Language and Family Happiness: Immigrant Integration Policy and Family Outcomes

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Abstract

Immigration integration policies requiring language and civic knowledge are increasingly adopted as key policy tools to facilitate the successful assimilation of immigrants. However, evidence on their impact on critical family outcomes—those that could significantly influence overall well-being—remains scarce and underexplored. We evaluate a unique visa policy change in South Korea that imposed language requirements for marriage migrants. Using administrative registry data covering the universe of marriages and divorces in Korea, we show that cumulative divorce rates among cross-border couples decreased by 37 percent in the first year of marriage and by 12 percent within the first four years. We investigate the mechanisms behind this finding and find evidence supporting a marital surplus gain, rather than changes in outside options such as labor market outcomes or discrimination faced in the country. Specifically, we find that couples from countries with stronger language barriers who married after the policy are less likely to experience quarrels due to language barriers or cultural differences, and report higher satisfaction with their spouse. Consistent with the increased marital gain, we also find that the probability of having a child within the first four years increased by 14 percent among these couples.

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1 Introduction

Intermarriages are often more fragile than those between individuals from homogeneous groups. For example, in Italy, interethnic marriages face a 15-percentage point higher risk of separation compared to homogamous ones [Tura, 2016]. Similarly, in South Korea, cross-border marriages are about three times more likely to end in dissolution within the first four years than marriages between natives.[1] While factors such as economic conditions and divorce laws generally influence marital stability, for intermarried couples, aspects like legal status and cultural differences play a particularly significant role in divorce decisions [Adda et al., 2025; Tura, 2016]. Existing studies highlight the crucial role of culture in marriage, as cultural resources shape how individuals interact with each other and serve as complementary inputs in household production within marriage [Bisin and Tura, 2019; Kalmijn, 1994; Furtado et al., 2013]. Among the factors that constitute cultural traits, language is particularly significant. Culture encompasses customary values and beliefs within ethnic, religious, and social groups, and language plays a central role in transmitting and expressing these elements, thereby shaping cultural identity [Alesina and Giuliano, 2015; Ginsburgh and Weber, 2020; Giuliano and Nunn, 2021]. Through language, people communicate not only ideas but also cultural norms, traditions, and collective experiences. Could language play a critical role in influencing marital stability of intermarried couples? Could an immigration policy that imposes language requirements potentially reduce divorce rates among them?

In this paper we examine how an immigration policy that imposes language requirements for foreign spouses influences marriage stability, using a unique visa policy change in South Korea that introduced language requirements for marriage migrants. This policy can be viewed as an example of "civic integration policies" that include mandatory language and civic education requirements. Given that immigrant integration is a major policy goal in many countries, civic integration policies have been particularly popular in Europe since the mid-1990s. These requirements, which vary in strictness, are imposed at different stages of the integration process, such as at admission, naturalization, obtaining permanent residency, or accessing social benefits [Neureiter, 2019; Emeriau et al., Forthcoming; Fouka, 2023]. The policy examined here imposes language requirements at the time of admission, a strategy often referred to as "integration-from-abroad" or "pre-entry integration requirements", which is a relatively new policy tool.[2] Broadly, this can be viewed as an immigration restriction that

[1] 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]; Tura [2016].

[2] As of 2011, five European countries—namely, the Netherlands, France, Germany, Denmark, and the UK—practice integration-from-abroad 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

limits or controls the movement of people into a country. Given their recent introduction, the effectiveness of pre-entry integration requirements on integration outcomes has been rarely studied. Furthermore, existing studies on general civic integration policies primarily focus on labor market outcomes, overlooking potential impacts on important social outcomes such as marriage and divorce.[3]

Specifically, we use the 2014 amendment to the screening standards for issuing the marriage migrant (F-6) visa. In Korea, cross-border marriages between Korean nationals and immigrants account for 8-10% of all marriages. 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. In 2014, the Korean government tightened visa requirements for marriage migrants to support their stable settlement in the country after arrival. The most salient 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) or the certificate demonstrating the completion of a basic level Korean language course in an education center designated by the Ministry of Justice. After the policy change, the share of migrants with very poor Korean language skills in the first year of their arrival precipitously decreased by 85 percent. The share of migrants with poor or very poor Korean speaking abilities also dropped by 26 percent. Although a few other requirements were imposed by this visa amendment, these did not significantly impact the intended target variables. This setting provides us with a unique opportunity to evaluate the impacts of languages on marital surplus.

Using administrative data covering all marriages between 2010 and 2017, along with divorce data for up to four years following these marriages, and exploiting the change in visa requirements, we conduct our analysis in several steps. First, we assess the overall impact of the visa restrictions by comparing divorce outcomes before and after the policy change. Although the language requirement was implemented nationally, differences in language abilities prior to the policy change led to varying impacts across migrants from different countries. We use this variation to explore how language skills influence marital

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].

[3]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 [Lochmann et al., 2019; Pont-Grau et al., 2023; Heller and Mumma, 2023; Foged et al., 2024b,a; Foged and Van der Werf, 2023; Pesola and Sarvimäki, Forthcoming; Emeriau et al., Forthcoming]. However, the impacts on family outcomes have not been studied.

dissolution probabilities. Next, since the policy was applied at the admission stage, it is likely that the composition of migrants changed as a result. We conduct a careful analysis of these compositional effects to determine the extent to which they drive the observed outcomes. Finally, we examine the mechanisms behind changes in divorce rates by utilizing nationally representative survey data on marriage migrants, focusing specifically on labor market outcomes, discrimination-related outcomes, and marital surplus-related outcomes.

We begin by analyzing the overall policy impact and find a significant drop in divorce probabilities. Specifically, we observe that cumulative divorce probabilities decrease by 1.9 percentage points within the first four years of marriage. The most significant change occurs during the first 12 months, with cumulative divorce rates reduced by 2.5 percentage points, corresponding to a 37 percent drop in cumulative divorce rates. 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. Moreover, given that the educational attainment and ages of marriage migrants changed after the policy, and education and age are correlated with divorce probabilities, we conduct a careful analysis of the (non-language) compositional effects on divorce. These compositional effects explain at most 30% of the impact we observe. Furthermore, different matching patterns after the policy also play a limited role.

To further understand the impacts of language, we conduct analyses using a double-difference model, leveraging country-level variations in language abilities before the amendment. The results show that when the pre-amendment probability of poor or very poor Korean skills increases by one percentage point, cumulative divorce rates decrease by 0.045 percentage points in the first 12 months. The impact size is the largest in the first year of marriage, again suggesting that the primary impact occurs during the early stage of marriage. This specification allows us to test pre-trends in divorce probabilities, and we do not find any significant effects before the amendment.

Next, we analyze the impacts on divorce by different reasons and types. In terms of divorce reasons, we observe the largest reductions in the incompatibility and "other" categories, which are the two most common reasons for divorce. There are two other notable categories worth mentioning. We find that divorces due to abuse and family conflicts decrease significantly after the amendment, dropping by 61% and 54%, respectively. Regarding divorce types, the impact on contested divorces, which are more costly in terms of both financial costs and time, is more than three times larger than that on uncontested divorces. Contested divorces decreased by 44% in the first 12 months, and by 48 months, they decreased by 15%.

We test the mechanisms behind these impacts using nationally representative survey data on marriage migrants. Empirically, we find a reduction in divorce rates; however,

theoretically, there are several ways in which better language skills could affect marital stability in different directions. One possibility is that improved language skills expand migrants' outside opportunities, which could, in turn, increase the likelihood of marital dissolution. On the other hand, better language skills could enhance communication with the spouse, improving the quality of the marital relationship and increasing marital surplus. If we consider that, for many couples, language or communication barriers may not feel as significant until they are married, living together, and making important joint decisions, language skills could act as a 'new information shock' that influences match quality for couples, potentially affecting divorce decisions. The likelihood of such a negative shock may decrease with better language skills.

We find evidence supporting the marital surplus (match quality) explanation. Specifically, we examine labor market outcomes, discrimination experiences, and marital surplus-related variables, including the probability of quarrels between spouses for various reasons and marital satisfaction, using the double-difference strategy described above. We do not find any significant impacts on labor market outcomes, including employment, monthly income, and weekly hours worked, suggesting that the outside option mechanism is not the main channel. We also find no significant impacts on discrimination experiences, although migrants made more official complaints when they were discriminated against. On the other hand, we find that the probability of spouse quarrels due to language barriers decreased significantly more, and marital satisfaction increased more after the policy for the group with a higher share of migrants with poor Korean skills. Among the ten reasons for spouse quarrels including financial issues and issues related to children, we observe a significant reduction only in quarrels due to language barriers. Furthermore, we find that both migrants and their spouses are less likely to experience cultural differences after the amendment. Additionally, our finding that the divorce decreases by the largest amount in the first 12 months also aligns with the unexpected match quality shock explanation. In Korea, most marriage migrants experience relatively short dating periods and do not cohabit before marriage, making the information shock more likely and acute. We also analyze fertility outcomes using birth registry data and find that couples are more likely to have a child within four years of marriage after the amendment, suggesting an improvement in the quality of marriages.

We make several important contributions to the literature. First, we contribute to the understanding of the impact of language abilities on marital stability. While there are studies showing a correlation between language abilities and divorce, causal evidence on the impact of language abilities on divorce remains scarce, despite the common occurrence of language barriers between spouses. As an exception, Bleakley and Chin [2010] examines this question by using age of arrival as an instrument for language skills, showing that divorce

probability increases with better language abilities. However, since they use cross-sectional data that lacks information on previous marital partners (natives vs. migrants) or the timing of marriage and divorce, it is difficult to understand the dynamics of marriage or the underlying mechanisms.[4] We advance the literature by shedding light on the mechanisms and dynamic effects using a novel natural experiment. Additionally, while most studies examine the impacts of language use variations in childhood (e.g., education reform), we provide evidence using language variations in adulthood. Given that immigrants typically arrive as adults, understanding the impacts of language among migrants using variations in adulthood is crucial.[5]

Second, we build on the growing literature that examines the factors contributing to marital dissolution among intermarriages, which are increasingly common due to factors such as greater social acceptance, globalization, and evolving cultural 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]. We contribute to the literature by specifically focusing on an important dimension of culture, language, and its impacts on divorce. Our study shows that policies imposing language requirements can positively influence marital outcomes by reducing barriers in the production of marital surplus among cross-border couples.

Third, we contribute to the literature on the impacts of civic integration policies that impose mandatory language and civic education requirements by providing evidence on how such policies influence migrants' family outcomes. These policies have been widely implemented in European countries, where most countries have adopted some form of language and assimilation requirements since the mid-1990s and 2000s. Studies evaluating the efficacy of immigrant civic integration measures, such as language training, show that language training generally has a positive impact on immigrants' labor market outcomes, human capital investment, political participation, and intergenerational human capital outcomes.[7] We

[4]Tura [2016] shows that interethnic couples have a higher propensity to divorce than homogamous couples, whereas migrant-migrant couples exhibit a lower propensity to divorce than homogamous couples. This suggests that marriages involving migrants may behave very differently depending on the characteristics of the spouses.

[5]In the U.S., migrants who arrive before the age of 18 account for only 22 percent of all migrants in 2019 [Camarota and Zeigler, 2021].

[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 Lochmann et al. [2019]; Pont-Grau et al. [2023]; Heller and Mumma [2023]; Foged et al. [2024b,a]; Foged and Van der Werf [2023] for human capital investment, Heller and Mumma [2023] for political participation, and Pesola and Sarvimäki [Forthcoming]; Foged and Van der Werf [2023]; Dang [2025] for intergenerational human capital outcomes. However, Emeriau et al. [Forthcoming] find that the integration contract in France, which includes language training and compulsory civics courses, did not lead to increased economic

extend this literature by showing that these policies also have a positive impact on family outcomes, specifically by reducing divorce rates and increasing fertility rates.

2 Background

2.1 Marriage migration to Korea

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 suggested by the imbalances in the sex ratio of the marriage market, most cross-border marriages (more than 70%) involve Korean men marrying foreign women, rather than the other way around.[8] The largest bride-sending countries are China and Vietnam, followed by the Philippines, Japan, and Cambodia.[9] 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.

2.2 An amendment to the screening standards for issuing the F-6 marriage migrant visa

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). The government announced the changes for visa requirements for foreign brides on February 6th, 2014. The new law went into effect on April 1st, 2014.

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

or social integration.

[8] 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.

[9] Chinese migrants 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, while the remaining 47% were of non-Korean ethnicity. Choseonjok typically have stronger Korean language skills compared to other migrants from China. [Ahn and Lubotsky, 2024] shows that differences in language abilities between these two groups contribute to differences in intrahousehold decision making power of migrants.

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.[10]

Another important requirement was that the visa 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).

There were three additional changes to the visa requirements. However, these changes were relatively minor and did not have a significant impact on the targeted variables.[11] 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.

This amendment to the visa requirements significantly affected the number of cross-border marriages, with the number of marriages decreasing by 35% within the first month (Figure 1). While the number of marriages somewhat rebounded after the amendment, it has remained below pre-amendment levels. This decrease in the number of marriages is not observed among Korean native couples, indicating that the decline is primarily driven by the visa policy change rather than broader national trends related to marriage.

2.2.1 Did the amendment influence language abilities of marriage migrants?

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 2. The first figure 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 0. The second figure shows that the share of migrants who have ever taken TOPIK increased by a substantial margin after the amendment. The third figure shows

[10] If a couple can prove that they can communicate in other languages other than Korean, a F-6 visa can be issued.

[11] These requirements are investigated in Appendix Section A.

that the share of test-takers with at least Level 1 somewhat increased after the amendment. However, since Level 1 is the lowest possible level (though it is still possible to fail), it was already a high share before the amendment. Combining the two figures, the unconditional share of migrants holding TOPIK Level 1 or above increased substantially after the amendment. Furthermore, given that the amendment required basic language skills, the impacts were most significant in the first years in Korea (Figure A5). The cohorts who married after the amendment had significantly better Korean speaking skills for up to two years. However, in the subsequent years, the difference between the cohorts before and after the amendment became small and statistically insignificant.

The regression results in Table 2 confirm the graphical evidence presented in Figure 2. The share of migrants with poor or very poor 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 substantially after the amendment, rising by 49 percent.

2.2.2 Did the amendment affect the household income of marriage migrant families?

To assess the impacts of the amendment on household income, another important requirement, we use a household monthly income variable in the survey data. The yearly income requirement in 2014 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 A2, we examine the income category with monthly earnings lower than 1 million KRW to determine whether the amendment affected the lowest income group.[12] 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 A1 shows that the impacts of the amendment

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

on income disappear once the trend variable is included in the model.[13] 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.

2.3 Divorce law in Korea

Korean divorce law outlines two ways to obtain a divorce: divorce by agreement (uncontested divorce) and judicial divorce (contested divorce) [Park, 2010]. A divorce by agreement allows the marriage to end without the need for a court judgment, as long as both spouses consent to the divorce and its terms.[14] On the other hand, a judicial divorce occurs when the parties do not agree on the divorce itself or the terms of the divorce. In this case, a party can file for divorce only if at least one of the grounds specified in the Korean Civil Code is met.[15] Judicial divorce is typically more costly due to the length and complexity of the legal process involved.

Divorce for cross-border couples in Korea can be a complex process due to the involvement of different legal systems. For couples who reside in Korea, they can divorce based on Korean law. However, in the case of a divorce by agreement, if one party's country of origin does not allow divorce based on mutual agreement, they must take actions to divorce in that country. Additionally, if one spouse is not present in the country, divorce by agreement is not possible, as both parties must attend court. Therefore, when at least one spouse is a foreigner and there is no major disagreement on the terms of the divorce, divorce arbitration—one of the options under judicial divorce—is often recommended. When there is a major disagreement, litigation through the courts may be necessary to resolve the issues and finalize the divorce.

3 Conceptual framework

This section presents conceptual framework, focusing on the impacts of language on marital stability. Theoretically, it is ambiguous how language skills influence marital outcomes.

[13] Figure A3 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.

[14] The couple still needs to obtain confirmation from the Family Court. However, the Family Court merely verifies the existence of mutual consent and is not part of the judicial process [Park, 2010].

[15] These grounds for judicial divorce are as follows [Park, 2010]: 1. If the other spouse has committed an act of unchastity; 2. If one spouse has been maliciously deserted by the other spouse; 3. If one spouse has been extremely maltreated by the other spouse or his or her lineal ascendants; 4. If a spouse's lineal ascendant has been extremely maltreated by the other spouse; 5. If the death or life of the other spouse has been unknown for three years; and 6. If there exist any other serious cause for making it difficult to continue the marriage.

Although there is limited research on the topic, two competing mechanisms stand out: on the one hand, better language skills may improve outside options, potentially leading to higher divorce rates, while on the other hand, it may improve communication within the marriage, improving household production and, as a result, contributing to greater marital stability.

On one hand, improved language skills may enhance a migrant's outside options through better opportunities in labor markets and marriage markets, which could lead to a higher likelihood of divorce. As migrants become better at the local language, they are better able to access employment, social networks, and other resources. This increased access to external opportunities may reduce the relative "gains from marriage" compared to being single. While it is possible for the migrant to leverage these improved outside options to increase their share of the marriage's benefits, marital instability can arise if the spouse is unwilling to adjust how the gains from marriage are split, or if those gains are insufficient to justify the continuation of the relationship. In such cases, the migrant may choose to leave the marriage, as external opportunities become more appealing.[16]

On the other hand, better language skills could enhance communication with the spouse, improving the quality of the marital relationship and potentially increasing marital surplus. Communication is central to marital satisfaction, and as migrants improve their language skills, they may experience fewer misunderstandings and better conflict resolution. This enhanced communication can lead to greater marital surplus, fostering a more stable relationship. In the framework of Becker et al. [1977]'s seminal work, language has a complementary role in household production, and the spousal gap in the primary language is likely to reduce the gains from marriage among cross-border couples. This is consistent with the heterogamy hypothesis in sociology, which posits that heterogamous marriages are more prone to instability than homogamous marriages.[17]

Furthermore, language skills and communication quality could act as a "quality of match" shock that is revealed after marriage. Even if a couple has been dating for a long time, language or communication barriers might not feel significant until they are married, living together, and making important joint decisions (e.g., about children or public goods).[18] For migrant couples, these language differences can become a source of tension and frustration

[16]In the US context, Bleakley and Chin [2010] show that using the age of arrival as an instrument for language skills, English proficiency increases the probability of divorce.

[17]For instance, differences in education, age, religion, race, and ethnicity are associated with a higher likelihood of marriage dissolution [e.g. Becker et al., 1977; Tzeng, 1992; Lehrer and Chiswick, 1993; Bratter and King, 2008; Zhang and Van Hook, 2009; Tura, 2016].

[18]Becker et al. [1977] notes that "Even after prolonged dating, newly married persons face tremendous uncertainty about their own or their mate's needs, their capacity to get along with each other, their fecundity and other aspects of having and raising children, and so on almost indefinitely."

in the long-term, close-knit nature of marriage, crucially impacting household production. During the dating phase, language barriers might be less noticeable or easier to navigate through patience and limited interactions. However, once married, the need for clear and constant communication becomes more critical, and the language barrier may emerge as a negative shock to the quality of the match—an issue that was not as apparent before.

That said, couples who have been dating for a long time tend to have a more accurate idea of the level of communication barriers they face. They may have already encountered these challenges during their relationship and developed strategies for managing them, which reduces the likelihood of experiencing a "quality of match" shock after marriage. For couples with shorter or less intensive dating periods, however, the language barrier may come as more of a surprise once they are living together full-time. Improved language abilities can reduce the likelihood of such a negative "quality of match" shock, ultimately leading to better communication and, in turn, greater marital stability.

4 Data

4.1 Marriage and divorce registry data

We utilize individual-level administrative data on marriages and divorces, which covers the universe of these events in South Korea. 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.[19] 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. As a result, we need to 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") allowing us to link the marriage and divorce data.[20] We use the number of marriages in each cell as weights throughout our analysis.

The divorce data also includes the reasons for divorce (infidelity, abuse, family conflicts, financial problems, incompatibility, health issues, others), divorce types (uncontested vs. contested), and the number of children under 20 years old. Data on the reasons for divorce are only available up to 2017. Thus, our analysis of this outcome is restricted to marriage

[19]Specific questions regarding nationality and country of origin were added in 2010.

[20]China and Vietnam are the two largest bride-sending countries, followed by Philippines, Japan, and Cambodia (Figure A1).

cohorts from 2010 to 2015 and we track their divorces over a period of up to two years.

4.2 Survey data on marriage migrants

To understand the mechanisms behind the 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.[21] The subsequent surveys were smaller, with approximately 15,000 to 17,000 marriage migrants in each wave between 2012 and 2021. These surveys include an extensive set of questions on marriage migrant characteristics such as language abilities, family background, economic activities, experiences of discrimination, and marital life.

4.3 Birth registry data

Additionally, we use birth registry data covering all births in Korea from 2010 to 2021 to analyze fertility outcomes. The data includes information on parents' time of marriage 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.

4.4 Sample selection

We focus on samples that the amendment primarily targeted, namely, marriages between a Korean-born man and foreign-born woman who are likely to face language barriers. These couples typically come from less developed countries and are often those who were arranged through marriage brokerage companies. We focus on 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. 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.[22]

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

[22] As shown in the bottom panel in Figure A1, 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.

4.5 Summary statistics

Figure 3 depicts cumulative divorce probabilities for cross-border and native couples before the amendment.[23] 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.

Table 1 presents divorce summary statistics for cross-border and Korean native couples. A large fraction of husbands in cross-border couples fall within the 40-49 age group, followed by the 30-39 age group, while wives are primarily in the under-30 age group, comprising more than 60%. This reflects a significant age gap among cross-border couples. In terms of education, both husbands and wives in cross-border marriages are less likely to be college-educated compared to their native counterparts; this reflects differences in education distributions between cross-border and native couples. For Korean native couples, only 15% of divorces are contested divorce, which is more costly than uncontested divorce. In contrast, contested divorces are much more common among cross-border couples, at 64%. For both cross-border and Korean native couples, the most common reasons for divorce are incompatibility and "other" factors. The average number of children among divorcing couples is higher among Korean native couples, likely due to the older age of women involved in divorces.

5 Empirical model

We use two models to estimate the impact of the amendment to the screening standards on cumulative divorce probabilities. First, we first estimate a simple difference equation, given by

$$y_c^m = \beta Post_c + \gamma q_c + \delta(q_c \times Post_c) + X_c'\phi + \varepsilon_c \tag{1}$$

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, wife's country of origin, and marriage cohorts (by quarter of each year). The dependent variable, y_c^m, is the cumulative divorce probability within group c 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_c refers to the marriage cohort quarter centered around the amendment. $Post_c$ is an indicator variable that takes the value one for marriage cohorts after

[23] 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].

the amendment, and zero otherwise ($Post_c = 1(q_c \geq 2014q2)$). Note that we exclude the second quarter of 2014 from our analysis because it was a transition period.[24] 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 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.

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 covariates. It captures the overall impact of the policy change which could operate through various mechanisms such as changes in selection, matching, marital surplus, and labor market outcomes.

We also estimate a double-difference model using country-level variations in the pre-amendment level of language skills. This model controls for a country-specific fixed effect and identifies the impact of the amendments on divorce based on the differential change in divorce probabilities across countries.

$$y_{oc}^{m} = \beta Post_c + \alpha KoreanSkills_{Pre,o} \times Post_c + \eta_o + \gamma q_c + \delta q_c \times Post_c + X_c'\phi + \varepsilon_{oc} \qquad (2)$$

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 (in 2009 and 2012). The country of origin fixed effects are captured by η_o. The rest of the variables, weighting, and robust standard errors are specified the same way as in Equation 1.

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.

[24]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. Furthermore, 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.

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 quarter fixed effects, rather than using the *Post* dummy.

6 Results: the impacts on divorce probabilities

In this section we present the results on the impacts of the amendment on divorce probabilities. We also present the impacts on divorce for different reasons and types. In the last subsection, we examine the role of selection and matching.

6.1 Overall divorces

We find that cumulative divorce rates decrease significantly following the amendment. Figure 4 presents the average cumulative divorce rates for cross-border couples consisting of foreign women and Korean men, by marriage cohorts, over 12, 24, 36, and 48 months, respectively. Each panel shows a clear and sharp drop in cumulative divorce rates following the change in the visa policy.

These sharp drops in cumulative divorce rates after the amendment are further confirmed by the regression results in Table 3. In our main specification, shown in Panel b, cumulative divorce rates over 12 months 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 also aligns with the unexpected match quality shock explanation. This is also consistent with Becker et al. [1977]'s observation that marriage decisions entail substantial uncertainty and that most divorces occur early in marriage.[25] In Korea, most marriage migrants experience relatively short dating periods and do not cohabit before marriage, making the information shock more likely and acute.

Adding control variables modestly reduces the magnitude of the coefficients, but the overall patterns remain very consistent, suggesting that selection based on education, age groups, and country of origin is unlikely to be the main channel explaining these effects. We discuss the selection issue further in a later section. Furthermore, using different functional forms does not meaningfully affect our results.

Figure 5 further shows the dynamics of the estimated changes in cumulative divorce rates

[25] 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].

over the 48-month period. As hinted by the regression results in Table 3, it shows that most of the decrease in divorce rates occurs during the first 15 months, and after that, the impact on cumulative divorce rates remains relatively flat. Panel B in Figure 5 shows 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.

These decreases in cumulative divorce rates are not driven by national trends in divorce rates. For comparison, we present the average cumulative divorce rates by marriage cohort and regression results for Korean native couples in Figure A7 and Table A2, respectively. Unlike cross-border couples, we do not observe any drop in divorce rates after the change in marriage visa requirements. Furthermore, there are no noticeable trends for the marriage cohorts studied in this paper. Not surprisingly, the regression results also confirm that the amendment had no effect on Korean native couples, with most coefficients being very small and statistically insignificant.

The results from the double-difference specification using pre-amendment Korean language abilities are presented in Table 4.[26] The coefficient for the *Post* dummy is small and statistically insignificant, indicating that, in the absence of migrants with bad or very bad speaking skills, the amendment does not influence divorce rates. On the other hand, 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, suggesting 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 7 provides visual evidence showing how cumulative divorce rates for durations of 12, 24, 36, and 48 months evolved across different marriage cohorts, with the first quarter of 2014 normalized to zero. This figure shows that the pre-amendment cumulative divorce rates trended in parallel across different levels of Korean proficiency at the country level. However, after the amendment, cumulative divorce rates diverged significantly based on

[26]Figure 6 shows how language skills are affected by the pre-amendment Korean language abilities.

baseline Korean language abilities. Countries with a higher share of migrants with limited Korean proficiency were more significantly affected by the amendment compared to countries with a lower share of them. These results remain robust when using continuous measures of language ability.

6.2 Divorces for different reasons

In this subsection, we analyze the impacts of the amendment on divorce by different reasons. For the divorce registry from 2010 to 2017 (within the available 2010 to 2021 data), specific reasons for divorce are provided. Using this information, we can examine whether the amendment influenced divorces resulting from different reasons within the first 24 months. In Equation 1, the dependent variables are now the cumulative divorce rates for seven different reasons: infidelity, abuse, family conflicts, financial problems, incompatibility, health issues, and others.

Table 5 shows the regression estimates by different divorce reason categories.[27] 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. For percent effects converted by scaling the outcomes by the average pre-amendment levels, the largest impacts come from the abuse and family conflicts categories, corresponding to a 61% and 54% drop, respectively, by 24 months of marriage duration. Although these estimates reflect the overall impact of the amendment, capturing various channels, the results based on different divorce reasons suggest that marital surplus among cross-border couples may have increased after the amendment. This is because conflicts between spouses (incompatibility) and family conflicts decreased, and furthermore, abuse—the most socially costly reason for divorce—also decreased substantially.[28]

6.3 Divorces for different types

As explained in the background, there are two types of divorce in Korea based on legal procedures. Uncontested divorce is based on each party's agreement and relatively quick to proceed. On the other hand, a contested divorce is more costly in terms of both financial costs and time. Moreover, a contested divorce typically requires more serious grounds, such as abuse or neglect, rather than reasons like incompatibility.[29]

[27] Figure 8 and Figure A9 visually show the dynamic effects for different divorce reason categories.

[28] Abuse and domestic violence have significant economic and health consequences. The estimated social cost of domestic abuse in Korea, including medical costs and productivity losses, is 196 million USD [Korean Women's Development Institute, 2009]. In the United States, the estimated annual costs of domestic violence exceed 5.8 billion USD [Centers for Disease Control, 2003].

[29] In the data, incompatibility accounts for more than half of the reasons for uncontested divorce. Financial problems and health issues are also more common in uncontested divorces. On the other hand, infidelity,

The estimated impacts of the amendment on the cumulative divorce rates by divorce types are presented in Table 6.[30] Uncontested divorce decreased by 0.63, 0.66, 0.42, and 0.39 percentage points during the 12, 24, 36, and 48 months of marriage, respectively. The estimated impacts on contested divorce are more than three times larger than those on uncontested divorce. Contested divorce decreased by 44% in the first 12 months, and by 48 months, it decreased by 15%.[31]

6.4 Selection and Matching

In this section, we investigate the impacts of the amendment on the composition of migrants and matching patterns, as well as how these factors contribute to changes in divorce rates. The amendment to the marriage visa requirement was imposed at the admission stage for migrants, potentially affecting the educational and age composition of marriage migrants entering Korea. As a result, the reduction in divorce rates observed in the previous section could have been influenced by this composition change. Furthermore, the amendment may have altered not only the composition of marriage migrants but also the composition of their spouses, potentially affecting matching patterns as well.

Table 7 shows how the composition of marriage migrants changed following the amendment, using a model that allows for separate linear trends before and after the amendment. Specifically, we investigate observable characteristics available in the dataset including education and age of husbands and wives and wives' country of origin. For both husbands and wives, the average education level increased after the amendment. For instance, the share of marriage migrants and their husbands with more than a high school education increased by 4.4 and 2.3 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. Regarding age, the composition of men and women changed differently. Men marrying foreign brides became younger, with a decrease in the proportion of those over 40 years old. For women, the probability of being under 30 years old decreased by 1.7 percentage points, while the probability of being between 30 and 39 years old increased by 2.2 percentage points. 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 and age composition may have also affected the relative education and ages within households, which are known to influence household dynamics [Browning

abuse, family conflicts, and 'others' are more likely to be reasons for contested divorce.

[30] Figure 5 and Figure A11 visually show the dynamic effects for different divorce type categories.

[31] We find qualitatively similar results using the double-difference model for different reasons and types of divorces. The results are provided in Table A7, Table A8, Figure A10, and Figure A12.

et al., 2014]. Table 8 reports the impacts of the amendment on spousal matching outcomes, specifically along the education and age dimensions. 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 husband characteristics and the wife's country of origin. It shows that the probability of the husband being more educated than the wife and the probability of the husband being older than the wife decreased after the amendment, although these estimates are all statistically insignificant.

How much do these factors contribute to the observed changes in divorce rates? To assess the degree to which observable variables contribute to these changes, 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.[32] Table A3 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 changes. 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. Not including cohort linear trends or adding cohort fixed effects yield very similar results, as shown in Table A4 and Table A5, suggesting the impacts of observable characteristics are relatively stable over time.

Using the coefficients estimated from the pre-amendment data as above (Table A3), we can calculate the predicted divorce rates post-amendment based on the new characteristics of marriage migrants and their husbands. The blue lines in Figure 11 show these predicted values. For all the marriage durations we consider here, compositional changes predict drops in cumulative divorce rates. However, these predicted drops are much smaller than the actual drops observed post-amendment. The red lines show regression-fitted values using only post-

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

amendment data. The differences between the pre-amendment fitted values (blue dots to the left of the red vertical line) and the post-amendment fitted values (red dots) are much larger than what compositional changes would predict for changes in divorce rates. Compositional changes, including matching effects, explain 14, 21, 26, and 28 percent of total changes for 12, 24, 36, and 48 months, respectively (Table A6). Observable characteristics increasingly explain the observed impacts on divorce rates as the marriage progresses. This is consistent with increasing R-squared as the marriage duration grows in Table A3. 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 (Figure A8).

We also conducted Gelbach decomposition [Gelbach, 2016], which nests Oaxaca-Blinder decomposition [Oaxaca, 1973; Blinder, 1973], to understand the compositional effects from education, age, country of origin, relative education, and relative age. We find qualitatively similar results; however, Gelbach decomposition analysis shows that compositional effects tend to explain slightly smaller shares of the observed reductions in divorce rates Figure 12. Overall, our analyses including controlling for observables, subtracting the predicted portions from the divorce variable, and Gelbach decomposition, show that compositional effects can explain at most 30 percent of the changes in the cumulative divorce rates.

7 Further Analysis on Mechanisms: How Language Can Affect Marital Stability

In this section, to better understand the underlying mechanisms, we investigate changes in outside options and marital surplus using survey data on marriage migrants. Specifically, we examine labor market outcomes, discrimination-related outcomes, and marital surplus-related outcomes. To explore the relationship between language skills and these outcomes, we use a model similar to the one employed in the earlier section. In this model, we interact the policy treatment variable with the share of marriage migrants from each sending country who had poor or very poor Korean language skills in the pre-period. Specifically, we employ the following model:

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

where i, o, c, and t represent individual, country of origin, marriage cohort (in years), and survey year, respectively. 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, and its squared term. Fixed effects for country of origin, marriage cohort, and survey year are included in

the model (η_o, μ_c, and σ_t, respectively).

Table 9 presents the results for 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. However, consistent with the visual evidence in Figure 6, 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.

7.1 Labor market outcomes

One possible channel through which language affects divorce decisions is improved outside opportunities. When migrants have better language skills, they may gain more opportunities to work, thereby increasing their financial independence. This, in turn, can affect the divorce decision, as it becomes easier to walk away from an unhappy marriage when outside labor market opportunities are better.

Table 10 reports the results on labor market outcomes including employment, monthly income, weekly hours of working, and types of jobs. The coefficients on the interaction terms are small and statistically insignificant, suggesting that the impacts of the amendment on labor market outcome are limited. These results may be surprising, given existing evidence that language training typically generates positive labor market outcomes. One possible explanation is that the language requirements, which mandate basic Korean language skills (around 800 words), are insufficient to induce changes in the labor market. Furthermore, more than half of migrants work in low-skilled jobs, and previous research shows that language proficiency plays a limited role in driving economic assimilation among low-skilled workers [Damas de Matos, 2017].

7.2 Discrimination experiences

In this subsection, we investigate migrants' discrimination experiences. Experiences of 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. In turn, these negative experiences could contribute to dissatisfaction within the marriage, potentially influencing divorce decisions.

Table 11 shows the results on discrimination experiences. The interaction coefficients are all small and statistically insignificant, suggesting that discrimination experiences did not

meaningfully change after the amendment for the group more affected by it. This implies that the amendment did not have a significant impact on migrants' perceptions of discrimination, or on their actual experiences of discrimination.

Table 12 reports the results on migrants' reactions to discrimination experiences. The probability of filing a complaint to a related organization and sharing experiences online increased more for migrants who were more affected by the amendment and these impacts are statistically marginally significant. This suggests that the policy change may have led to a greater sense of agency among these migrants, encouraging them to take action when experiencing discrimination. The increased likelihood of engaging in these activities could reflect an enhanced awareness of their rights and available resources, or a growing sense of empowerment in advocating for themselves. This might have contributed to lower divorce rates by reducing external stressors on their marriages.

7.3 Marital surplus-related outcomes

Language skills can influence marital surplus by improving communication and reducing misunderstandings between partners, potentially leading to lower divorce 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.

Table 13 reports the impacts of the amendment on marital surplus-related outcomes. It shows that the amendment had a significant effect on marital surplus. Although overall probability of spouse quarrel did not change, the likelihood of quarrels due to language barriers decreased, the experience of cultural differences diminished, and marital satisfaction increased for both spouses for migrants who were more likely to be affected by the policy change compared to those who were less likely to be affected. These impacts are all statistically significant.

The results in Table A9 present the estimated impacts on spouse quarrels due to various reasons and show that a reduced language barrier is a key channel to explain our findings. Among 10 different reasons for spouse quarrels including financial issues and issues related to children,, only quarrels stemming from language barriers decreased significantly for migrants who were more likely to be affected by the policy compared to those less likely to be affected. Specifically, 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 5 percent of the baseline mean. The same questions were also asked to the spouses (husbands) and the results are reported in Table A9. Consistent with the migrants' results, spouse quarrels from language

barriers decreased significantly, although the coefficient size is larger for spouses, indicating a stronger perceived improvement in the reduction of quarrels. Additionally, more affected spouses also reported reduced cultural differences and abuse after the amendment, indicating that the improvement in language skills had broader positive effects on marital dynamics.

8 Fertility

In this section, we investigate the impacts of the amendment on fertility outcomes among cross-border couples. 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 14 presents the impacts of the visa policy change on fertility outcomes. Column (1) and (3) are estimated using Equation 1 and column (2) and (4) using Equation 2. Consistent with the channel of higher marital surplus among cross-border couples after the amendment, we find that the likelihood of having a child increases by 8.6 percentage points (14 percent of baseline mean) after the amendment, after accounting for changes in observable characteristics. The double-difference model yields qualitatively similar results, although the interaction term is not statistically significant. Given the lower divorce rates among marriage cohorts after the amendment, this result is somewhat mechanical. However, the magnitude is much larger than the 1.9 percentage point decrease in divorce rates, suggesting that it reflects higher marital surplus among non-divorced couples. Columns (3) and (4) report the results on the likelihood of having a child who died (infant mortality), with the impact effectively being zero.

9 Conclusion

Divorce is known to be associated with lower physical and mental health, and single parenthood presents additional challenges, imposing significant social costs on individuals and society. With globalization, marriages involving at least one migrant are becoming increasingly common across many nations. For example, in the United States, approximately one in six marriages involves an immigrant, with a significant share including U.S.-born partners [Lichter et al., 2015]. Despite the prevalence of cross-border marriages and the widely documented fact that these marriages tend to have weaker marital stability, there is still a lack of understanding regarding the factors that affect divorce among these couples. In this paper, we focus on the impacts of language skills on marital dissolution among cross-border couples.

Our findings highlight the importance of language proficiency as a key factor in promoting marital stability among cross-border couples. By improving communication and reduc-

ing cultural misunderstandings, language skills appear to foster stronger relationships and greater satisfaction, leading to lower divorce rates and higher fertility rates. This suggests that immigration integration policies focused on language acquisition may not only enhance social integration but also yield significant personal and societal benefits, particularly in the context of marriage and family dynamics.

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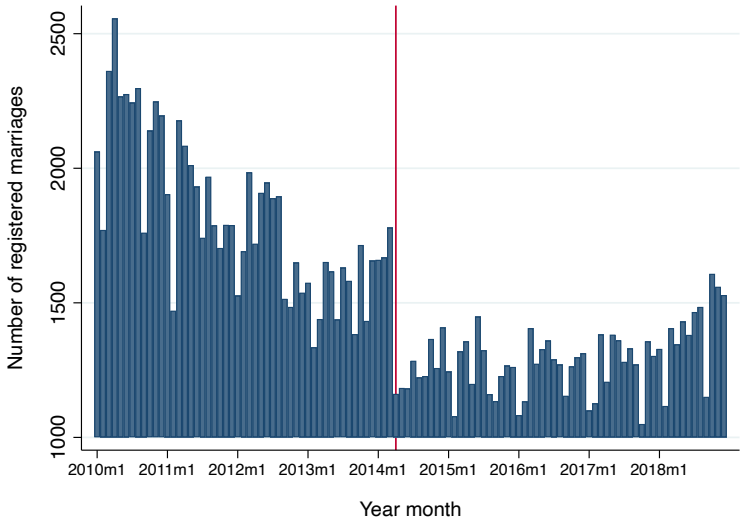
Tzeng, M.-S. (1992): "The effects of socioeconomic heterogamy and changes on marital dissolution for first marriages," *Journal of Marriage and the Family*, 609–619.

Wolfers, J. (2006): "Did unilateral divorce laws raise divorce rates? A reconciliation and new results," *American Economic Review*, 96, 1802–1820.

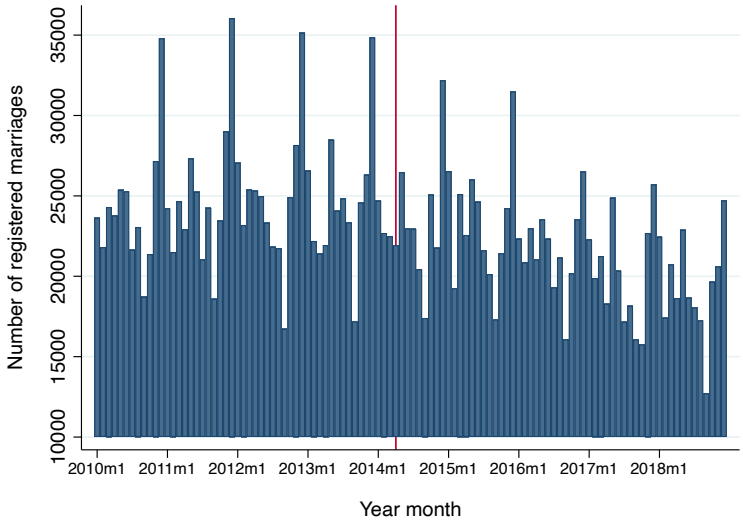
Zhang, Y. and J. Van Hook (2009): "Marital dissolution among interracial couples," *Journal of Marriage and Family*, 71, 95–107.

Figure 1: Number of registered marriages

All marriages between Korean men and foreign women



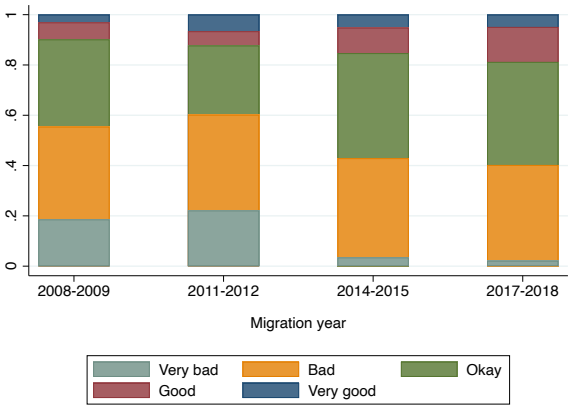
All marriages in between Korean men and Korean women



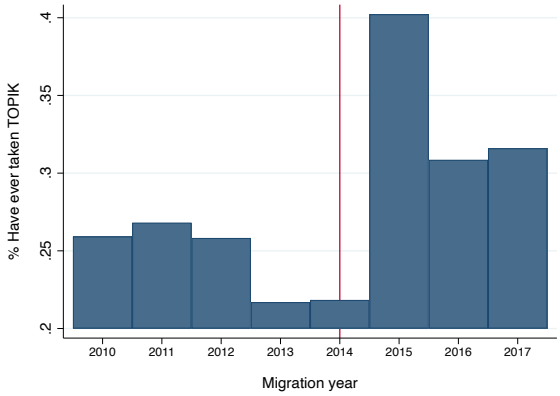
Notes: The top figure plots the number of registered marriages for cross-border couples comprising of Korean men and foreign women. The bottom figure plots the number of registered marriages for Korean native couples. The red lines indicate the amendment to the screening standards for issuing marriage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

Figure 2: Language requirement: the impacts on language abilities

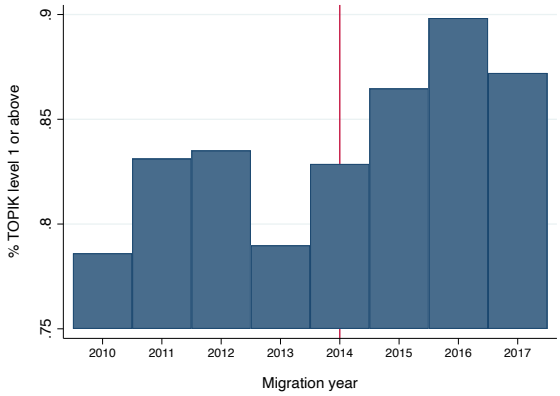
Korean speaking ability at the time of migration



% Have ever taken TOPIK

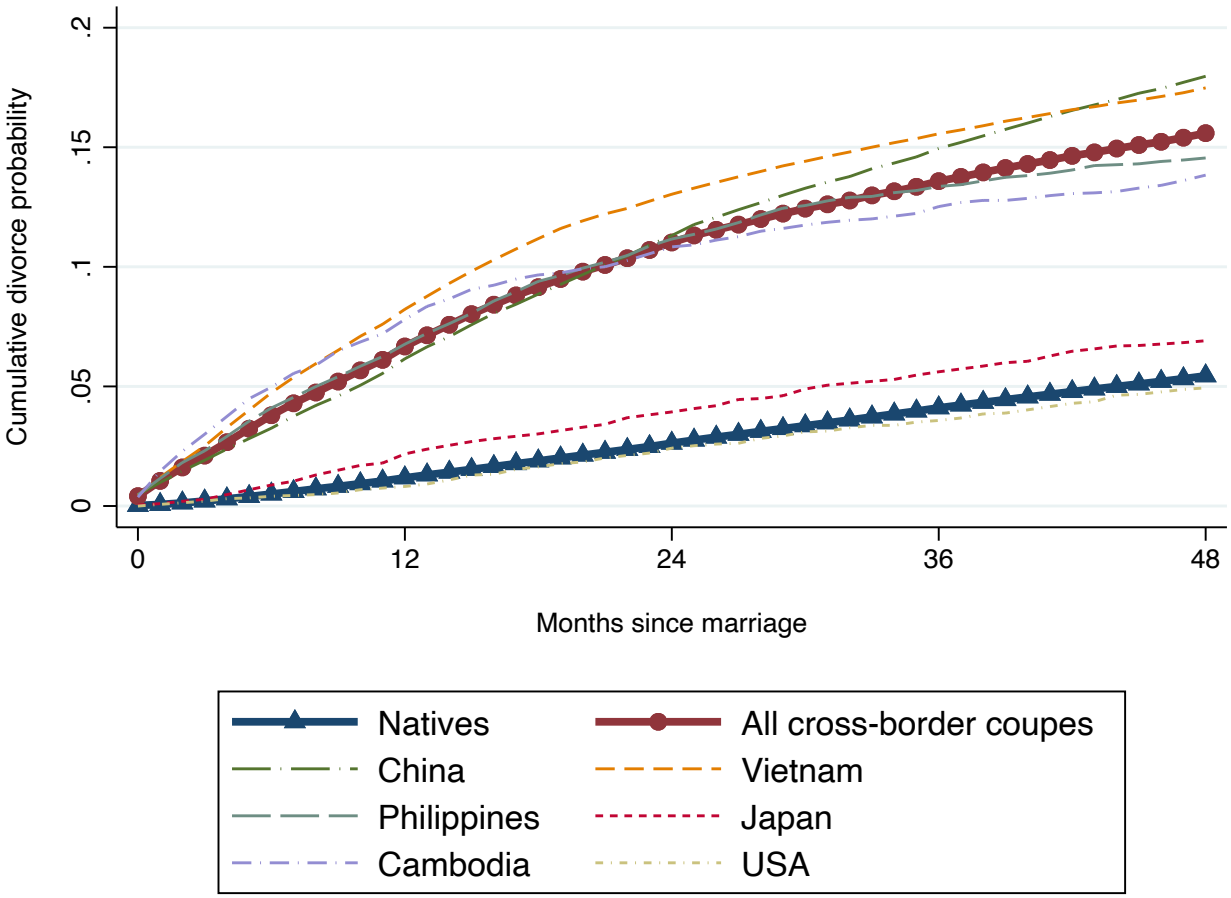


% Level 1 or above



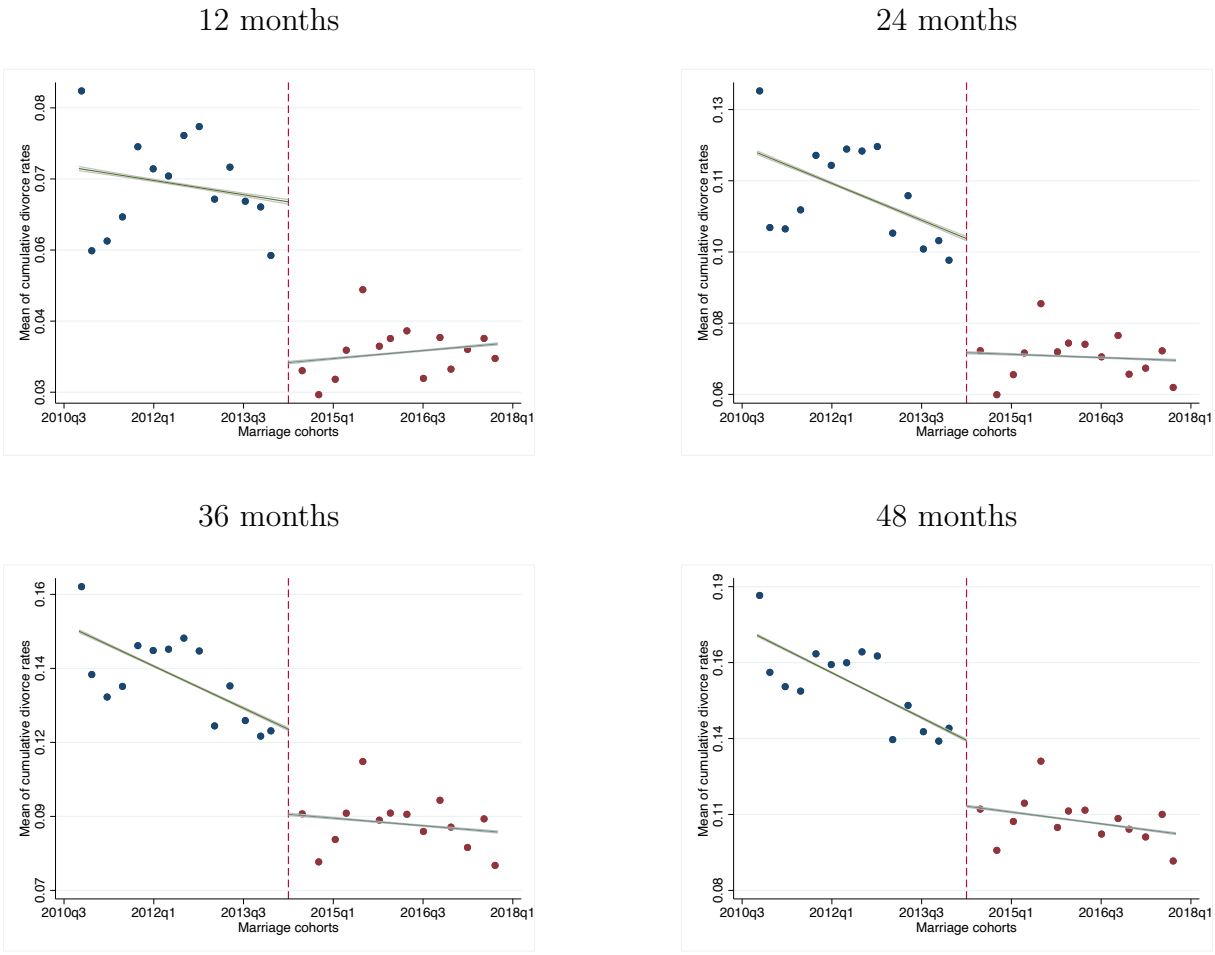
Notes:

Figure 3: 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 4: Cumulative divorce probabilities



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.

Figure 5: The impacts of the amendment on cumulative divorce probabilities

Panel A. Level effects



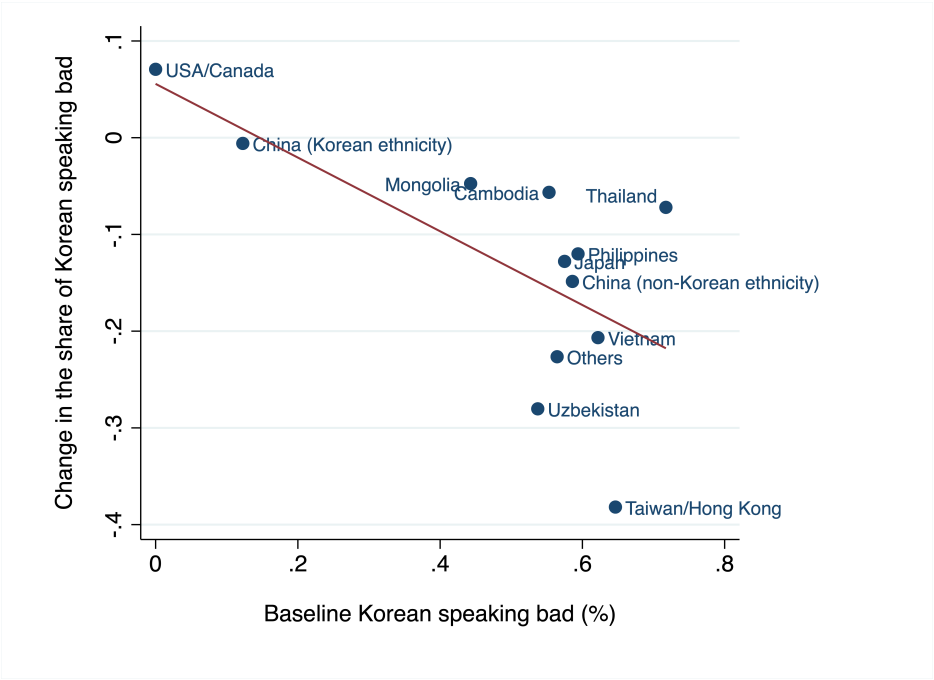
Panel B. Percent effects



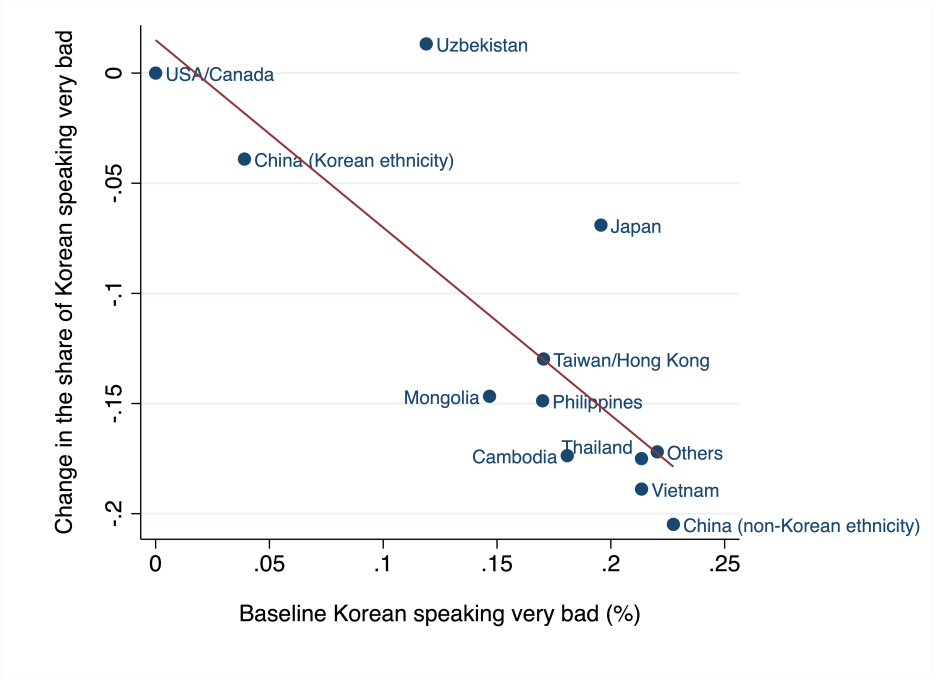
Notes: This figure plots regression estimates of the impacts on the amendment on cumulative divorce probabilities. Linear specification is used. Controls include husband education, wife education, husband age group, wife age group, and wife's country of origin. The samples consist of cross-border couples,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

Figure 6: Relationship between Baseline Korean speaking abilities and change in language abilities

Panel A. Korean speaking bad

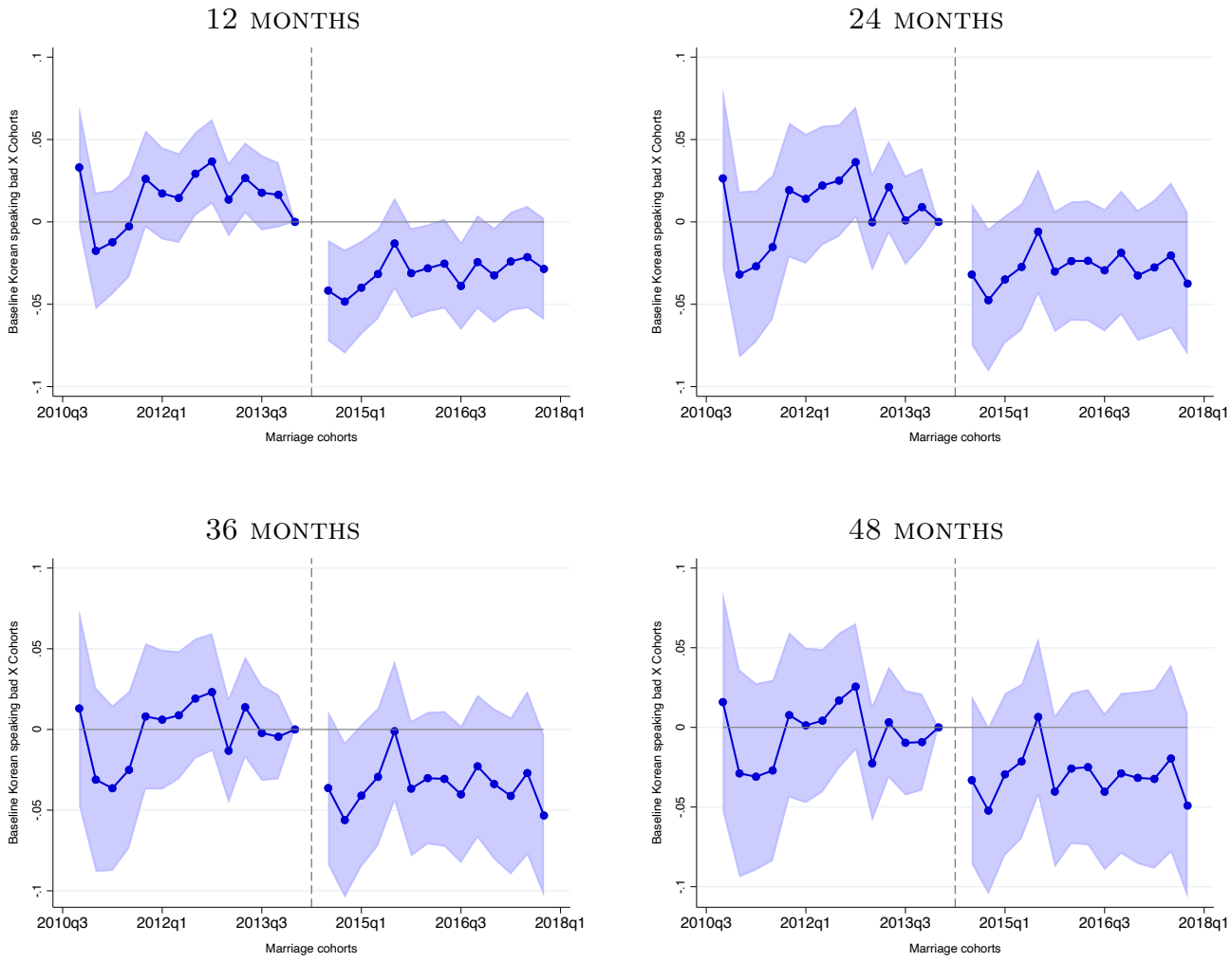


Panel B. Korean speaking very bad



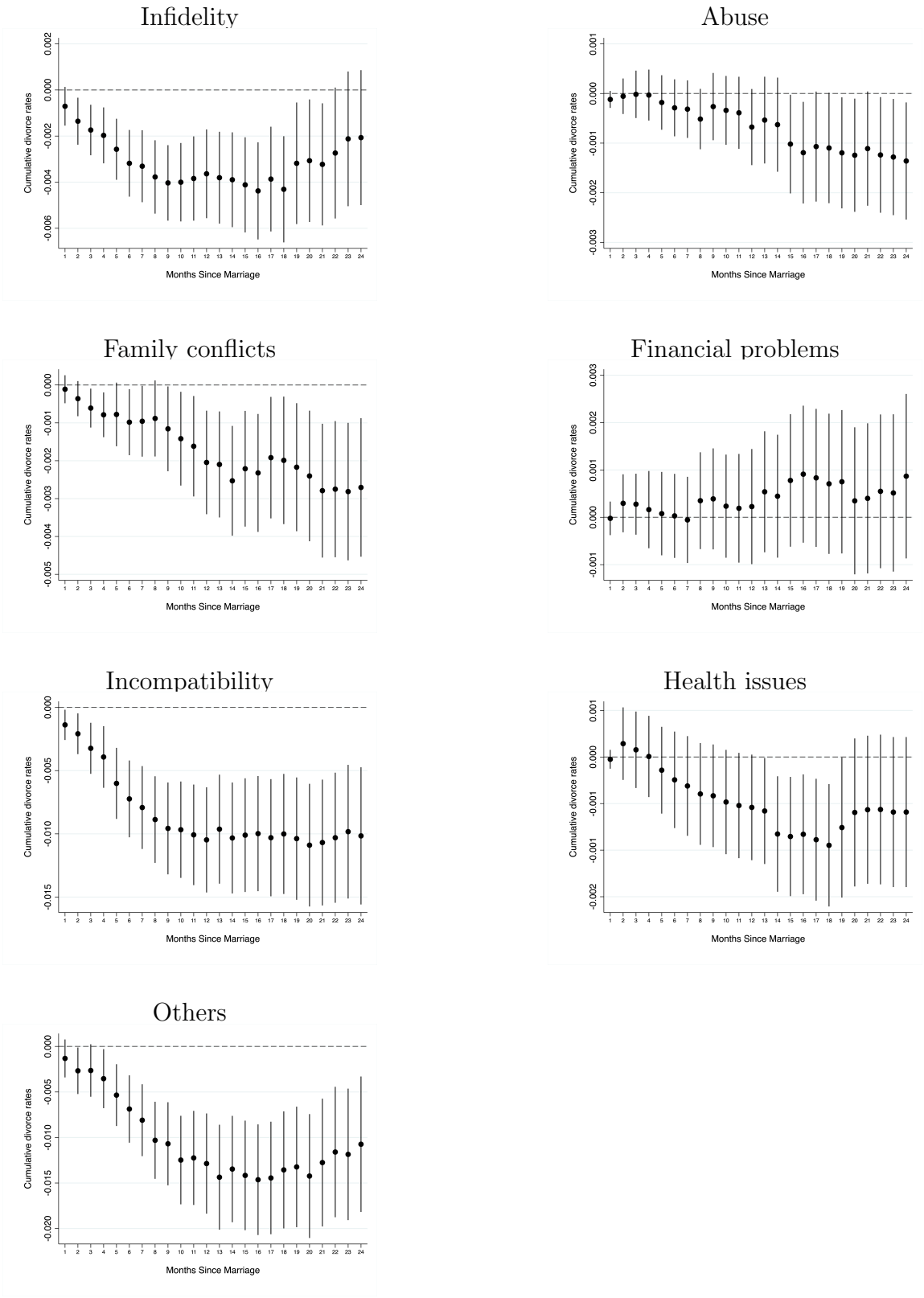
Notes: These figures plot the relationship between baseline Korean speaking abilities and the change in the share of migrants who have bad or very bad speaking skills after the amendment.

Figure 7: The impacts of the amendment on cumulative divorce probabilities (double-difference estimates)



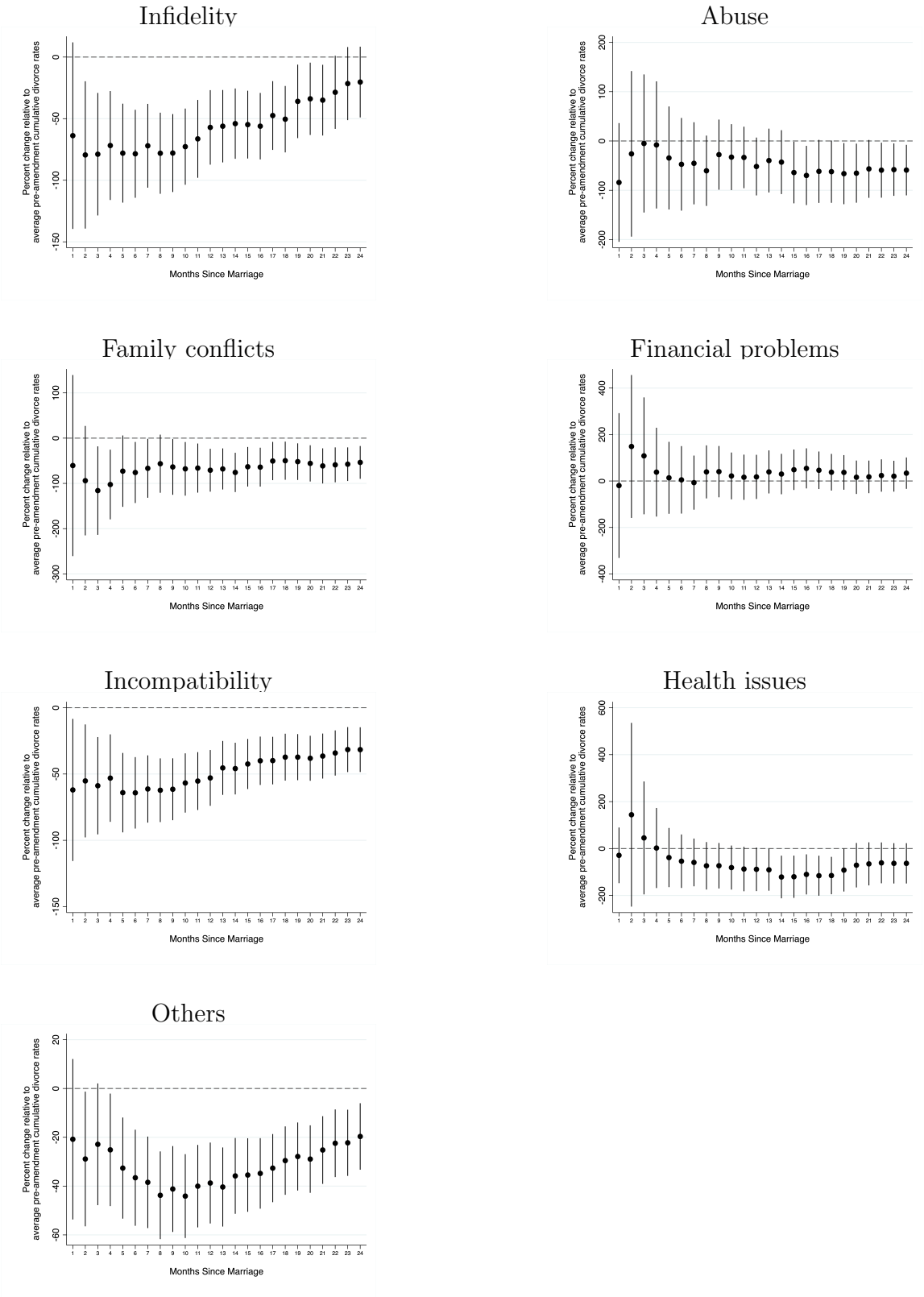
Notes: These figures plot event study coefficient estimates of the interaction between the baseline probability of Korean speaking being bad at the country level and the post dummy. Controls include husband education, wife education, husband age group, wife age group, and wife's country of origin. The samples consist of cross-border couples, comprising Korean men and foreign women.

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



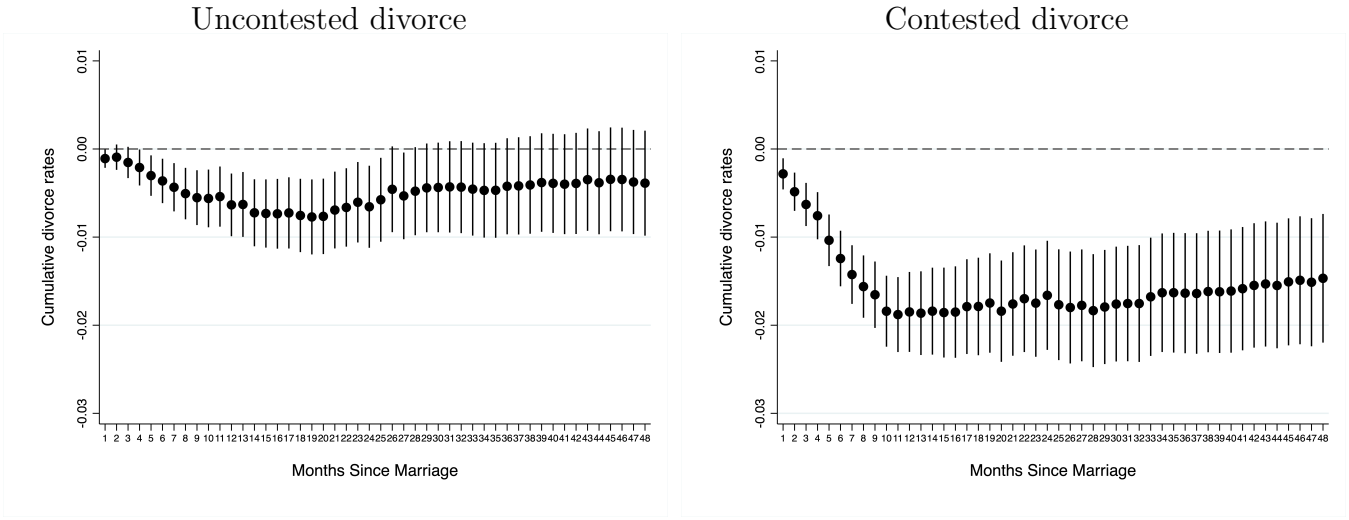
Notes: These figures plot regression estimates of the impacts on the amendment on cumulative divorce probabilities by different reasons (up to 24 months). Note that the variable for divorce reasons is available in 2010-2017 data. We use cohorts up to 2015q4 for this analysis. Linear specifications are used. 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.

Figure 9: The impacts of the amendment on cumulative divorce probabilities for specific reasons (percent)



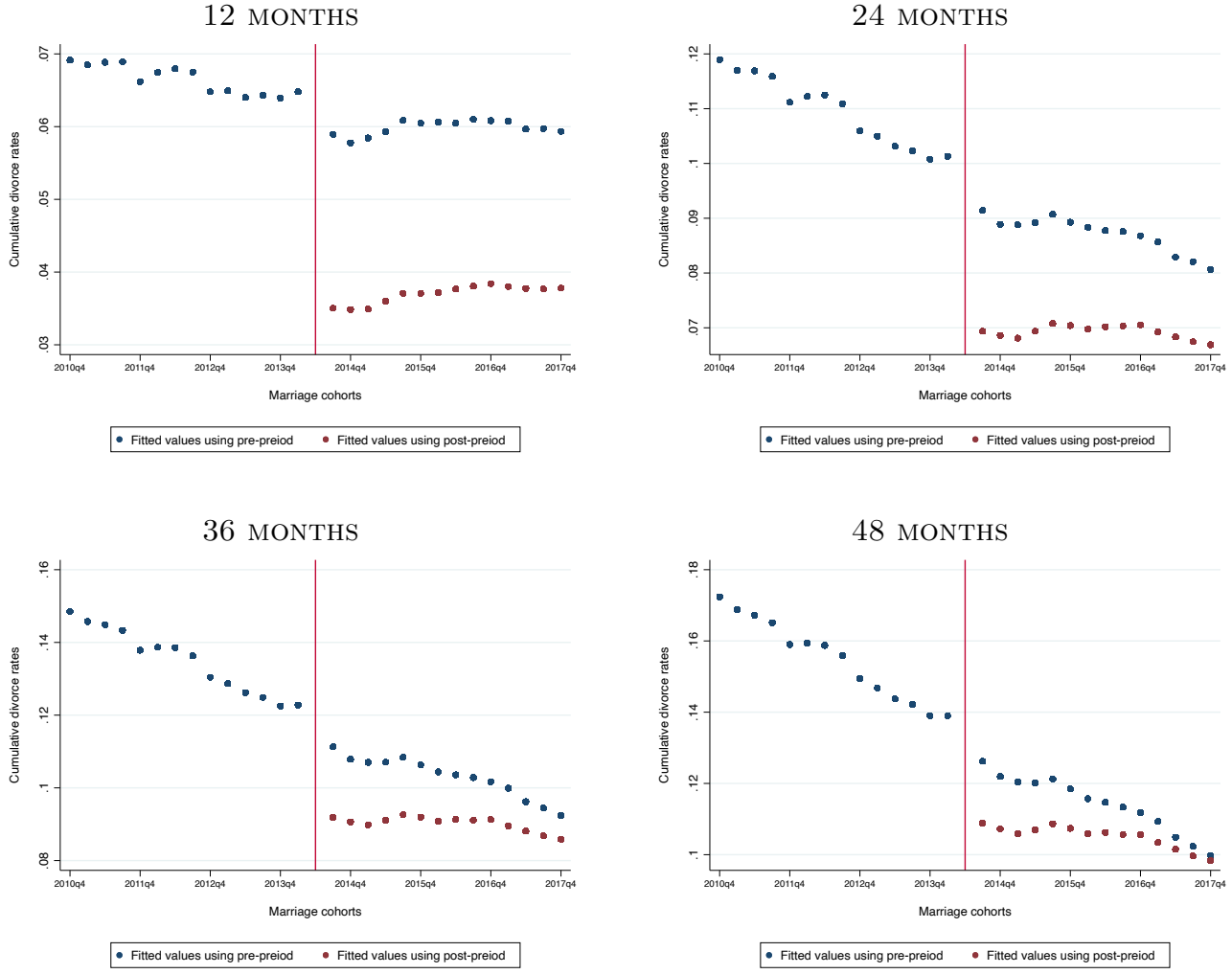
Notes: These figures plot regression estimates of the impacts on the amendment on cumulative divorce probabilities by different reasons (up to 24 months). Note that the variable for divorce reasons is available in 2010-2017 data. We use cohorts up to 2015q4 for this analysis. Linear specifications are used. 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.

Figure 10: The impacts of the amendment on cumulative divorce probabilities for different types



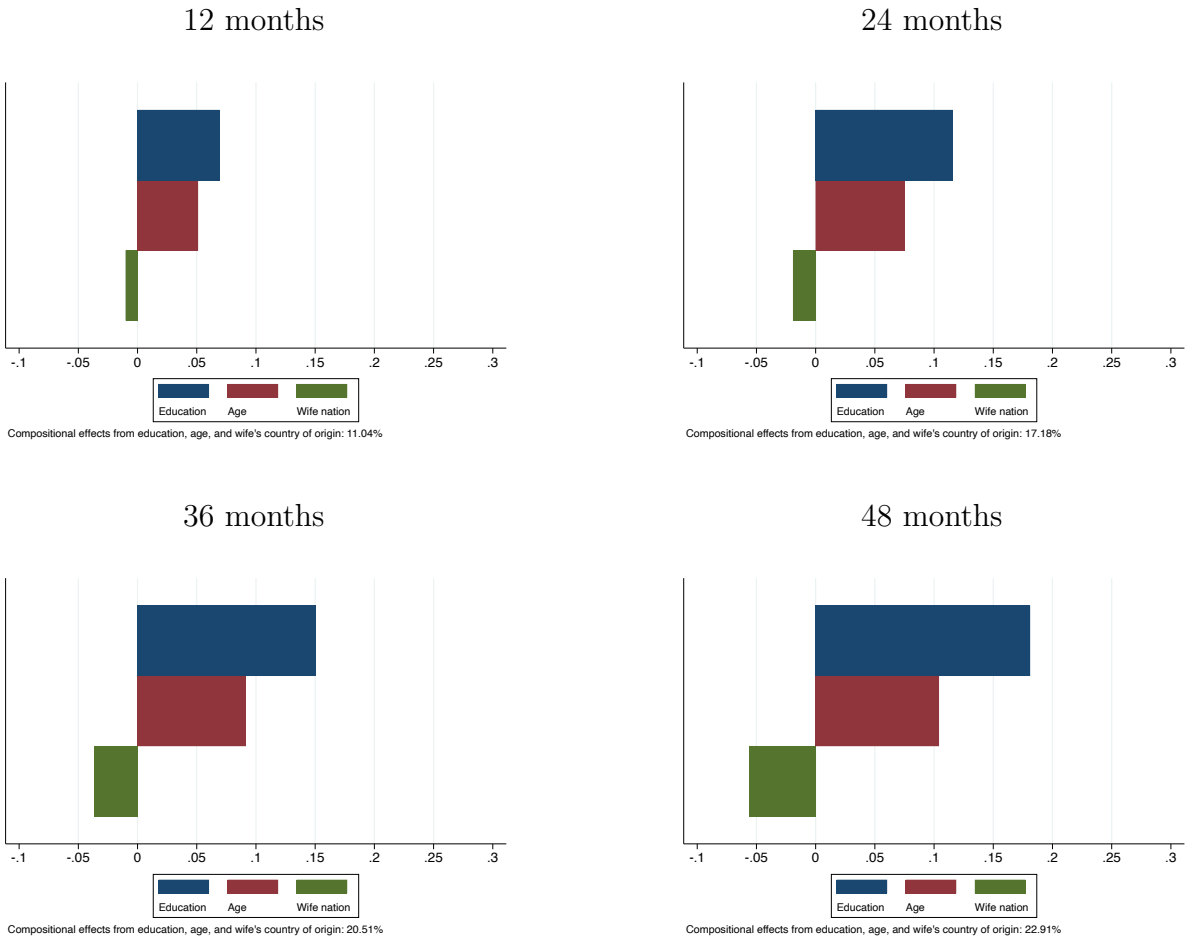
Notes: These figures plot regression estimates of the impacts on the amendment on cumulative divorce probabilities by different types. Linear specifications are used. Controls include husband education, wife education, husband age group, wife age group, and wife's country of origin. The samples consist of cross-border couples, comprising Korean men and foreign women.

Figure 11: 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 fitted values using post-period data. Both sets of 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.

Figure 12: Gelbach decomposition analysis



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.

Table 1: Divorce summary statistics

	Cross-border couples				Korean native coupes			
	Pre	Post	Post-Pre		Pre	Post	Post-Pre	
	Mean	Mean	Coefficient	SE	Mean	Mean	Coefficient	SE
Husb edu: less than high school	0.190	0.146	-.014	0.014	0.107	0.092	-0.010**	0.004
Husb edu: high school	0.574	0.559	0.044**	0.019	0.470	0.467	.003	0.006
Husb edu: college	0.236	0.295	-0.030*	0.017	0.423	0.441	.007	0.006
Wife edu: less than high school	0.414	0.339	-0.064***	0.019	0.111	0.094	-0.011***	0.004
Wife edu: high school	0.475	0.517	0.051***	0.020	0.470	0.451	.005	0.006
Wife edu: college	0.111	0.144	.013	0.014	0.419	0.455	.006	0.006
Husb age: less than 30	0.026	0.032	0.016**	0.007	0.262	0.261	.009	0.006
Husb age: 30-39	0.332	0.280	.023	0.018	0.436	0.422	-.009	0.006
Husb age: 40-49	0.431	0.444	-0.034*	0.019	0.174	0.172	.005	0.005
Husb age: 50-59	0.161	0.181	0	0.015	0.098	0.104	-.006	0.004
Husb age: 60 or more	0.050	0.062	-.004	0.009	0.031	0.040	.001	0.002
Wife age: less than 30	0.640	0.595	-0.032*	0.019	0.396	0.388	0.012**	0.006
Wife age: 30-39	0.187	0.220	0.030*	0.016	0.351	0.345	-0.011*	0.006
Wife age: 40-49	0.118	0.118	-.003	0.013	0.160	0.154	.001	0.005
Wife age: 50-59	0.049	0.055	.005	0.009	0.080	0.091	-.001	0.004
Wife age: 60 or more	0.006	0.012	.001	0.004	0.014	0.021	-.001	0.002
Uncontested Divorce	0.358	0.480	0.042**	0.019	0.848	0.848	.006	0.005
Contested Divorce	0.641	0.519	-0.042**	0.019	0.152	0.152	-.006	0.005
Divorce reason: Infidelity	0.090	0.093	0	0.014	0.061	0.053	-.002	0.004
Divorce reason: Abuse	0.029	0.014	-.009	0.006	0.044	0.041	-.004	0.003
Divorce reason: Family conflict	0.054	0.057	-.002	0.011	0.069	0.070	.004	0.004
Divorce reason: Financial problems	0.030	0.028	.01	0.008	0.076	0.067	-.002	0.004
Divorce reason: Incompatibility	0.300	0.349	-.02	0.023	0.551	0.566	.007	0.008
Divorce reason: Health issues	0.010	0.009	.001	0.005	0.006	0.006	.001	0.001
Divorce reason: Others	0.487	0.449	.02	0.024	0.193	0.197	-.003	0.006
Number of children below 20 years old	0.104	0.142	.016	0.016	0.431	0.414	0.024***	0.008
Number of observations	9716	4289	14005	-	55794	48008	103802	-

Notes: This table presents summary statistics for divorces among marriage cohorts from 2010q4 to 2017q4. These samples include divorces occurring within 48 months of marriage. 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 2: 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 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			
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 b. 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 c. Quadratic regression			
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 d. 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 e. Weighted least squares			
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
	Panel f. 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
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. The samples consist of cross-border couples, comprising Korean men and foreign women. Robust standard errors are used.

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

Up to:	12 months	24 months	36 months	48 months
	(1)	(2)	(3)	(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***	-0.042***	-0.041***	-0.036**
	(0.008)	(0.011)	(0.013)	(0.015)
Mean of Untreated	0.067	0.110	0.136	0.156
	Panel b. Linear regression with controls			
Post	-0.001	-0.004	-0.003	-0.004
	(0.005)	(0.007)	(0.008)	(0.009)
Baseline Korean speaking bad × Post	-0.045***	-0.035***	-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: The impacts of the amendment on cumulative divorce probabilities by different types

Up to:	12 months	24 months	36 months	48 months
	(1)	(2)	(3)	(4)
	Type: uncontested divorce			
Post	-0.0063***	-0.0066***	-0.0042	-0.0039
	(0.0018)	(0.0024)	(0.0028)	(0.0030)
Mean of Untreated	0.0241	0.0374	0.0478	0.0581
N	14149	14149	14149	14149
	Type: contested divorce			
Post	-0.0185***	-0.0166***	-0.0164***	-0.0147***
	(0.0023)	(0.0032)	(0.0035)	(0.0037)
Mean of Untreated	0.0425	0.0726	0.0879	0.0975
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. 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. Robust standard errors are used.

Table 7: Composition of marriage migrants

	Pre	Post	Post-Pre	
	Mean	Mean	Coefficient	SE
Husb edu: less than high school	0.116	0.077	-.005	0.004
Husb edu: high school	0.512	0.450	-0.014**	0.006
Husb edu: college	0.359	0.430	0.023***	0.006
Wife edu: less than high school	0.230	0.149	-0.020***	0.005
Wife edu: high school	0.458	0.429	-0.020***	0.006
Wife edu: college	0.284	0.357	0.044***	0.006
Husb age: less than 30	0.090	0.101	0.006*	0.004
Husb age: 30-39	0.415	0.389	0.020***	0.006
Husb age: 40-49	0.362	0.372	-0.016***	0.006
Husb age: 50-59	0.108	0.109	-0.009**	0.004
Husb age: 60 or more	0.026	0.028	-.002	0.002
Wife age: less than 30	0.640	0.599	-0.017***	0.006
Wife age: 30-39	0.222	0.272	0.022***	0.005
Wife age: 40-49	0.102	0.091	-.006	0.004
Wife age: 50-59	0.032	0.032	-.001	0.002
Wife age: 60 or more	0.004	0.006	.001	0.001
Wife origin: Philippines	0.094	0.059	-0.019***	0.003
Wife origin: Vietnam	0.335	0.350	-0.038***	0.006
Wife origin: Cambodia	0.038	0.033	0	0.002
Wife origin: China	0.333	0.288	0.039***	0.006
Wife origin: Japan	0.059	0.062	.005	0.003
Wife origin: USA	0.027	0.038	0.005**	0.002
Wife origin: Others	0.113	0.170	0.007*	0.004
Number of observations	72572	50301	122873	-

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 8: Matching outcomes

Dependent variable:	Husband more educated (= 1)		Husband edu = Wife edu (= 1)		Wife more educated (= 1)		Husband older (= 1)		Husb age group = wife age group (= 1)		Wife older (= 1)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Post	-0.025	-0.022	0.020	0.011	0.005	0.011	-0.032	-0.004	0.032	0.007	0.000	-0.003
	(0.039)	(0.036)	(0.043)	(0.042)	(0.020)	(0.018)	(0.034)	(0.023)	(0.033)	(0.023)	(0.005)	(0.005)
Baseline mean	0.31	0.31	0.55	0.55	0.14	0.14	0.74	0.74	0.23	0.23	0.03	0.03
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Observations	14,149	14,149	14,149	14,149	14,149	14,149	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 age groups, and wife origin country. The estimates are weighted by the number of marriages in each cell.

Table 9: 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)
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. Significance levels: * 10%, ** 5%, *** 1%. Sources: NSMF 2012, 2015, 2018, 2021. The TOPIK variable exists only from 2015.

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)
Baseline Korean speaking bad × Post	-0.066	144.089	1.330	-0.006	-0.054	0.060
	(0.080)	(235.190)	(3.409)	(0.063)	(0.111)	(0.101)
Baseline mean	0.46	1264.20	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	6,561	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. 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)
Baseline Korean speaking bad × Post	0.062	-0.020	0.047	0.002	0.015
	(0.065)	(0.048)	(0.048)	(0.039)	(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. Significance levels: * 10%, ** 5%, *** 1%. Sources: NSMF 2012, 2015, 2018, 2021.

Table 12: The impacts of the amendment on reactions to discrimination

	(1) Demanded apology (= 1)	(2) Discussed the issue with friends and family (= 1)	(3) Consulted a support group (= 1)	(4) Filed a complaint to a related organization (= 1)	(5) Shared my experience online (= 1)
Baseline Korean speaking bad × Post	0.022	-0.000	-0.006	0.014*	0.022*
	(0.021)	(0.041)	(0.005)	(0.007)	(0.013)
Baseline mean	0.02	0.11	0.01	0.00	0.01
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	12,951	12,951	12,951	12,951	12,951

Notes: This table presents double-difference model estimates of the impacts on the amendment on reactions to discrimination. 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 2015, 2018, 2021.

Table 13: 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)
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. Significance levels: * 10%, ** 5%, *** 1%. Sources: NSMF 2012, 2015, 2018, 2021.

Table 14: Fertility outcomes within four years of marriage

Dependent variable:	Have a child		Have a child who died	
	(1)	(2)	(3)	(4)
Post	0.086***	0.043	0.000	-0.000
	(0.018)	(0.034)	(0.001)	(0.001)
Baseline Korean speaking bad × Post		0.081		0.001
		(0.055)		(0.002)
Baseline mean	0.61	0.61	0.0014	0.0014
Controls	Yes	Yes	Yes	Yes
Observations	14,149	14,149	14,149	14,149

Notes: This table presents the effects of the amendment on fertility outcomes within the first four years of marriage. Controls include husband education, husband age groups, and wife origin country. The estimates are weighted by the number of marriages in each cell.

Appendix

A. Impacts of the amendment on other targeted variables

In this section, we discuss two additional requirements introduced by the 2014 amendment to the marriage visa requirements, which went into effect immediately.

- 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."

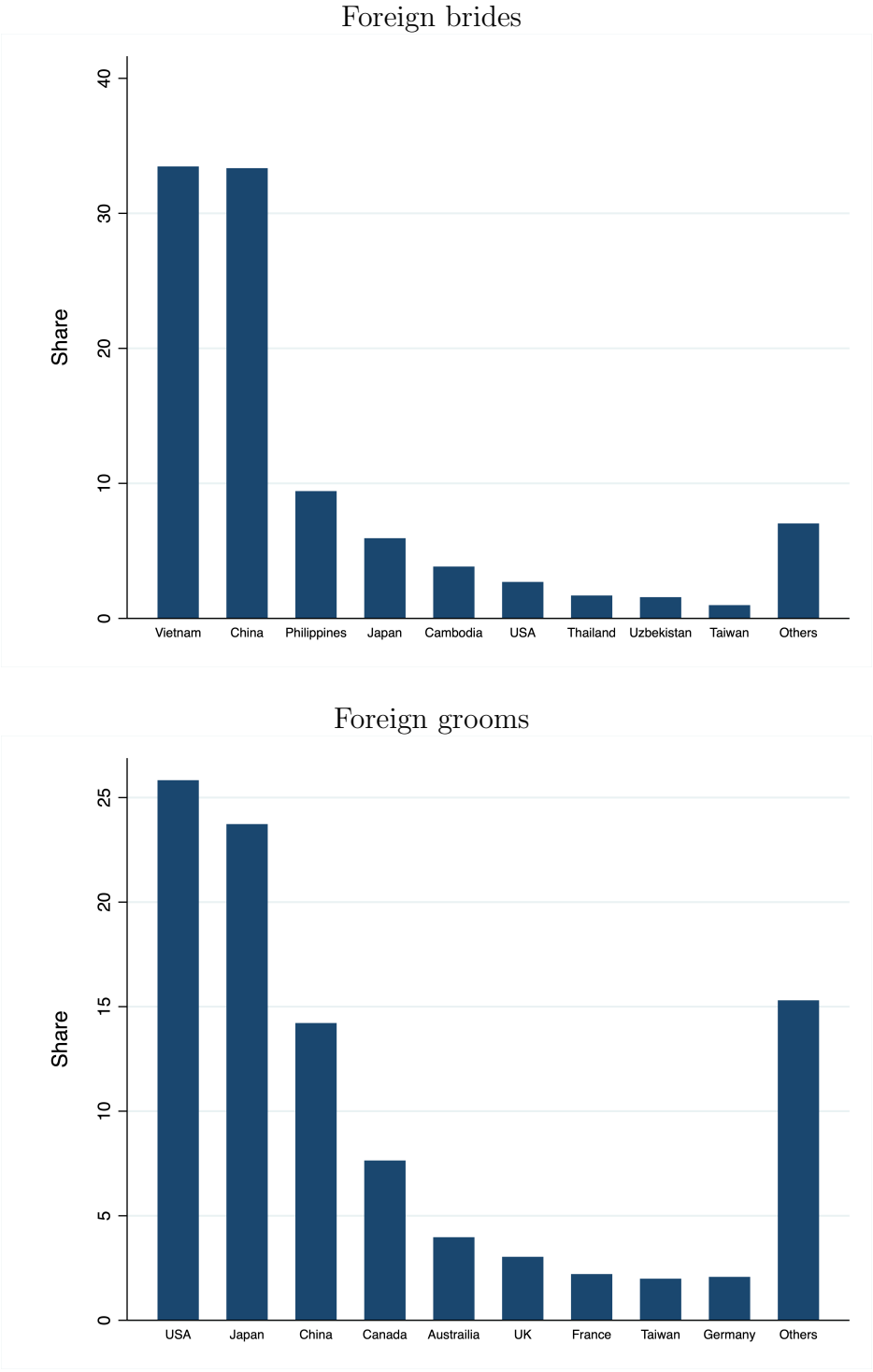
  The residential space requirement was established to ensure that married couples have adequate living space. Specifically, gosiwon (originally designed for students preparing for exams, these accommodations are characterized by low rent, shared bathrooms and kitchens, and very limited private space), commercial stores, and poly tunnel-style non standard living arrangements were specifically targeted for exclusion.

  Figure A4 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 A1 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 A1 show consistent patterns.

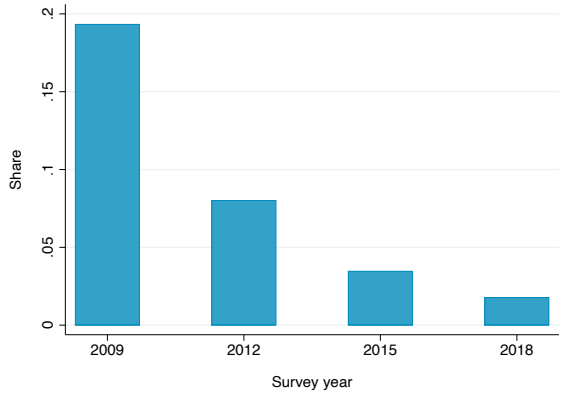
Figure A1: Distribution of country of origins



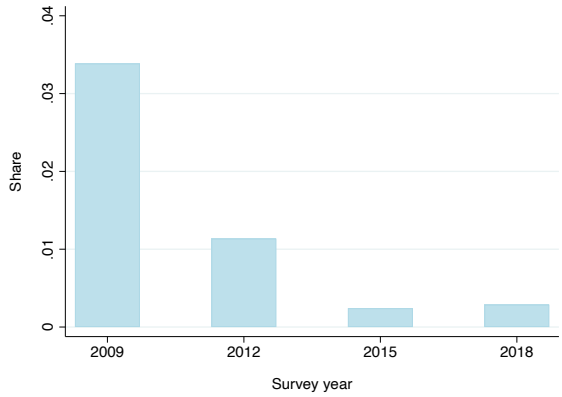
Notes: The top and bottom figures plot the distribution of origin of countries for foreign brides and foreign grooms in the pre-policy period, respectively.

Figure A2: Household income requirement: The impacts on household income

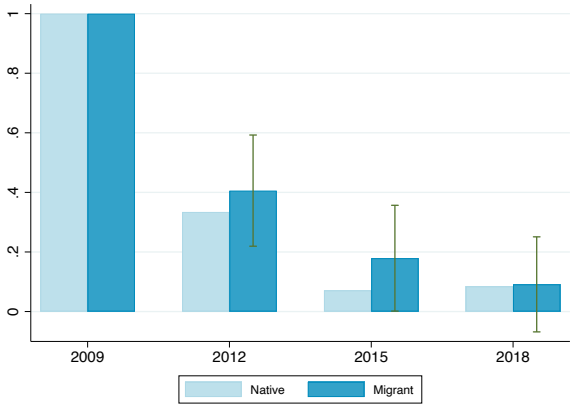
HH income < 1M KRW at the time of migration



HH income < 1M KRW(Korean natives)



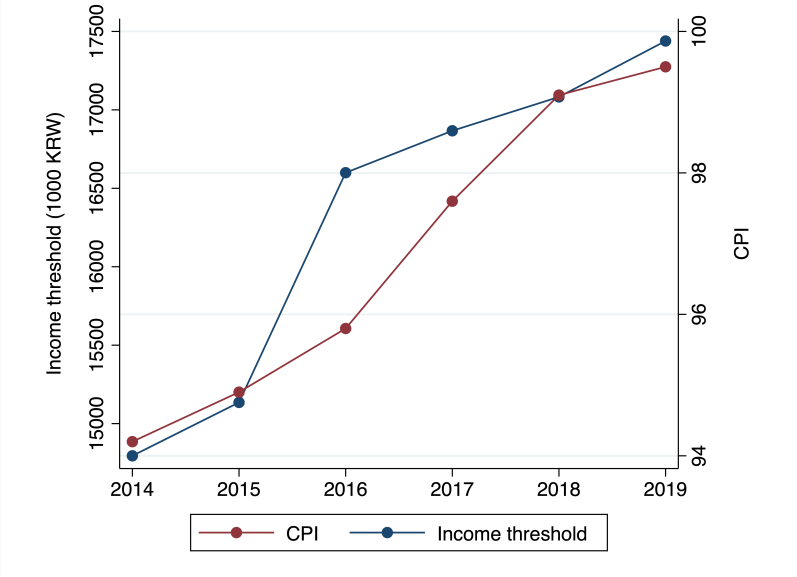
Normalized comparison (HH income < 1M)



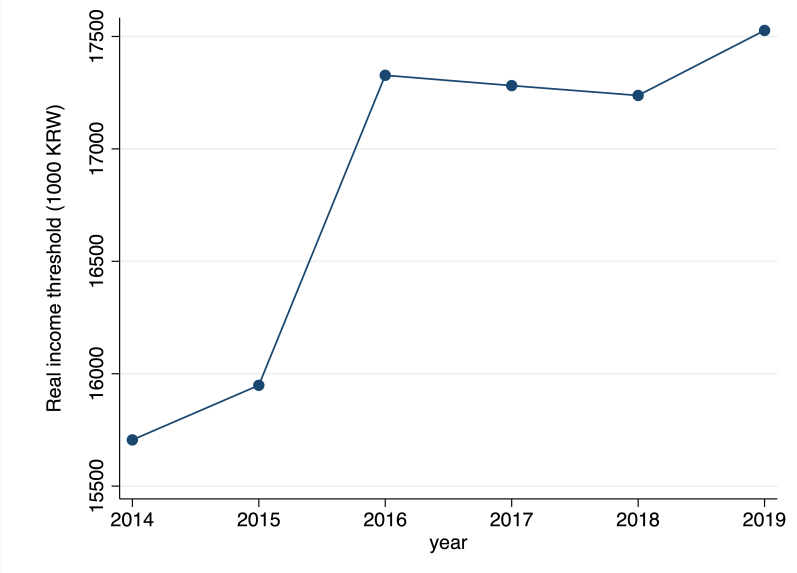
Notes:

Figure A3: Income threshold

Nominal income threshold and consumer price index

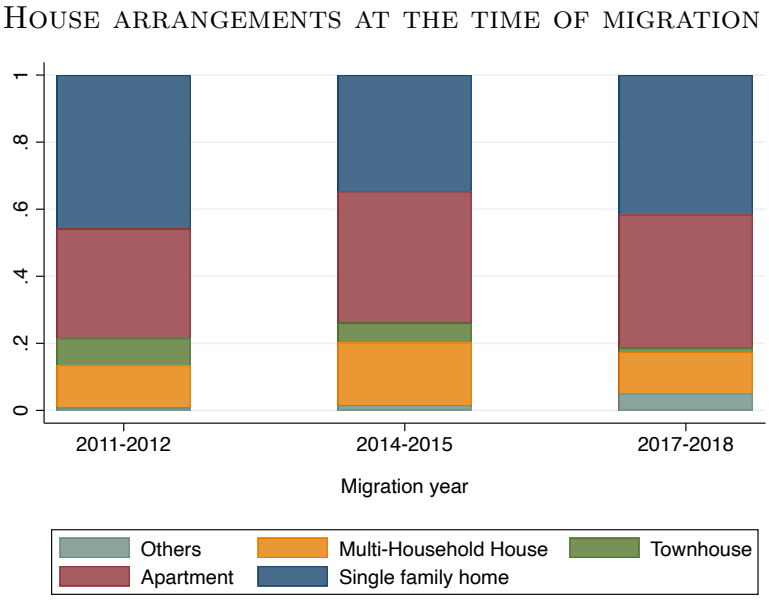


Real income threshold (normalized relative to KRW in 2000)



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.

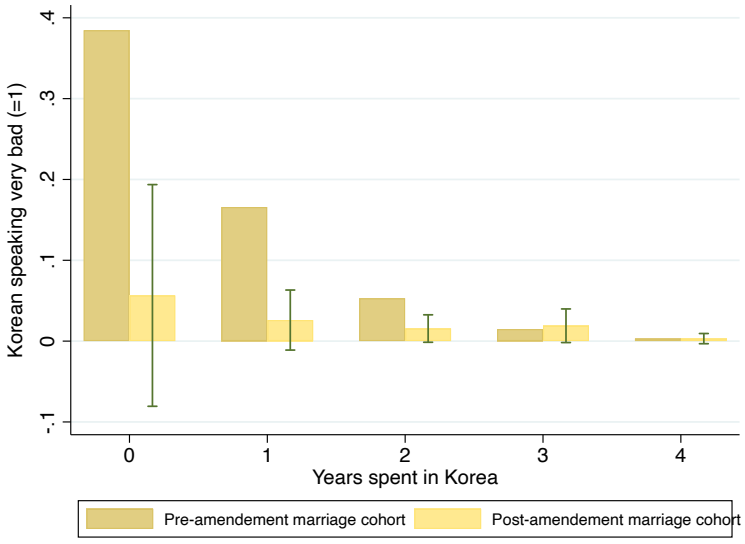
Figure A4: Residential space requirement: The impacts on housing



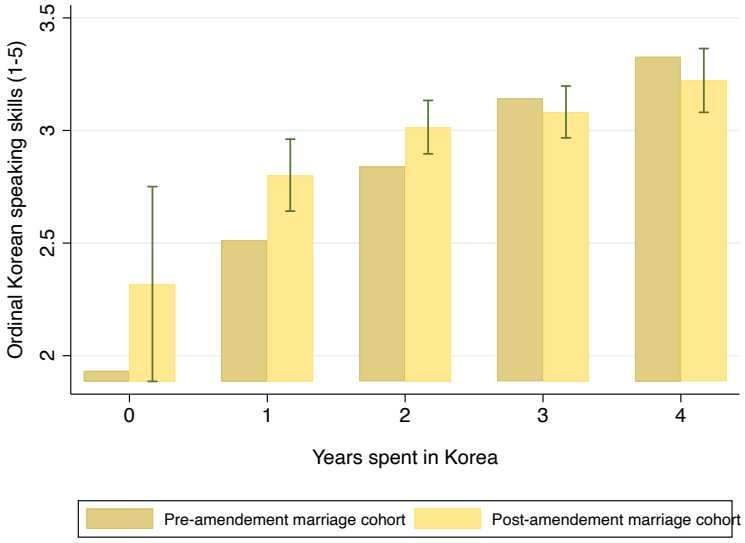
Notes:

Figure A5: Language requirement: the impacts on language abilities

Korean speaking very bad over time



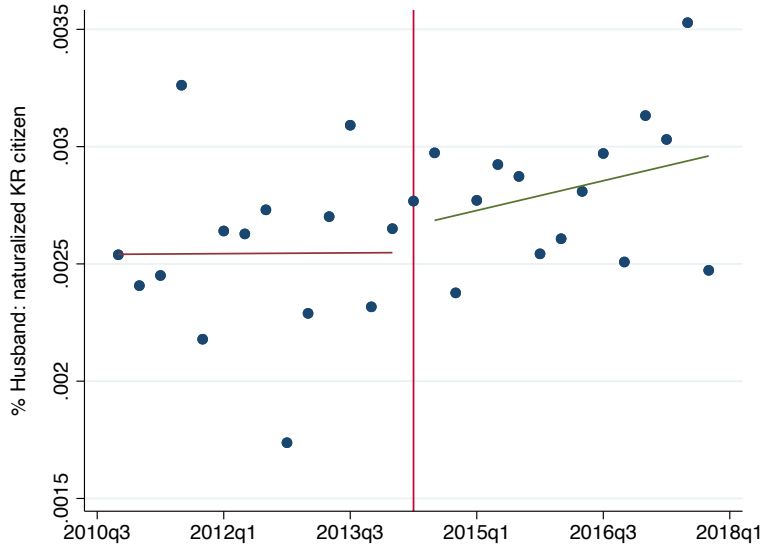
Korean speaking skills over time



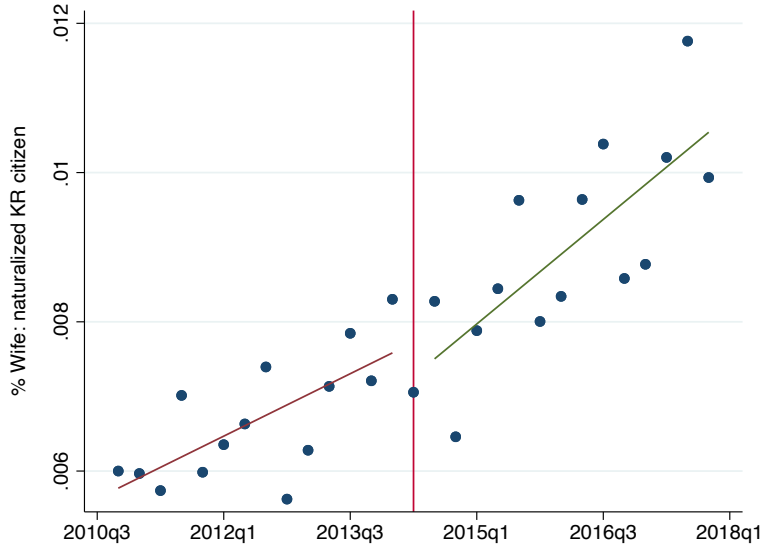
Notes:

Figure A6: 3-year lapse after naturalization through marriage

% Husband: naturalized KR citizen among all marriages

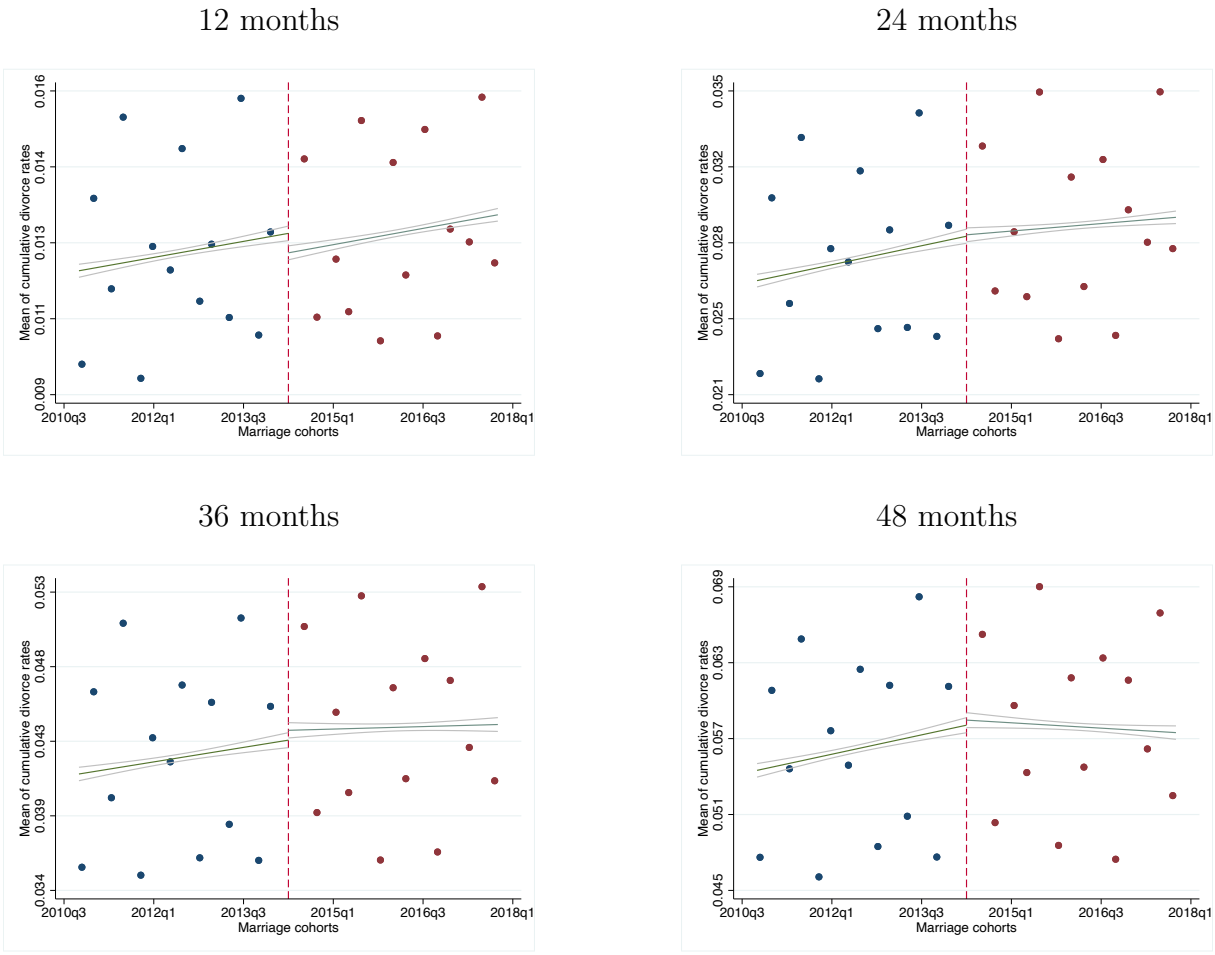


% Wife: naturalized KR citizen among all marriages



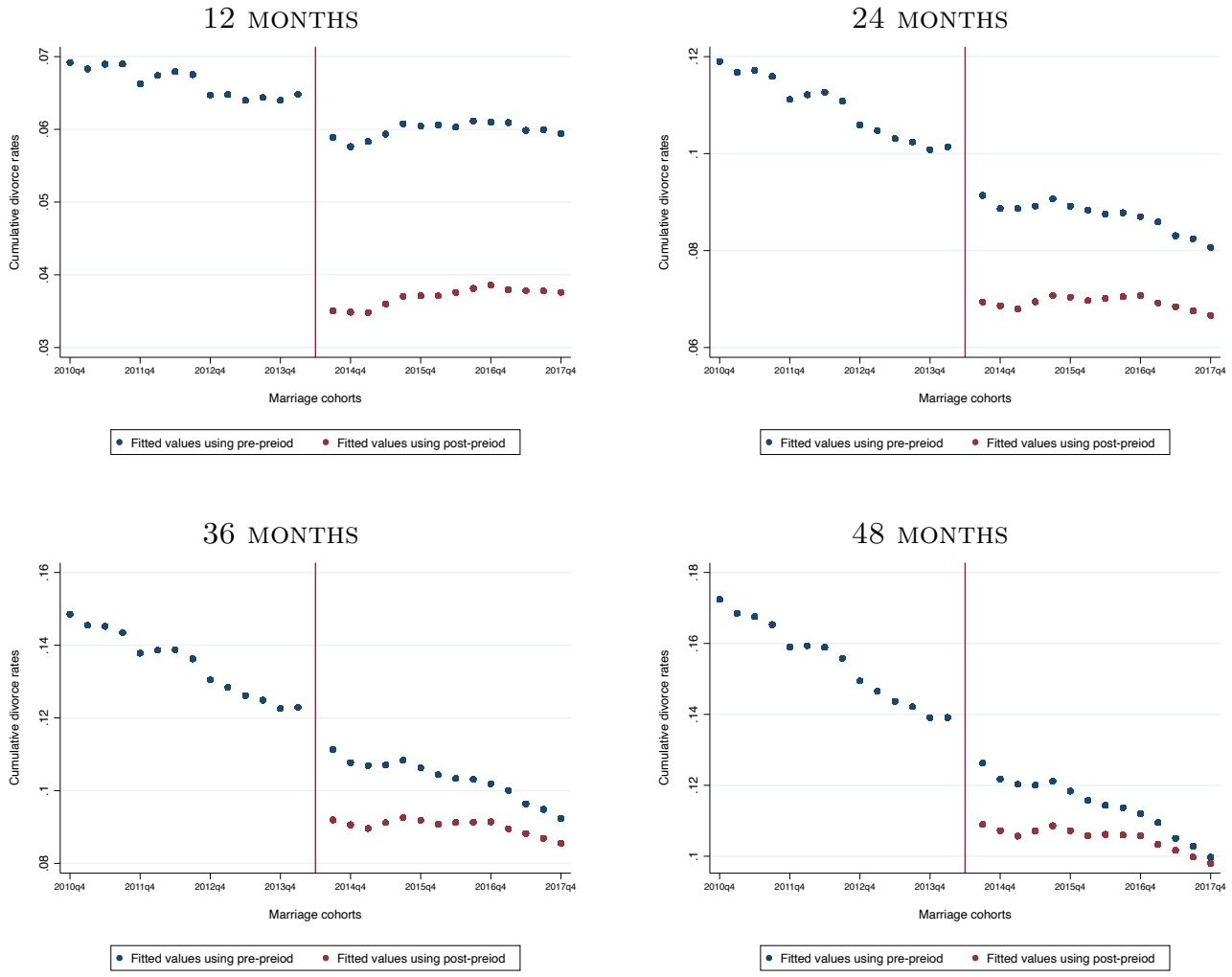
Notes:

Figure A7: Cumulative divorce probabilities (native)



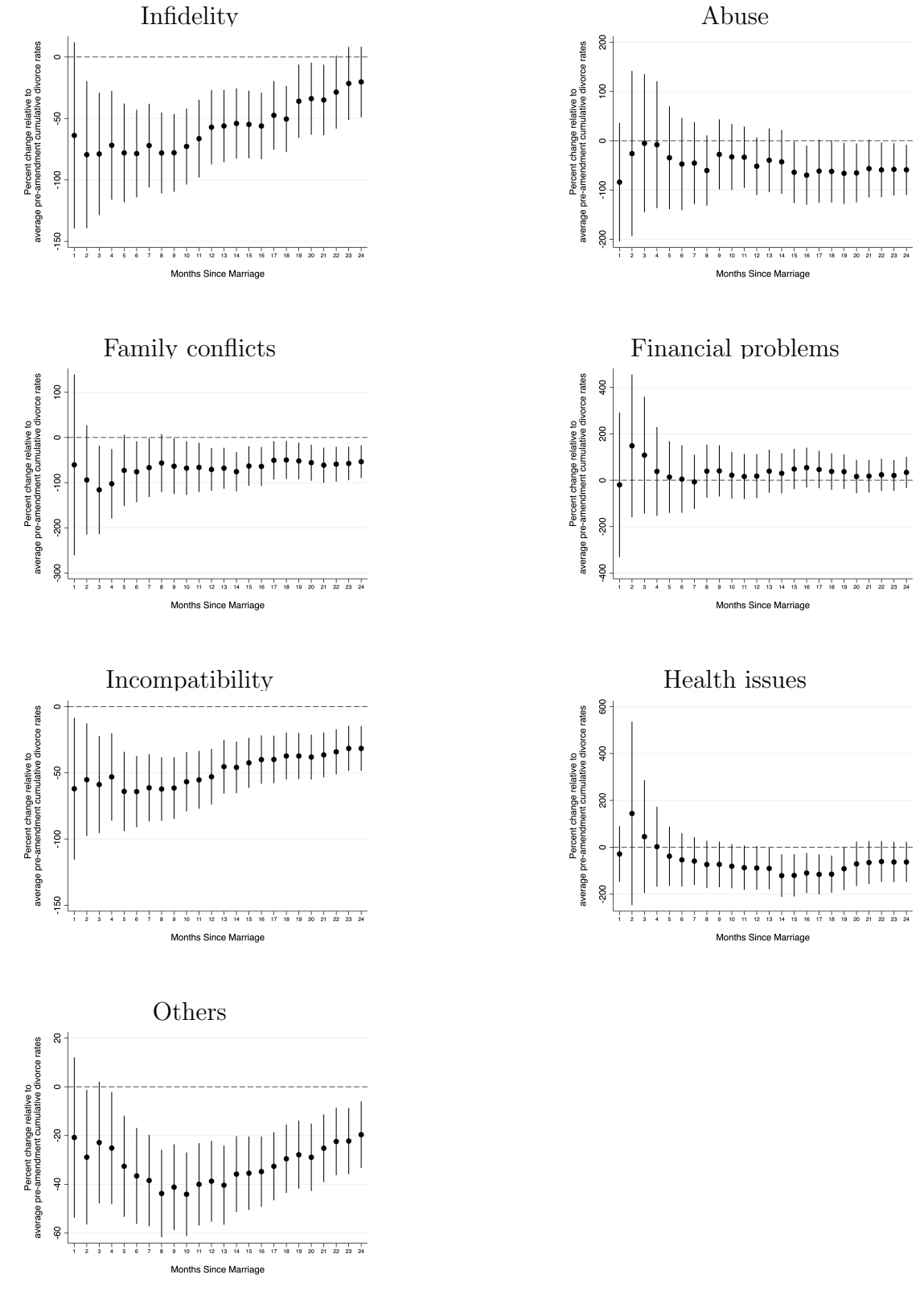
Notes: These figures plot cumulative divorce probabilities of Korean native couples within 12, 24, 36, and 48 months, respectively. The red lines indicate the amendment to the screening standards for issuing marriage visas. The samples consist of Korean native couples, comprising Korean men and Korean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

Figure A8: The impacts of the amendment on cumulative divorce probabilities, fitted values based on observable characteristics



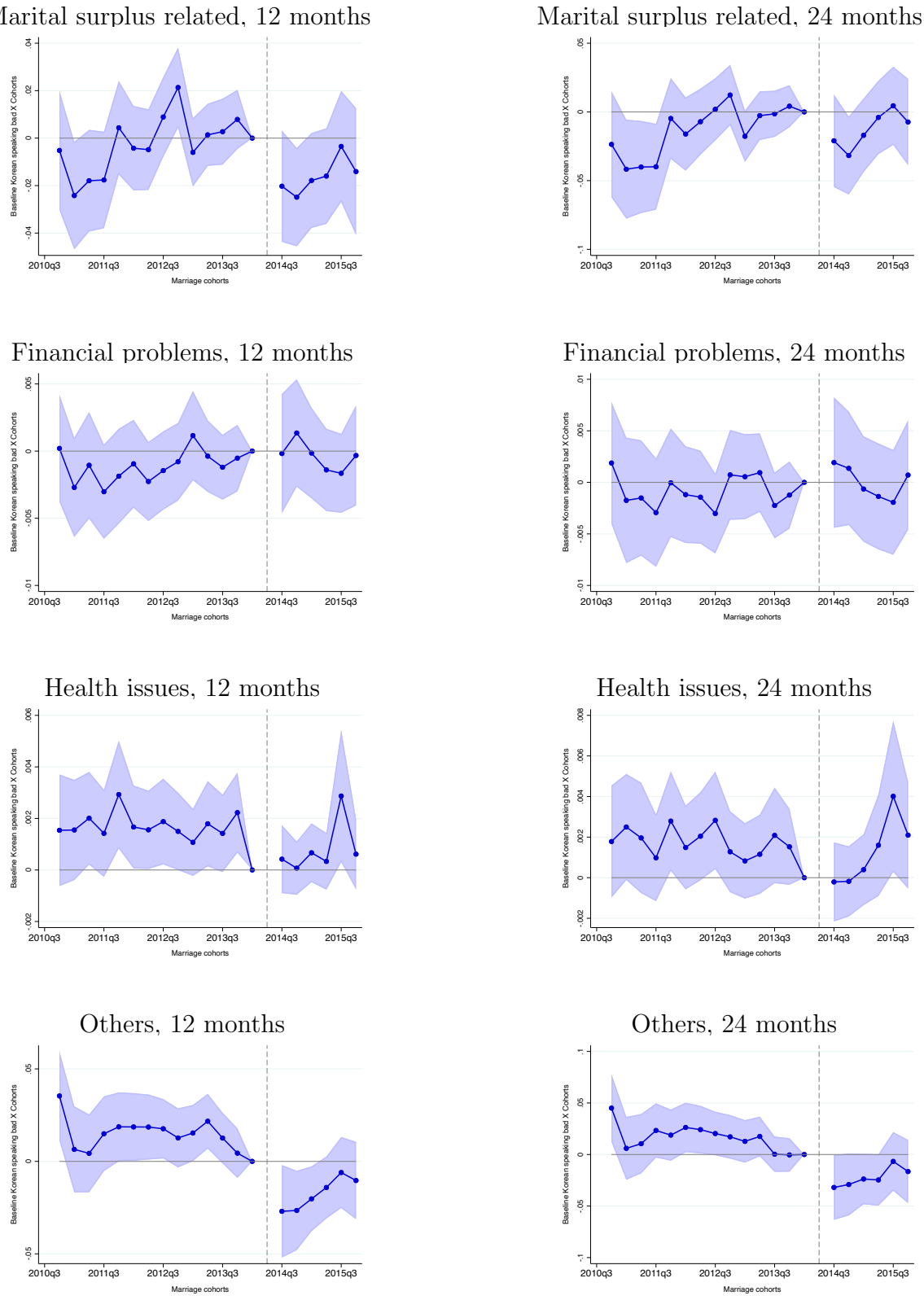
Notes: These figures plot the fitted values of cumulative divorce probabilities. The blue series represent fitted values using pre-period data, while the red series represent fitted values using post-period data. Both sets of fitted values include the same covariates: all combination of husband's education and wife's education, all combination of husband's age group at marriage and wife's age group at marriage, wife's country of origin, and linear quarterly trends.

Figure A9: The impacts of the amendment on cumulative divorce probabilities for specific reasons (percent)



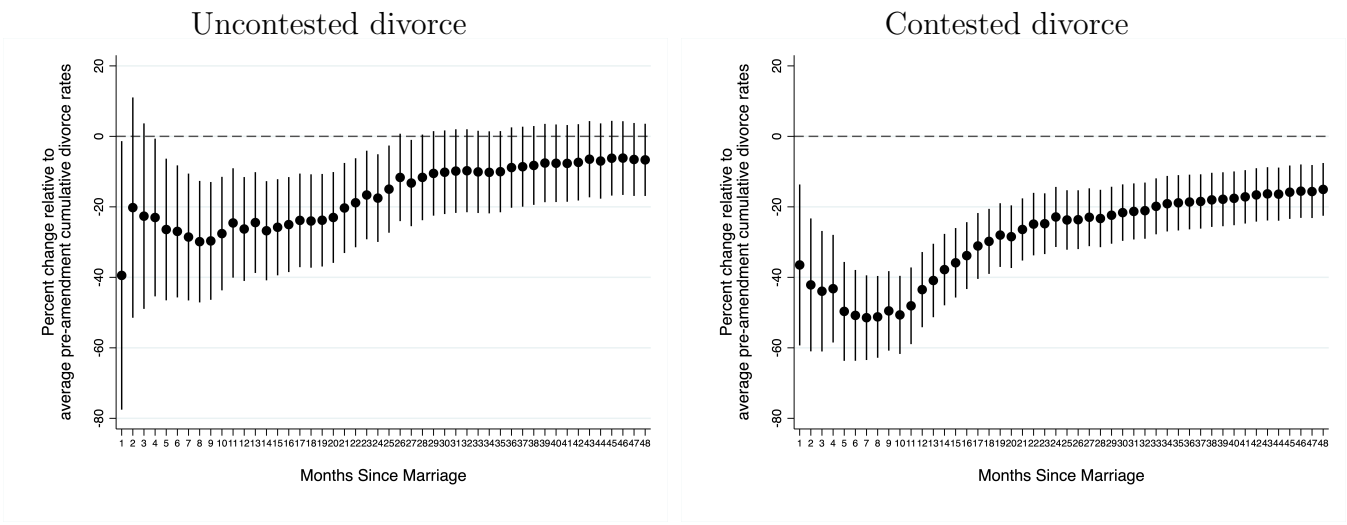
Notes: These figures plot regression estimates of the impacts on the amendment on cumulative divorce probabilities by different reasons (up to 24 months). Note that the variable for divorce reasons is available in 2010-2017 data. We use cohorts up to 2015q4 for this analysis. Linear specifications are used. 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.

Figure A10: The impacts of the amendment on cumulative divorce probabilities for specific reasons (double-difference estimates)



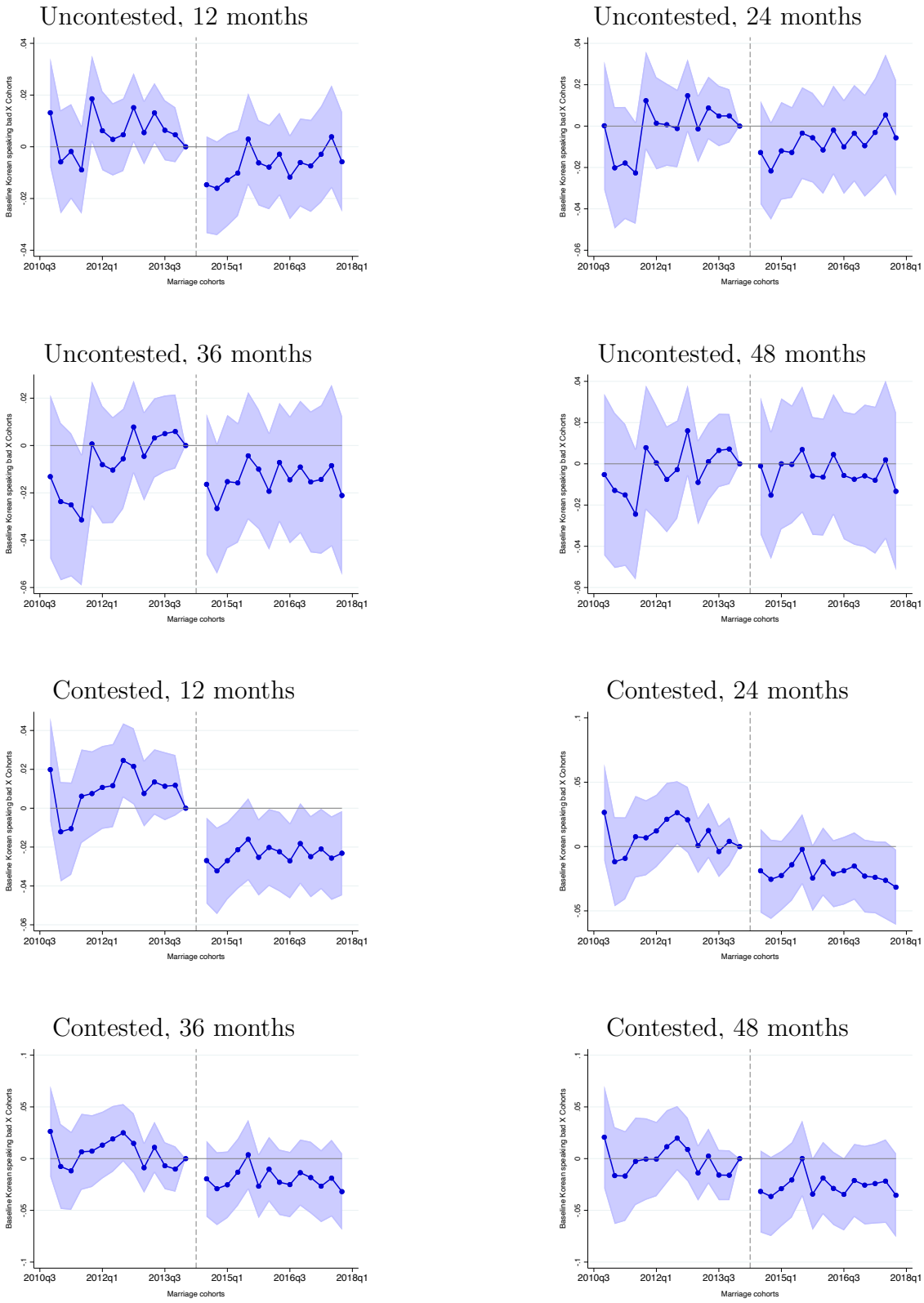
Notes: These figures plot event study coefficient estimates of the interaction between the baseline probability of Korean speaking being bad at the country level and the post dummy. Marital surplus related divorce reasons include infidelity, abuse, family conflicts, and incompatibility. Controls include 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.

Figure A11: The impacts of the amendment on cumulative divorce probabilities for different types (percent)



Notes: These figures plot regression estimates of the impacts on the amendment on cumulative divorce probabilities by different types. Linear specifications are used. 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.

Figure A12: The impacts of the amendment on cumulative divorce probabilities for different types (double-difference estimates)



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. The samples consist of cross-border couples, comprising Korean men and foreign women.

Appendix Table A1: 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***	0.0196	-0.2185***	0.0422	-0.1698***	-0.2001***	-0.0061	0.0148	0.0003**	0.0000	0.0021***	-0.0006
	(0.0090)	(0.0230)	(0.0188)	(0.0450)	(0.0097)	(0.0277)	(0.0115)	(0.0164)	(0.0001)	(0.0003)	(0.0004)	(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 teh survey data. Sources: The NSMF 2009, 2012, 2015, 2018. Marriage registry 2010-2017.

Appendix Table A2: The impacts of the amendment on cumulative divorce probabilities (natives)

Up to:	12 months	24 months	36 months	48 months
	(1)	(2)	(3)	(4)
	Panel a. Linear regression			
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 b. 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 c. Quadratic regression			
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 d. 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 e. Weighted least squares			
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
	Panel f. 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
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.

Appendix Table A3: 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	0.013*	0.004	0.008	0.009
	(0.007)	(0.009)	(0.010)	(0.011)
Husband edu: college	0.026**	0.013	0.019	0.020
	(0.013)	(0.016)	(0.017)	(0.019)
Wife edu: high school	-0.051***	-0.080***	-0.097***	-0.106***
	(0.007)	(0.008)	(0.009)	(0.010)
Wife edu: college	-0.099***	-0.146***	-0.178***	-0.197***
	(0.013)	(0.015)	(0.017)	(0.019)
Husband age: 30-39	0.033***	0.043***	0.046***	0.042***
	(0.005)	(0.006)	(0.007)	(0.008)
Husband age: 40-49	0.059***	0.082***	0.090***	0.087***
	(0.007)	(0.009)	(0.009)	(0.010)
Husband age: 50-59	0.083***	0.106***	0.119***	0.122***
	(0.010)	(0.013)	(0.014)	(0.015)
Husband age: 60+	0.102***	0.135***	0.151***	0.162***
	(0.015)	(0.019)	(0.021)	(0.022)
Wife age: 30-39	-0.033***	-0.041***	-0.043***	-0.043***
	(0.004)	(0.005)	(0.006)	(0.006)
Wife age: 40-49	-0.065***	-0.086***	-0.085***	-0.085***
	(0.007)	(0.009)	(0.010)	(0.011)
Wife age: 50-59	-0.077***	-0.095***	-0.088***	-0.078***
	(0.011)	(0.014)	(0.016)	(0.018)
Wife age: 60+	-0.102***	-0.139***	-0.144***	-0.150***
	(0.021)	(0.026)	(0.030)	(0.033)
Wife origin: Philippines	-0.018***	-0.029***	-0.033***	-0.039***
	(0.004)	(0.006)	(0.008)	(0.009)
Wife origin: Vietnam	-0.002	-0.003	-0.009	-0.020***
	(0.004)	(0.005)	(0.006)	(0.006)
Wife origin: Cambodia	-0.013***	-0.026***	-0.036***	-0.045***
	(0.004)	(0.004)	(0.005)	(0.005)
Wife origin: China	-0.028***	-0.065***	-0.085***	-0.100***
	(0.006)	(0.008)	(0.009)	(0.009)
Wife origin: Japan	-0.031***	-0.042***	-0.053***	-0.058***
	(0.005)	(0.008)	(0.009)	(0.009)
Wife origin: USA	0.022**	0.022*	0.018	0.015
	(0.011)	(0.013)	(0.016)	(0.017)
Husband more education than wife	-0.033**	-0.036**	-0.054***	-0.065***
	(0.014)	(0.018)	(0.019)	(0.021)
Husband same education as wife	-0.018**	-0.019**	-0.029***	-0.035***
	(0.008)	(0.009)	(0.010)	(0.011)
Husband older than wife	-0.024***	-0.023**	-0.019	-0.008
	(0.009)	(0.011)	(0.013)	(0.014)
Husband and wife same age group	-0.023***	-0.029***	-0.026***	-0.020**
	(0.005)	(0.007)	(0.008)	(0.009)
Cohort linear trends	Yes	Yes	Yes	Yes
Baseline mean	.067	.11	.136	.156
R-squared	0.122	0.178	0.188	0.193
Observations	7,257	7,257	7,257	7,257

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.

Appendix Table A4: 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*	0.002	0.006	0.004
	(0.007)	(0.009)	(0.010)	(0.011)
Husband edu: college	0.029**	0.011	0.016	0.013
	(0.013)	(0.016)	(0.018)	(0.019)
Wife edu: high school	-0.054***	-0.083***	-0.100***	-0.108***
	(0.007)	(0.008)	(0.009)	(0.010)
Wife edu: college	-0.104***	-0.150***	-0.181***	-0.197***
	(0.013)	(0.016)	(0.017)	(0.019)
Husband age: 30-39	0.032***	0.042***	0.045***	0.043***
	(0.005)	(0.007)	(0.007)	(0.008)
Husband age: 40-49	0.058***	0.081***	0.090***	0.088***
	(0.007)	(0.009)	(0.010)	(0.011)
Husband age: 50-59	0.082***	0.107***	0.122***	0.126***
	(0.010)	(0.013)	(0.014)	(0.015)
Husband age: 60+	0.100***	0.133***	0.151***	0.165***
	(0.015)	(0.019)	(0.021)	(0.023)
Wife age: 30-39	-0.031***	-0.040***	-0.044***	-0.044***
	(0.004)	(0.005)	(0.006)	(0.006)
Wife age: 40-49	-0.061***	-0.084***	-0.086***	-0.088***
	(0.007)	(0.009)	(0.010)	(0.011)
Wife age: 50-59	-0.071***	-0.092***	-0.090***	-0.084***
	(0.011)	(0.014)	(0.016)	(0.018)
Wife age: 60+	-0.097***	-0.138***	-0.147***	-0.158***
	(0.021)	(0.026)	(0.030)	(0.033)
Wife origin: Philippines	-0.023***	-0.028***	-0.030***	-0.039***
	(0.005)	(0.006)	(0.007)	(0.007)
Wife origin: Vietnam	-0.035***	-0.053***	-0.059***	-0.065***
	(0.005)	(0.006)	(0.007)	(0.007)
Wife origin: Cambodia	-0.051***	-0.092***	-0.108***	-0.121***
	(0.007)	(0.009)	(0.010)	(0.011)
Wife origin: China	-0.027***	-0.030***	-0.023***	-0.018***
	(0.004)	(0.005)	(0.006)	(0.006)
Wife origin: Japan	-0.029***	-0.037***	-0.034***	-0.036***
	(0.004)	(0.006)	(0.006)	(0.007)
Wife origin: USA	-0.035***	-0.040***	-0.044***	-0.048***
	(0.004)	(0.006)	(0.007)	(0.008)
Husband more education than wife	-0.036**	-0.035**	-0.053***	-0.060***
	(0.015)	(0.018)	(0.019)	(0.021)
Husband same education as wife	-0.020***	-0.019**	-0.029***	-0.034***
	(0.008)	(0.009)	(0.010)	(0.011)
Husband older than wife	-0.023***	-0.025**	-0.023*	-0.015
	(0.009)	(0.011)	(0.013)	(0.014)
Husband and wife same age group	-0.023***	-0.031***	-0.029***	-0.024**
	(0.005)	(0.007)	(0.009)	(0.010)
Cohort fixed effects	No	No	No	No
Baseline mean	.068	.112	.138	.158
R-squared	0.143	0.200	0.211	0.214
Observations	6,031	6,031	6,031	6,031

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.

Appendix Table A5: 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*	0.002	0.006	0.005
	(0.007)	(0.009)	(0.010)	(0.011)
Husband edu: college	0.029**	0.011	0.017	0.015
	(0.013)	(0.016)	(0.017)	(0.019)
Wife edu: high school	-0.054***	-0.083***	-0.100***	-0.107***
	(0.007)	(0.008)	(0.009)	(0.010)
Wife edu: college	-0.105***	-0.150***	-0.181***	-0.196***
	(0.013)	(0.015)	(0.017)	(0.019)
Husband age: 30-39	0.031***	0.041***	0.045***	0.043***
	(0.005)	(0.006)	(0.007)	(0.008)
Husband age: 40-49	0.058***	0.081***	0.090***	0.089***
	(0.007)	(0.009)	(0.010)	(0.010)
Husband age: 50-59	0.081***	0.107***	0.122***	0.127***
	(0.010)	(0.013)	(0.014)	(0.015)
Husband age: 60+	0.099***	0.134***	0.151***	0.166***
	(0.015)	(0.019)	(0.021)	(0.023)
Wife age: 30-39	-0.031***	-0.040***	-0.044***	-0.044***
	(0.004)	(0.005)	(0.006)	(0.006)
Wife age: 40-49	-0.061***	-0.084***	-0.086***	-0.088***
	(0.007)	(0.009)	(0.010)	(0.011)
Wife age: 50-59	-0.071***	-0.092***	-0.089***	-0.083***
	(0.011)	(0.014)	(0.016)	(0.018)
Wife age: 60+	-0.098***	-0.138***	-0.148***	-0.158***
	(0.020)	(0.026)	(0.029)	(0.033)
Wife origin: Philippines	-0.023***	-0.028***	-0.030***	-0.040***
	(0.005)	(0.006)	(0.007)	(0.007)
Wife origin: Vietnam	-0.035***	-0.052***	-0.059***	-0.065***
	(0.005)	(0.006)	(0.007)	(0.007)
Wife origin: Cambodia	-0.050***	-0.090***	-0.107***	-0.120***
	(0.007)	(0.009)	(0.010)	(0.011)
Wife origin: China	-0.027***	-0.030***	-0.023***	-0.019***
	(0.004)	(0.005)	(0.006)	(0.006)
Wife origin: Japan	-0.029***	-0.037***	-0.034***	-0.037***
	(0.004)	(0.006)	(0.006)	(0.007)
Wife origin: USA	-0.036***	-0.040***	-0.044***	-0.047***
	(0.004)	(0.007)	(0.007)	(0.008)
Husband more education than wife	-0.036**	-0.036**	-0.053***	-0.060***
	(0.014)	(0.017)	(0.019)	(0.021)
Husband same education as wife	-0.020***	-0.019**	-0.029***	-0.034***
	(0.008)	(0.009)	(0.010)	(0.011)
Husband older than wife	-0.023***	-0.025**	-0.023*	-0.015
	(0.009)	(0.011)	(0.013)	(0.014)
Husband and wife same age group	-0.023***	-0.031***	-0.029***	-0.024**
	(0.005)	(0.007)	(0.009)	(0.010)
Cohort fixed effects	Yes	Yes	Yes	Yes
Baseline mean	.068	.112	.138	.158
R-squared	0.151	0.207	0.217	0.219
Observations	6,031	6,031	6,031	6,031

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.

Appendix Table A6: The impacts of the amendment on cumulative divorce probabilities (compositional effects)

Up to:	12 months	24 months	36 months	48 months
	(1)	(2)	(3)	(4)
	Dep. var.: cumulative divorce rates			
Post	-0.028***	-0.029***	-0.027***	-0.025***
	(0.0037)	(0.0052)	(0.0059)	(0.0065)
Mean of Untreated	0.0667	0.1102	0.1358	0.1559
N				
	Dep. var.: difference between observed and predicted			
Post	-0.024***	-0.023***	-0.020***	-0.018***
	(0.0032)	(0.0043)	(0.0047)	(0.0051)
Mean of Untreated	0.0001	0.0007	0.0007	0.0006
N	14149	14149	14149	14149

Notes: This table presents regression estimates of the impacts on the amendment on cumulative divorce probabilities and differences between actual and predicted cumulative divorce probabilities up to 12, 24, 36, and 48 months. 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. Robust standard errors are used.

Appendix Table A7: The impacts of the amendment on cumulative divorce probabilities by different reasons (double-difference estimates)

Up to:	12 months	24 months
	(1)	(2)
	Reason: Marital surplus related	
Baseline Korean speaking bad × Post	-0.0142**	-0.0012
	(0.0065)	(0.0090)
Mean of Untreated	0.0303	0.0497
N	10170	10170
	Reason: financial problems	
Baseline Korean speaking bad × Post	0.0007	0.0008
	(0.0008)	(0.0015)
Mean of Untreated	0.0013	0.0026
N	10170	10170
	Reason: Health issues	
Baseline Korean speaking bad × Post	-0.0008*	-0.0004
	(0.0005)	(0.0007)
Mean of Untreated	0.0006	0.0009
N	10170	10170
	Reason: others	
Baseline Korean speaking skills × Post	-0.0318***	-0.0380***
	(0.0057)	(0.0082)
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, 24, 36, and 48 months. 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. Robust standard errors are used.

Appendix Table A8: The impacts of the amendment on cumulative divorce probabilities by different types (double-difference estimates)

Up to:	12 months	24 months	36 months	48 months
	(1)	(2)	(3)	(4)
	Type: uncontested divorce			
Baseline Korean speaking bad × Post	-0.0126**	-0.0279***	-0.0075	-0.0014
	(0.0049)	(0.0072)	(0.0080)	(0.0090)
Mean of Untreated	0.0241	0.0726	0.0478	0.0581
N	14149	14149	14149	14149
	Type: contested divorce			
Baseline Korean speaking skills × Post	-0.0325***	-0.0279***	-0.0252***	-0.0247***
	(0.0048)	(0.0072)	(0.0086)	(0.0094)
Mean of Untreated	0.0425	0.0726	0.0879	0.0975
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. 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. Robust standard errors are used.

Appendix 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.)
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.

Appendix Table A10: The impacts of the amendment on marital surplus (husband response)

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.)
Baseline Korean speaking bad × Post	-0.048	-0.094**	-0.157***	-0.033	0.012	-0.041	-0.055	-0.001	-0.010**	-0.008
	(0.075)	(0.038)	(0.029)	(0.036)	(0.043)	(0.031)	(0.036)	(0.004)	(0.004)	(0.005)
Baseline mean	0.35	0.11	0.17	0.10	0.11	0.05	0.08	0.00	0.00	0.01
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.