from language barrier (= 1)	(3) Cultural difference (migrant) (= 1)	(4) Cultural difference (spouse) (= 1)	(5) Satisfaction about spouse (migrant) (= 1)	(6) Satisfaction about spouse (spouse) (= 1)
Panel A						
Non-Choseonjok × Post	-0.023	-0.059***	-0.144***	-0.118***	0.077**	0.042
	(0.045)	(0.013)	(0.044)	(0.044)	(0.031)	(0.028)
Baseline mean	0.63	0.18	0.73	0.71	0.78	0.81
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Origin FE	Yes	Yes	Yes	Yes	Yes	Yes
Marriage year FE	Yes	Yes	Yes	Yes	Yes	Yes
Survey year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	15,221	15,221	15,221	15,221	15,221	15,221
Panel B						
Baseline Korean speaking bad × Post	-0.013	-0.085***	-0.226***	-0.193**	0.145***	0.113**
	(0.081)	(0.028)	(0.079)	(0.079)	(0.055)	(0.051)
Baseline mean	0.63	0.18	0.73	0.71	0.78	0.81
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Origin FE	Yes	Yes	Yes	Yes	Yes	Yes
Marriage year FE	Yes	Yes	Yes	Yes	Yes	Yes
Survey year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	15,045	15,045	15,045	15,045	15,045	15,045

Notes: This table presents double-difference model estimates of the impacts on the amendment on outcomes related to marital surplus. Satisfaction variables are coded as 1 if respondents indicated "Very satisfied" or "More or less satisfied". Controls include country of origins, husbands' and wives' education and ages, migrants' year spent in Korea and its squared. Robust standard errors are used. Significance levels: * 10%, ** 5%, *** 1%. Sources: NSMF 2012, 2015, 2018, 2021.

Table 10: The impacts of the amendment on labor market outcomes

	(1) Employed (= 1)	(2) Monthly income	(3) Weekly hours of working	(4) High-skilled jobs (= 1)	(5) Medium-skilled jobs (= 1)	(6) Low-skilled jobs (= 1)
Panel A						
Non-Choseonjok × Post	-0.039	-101.412	2.154	0.011	-0.047	0.036
	(0.044)	(111.604)	(1.910)	(0.036)	(0.063)	(0.058)
Baseline mean	0.46	583.38	39.95	0.08	0.39	0.53
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Origin FE	Yes	Yes	Yes	Yes	Yes	Yes
Marriage year FE	Yes	Yes	Yes	Yes	Yes	Yes
Survey year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	15,221	15,221	6,624	6,618	6,618	6,618
Panel B						
Baseline Korean speaking bad × Post	-0.066	-94.882	1.330	-0.006	-0.054	0.060
	(0.080)	(200.424)	(3.409)	(0.063)	(0.111)	(0.101)
Baseline mean	0.46	583.38	39.95	0.08	0.39	0.53
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Origin FE	Yes	Yes	Yes	Yes	Yes	Yes
Marriage year FE	Yes	Yes	Yes	Yes	Yes	Yes
Survey year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	15,045	15,045	6,561	6,555	6,555	6,555

Notes: This table presents double-difference model estimates of the impacts on the amendment on labor market outcomes. High-skilled jobs include managers, professionals and related workers. Medium-skilled jobs include clerical workers, service workers, sales workers, skilled workers in agriculture, forestry, and fisheries, and technicians and associate professionals. Low-skilled jobs include plant and machine operators and assemblers and elementary occupations. Results in columns (2)-(6) are conditional on being employed. Controls include country of origins, husbands' and wives' education and ages, migrants' year spent in Korea and its squared. Robust standard errors are used. Significance levels: * 10%, ** 5%, *** 1%. Sources: NSMF 2012, 2015, 2018, 2021.

Table 11: The impacts of the amendment on discrimination

	(1) Experienced discrimination (= 1)	(2) Experienced discrimination on street (= 1)	(3) Experienced discrimination in a shop, restaurant, or bank (= 1)	(4) Experienced discrimination in public institutes (= 1)	(5) Experienced discrimination at work (= 1)
Panel A					
Non-Choseonjok × Post	0.021 (0.036)	-0.021 (0.026)	0.017 (0.026)	0.008 (0.021)	0.009 (0.033)
Baseline mean	0.32	0.18	0.19	0.10	0.16
Controls	Yes	Yes	Yes	Yes	Yes
Origin FE	Yes	Yes	Yes	Yes	Yes
Marriage year FE	Yes	Yes	Yes	Yes	Yes
Survey year FE	Yes	Yes	Yes	Yes	Yes
Observations	15,221	15,221	15,221	15,221	15,221
Panel B					
Baseline Korean speaking bad × Post	0.062 (0.065)	-0.020 (0.048)	0.047 (0.048)	0.002 (0.039)	0.015 (0.058)
Baseline mean	0.32	0.18	0.19	0.10	0.16
Controls	Yes	Yes	Yes	Yes	Yes
Origin FE	Yes	Yes	Yes	Yes	Yes
Marriage year FE	Yes	Yes	Yes	Yes	Yes
Survey year FE	Yes	Yes	Yes	Yes	Yes
Observations	15,045	15,045	15,045	15,045	15,045

Notes: This table presents double-difference model estimates of the impacts on the amendment on discrimination. Controls include country of origins, husbands' and wives' education and ages, migrants' year spent in Korea and its squared. Robust standard errors are used. Significance levels: * 10%, ** 5%, *** 1%. Sources: NSMF 2012, 2015, 2018, 2021.

Table 12: Composition of marriage migrants and their spouses (longer-term)

	Pre cohorts	2014-2017 post cohorts	2018-2019 post cohorts
	Mean	Mean	Mean
Husb edu: less than high school	0.123	0.079	0.066
Husb edu: high school	0.525	0.466	0.463
Husb edu: college	0.351	0.454	0.471
Wife edu: less than high school	0.247	0.159	0.138
Wife edu: high school	0.475	0.458	0.478
Wife edu: college	0.278	0.383	0.385
Number of observations	89437	47542	26579

Notes: This table presents education distribution for marriage migrants and their husbands among marriage cohorts from 2010q4 to 2019q4.

Appendix

A. Impacts of the amendment on other targeted variables

Here we discuss some additional requirements introduced by the 2014 amendment to the marriage visa requirements.

- The visa amendment required that sponsors must have income above a threshold that varied by family size. In 2014, the yearly income requirement for a two-person household was 14,794,804 KRW, meaning the monthly income needed to meet the requirement was 1,232,900 KRW (approximately 1.2 million KRW). In Figure A3, we examine the income category with monthly earnings lower than 1 million KRW to determine whether the amendment affected the lowest income group.[36] The first panel shows the share of households with income less than 1 million KRW by year among households with incoming migrants. There is a drop between 2012 and 2015, but the decreasing trend was already evident before the amendment (between 2009 and 2012). This pattern is likely explained by inflation. To understand the impact of general inflation trends, we plot the share of households with income less than 1 million KRW among Korean natives in the second panel. Although the share is lower among Korean natives, the decreasing trend closely mirrors that observed among households with migrants. In the third panel, we compare households with migrants and native households after normalizing the 2009 values to 1. We find that the decreases in subsequent years are statistically indistinguishable between the two groups. Although there are only four time points, Table A11 shows that the impacts of the amendment on income disappear once the trend variable is included in the model.[37] Overall, our findings suggest that the effects of the household income requirements were negligible, or at most, minimal. This may be because, given that asset value can partially be counted as income and the inviting spouse can use the income and assets of immediate family members in the same household to meet the requirement, the share of households actually subject to this requirement is small.

- Residential space requirement: "A sponsor must have a residential space where a marriage migrant can reside upon entering Korea. The space must be owned or rented under the name of the sponsor or a member of his/her immediate family living with him/her represented on the resident registration. Residency requirement is subject to evaluation based on the size, the number of rooms, and the number of people living in that space other than the sponsor."

  The residential space requirement was established to ensure that married couples have adequate living space. Specifically, gosiwon (originally designed for students preparing for exams, these accommodations are characterized by low rent, shared bathrooms and kitchens, and

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[36]Note that the household income variable is categorical.

[37]Figure A4 plots nominal and real income thresholds imposed for marriage visa by year. There was a relatively large jump in the real threshold between 2015 and 2016, but we do not find evidence that it affected the number of cross-border marriages, suggesting that the effect of the income requirement is limited.

very limited private space), commercial stores, and poly tunnel-style non standard living arrangements were specifically targeted for exclusion.

Figure A5 shows the housing arrangements of marriage migrant families at the time of migration. It indicates that the share of "Others," which may include non-standard living arrangements, is quite small. This share also does not change significantly after the policy, indicating the limited impact of this requirement. The regression results in Table A11 confirm this pattern.

- 3-year lapse after naturalization through marriage: "If a sponsor is a naturalized Korean through marriage with a Korean national, and it has not been 3 years since the sponsor acquired Korean nationality, sponsorship of a foreign spouse is not permitted."

To evaluate the impact of this requirement, we plotted the share of husbands and wives who are naturalized Korean citizens in Figure A6. If the requirement had reduced marriages involving naturalized Korean citizens, we would expect to see a decline in the share of such marriages. However, we do not observe a notable decrease. The regression results in Table A11 show consistent patterns.

B. Gelbach decomposition

We use the decomposition method from Gelbach [2016] to quantify the contribution of changes in each factor (education, age, and country of origin). Specifically, for education, we include both the husband's and wife's education as well as their relative education. Similarly, for age, we include the husband's and wife's age at marriage, along with their relative ages.

$$comp_c^j = \beta^j Post_c + \gamma^j q_c + \delta^j (q_c \times Post_c) + \varepsilon_c$$

where $comp_c^j$ indicates each factor j (education, age, and country of origin). The other variables are same is in Equation 1. Our main regression can be rewritten in long form, with all the variables for compositional changes included.

$$y_c^m = \beta^+ Post_c + \gamma^+ q_c + \delta^+ (q_c \times Post_c) + \sum_j \kappa^j comp_c^j + \varepsilon_c$$

Gelbach [2016] shows the following relationship:

$$\hat{\beta} = \hat{\beta}^+ + \sum_j \hat{\kappa}^j \hat{\beta}^j$$

The contribution by each factor j can be calculated as $\frac{\hat{\kappa}^j \hat{\beta}^j}{\hat{\beta}}$.

C. Additional Tables and Figures

Figure A1: Language requirement: the impacts on language abilities

Korean speaking very bad over time

Korean speaking skills over time
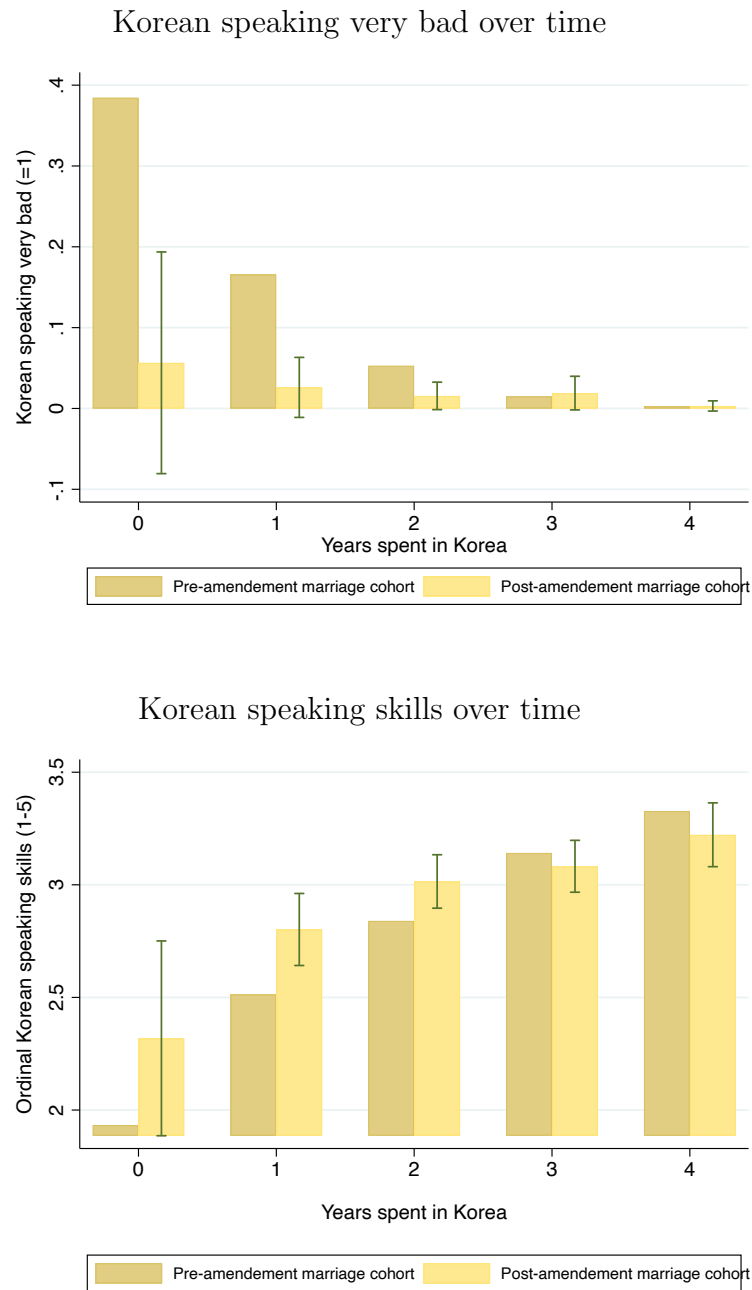
Notes: These figures show the evolution of Korean speaking abilities over time, comparing those subject to the amendment with those not subject to it. The first figure displays the share of migrants with very poor Korean speaking skills, while the second figure presents a continuous measure of speaking abilities.

Figure A2: Gelbach decomposition analysis

12 months

Compositional effects from education, age, and wife's country of origin: 11.03%

24 months

Compositional effects from education, age, and wife's country of origin: 17.18%

36 months

Compositional effects from education, age, and wife's country of origin: 20.50%

48 months

Compositional effects from education, age, and wife's country of origin: 22.90%
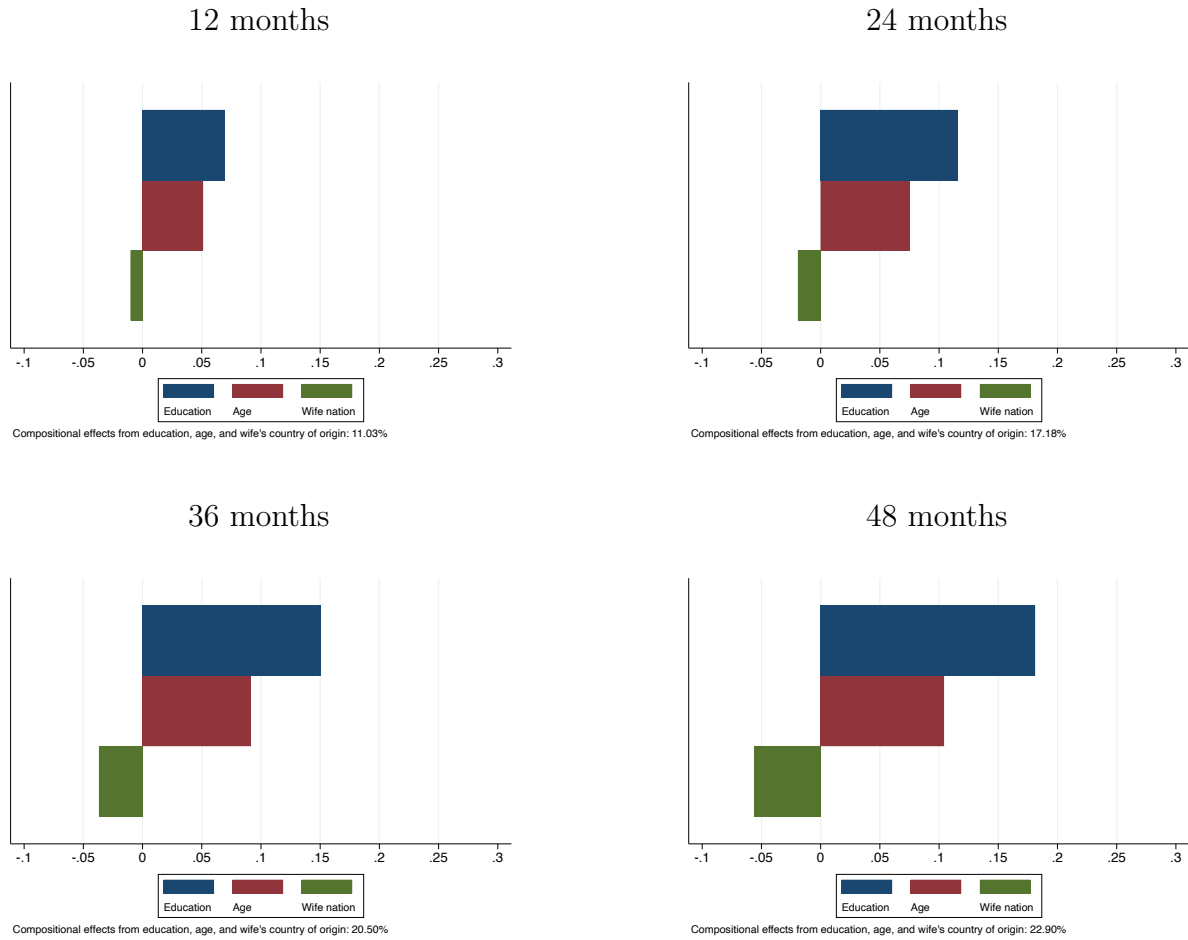
Notes: This figure shows the Gelbach decomposition results [Gelbach, 2016]. Education includes both the husband and wife's education, as well as their relative education. Age includes the husband and wife's ages, and their relative ages. Wife's nationality refers to the wife's country of origin, included as dummy variables.

Figure A3: Household income requirement: The impacts on household income

HH income < 1M KRW at the time of migration
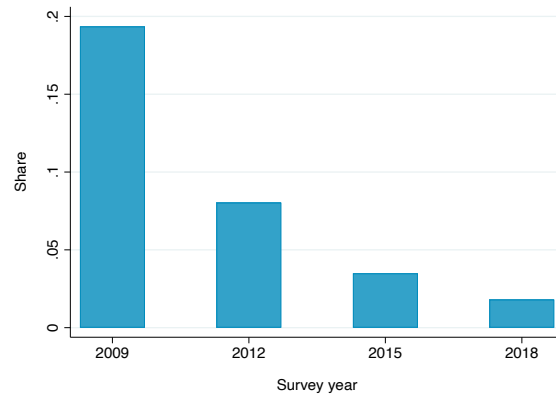
HH income < 1M KRW(Korean natives)
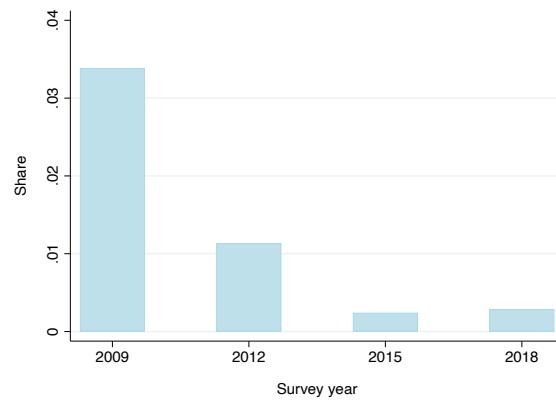
Normalized comparison (HH income < 1M)
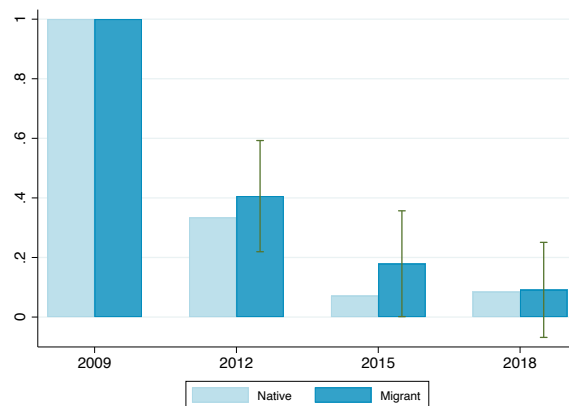
Notes: These figures show the share of households with a household income of less than 1 million (nominal) KRW. The first figure represents households with a new marriage migrant, while the second figure represents Korean native households. The third figure compares households with new marriage migrants to Korean native households. The values for 2009 are normalized to 1 for both types of households.

Figure A4: Income threshold

Nominal income threshold and consumer price index
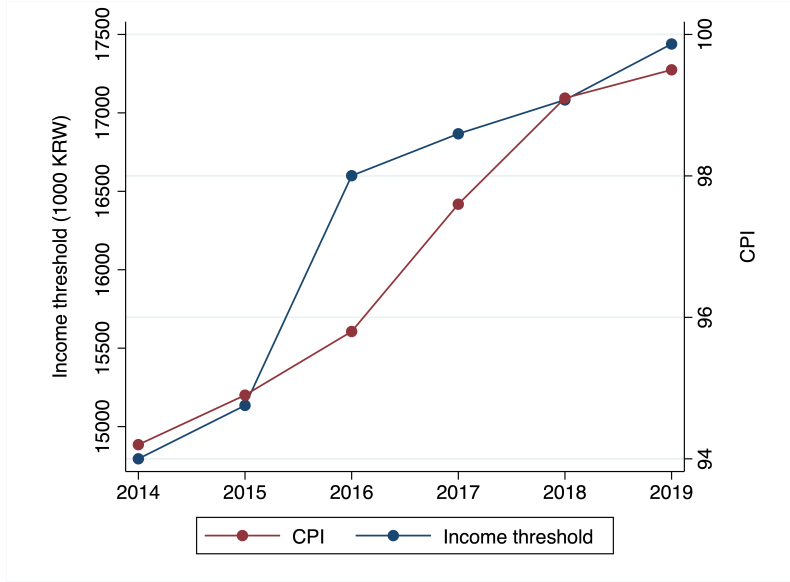
Real income threshold (normalized relative to KRW in 2000)
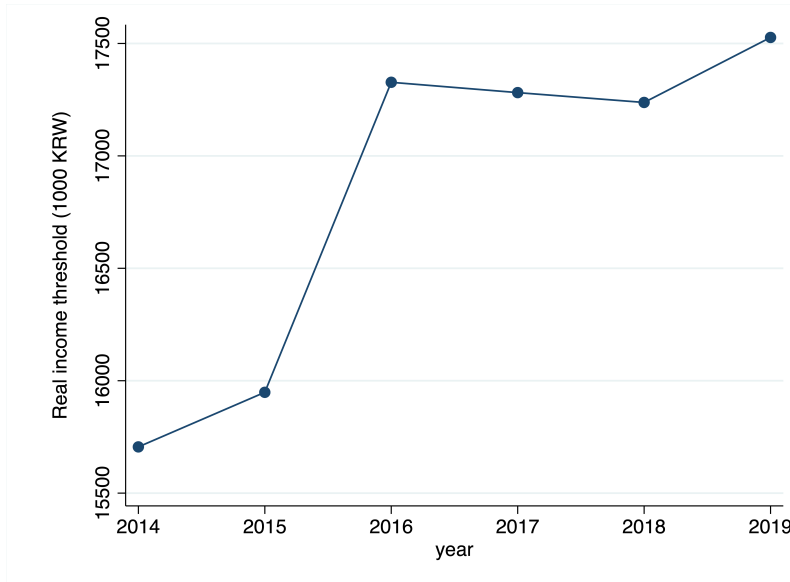
Notes: The top figure plots the nominal income threshold for inviting marriage migrants, imposed each year since the 2014 amendment, alongside the consumer price index (CPI). The bottom figure plots the real income threshold, adjusted for the CPI.

Figure A5: Residential space requirement: The impacts on housing

House arrangements at the time of migration
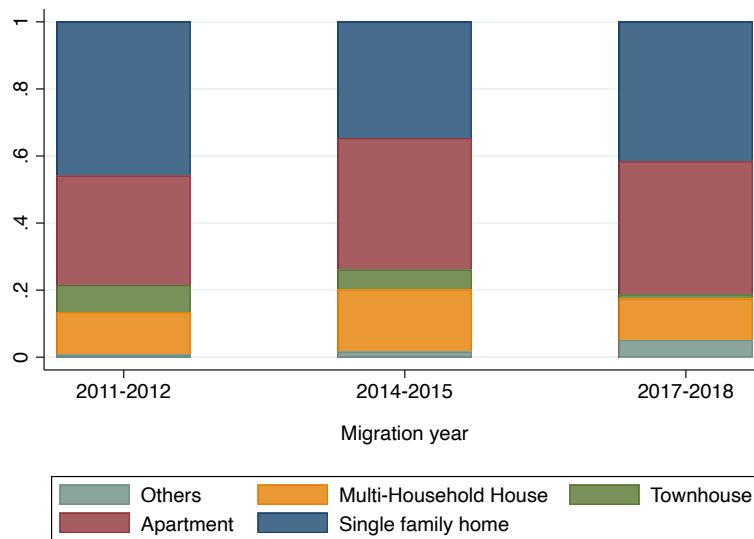
Notes: This figure shows the distribution of different household arrangements among households with a new marriage migrant.

Figure A6: 3-year lapse after naturalization through marriage

% Husband: naturalized KR citizen among all marriages
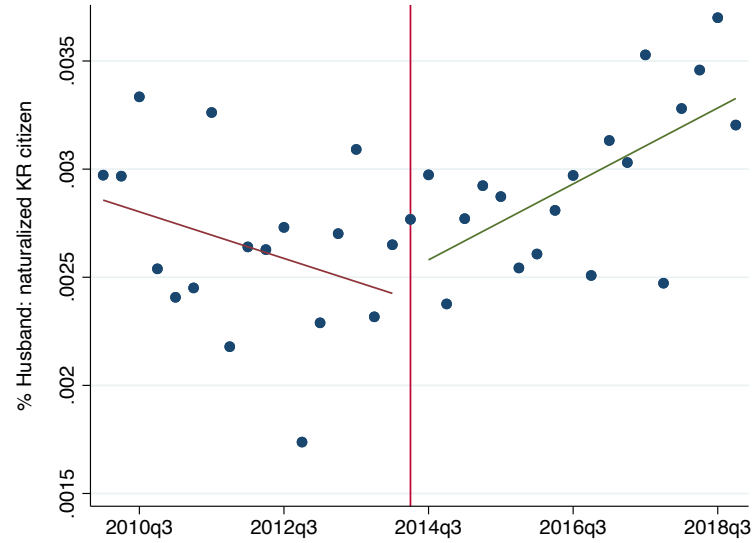
% Wife: naturalized KR citizen among all marriages
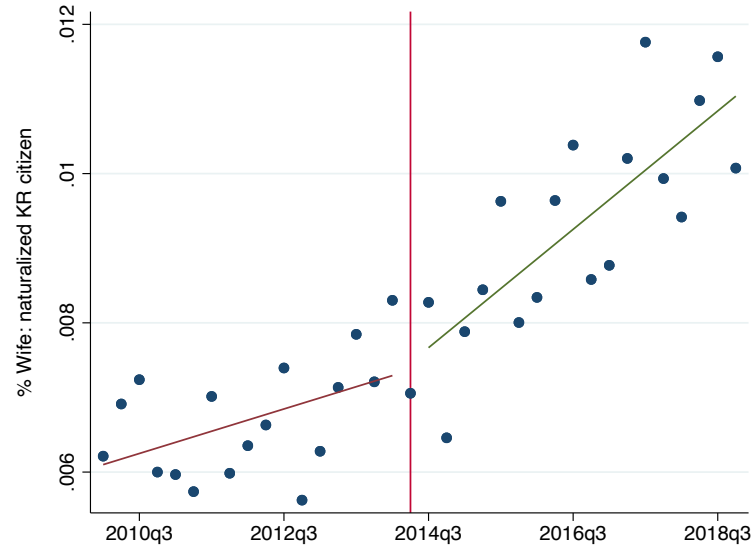
Notes: These figures plot the share of husbands and wives who are naturalized Korean citizens among all marriages.

Figure A7: Cumulative divorce probabilities (long term)

12 months
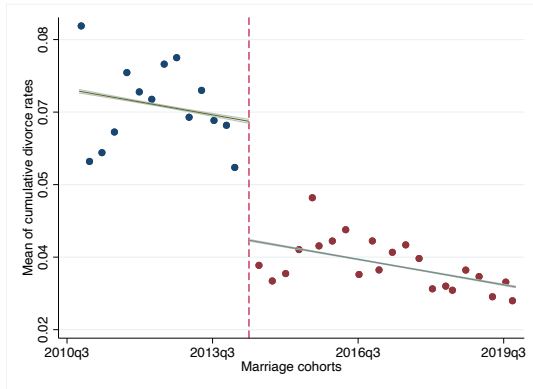
24 months
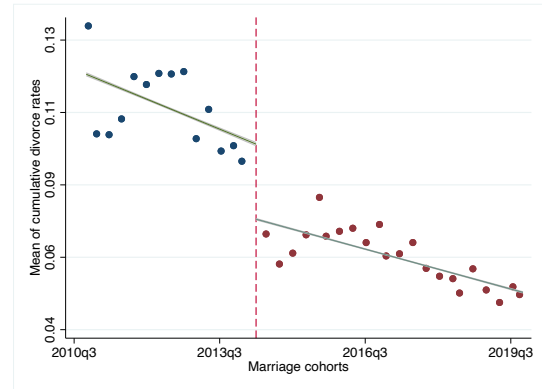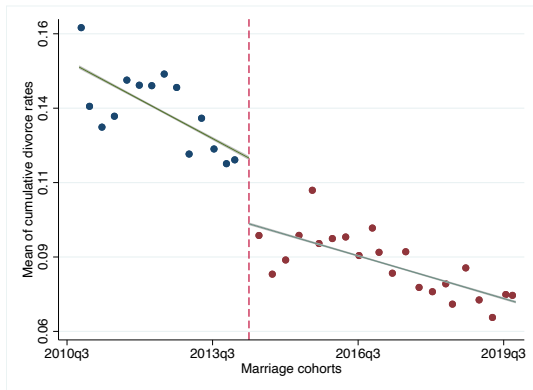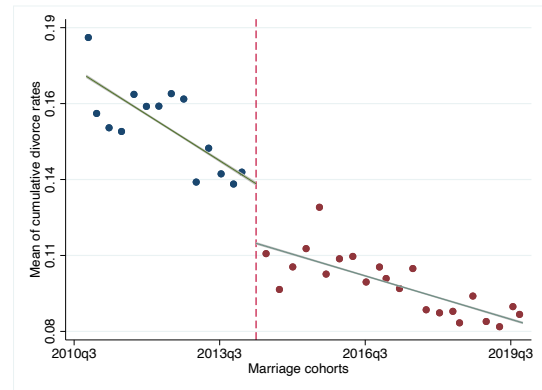
36 months

48 months

Notes: These figures plot cumulative divorce probabilities of cross-border couples within 12, 24, 36, and 48 months, respectively. The red lines indicate the amendment to the screening standards for issuing marriage visas. The samples consist of cross-border couples, comprising Korean men and foreign women.

Table A1: Matching outcomes

Dependent variable:	Husband more educated (= 1)		Husband edu = Wife edu (= 1)		Wife more educated (= 1)	
	(1)	(2)	(3)	(4)	(5)	(6)
Post	-0.025	-0.021	0.020	0.010	0.005	0.010
	(0.039)	(0.036)	(0.043)	(0.042)	(0.020)	(0.018)
Baseline mean	0.31	0.31	0.55	0.55	0.14	0.14
Controls	No	Yes	No	Yes	No	Yes
Observations	14,149	14,149	14,149	14,149	14,149	14,149

Notes: This table presents the effects of the amendment on matching outcomes using marriage registry data. Controls include husband education, husband and wife's age groups, and wife origin country. The estimates are weighted by the number of marriages in each cell. Robust standard errors are used.

Table A2: Pre-policy charateristics

	Foreign men - Korean women (FMKW) couples	Korean men - foreign women (KMFW) couples	KMFW-FMKW	
	Mean	Mean	Coefficient	SE
A. Income requirement related characteristics				
Household income less than 1 million KRW	0.095	0.076	-.019	0.032
B. Language requirement related characteristics				
Migrant speaks Korean poorly/very poorly	0.426	0.498	.072	0.059
Korean spouse speaks partner's language well/very well	0.694	0.082	-0.611***	0.053
Korean spouse speaks partner's language poorly/very poorly	0.192	0.786	0.594***	0.046
Both spouses speak each other's language very poorly	0.031	0.088	0.057***	0.018
Both spouses speak each other's language poorly/very poorly	0.084	0.413	0.328***	0.028
C. Housing requirement related characteristics				
Non-standard housing arrangements	0.011	0.010	-.001	0.007
Number of observations	107	1945	2052	-

Notes: This table reports summary statistics for pre-policy characteristics of newly arrived migrant families. The "KMFW–FMKW" columns present regression estimates of the coefficient on the FMKW dummy. Robust standard errors are used. The sample consists of KMFW and FMKW couples in which the migrant spouse arrived in 2010 or later, drawn from the 2012 NSMF survey.

Table A3: The impacts of the amendment on cumulative divorce probabilities (natives)

Up to:	12 months (1)	24 months (2)	36 months (3)	48 months (4)
Panel a. Linear regression with controls				
Post	-0.001	-0.000	0.001	0.001
	(0.000)	(0.001)	(0.001)	(0.002)
Mean of Untreated	0.012	0.026	0.041	0.054
Panel b. Linear regression without controls				
Post	-0.000	0.000	0.001	0.001
	(0.002)	(0.005)	(0.007)	(0.009)
Mean of Untreated	0.012	0.026	0.041	0.054
Panel c. Quadratic regression with controls				
Post	0.001	0.004**	0.005**	0.004
	(0.001)	(0.001)	(0.002)	(0.003)
Mean of Untreated	0.012	0.026	0.041	0.054
Panel d. Quadratic regression wihtout controls				
Post	0.001	0.004	0.005	0.003
	(0.004)	(0.008)	(0.011)	(0.015)
Mean of Untreated	0.012	0.026	0.041	0.054
Panel e. Weighted least squares with controls				
Post	0.000	0.001	0.002	0.002
	(0.000)	(0.001)	(0.002)	(0.002)
Mean of Untreated	0.012	0.026	0.041	0.054
Panel f. Weighted least squares without controls				
Post	0.000	0.001	0.002	0.002
	(0.002)	(0.005)	(0.008)	(0.010)
Mean of Untreated	0.012	0.026	0.041	0.054
N	4,484	4,484	4,484	4,484

Notes: This table presents regression estimates of the impacts on the amendment on cumulative divorce probabilities up to 12, 24, 36, and 48 months. Controls include husband education, wife education, husband age group, and wife age group. The weighted linear regressions use triangular kernel. The samples consist of Korean native couples, comprising Korean men and Korean women. Robust standard errors are used.

Table A4: The impacts of the amendment on cumulative divorce probabilities (Korean women - foreign men couples)

Up to:	12 months (1)	24 months (2)	36 months (3)	48 months (4)
	Panel a. Linear regression with controls			
Post	-0.000	-0.001	-0.004	0.000
	(0.003)	(0.005)	(0.005)	(0.006)
Mean of Untreated	0.020	0.044	0.062	0.076
	Panel b. Linear regression without controls			
Post	-0.001	-0.002	-0.005	-0.001
	(0.003)	(0.005)	(0.006)	(0.007)
Mean of Untreated	0.020	0.044	0.062	0.076
	Panel c. Quadratic regression with controls			
Post	0.002	-0.004	-0.008	-0.008
	(0.006)	(0.008)	(0.009)	(0.010)
Mean of Untreated	0.020	0.044	0.062	0.076
	Panel d. Quadratic regression without controls			
Post	0.003	-0.002	-0.005	-0.005
	(0.006)	(0.009)	(0.011)	(0.012)
Mean of Untreated	0.020	0.044	0.062	0.076
	Panel e. Weighted least squares with controls			
Post	0.001	-0.003	-0.006	-0.003
	(0.004)	(0.005)	(0.006)	(0.007)
Mean of Untreated	0.020	0.044	0.062	0.076
	Panel f. Weighted least squares without controls			
Post	0.001	-0.002	-0.005	-0.003
	(0.004)	(0.006)	(0.007)	(0.008)
Mean of Untreated	0.020	0.044	0.062	0.076
N	7,769	7,769	7,769	7,769

Notes: This table presents regression estimates of the impacts on the amendment on cumulative divorce probabilities up to 12, 24, 36, and 48 months. Controls include husband education, wife education, husband age group, wife age group, and husband country of origin. The weighted linear regressions use triangular kernel. The samples consist of Korean women and foreign men couples. Robust standard errors are used.

Table A5: The impacts of the amendment on cumulative divorce probabilities

Up to:	12 months (1)	24 months (2)	36 months (3)	48 months (4)
	Panel a. Linear regression			
KMFW × Post	-0.026***	-0.030***	-0.031***	-0.035***
	(0.002)	(0.004)	(0.004)	(0.005)
	Panel b. Linear regression with controls			
KMFW × Post	-0.025***	-0.028***	-0.029***	-0.032***
	(0.002)	(0.003)	(0.004)	(0.004)
Mean of Untreated	0.056	0.095	0.119	0.138
N	21918	21918	21918	21918

Notes: This table presents regression estimates of the impacts on the amendment on cumulative divorce probabilities up to 12, 24, 36, and 48 months. The samples consist of Korean men–foreign women couples and foreign men–Korean women couples. "KMFW" denotes Korean men–foreign women couples. All specifications include quarter fixed effects and the KMFW dummy. Control variables include husband's education, wife's education, husband's age group, wife's age group, and spouse's nationality. Robust standard errors are used.

Table A6: Predictors of divorce probabilities for cross-border couples

Dependent variable:	Cumulative divorce probability			
	(1)	(2)	(3)	(4)
Up to:	12 months	24 months	36 months	48 months
Husband edu: high school	0.015**	0.007	0.011	0.012
	(0.006)	(0.008)	(0.009)	(0.010)
Husband edu: college	0.033***	0.022	0.029*	0.031*
	(0.012)	(0.015)	(0.016)	(0.018)
Wife edu: high school	-0.056***	-0.087***	-0.105***	-0.116***
	(0.006)	(0.008)	(0.008)	(0.009)
Wife edu: college	-0.109***	-0.160***	-0.196***	-0.220***
	(0.012)	(0.015)	(0.016)	(0.017)
Husband age: 30-39	0.033***	0.044***	0.045***	0.042***
	(0.004)	(0.006)	(0.007)	(0.007)
Husband age: 40-49	0.058***	0.081***	0.087***	0.085***
	(0.006)	(0.008)	(0.009)	(0.010)
Husband age: 50-59	0.080***	0.104***	0.118***	0.120***
	(0.009)	(0.012)	(0.013)	(0.014)
Husband age: 60+	0.102***	0.134***	0.150***	0.161***
	(0.013)	(0.017)	(0.018)	(0.020)
Wife age: 30-39	-0.034***	-0.042***	-0.044***	-0.043***
	(0.004)	(0.005)	(0.005)	(0.006)
Wife age: 40-49	-0.067***	-0.086***	-0.085***	-0.084***
	(0.006)	(0.008)	(0.009)	(0.010)
Wife age: 50-59	-0.078***	-0.098***	-0.094***	-0.083***
	(0.010)	(0.013)	(0.014)	(0.016)
Wife age: 60+	-0.104***	-0.150***	-0.156***	-0.167***
	(0.018)	(0.022)	(0.026)	(0.029)
Wife origin: Philippines	-0.019***	-0.033***	-0.037***	-0.042***
	(0.004)	(0.006)	(0.007)	(0.008)
Wife origin: Vietnam	-0.003	-0.006	-0.013**	-0.026***
	(0.004)	(0.005)	(0.005)	(0.006)
Wife origin: Cambodia	-0.015***	-0.032***	-0.043***	-0.053***
	(0.003)	(0.004)	(0.005)	(0.005)
Wife origin: China	-0.027***	-0.067***	-0.087***	-0.104***
	(0.006)	(0.007)	(0.008)	(0.008)
Wife origin: Japan	-0.025***	-0.037***	-0.049***	-0.052***
	(0.005)	(0.007)	(0.008)	(0.009)
Wife origin: USA	0.021**	0.020*	0.010	0.009
	(0.010)	(0.012)	(0.013)	(0.014)
Husband more education than wife	-0.044***	-0.051***	-0.074***	-0.088***
	(0.013)	(0.017)	(0.018)	(0.019)
Husband same education as wife	-0.024***	-0.025***	-0.038***	-0.046***
	(0.007)	(0.009)	(0.010)	(0.010)
Husband older than wife	-0.024***	-0.023**	-0.014	-0.004
	(0.008)	(0.010)	(0.011)	(0.012)
Husband and wife same age group	-0.020***	-0.026***	-0.022***	-0.017**
	(0.005)	(0.007)	(0.008)	(0.008)
Cohort fixed effects	No	No	No	No
Baseline mean	.067	.111	.138	.159
R-squared	0.118	0.175	0.191	0.197
Observations	8,930	8,930	8,930	8,930

Notes: Pre-policy data are used for this table. The unit of observation is quarterly marriage cohort-wife's country of origin-husband's education-wife's education cell. The number of marriages for each cell is used as weights. The reference group for education and age is "less than high school," and "Under 30 years old", respectively. The reference group for the wife's origin is "other countries". Robust standard errors are used.

Table A7: Predictors of divorce probabilities for cross-border couples

Dependent variable:	Cumulative divorce probability			
	(1)	(2)	(3)	(4)
Up to:	12 months	24 months	36 months	48 months
Husband edu: high school	0.014**	0.007	0.011	0.013
	(0.006)	(0.008)	(0.009)	(0.010)
Husband edu: college	0.033***	0.022	0.030*	0.033*
	(0.012)	(0.015)	(0.016)	(0.018)
Wife edu: high school	-0.056***	-0.087***	-0.105***	-0.116***
	(0.006)	(0.008)	(0.008)	(0.009)
Wife edu: college	-0.109***	-0.160***	-0.195***	-0.219***
	(0.012)	(0.015)	(0.016)	(0.017)
Husband age: 30-39	0.033***	0.044***	0.045***	0.042***
	(0.004)	(0.006)	(0.007)	(0.007)
Husband age: 40-49	0.058***	0.081***	0.087***	0.086***
	(0.006)	(0.008)	(0.009)	(0.010)
Husband age: 50-59	0.080***	0.105***	0.118***	0.121***
	(0.009)	(0.012)	(0.013)	(0.014)
Husband age: 60+	0.102***	0.134***	0.151***	0.162***
	(0.013)	(0.017)	(0.018)	(0.020)
Wife age: 30-39	-0.034***	-0.042***	-0.044***	-0.043***
	(0.004)	(0.005)	(0.005)	(0.006)
Wife age: 40-49	-0.067***	-0.086***	-0.085***	-0.084***
	(0.006)	(0.008)	(0.009)	(0.010)
Wife age: 50-59	-0.078***	-0.098***	-0.093***	-0.083***
	(0.010)	(0.013)	(0.014)	(0.016)
Wife age: 60+	-0.104***	-0.150***	-0.156***	-0.167***
	(0.018)	(0.022)	(0.026)	(0.029)
Wife origin: Philippines	-0.019***	-0.032***	-0.037***	-0.041***
	(0.004)	(0.006)	(0.007)	(0.008)
Wife origin: Vietnam	-0.003	-0.006	-0.013**	-0.025***
	(0.004)	(0.005)	(0.005)	(0.006)
Wife origin: Cambodia	-0.015***	-0.032***	-0.043***	-0.053***
	(0.003)	(0.004)	(0.005)	(0.005)
Wife origin: China	-0.028***	-0.067***	-0.087***	-0.104***
	(0.006)	(0.007)	(0.008)	(0.008)
Wife origin: Japan	-0.025***	-0.037***	-0.049***	-0.052***
	(0.005)	(0.007)	(0.008)	(0.009)
Wife origin: USA	0.021**	0.020*	0.010	0.008
	(0.010)	(0.012)	(0.013)	(0.014)
Husband more education than wife	-0.044***	-0.051***	-0.074***	-0.089***
	(0.013)	(0.017)	(0.018)	(0.020)
Husband same education as wife	-0.024***	-0.025***	-0.038***	-0.046***
	(0.007)	(0.009)	(0.010)	(0.010)
Husband older than wife	-0.024***	-0.023**	-0.014	-0.004
	(0.008)	(0.010)	(0.011)	(0.013)
Husband and wife same age group	-0.020***	-0.026***	-0.022***	-0.017**
	(0.005)	(0.007)	(0.008)	(0.008)
Cohort linear trends	Yes	Yes	Yes	Yes
Baseline mean	.067	.111	.138	.159
R-squared	0.118	0.175	0.191	0.198
Observations	8,930	8,930	8,930	8,930

Notes: Pre-policy data are used for this table. The unit of observation is quarterly marriage cohort-wife's country of origin-husband's education-wife's education cell. The number of marriages for each cell is used as weights. The reference group for education and age is "less than high school," and "Under 30 years old", respectively. The reference group for the wife's origin is "other countries". Robust standard errors are used.

Table A8: Predictors of divorce probabilities for cross-border couples

Dependent variable:	Cumulative divorce probability			
	(1)	(2)	(3)	(4)
Up to:	12 months	24 months	36 months	48 months
Husband edu: high school	0.014**	0.007	0.011	0.013
	(0.006)	(0.008)	(0.009)	(0.010)
Husband edu: college	0.033***	0.022	0.030*	0.033*
	(0.012)	(0.015)	(0.016)	(0.018)
Wife edu: high school	-0.056***	-0.087***	-0.105***	-0.116***
	(0.006)	(0.007)	(0.008)	(0.009)
Wife edu: college	-0.109***	-0.160***	-0.195***	-0.219***
	(0.012)	(0.014)	(0.016)	(0.017)
Husband age: 30-39	0.033***	0.043***	0.045***	0.042***
	(0.004)	(0.006)	(0.007)	(0.007)
Husband age: 40-49	0.058***	0.081***	0.087***	0.086***
	(0.006)	(0.008)	(0.009)	(0.010)
Husband age: 50-59	0.080***	0.104***	0.118***	0.121***
	(0.009)	(0.011)	(0.012)	(0.013)
Husband age: 60+	0.102***	0.135***	0.151***	0.162***
	(0.013)	(0.016)	(0.018)	(0.020)
Wife age: 30-39	-0.034***	-0.042***	-0.044***	-0.043***
	(0.004)	(0.005)	(0.005)	(0.006)
Wife age: 40-49	-0.067***	-0.086***	-0.086***	-0.084***
	(0.006)	(0.008)	(0.009)	(0.010)
Wife age: 50-59	-0.078***	-0.099***	-0.094***	-0.083***
	(0.010)	(0.013)	(0.014)	(0.016)
Wife age: 60+	-0.104***	-0.151***	-0.156***	-0.168***
	(0.018)	(0.022)	(0.025)	(0.028)
Wife origin: Philippines	-0.020***	-0.033***	-0.038***	-0.042***
	(0.004)	(0.006)	(0.007)	(0.008)
Wife origin: Vietnam	-0.003	-0.006	-0.013***	-0.026***
	(0.004)	(0.005)	(0.005)	(0.005)
Wife origin: Cambodia	-0.015***	-0.031***	-0.042***	-0.052***
	(0.003)	(0.004)	(0.004)	(0.005)
Wife origin: China	-0.027***	-0.066***	-0.087***	-0.104***
	(0.006)	(0.007)	(0.008)	(0.008)
Wife origin: Japan	-0.024***	-0.037***	-0.049***	-0.051***
	(0.005)	(0.007)	(0.008)	(0.009)
Wife origin: USA	0.021**	0.020*	0.010	0.008
	(0.010)	(0.012)	(0.013)	(0.014)
Husband more education than wife	-0.044***	-0.052***	-0.075***	-0.089***
	(0.013)	(0.016)	(0.017)	(0.019)
Husband same education as wife	-0.024***	-0.025***	-0.038***	-0.046***
	(0.007)	(0.008)	(0.009)	(0.010)
Husband older than wife	-0.024***	-0.023**	-0.015	-0.004
	(0.008)	(0.010)	(0.011)	(0.012)
Husband and wife same age group	-0.021***	-0.026***	-0.022***	-0.017**
	(0.005)	(0.007)	(0.008)	(0.008)
Cohort fixed effects	Yes	Yes	Yes	Yes
Baseline mean	.067	.111	.138	.159
R-squared	0.126	0.183	0.197	0.203
Observations	8,930	8,930	8,930	8,930

Notes: Pre-policy data are used for this table. The unit of observation is quarterly marriage cohort-wife's country of origin-husband's education-wife's education cell. The number of marriages for each cell is used as weights. The reference group for education and age is "less than high school," and "Under 30 years old", respectively. The reference group for the wife's origin is "other countries". Robust standard errors are used.

Table A9: The impacts of the amendment on marital surplus

Spouse quarrel from	(1) Incompatibility	(2) Cultural difference	(3) Language barrier	(4) Issues related to children	(5) Financial issues	(6) Drinking issues	(7) Family conflict	(8) Infidelity	(9) Abuse	(10) Severe degree of doubt and restriction of going out (hiding the passport, etc.)
Panel A										
Non-Choseonjok × Post	-0.027	-0.027	-0.059***	-0.017	0.002	-0.025	-0.000	0.000	-0.001	0.001
	(0.041)	(0.021)	(0.013)	(0.021)	(0.022)	(0.019)	(0.019)	(0.003)	(0.004)	(0.003)
Baseline mean	0.33	0.10	0.18	0.10	0.10	0.06	0.08	0.00	0.01	0.00
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Origin FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Marriage year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Survey year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	15,221	15,221	15,221	15,221	15,221	15,221	15,221	10,390	15,221	10,390
Panel B										
Baseline Korean speaking bad × Post	-0.005	-0.025	-0.085***	-0.014	-0.000	-0.047	-0.019	0.002	-0.003	0.001
	(0.073)	(0.037)	(0.028)	(0.038)	(0.040)	(0.033)	(0.036)	(0.005)	(0.007)	(0.006)
Baseline mean	0.33	0.10	0.18	0.10	0.10	0.06	0.08	0.00	0.01	0.00
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Origin FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Marriage year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Survey year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	15,045	15,045	15,045	15,045	15,045	15,045	15,045	10,309	15,045	10,309

Notes: This table presents double-difference model estimates of the impacts on the amendment on outcomes related to marital surplus. Specifically, this table shows the effects of the amendment on spouse quarrels. Controls include country of origins, husbands' and wives' education and ages, migrants' year spent in Korea and its squared. Significance levels: * 10%, ** 5%, *** 1%. Sources: NSMF 2012, 2015, 2018, 2021.

Table A10: The impacts of the amendment on cumulative divorce probabilities (long term)

Up to:	12 months (1)	24 months (2)	36 months (3)	48 months (4)
	Panel a. Linear regression			
Post	-0.031***	-0.033**	-0.038**	-0.048**
	(0.010)	(0.015)	(0.017)	(0.019)
Mean of Untreated	0.067	0.111	0.138	0.159
	Panel b. Linear regression with controls			
Post	-0.028***	-0.027**	-0.031**	-0.040***
	(0.009)	(0.012)	(0.014)	(0.015)
Mean of Untreated	0.067	0.111	0.138	0.159
N	13327	13327	13327	13327

Notes: This table presents regression estimates of the impacts on the amendment on cumulative divorce probabilities up to 12, 24, 36, and 48 months. The post period includes marriage cohorts in year 2018 and 2019. Controls include husband education, wife education, husband age group, wife age group, and wife's country of origin. The weighted linear regressions use triangular kernel. The samples consist of cross-border couples, comprising Korean men and foreign women. Robust standard errors are used.

Table A11: The impacts of the amendment on policy-targeted variables

	(1) HH income < 1M (= 1)	(2) HH income < 1M (= 1)	(3) 1M ≤ HH income < 2M (= 1)	(4) 1M ≤ HH income < 2M (= 1)	(5) Korean speaking very bad (= 1)	(6) Korean speaking very bad (= 1)	(7) Other housing arrangements (= 1)	(8) Other housing arrangements (= 1)	(9) Naturalized husband (= 1)	(10) Naturalized husband (= 1)	(11) Naturalized wife (= 1)	(12) Naturalized wife (= 1)
Post	-0.1109*** (0.0090)	0.0196 (0.0230)	-0.2185*** (0.0188)	0.0422 (0.0450)	-0.1698*** (0.0097)	-0.2001*** (0.0277)	-0.0061 (0.0115)	0.0148 (0.0164)	0.0003** (0.0001)	0.0000 (0.0003)	0.0021*** (0.0004)	-0.0006 (0.0007)
Baseline mean	0.14	0.14	0.39	0.39	0.20	0.20	0.04	0.04	0.00	0.00	0.01	0.01
Time trends	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Observations	9,520	9,520	9,520	9,520	12,641	12,641	12,641	12,641	26	26	26	26

Notes: This table presents pre-post comparisons of policy-targeted variables. Other housing arrangements refer to housing types that are not single-family houses, multi-family houses, multiplex houses, or apartments. Time trends include linear and quadratic terms. The estimates using survey data (column (1)-(8))use year trends and the estimates using marriage registry data (column (9)-(12)) use quarterly trends. The estimates in column (1)-(8) are weighted by survey weights. The estimates in column (9)-(12) are weighted by number of marriages in each cell. Migrants who spent a year or less are included as samples for the survey data. Sources: The NSMF 2009, 2012, 2015, 2018. Marriage registry 2010-2017.