

Before the Border: Dynamic Effects of Pre-Entry Immigration Requirements

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July 13, 2026

The Challenge of Immigrant Integration

- ▶ Immigrant integration is a major policy challenge in immigrant-receiving countries
- ▶ Concerns about integration have become increasingly salient in public debate

“Multiculturalism has utterly failed.”

— *Angela Merkel (2010)*

- ▶ Governments increasingly use civic integration policies
 - ▶ Imposed at different stages of the migration process
 - ▶ Language proficiency requirements
 - ▶ Civic knowledge requirements
- ▶ Most existing evidence focuses on *post-migration* integration requirements (Fouka, 2024)

Pre-Entry Integration Requirements

- ▶ One prominent form of civic integration policy is **pre-entry integration requirements**
 - ▶ Migrants must demonstrate language proficiency or civic knowledge before arrival
 - ▶ First adopted by the Netherlands (2006)
 - ▶ Subsequently adopted by many countries, including the UK, Austria, Germany, France, Denmark, and South Korea
- ▶ Primarily target family migrants
 - ▶ Approximately 40% of permanent OECD immigration inflows
- ▶ Deeply contested
 - ▶ Supporters: facilitate integration through early acquisition of host-country skills
 - ▶ Critics: act primarily as barriers to migration

Yet there is little credible empirical evidence on how these policies work

This Paper

- ▶ Study how pre-entry integration requirements work, focusing on their **dynamic** effects
- ▶ Key idea: eligibility requirements generate dynamic selection
 - ▶ **Short run:** only migrants already able to satisfy the requirement can enter
⇒ sharp flow decline and sharp compositional change
 - ▶ **Long run:** selection after prospective migrants have time to invest
⇒ partial recovery in flows and evolving composition
 - ▶ Selection and investment jointly shape who migrates and how migrants fare after arrival
- ▶ Setting: South Korea's 2014 marriage visa reform requiring Korean proficiency before entry
- ▶ Data: administrative visa, marriage, and divorce records, and survey data on language acquisition
- ▶ Design: difference-in-differences

Preview of results

▶ **Migration flows**

- ▶ Short run: -39% in marriage visa entries; long run: partial recovery to -12%

▶ **Migrant composition**

- ▶ Short run: share of college-educated migrants rises; share from Southeast Asia falls
- ▶ Long run: both patterns partially reverse, consistent with marginal investors entering

▶ **Language investment**

- ▶ Studying Korean abroad flat in 2014, rises from 2015; consistent with this, TOPIK test-taking flat in 2014, rises from 2015 onward
- ▶ Proficiency at arrival jumps immediately post-reform (screening based on pre-reform language)
- ▶ Investment concentrated among non-college and SEA migrants (likely marginal investors)

▶ **Post-migration outcomes**

- ▶ Divorce within 3 years: -21% in short run, -22% in long run
- ▶ SR and LR effects statistically indistinguishable—consistent with investment improving outcomes in the long run
- ▶ Investment channel accounts for at least 39% of the long-run improvement

Literature and contributions

- ▶ **Civic integration policies** (Fouka, 2024): recent work studies *post-arrival* training and integration contracts (Foged et al., 2024; Arendt et al., 2025; Emeriau et al., 2025)
 - First causal evidence on *pre-entry* requirements on migration flows; short- vs. long-run effects diverge (Goodman, 2011; OECD, 2017)
- ▶ **Migration and human capital investment**: prior work links migration prospects to schooling in origin countries (Mountford, 1997; Docquier and Rapoport, 2012)
 - Evidence consistent with investment in destination-specific skills before arrival
- ▶ **Selective immigration policy and migrant selection** (Antecol et al., 2003; Jasso and Rosenzweig, 2008; Aydemir, 2011)
 - Costly eligibility generates *dynamic* selection as marginal investors enter over time
- ▶ **Cross-border marriage and marriage migration** (Weiss et al., 2018; Ahn, 2025; Ahn and Lubotsky, 2024; Farahzadi, 2024)
 - Highlights the role of policies

Outline

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Empirical strategy

Results

- Migration flows

- Migrant composition

- Language investment

- Marital stability

Conclusion

Korean marriage migration

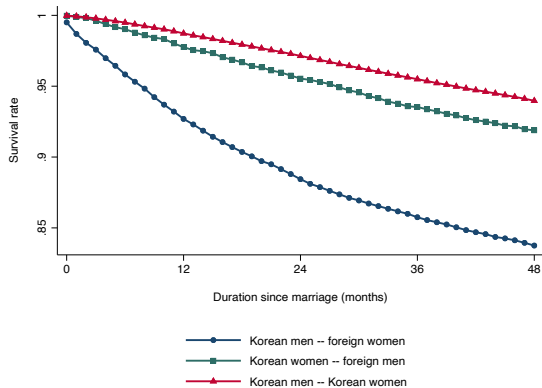
- ▶ Rapid increase in cross-border marriages since the early 2000s
 - ▶ $\approx 8\text{--}10\%$ of new marriages annually
 - ▶ Driven primarily by male-biased sex ratios
 - ▶ Predominantly Korean men and women from China, Vietnam, Philippines
 - ▶ 88.4% of visa cases: Korean husband + foreign wife
 - ▶ Large share arranged through international matchmaking agencies
- ▶ Family flows: 42% of permanent migration inflows to Korea (OECD, 2017); in Korea, family formation (marriage) is the dominant component

Korean marriage migration

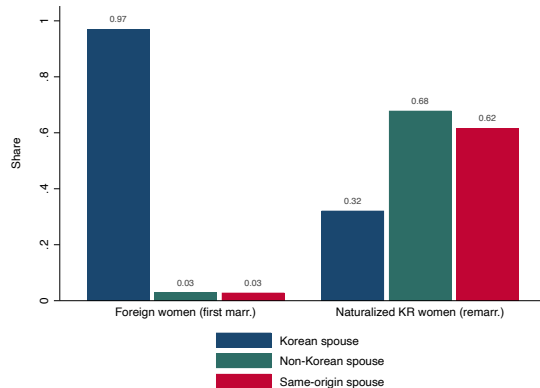
- ▶ Integration challenges
 - ▶ Divorce rates substantially higher than among native Korean couples
 - ▶ Marital dissolution $\Rightarrow$ economic vulnerability, return migration, social support dependence
 - ▶ Children in multicultural families face relatively poorer educational and socioeconomic outcomes
- ▶ Policy concern: marriage used as pathway to Korean residency and naturalization
 - ▶ Naturalized women who remarry: disproportionately high share marrying same-origin spouse
 - ▶ Pattern consistent with using initial marriage to Korean national as pathway to citizenship

Korean marriage migration: integration challenges

Panel A: Marriage survival rates



Panel B: Marriage patterns



- ▶ Cross-border marriages dissolve far more often than native marriages
- ▶ Naturalized women who remarry disproportionately marry a same-origin spouse

The 2014 marriage visa reform

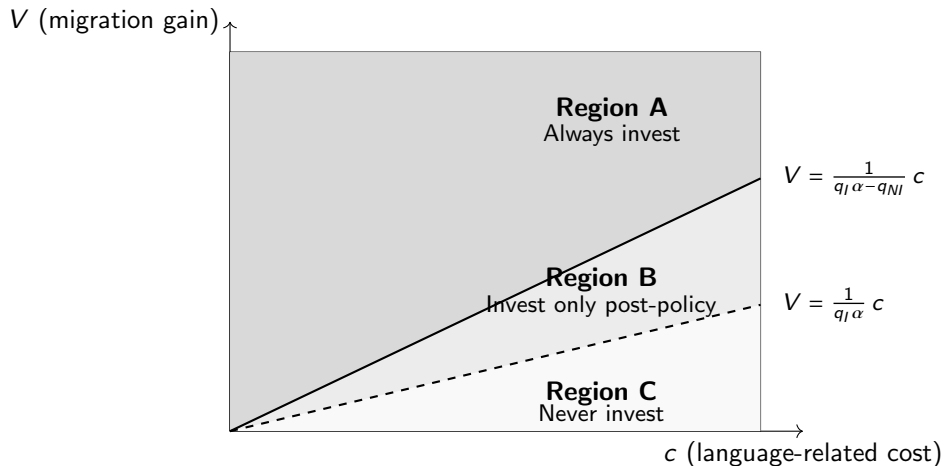
- ▶ Legally enacted October 2013; **implemented April 1, 2014**
- ▶ Language requirement for F-6 (marriage) visa applicants
 - ▶ TOPIK level 1, approved Korean program (≥ 120 hours, $\approx 3\text{--}4$ months), Korean-language degree, ethnic Korean, prior residence ≥ 1 year, or shared common language
- ▶ The requirement primarily affected Korean men + foreign women via matchmaking agencies
 - ▶ Korean women–foreign men couples largely unaffected (49% of foreign husbands from English-speaking countries)
- ▶ Sponsor-side requirements (income, housing, sponsorship limits) had minimal practical effect (Ahn and Lubotsky, 2025)
- ▶ In practice: couples match first, *then* the prospective wife invests in Korean training
 - ▶ Reported language-training costs: 487k KRW (2014 survey) $\rightarrow$ 1,106k KRW (2017 survey)
 - ▶ The additional costs may have increased financial barriers to cross-border marriage, particularly for lower-income men

Conceptual Framework

Conceptual framework: set-up

- ▶ Pool of potential migrants who differ in two dimensions
 - ▶ V : net gain from migration (primarily marital surplus)
 - ▶ c : cost of investing in Korean language skills
- ▶ If invest: migration gain = αV ($\alpha > 1$), migrate with probability q_I
- ▶ If do not invest: migration gain = V , migrate with probability $q_{NI} < q_I$
- ▶ Pre-reform: investment optional; invest iff $c \leq (q_I \alpha - q_{NI}) V \equiv a_1 V$
- ▶ Post-reform: investment is a prerequisite for migration; invest iff $c \leq q_I \alpha V \equiv a_2 V$
- ▶ Since $a_2 > a_1$, the reform expands the set of individuals who choose to invest
- ▶ Three groups in (V, c) space
 - ▶ **Always-investors (A)**: $c \leq a_1 V$ — invest before and after; enter in the short run
 - ▶ **Marginal investors (B)**: $a_1 V < c \leq a_2 V$ — invest only post-reform; enter in the long run
 - ▶ **Never-investors (C)**: $c > a_2 V$ — permanently excluded by the reform

Conceptual framework: investment regions



Region A invests before and after the reform; Region B invests only once language proficiency is required; Region C never invests and is excluded post-policy.

Testable predictions

	Short run (screening only)	Long run (screening + investment)
P1. Migration flows	Sharp decline, only always-investors enter	Partial rebound as marginal investors qualify
P2. Composition	College $\uparrow$, SE Asia $\downarrow$ (strong selection)	College $\downarrow$, SE Asia $\uparrow$ (partial reversion)
P3. Language	Investment flat; proficiency at arrival $\uparrow$	Studying Korean and test-taking $\uparrow$, esp. marginal types
P4. Marital stability	Improves via selection	Weaker selection but investment impacts

P1–P3: initial effects should weaken as marginal investors enter. P4: if improvements are driven only by screening, marital-stability gains should attenuate in the long run.

Data

Data: administrative records

- ▶ **International Migration Statistics** (Ministry of Justice, 2013–2019)
 - ▶ Monthly counts of long-term visa entries by visa type
 - ▶ Used to study marriage migration flows: F-6 marriage visas vs. E-category employment visas
- ▶ **Marriage registry** (Statistics Korea, 2013–2019)
 - ▶ Individual-level marriage records with spouse education, age, nationality, and origin
 - ▶ Used to study marriage registrations and migrant composition
- ▶ **Divorce registry** (Statistics Korea, 2013–2019)
 - ▶ Individual-level divorce records merged to marriage cohorts by year/month, age, education, and origin
 - ▶ Main outcome: divorce within the first 3 years of marriage
- ▶ **Taiwan marriage registry** (Ministry of the Interior, Taiwan, 2013–2019)
 - ▶ Monthly aggregate marriages used as a cross-country comparison

Data: language investment and proficiency

- ▶ **TOPIK test-taking records** (Ministry of Education, Korea)
 - ▶ Annual overseas TOPIK applicants, 2011–2017
 - ▶ Used to measure aggregate overseas demand for Korean-language certification
- ▶ **Migrant Labor Force Survey** (2018)
 - ▶ Retrospective information on Korean study abroad and year of entry
 - ▶ Used to measure pre-migration language study
- ▶ **National Survey of Multicultural Families** (2009, 2012, 2015, 2018)
 - ▶ Language proficiency and TOPIK take-up among marriage migrants
 - ▶ Used to measure language skills at or shortly after arrival

Empirical Strategy

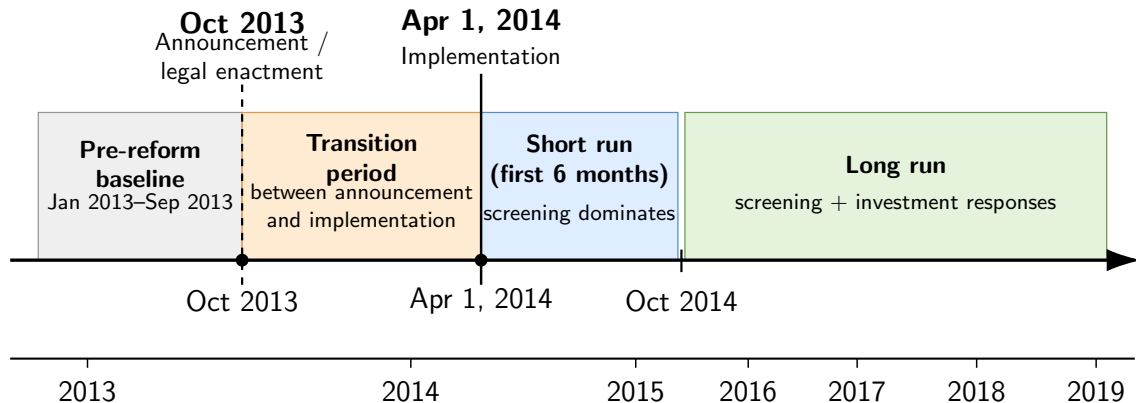
Empirical strategy

- ▶ Two complementary difference-in-differences designs
- ▶ **Within-country:** marriage visa entries vs. employment visa entries
 - ▶ Reform applied only to marriage migrants; employment visa requirements unchanged
- ▶ **Cross-country:** Korea vs. Taiwan (native men $\times$ foreign women marriages)
 - ▶ Taiwan: similar demographics, same major source countries, no comparable 2014 reform
 - ▶ Removes common supply-side shocks from source countries
- ▶ Estimating equation:

$$Y_{gym} = \beta^t \cdot \text{Treated}_g \times \text{Transition}_{ym} + \beta^s \cdot \text{Treated}_g \times \text{SR}_{ym} + \beta^l \cdot \text{Treated}_g \times \text{LR}_{ym} + \gamma_g + \delta_{ym} + \varepsilon_{gym}$$

- ▶ Transition = time between announcement and implementation; SR = first 6 months (before investment behavior adjusts); LR = up to 2019
- ▶ Composition analysis uses Korean women–foreign men couples as comparison group
 - ▶ Subject to same institutional environment; largely unaffected by language requirement

Timing of the 2014 marriage visa reform



Results

Testable predictions

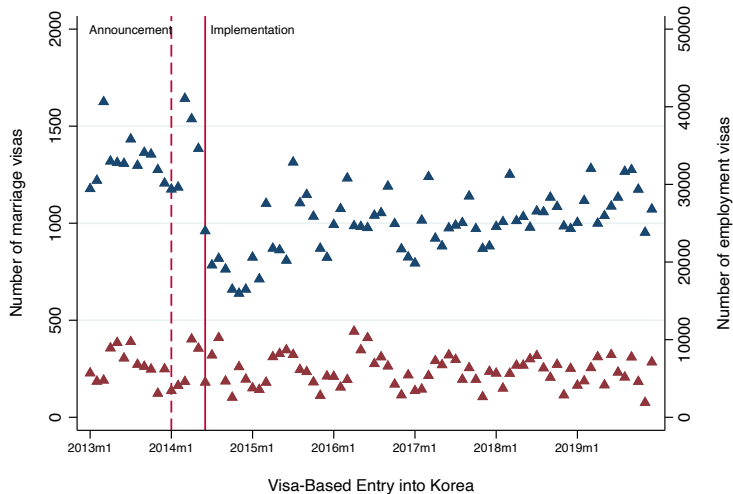
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Migration flows: visa-based entry, total

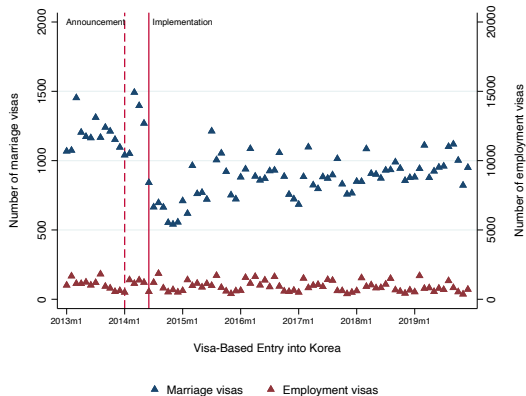
Panel A: Total



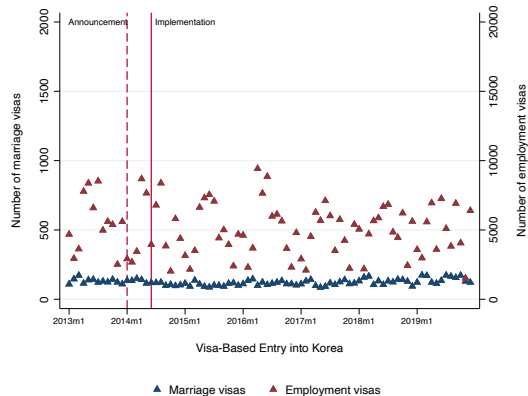
▲ Marriage visas ▲ Employment visas

Migration flows: visa-based entry by sex

Panel B: Women

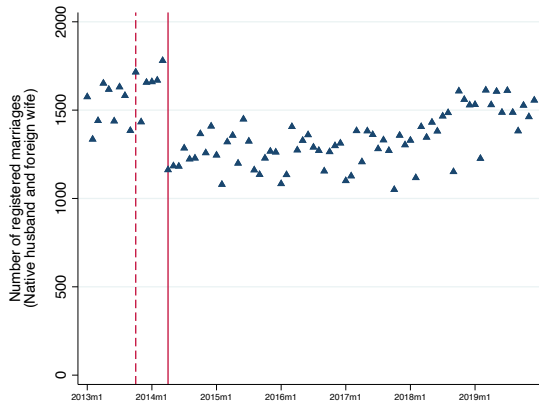


Panel C: Men

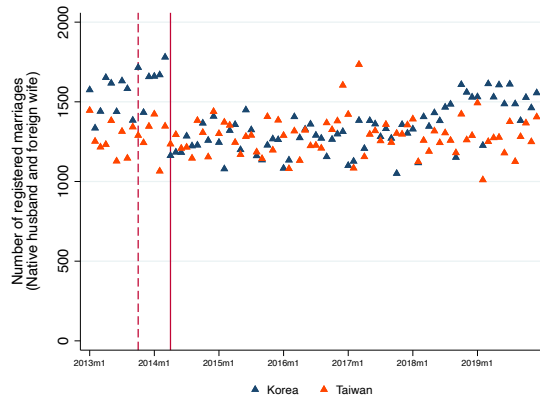


Migration flows: Korea vs. Taiwan

Panel A: Native men–foreign women, Korea



Panel B: Korea vs. Taiwan



Migration flows: regression results

	<i>Log visa entries</i>			<i>Log marriages</i>
	(1) Total	(2) Female	(3) Male	(4) Korea vs. Taiwan
Treated $\times$ Transition	0.133 (0.173)	0.058 (0.168)	0.183 (0.239)	
Treated $\times$ SR	-0.488*** (0.188)	-0.454** (0.185)	-0.101 (0.216)	-0.270**
Treated $\times$ LR	-0.129 (0.105)	-0.084 (0.113)	0.048 (0.141)	-0.137**
<i>p</i> -val: SR = LR	0.038	0.028	0.429	0.053
Year-month FE, group FE	✓	✓	✓	✓

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

- SR: sharp decline, LR: partial rebound
- Driven by women

Testable predictions

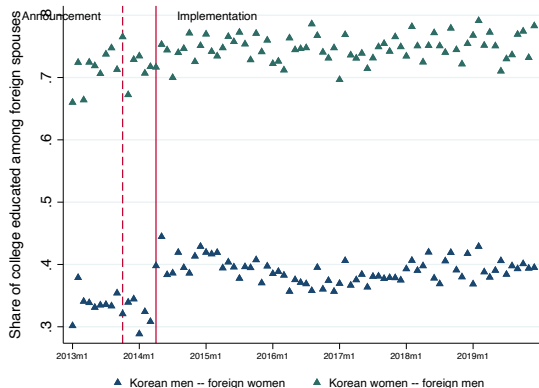
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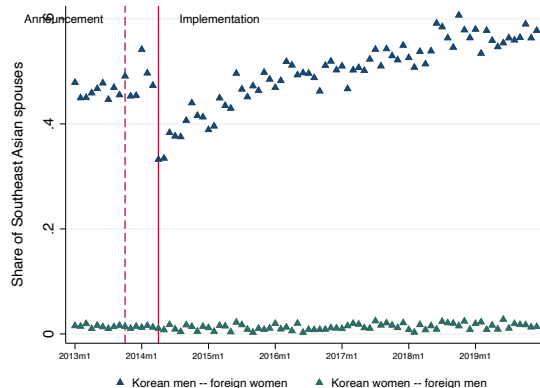
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Migrant composition: migrants

Panel A: Migrants' education



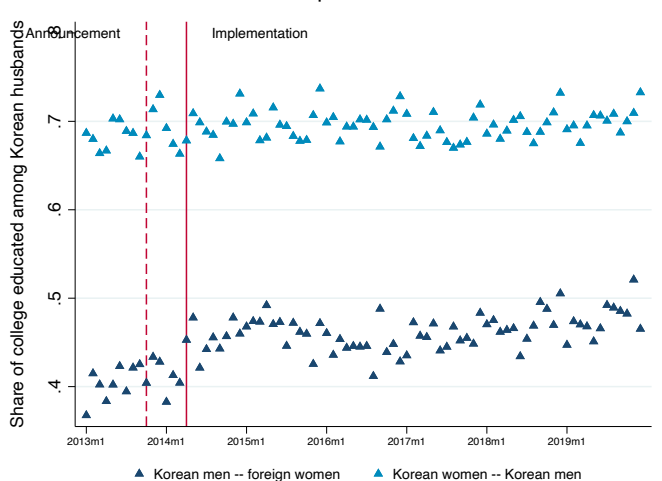
Panel B: Migrants' country of origin



◀ Country heterogeneity

Migrant composition: Korean sponsors

Panel C: Korean sponsors' education



Migrant composition: regression results

	(1) College-educated	(2) From SEA	(3) Husband college
KM-FW $\times$ Transition	-0.027 (0.018)	0.023* (0.012)	
KM-FW $\times$ SR	0.044*** (0.012)	-0.091*** (0.011)	0.042***
KM-FW $\times$ LR	0.014 (0.009)	0.050*** (0.008)	0.042***
<i>p</i> -val: SR = LR	0.0004	0.0000	0.9283
Year-month FE, couple type FE	✓	✓	✓

- ▶ Migrant characteristics: SR and LR statistically different for both outcomes—marginal investors enter in the long run
- ▶ Sponsor characteristics: SR $\approx$ LR. Sponsor-side composition changes do not display the same short-run/long-run pattern
- ▶ The contrast between migrant and sponsor patterns strengthens the screening–investment interpretation

Testable predictions

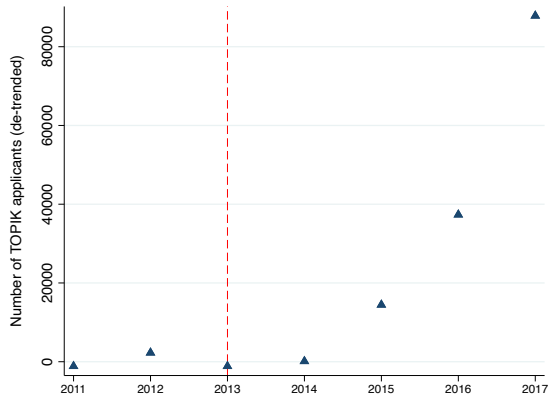
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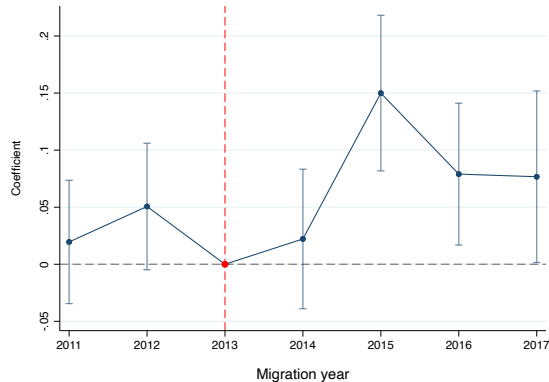
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Language investment: test-taking

Panel A: TOPIK applicants abroad

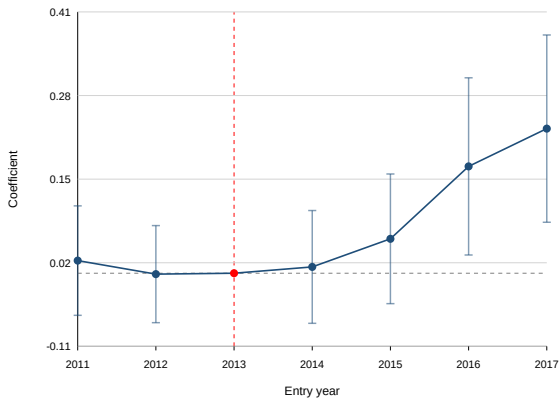


Panel B: Share with TOPIK $\geq$ Level 1

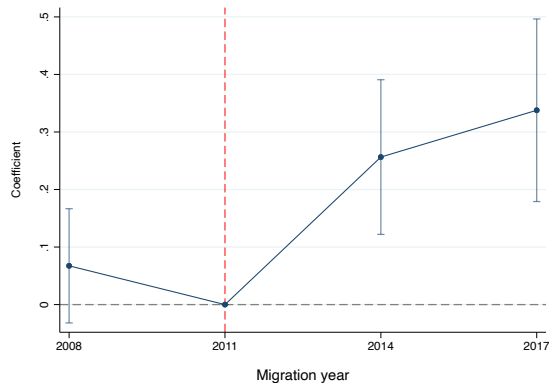


Language investment: study & proficiency

Panel C: Studied Korean abroad ≥ 3 months



Panel D: Korean ability at arrival



Language investment: regression results

	(1) TOPIK $\geq$ Lvl 1	(2) Studied Korean $\geq 3m$	(3) Korean ability
2014 cohort	-0.002 (0.026)	0.005 (0.037)	0.256*** (0.069)
Long-run cohort(s)	0.081*** (0.020)	0.149*** (0.039)	0.338*** (0.081)
Omitted cohort(s)	2011–2013	2011–2013	2011
Mean (omitted)	0.221	0.105	2.505
Observations	3,941	1,167	9,594

*** $p < 0.01$. Cols (1)–(2): shares; col (3): 1–5 ability scale.

- ▶ Investment measures (cols 1–2): 2014 cohort ≈ 0 , long-run cohorts strongly positive
- ▶ Proficiency at arrival (col 3): jumps immediately for the 2014 cohort
- ▶ Confirms the graphical pattern: screening operates immediately, investment emerges gradually

Heterogeneity in language investment

	(1) Overall	(2) Non-college	(3) College	(4) Non-SEA	(5) SEA
<i>Outcome: TOPIK Level 1 or higher</i>					
2014 cohort	-0.002 (0.026)	-0.018 (0.028)	0.029 (0.055)	0.024 (0.049)	-0.012 (0.031)
Long-run cohorts	0.081*** (0.020)	0.074*** (0.023)	0.057 (0.038)	0.078** (0.036)	0.090*** (0.024)
Mean (omitted)	0.221	0.184	0.328	0.267	0.197
Observations	3,941	2,578	1,363	1,657	2,233

Omitted cohorts 2011–2013; long-run cohorts 2015–2017. ** $p < 0.05$, *** $p < 0.01$.

- ▶ Long-run TOPIK take-up rises most among **non-college** and **Southeast Asian** migrants—the likely marginal investors
- ▶ 2014 cohort shows no increase in any subgroup (investment takes time)

Testable predictions

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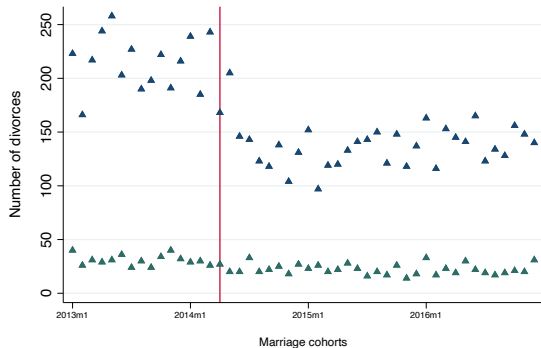
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Do dynamic responses translate into post-migration outcomes?

- ▶ The previous results show three dynamic responses:
 - ▶ Migration flows partially recover
 - ▶ Initial compositional changes weaken
 - ▶ Pre-migration language investment rises among later cohorts
- ▶ If long-run recovery reflects investment rather than only weaker selection, post-migration outcomes may remain improved even as observed selection weakens
- ▶ I test this using marital stability:
 - ▶ Outcome: divorce within the first 3 years of marriage

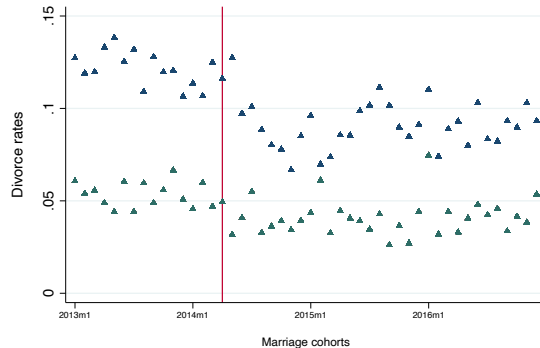
Post-migration outcomes: divorce

Panel A: Number of divorces



▲ Korean men -- foreign women ▲ Korean women -- foreign men

Panel B: Divorce rate



▲ Korean men -- foreign women ▲ Korean women -- foreign men

How much of the long-run improvement reflects investment?

- ▶ Divorce rates remain lower in the long run, even though observed migrant selection weakens
- ▶ This pattern is hard to reconcile with pure screening alone
 - ▶ Pure screening: outcome gains should shrink as selection weakens
 - ▶ Investment channel: outcome gains can persist if migrants acquire useful skills before entry
- ▶ I use the stronger short-run selection to bound how much of the long-run effect can be explained by selection
- ▶ Remaining long-run improvement provides a lower bound on policy-induced investment responses

Bounding exercise: how much is investment?

- ▶ Available data cannot separately identify screening vs. investment
- ▶ Instead, derive a lower bound on the investment share under a weak assumption
- ▶ Let β^h = reform effect on the divorce rate at horizon $h \in \{SR, LR\}$; Δ_{unobs}^h = part attributable to selection on unobservables
- ▶ **Assumption:** selection's share of the effect is no larger in the long run than in the short run, when screening is strongest

$$\frac{\Delta_{unobs}^{LR}}{\beta^{LR}} \leq \frac{\Delta_{unobs}^{SR}}{\beta^{SR}}$$

- ▶ Supported by observables: controlling for education shrinks the SR effect far more than the LR effect
- ▶ **Result:** under this restriction, language investment accounts for at least **39%** of the long-run improvement in marital stability

Robustness checks

▶ **Alternative short-run and long-run definitions**

- ▶ Main patterns are stable using 3-, 6-, and 9-month short-run windows [▶ Figures](#)

▶ **Alternative comparison groups**

- ▶ Migration results are consistent across visa-based and Korea–Taiwan comparisons
- ▶ Composition/divorce results are consistent with simple pre-post specification and comparison with Korean-born couples [▶ Table](#) [▶ Figures](#)

▶ **Anticipation**

- ▶ Dropping the Oct. 2013–Apr. 2014 announcement window leaves results unchanged

▶ **Concurrent restriction on re-sponsorship after naturalization**

- ▶ 2014 package also barred naturalized migrants from sponsoring a new foreign spouse within 3 years—could deter strategic “pathway” divorces
- ▶ But pathway divorces require naturalization (≥ 2 years of marriage); divorce decline is concentrated in months 0–12, before naturalization is feasible [▶ Figures](#)

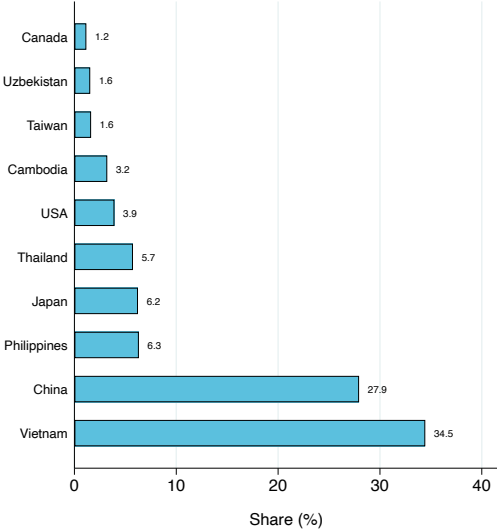
Conclusion

- ▶ Pre-entry integration requirements operate through two temporally distinct mechanisms
 - ▶ Short run—screening: gatekeeping selects migrants already able to comply
 - ▶ Long run—investment: marginal investors qualify; flows partially recover, initial compositional changes weaken, and outcomes remain improved
- ▶ Neither horizon alone captures the full policy effect
 - ▶ Examining dynamic patterns is informative about underlying mechanisms
- ▶ For divorce within 3 years, policy-induced investment responses account for at least 39% of the long-run improvement in marital stability
- ▶ Broader implication: framework applies to costly eligibility requirements more generally
 - ▶ Cross-cohort differences reflect both selection *and* behavioral responses
 - ▶ Evaluation horizon is an important choice in studying integration policies

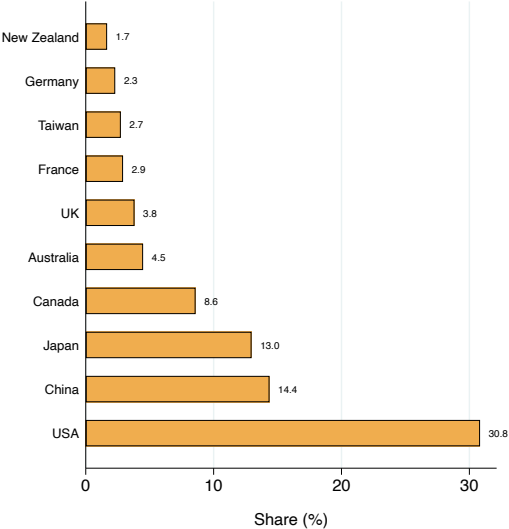
Thank you!

Appendix: Foreign spouses' origin countries

Panel A: Foreign wives

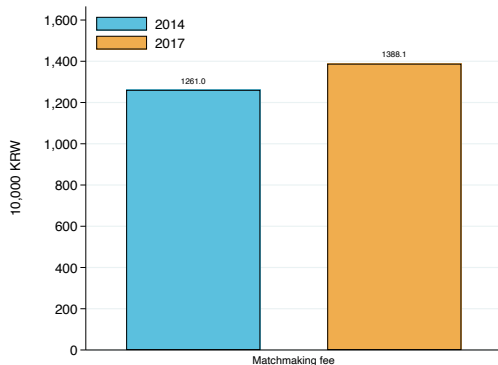


Panel B: Foreign husbands

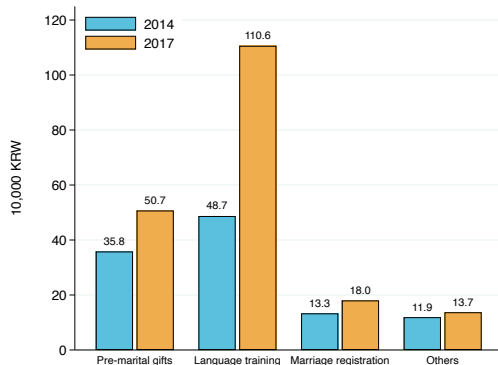


Appendix: Matchmaking expenses

Panel A: Matchmaking fee



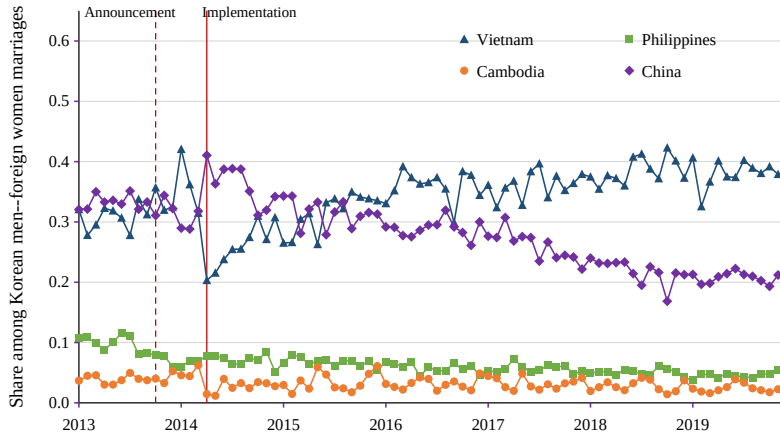
Panel B: Extra expenses



- ▶ Language-training expenses more than doubled between the 2014 and 2017 surveys
- ▶ Consistent with couples investing in language skills in response to the reform
- ▶ 2014 and 2017 survey coverage periods overlap; not a strict pre-post comparison

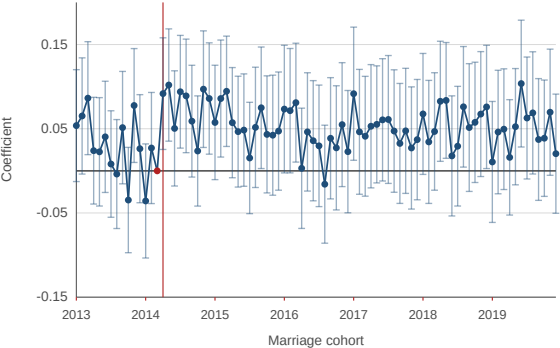
Appendix: Migrant composition: migrants (country heterogeneity)

Migrants' country of origin

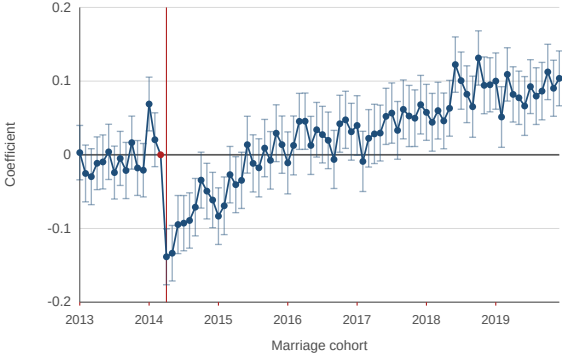


Appendix: Event-study, composition (vs. Korean women–foreign men)

Panel A: Migrants' education



Panel B: Migrants' country of origin

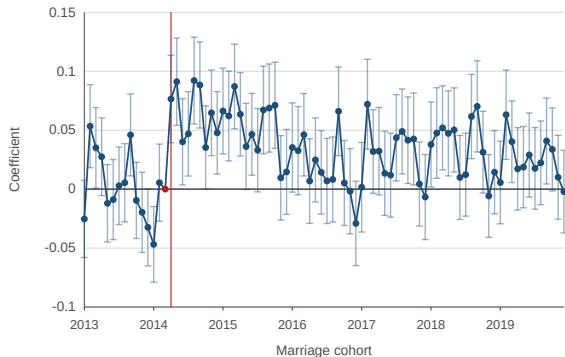


Coefficients normalized to March 2014; flat pre-trends, sharp break at implementation.

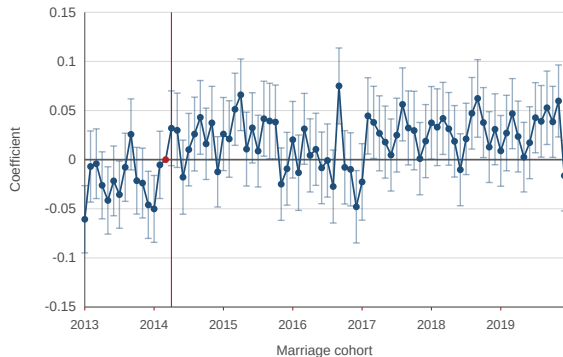
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Appendix: Event-study, composition (vs. Korean men–Korean women)

Panel C: Migrants' education

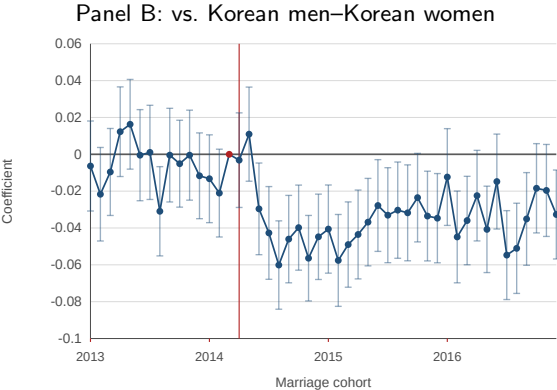
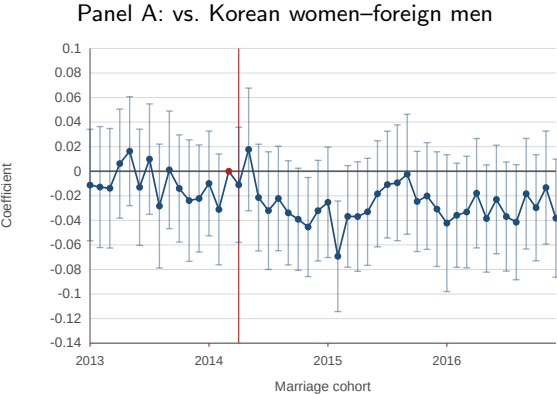


Panel D: Korean sponsors' education



Robust to the alternative Korean–Korean comparison group.

Appendix: Event-study, divorce rates

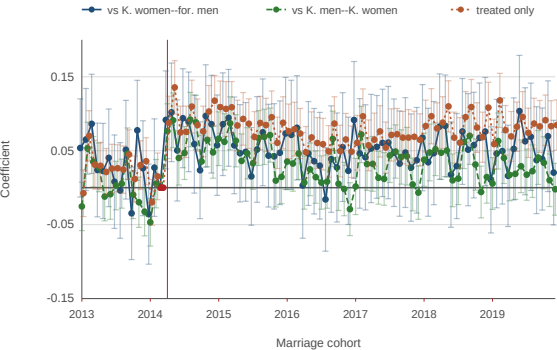


Cumulative divorce within 36 months; flat pre-trends, sustained decline post-reform.

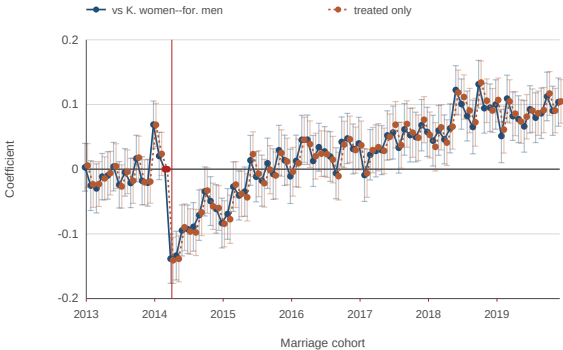
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Appendix: Robustness across specifications, composition

Panel A: Migrants' education



Panel B: Migrants' country of origin

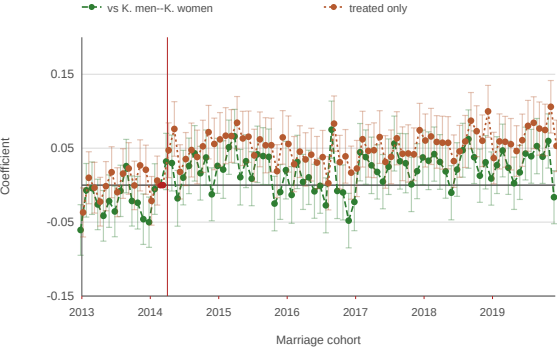


Estimates overlaid across comparison-group choices and treated-only specification.

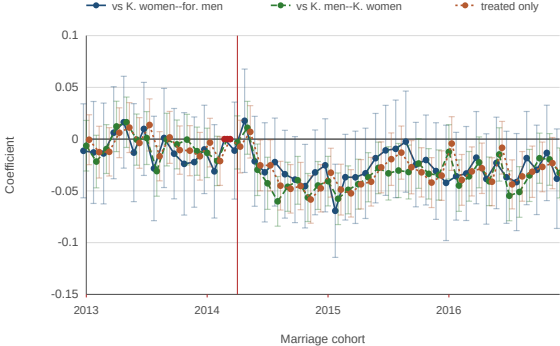
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Appendix: Robustness across specifications, sponsor & divorce

Panel C: Korean sponsors' education



Panel D: Divorce rate



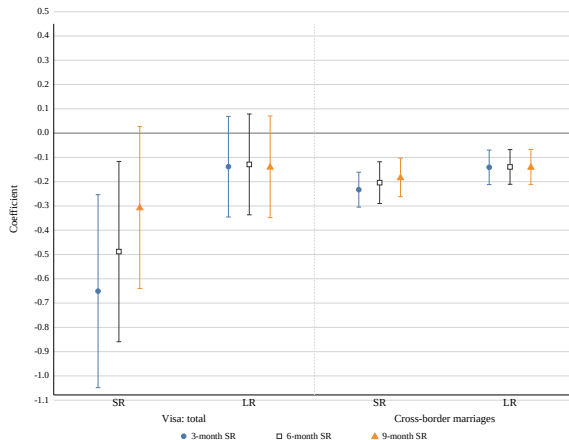
Appendix: Composition robustness across comparison groups

Comparison group		College	From SEA	Sponsor college
Korean women–foreign men	SR	0.044***	−0.091***	0.042***
	LR	0.014	0.050***	0.042***
Korean men–Korean women	SR	0.060***	—	0.042***
	LR	0.020**	—	0.042***
Treated group only	SR	0.066***	−0.093***	0.045***
	LR	0.051***	0.054***	0.057***

- ▶ Pattern robust across comparison-group choices: SR positive selection, LR partial reversion
- ▶ SEA outcome undefined for the Korean–Korean comparison (no foreign origin)

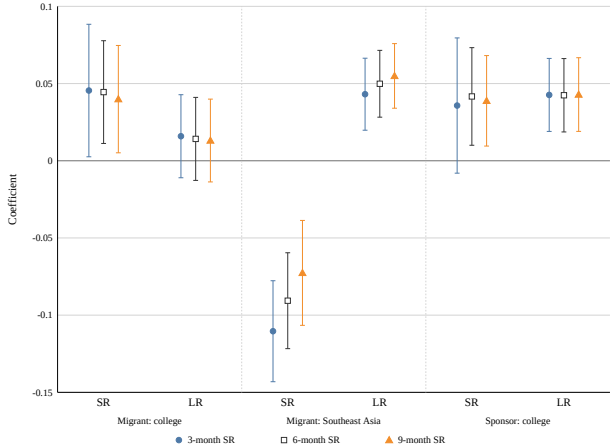
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Appendix: Robustness to short-run window—flows



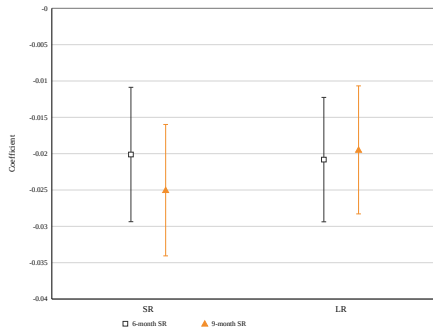
SR and LR estimates under 3-, 6-, and 9-month short-run windows; 6-month is the main specification.

Appendix: Robustness to short-run window—composition



Migrant education, Southeast Asia, and sponsor education under alternative short-run windows

Appendix: Robustness to short-run window—divorce

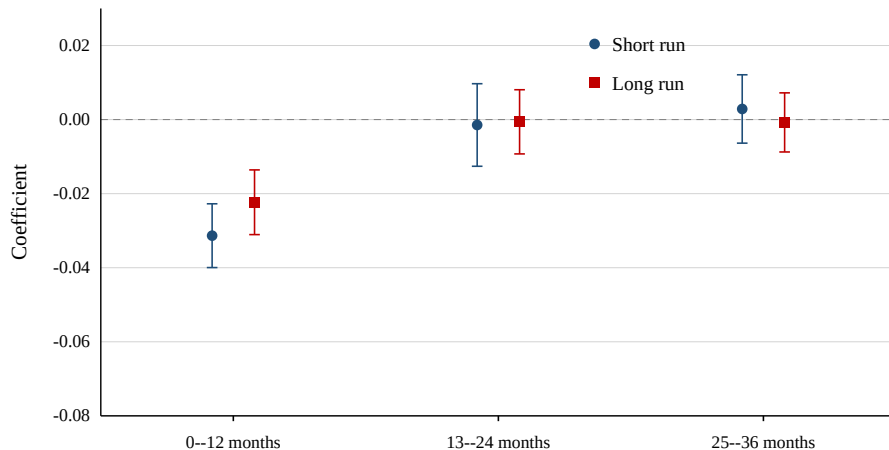


Divorce-rate effect (specification 2) under 6- and 9-month short-run windows.

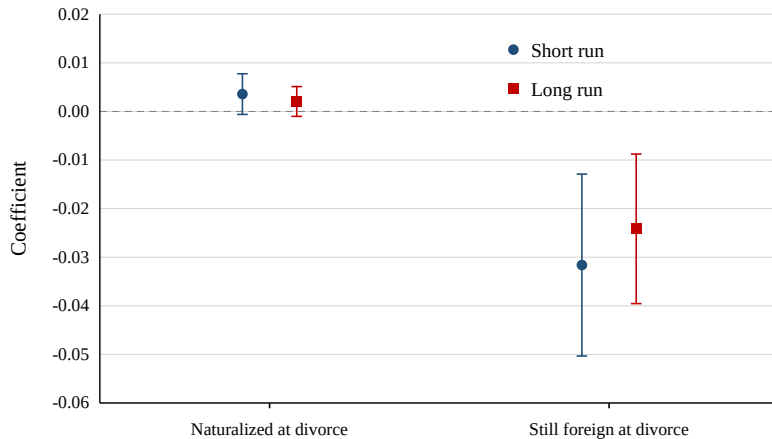
Appendix: Timing and anticipation

- ▶ Policy announced October 2013, implemented April 2014
- ▶ Visa processing $\approx 2\text{--}3$ months $\Rightarrow$ relevant application window starts around January 2014
- ▶ Pre-implementation surge: couples accelerate marriage and visa applications ahead of reform
- ▶ Transition period coefficient small and insignificant in all specifications
- ▶ April–June 2014 marriage cohorts excluded from divorce analysis
 - ▶ Divorce registry records date couples began living together, not marriage report date
 - ▶ Cohabitation typically begins 2–3 months after marriage registration
 - ▶ Exclusion avoids contamination from the transition period
- ▶ Robustness: defining SR as through October 2014 (rather than December 2014) yields slightly larger SR estimates; qualitative patterns unchanged

Divorce Effects Are Concentrated Before Naturalization Is Plausible



Divorce Effects Are Not Driven by Naturalized Spouses



Appendix: Decomposition derivation

- Decompose the reform effect on the divorce rate at each horizon:

$$\beta^{SR} = \Delta_{obs}^{SR} + \Delta_{unobs}^{SR}, \quad \beta^{LR} = \Delta_{obs}^{LR} + \Delta_{unobs}^{LR} + \Delta^{inv}$$

- Observable component recovered from regressions with vs. without controls:

$$\Delta_{obs}^h = \beta^h(\text{no controls}) - \beta^h(\text{with controls})$$

- Investment is the long-run residual once selection is removed:

$$\Delta^{inv} = \beta^{LR} - \Delta_{obs}^{LR} - \Delta_{unobs}^{LR}$$

- Δ_{unobs}^{LR} is not observed; bound it with weak monotonicity

$$\frac{\Delta_{unobs}^{LR}}{\beta^{LR}} \leq \frac{\Delta_{unobs}^{SR}}{\beta^{SR}} \implies \frac{\Delta^{inv}}{\beta^{LR}} \geq 1 - \frac{\Delta_{unobs}^{SR}}{\beta^{SR}} - \frac{\Delta_{obs}^{LR}}{\beta^{LR}}$$

- Plugging in the estimated shares yields a lower bound of **39%**

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