

Globalization of Marriage and Trade

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Household decisions shape the origin of market demand.

A Spanish couple migrates to the United States

A Spanish couple migrates to the United States

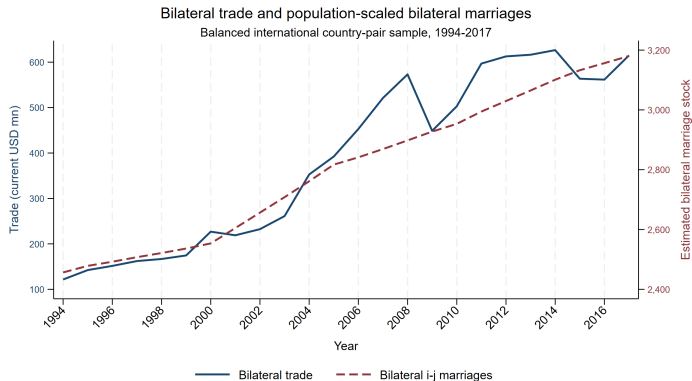
“We cannot cook (paella) without olive oil.”

They bring tastes, knowledge, and household decisions.



Household decisions affect markets and demand.

Trade and migrant marriages in the sample



Annual means over 15707 directional pairs. Marriage rates are interpolated before scaling by World Bank population.

Data detail

Three marriage channels

Income, γ_I

Pooling resources changes household expenditure.

Origin demand, γ_D

Household composition changes demand for origin-country goods.

Information, γ_F

Origin links lower search and trade costs.

Three marriage channels

Income, γ_I

Pooling resources changes household expenditure.

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Information, γ_F

Origin links lower search and trade costs.

Distinct mechanisms, combined in the estimated trade elasticities.

What we contribute

Data

A global migrant-marriage dataset identifying spouses' origins.

Model

Structural trade with households and non-homothetic demand.

Quantification

Implied channel contributions from estimates of marriage stocks.

Counterfactual general-equilibrium analysis

Households, trade and migration, migrant heterogeneity

Household decisions Becker (1973, 1974); Buera–Kaboski (2012); Buera–Kaboski–Zhao (2019).

Household production, specialization, and market demand.

Trade & migration Gould (1994); Head–Ries (1998); Rauch (1999); Rauch–Trindade (2002).

Origin preferences, information, and networks.

Migrant heterogeneity Aleksynska–Peri (2014); Bahar–Rapoport (2018); Cuadros et al. (2019).

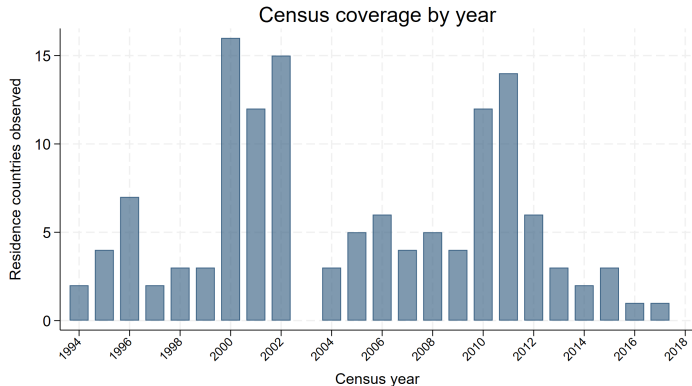
Education, occupations, and knowledge; we add migrant household composition.

Households

Trade and migration

Heterogeneity

The dataset starts with observed census waves



Coverage changes are why raw global totals should not be interpreted as a balanced-panel trend.

Coverage and definitions

Observed and interpolated years

From census cells to annual marriage stocks

133 census samples; 77 residence countries; 236 origin codes.

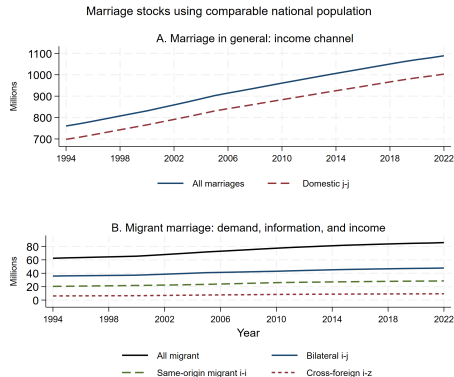
1. Identify both spouses' birthplaces; harmonize regional origins.
2. Divide weighted marriage cells by the census population.
3. Interpolate rates between waves; flag carried endpoints.
4. Multiply by World Bank population; merge with trade.

$$\widehat{M}_{ijt}^{k,WB} = \tilde{r}_{ijt}^k \text{Population}_{jt}^{WB}.$$

Construction detail

Descriptive tables

Four household compositions, four annual series

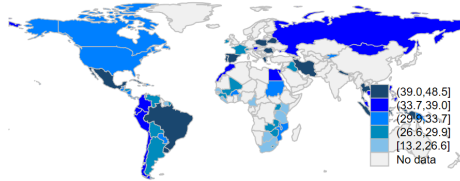


All types: interpolated marriage rates x World Bank population.
Balanced 77-country sample, 1994-2022.

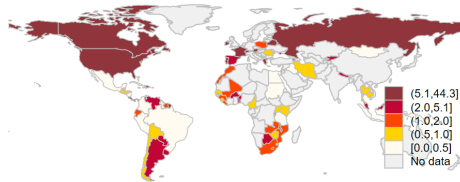
Stock definitions

Household composition differs across destinations

B. Domestic marriage rate



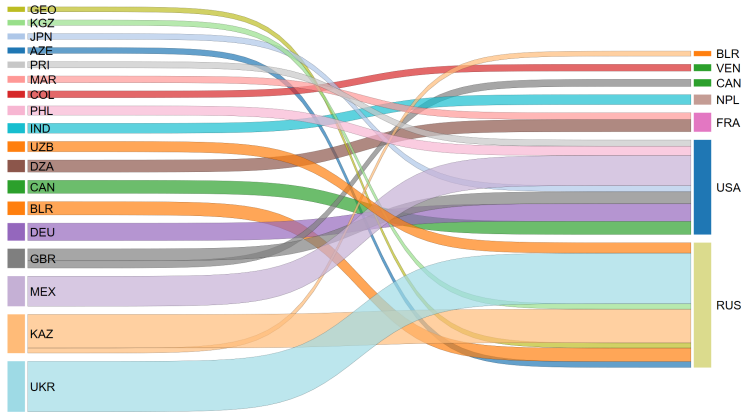
C. Migrant/cross-border marriage rate



Country tables

Largest population-scaled bilateral marriage corridors

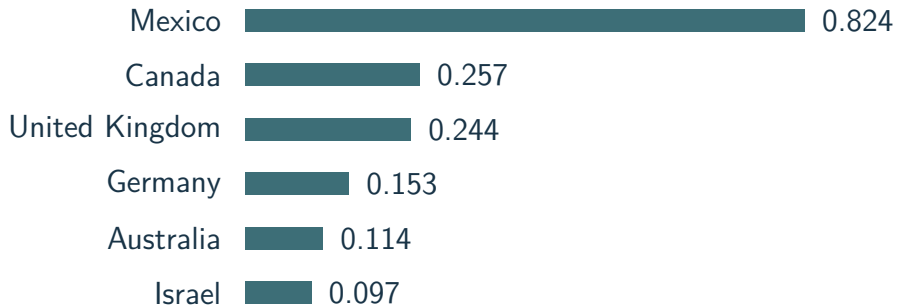
Average annual stock, 1994-2022



Top 20 origin-residence corridors; rates scaled by World Bank population.

Corridor tables

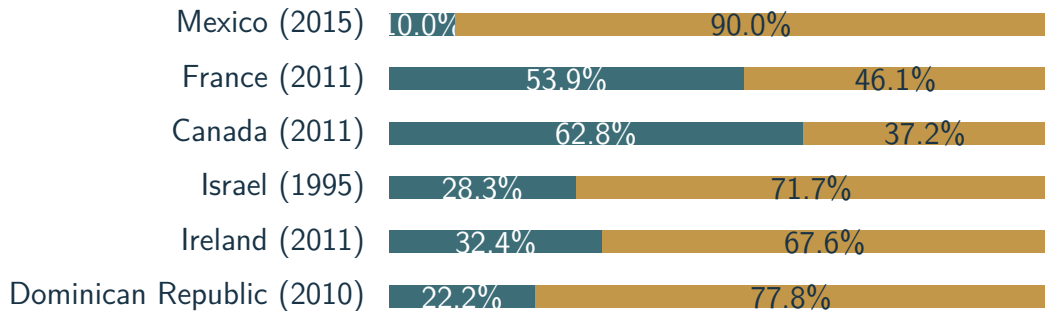
U.S.-born people abroad: leading foreign destinations



UN migrant stocks, 2024; millions of people.

Definitions and denominators

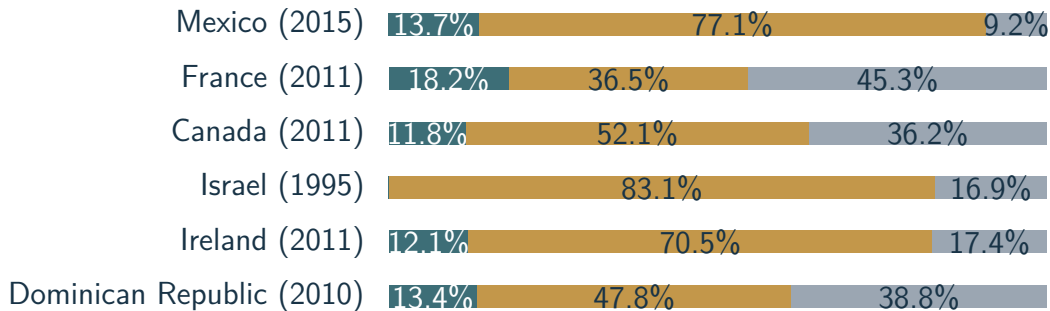
U.S.-born people abroad: marriage profiles



■ Recorded married ■ Other respondents

Sample definitions

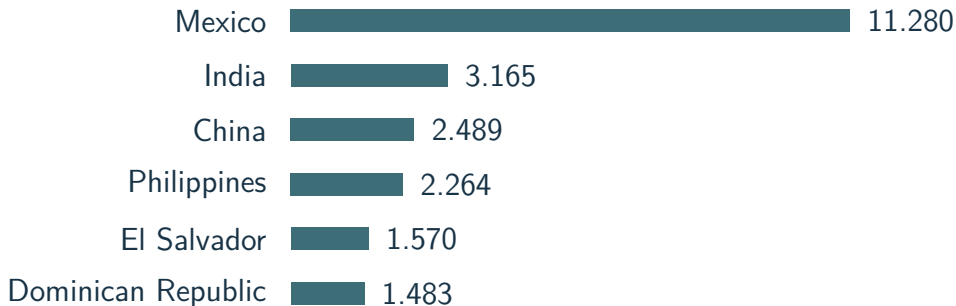
U.S.-born people abroad: spouse origins



■ Same origin ■ Destination ■ Third country

[Sample definitions](#)

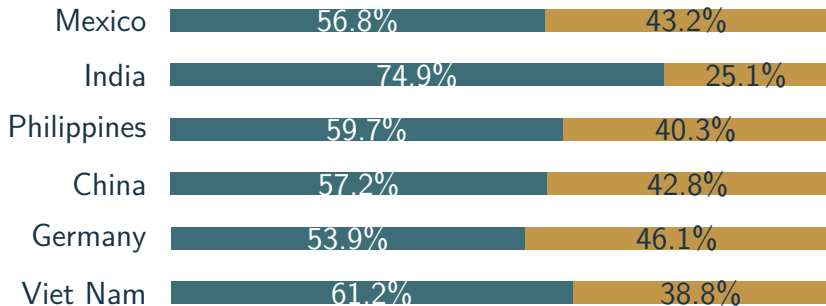
The United States as a migration destination



UN migrant stocks by birthplace, 2024; millions.

[Data detail](#)

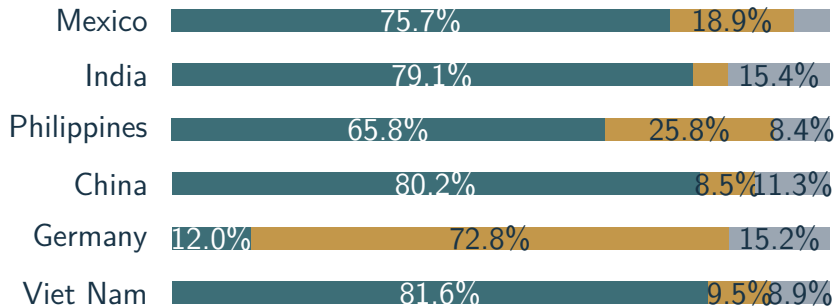
Immigrants in the United States: marriage profiles



U.S. census extract, 2015.

■ Recorded married ■ Other respondents

Immigrants in the United States: spouse origins



U.S. census extract, 2015.

■ Same origin ■ Destination ■ Third country

Canadians in the U.S. and U.S.-born people in Canada

	Canadians in U.S.	U.S.-born in Canada
UN migrant stock, 2024	950,387	256,571
Census year	2015	2011
Married / extract respondents	59.9%	62.8%
Same-origin spouse / married	28.3%	11.8%
Destination-born spouse / married	56.5%	52.1%
Third-country spouse / married	15.2%	36.2%

Historical marriage profiles and 2024 stocks are separate measures.

Denominators

Trade data: bilateral and domestic flows

Estimation: ITPD-E

Industry trade and production, including domestic flows.

Aggregate trade, then agriculture and food, beverages, and tobacco.

Controls

Bilateral migrant stocks: United Nations (UN).

Trade-policy controls: EU, RTA, and WTO relationships.

Counterfactuals / GE analysis: ITPD-S, 2017

A consistent square matrix of international and domestic trade.

Coverage and summary statistics

Household decisions shape markets and demand

Household decisions and heterogeneity

Specialization and household production change market demand; marriage adds heterogeneity in those decisions.

Buera–Kaboski (2012); Buera–Kaboski–Zhao (2019).

From households to migrants

Migrants affect trade through demand and information. Education and jobs shape those links (Aleksynska–Peri, 2014; Cuadros et al., 2019).

Household decisions shape markets and demand

Household decisions and heterogeneity

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Migrants affect trade through demand and information. Education and jobs shape those links (Aleksynska–Peri, 2014; Cuadros et al., 2019).

Aggregate migrant stocks fail to identify household characteristics. We study a novel margin: migrant household heterogeneity through marriage.

Aggregate consumption across heterogeneous households

Total consumption of goods from i in country j , C_{ij} , aggregates across household types h :

$$C_{ij} = \left[\sum_{h \in H_j} \alpha_h^{1/\sigma_H} \left(c_{ij}^{(h)} + \bar{c}_{ij}^{(h)} \right)^{\frac{\sigma_H - 1}{\sigma_H}} \right]^{\frac{\sigma_H}{\sigma_H - 1}}.$$

$c_{ij}^{(h)}$: adjustable consumption, responding to prices and resources.

$\bar{c}_{ij}^{(h)}$: fixed origin habit; breaks proportional scaling of demand.

α_h : expenditure share of household type h .

σ_H : substitution across household types in the aggregator.

Household preferences and the three marriage channels

For $\sigma_H = 1$, the paper adopts the Cobb–Douglas case:

$$C_{ij} = \prod_{h \in H_j} \left(\xi_{ij}^{(h)} c_{ij}^{(h)} \right)^{\alpha_h}, \quad \xi_{ij}^{(h)} = 1 + \frac{\bar{c}_{ij}^{(h)}}{c_{ij}^{(h)}}.$$

Income: pooling resources changes expenditure allocation.

Demand: spouses' origins change habits and bilateral preferences.

Information: family knowledge and networks facilitate origin purchases.

Household composition connects these mechanisms to bilateral demand and trade.

Marriage types and the aggregate preference term

$\mathcal{H}_{ij}^M = \{ii, ij, iz, jj\}$; $\mathcal{H}_{ij}^0$ contains the remaining households.

$$\xi_{ijt} = \prod_{ab \in \mathcal{H}_{ij}^M} \left(\xi_{ijt}^{(ab)} \right)^{\alpha_{ijt}^{(ab)}} \prod_{h \in \mathcal{H}_{ij}^0} \left(\xi_{ijt}^{(h)} \right)^{\alpha_{ijt}^{(h)}}.$$

Expenditure shares sum to one across both sets of households.

Substitution into structural gravity gives the paper's equation (6):

$$X_{ijt} = \frac{Y_{it} E_{jt}}{Y_t} \left(\frac{\tau_{ijt}}{\phi_{it} \Pi_{jt}} \right)^{1-\sigma} \xi_{ijt}^{\sigma-1}. \quad (6)$$

From the structural contribution to an empirical equation

Relative to a reference household composition, holding gravity fundamentals fixed:

$$\log \frac{X_{ijt}}{X_{ijt}^0} = (\sigma - 1) \left[\log \frac{\xi_{ijt}}{\xi_{ijt}^0} - \log \frac{\tau_{ijt}}{\tau_{ijt}^0} \right].$$

Approximate the combined contribution with marriage stocks and rates:

$$\log \frac{X_{ijt}}{X_{ijt}^0} = \beta_{ii} m_{ijt}^{ii} + \beta_{ij} m_{ijt}^{ij} + \beta_{iz} m_{ijt}^{iz} + \beta_{jj} r_{jt}^{jj} + \varepsilon_{ijt}.$$

$$m_{ijt}^{ab} = \text{asinh}(M_{ijt}^{ab}); r_{jt}^{jj} = \text{asinh}(R_{jt}^{jj}).$$

This conditional empirical bridge is not a GE counterfactual.

From marriage elasticities to channel contributions

Combined elasticities

$$\tilde{\beta}_{ii} = \gamma_I^{ii} + \gamma_D^{ii} + \gamma_F^{ii}$$

$$\tilde{\beta}_{ij} = \gamma_I^{ij} + \gamma_D^{ij} + \gamma_F^{ij}$$

$$\tilde{\beta}_{iz} = \gamma_I^{iz} + \gamma_D^{iz}$$

$$\tilde{\beta}_{jj} = \gamma_I^{jj}$$

Implied channel contributions

$$\gamma_I = \tilde{\beta}_{jj}$$

$$\gamma_D = \tilde{\beta}_{iz} - \tilde{\beta}_{ij}$$

$$\gamma_F^{ii} = \tilde{\beta}_{ii} - \tilde{\beta}_{iz}$$

$$\gamma_F^{ij} = \tilde{\beta}_{ij} - \tilde{\beta}_{iz}$$

Identifying assumptions

$$\gamma_I^{ii} = \gamma_I^{ij} = \gamma_I^{iz} = \gamma_I^{jj} = \gamma_I, \quad \gamma_D^{ii} = \gamma_D^{ij} = \gamma_D^{iz} = \gamma_D.$$

$\gamma_F^{iz} = \gamma_F^{jj} = \gamma_F^{jj} = 0$; information may differ between ii and ij .

$$\tilde{\beta}_{jj} = \beta_{jj} \frac{R_0}{\sqrt{1 + R_0^2}}, \quad R_0 = 0.3224. \quad I: \text{income}; D: \text{demand}; F: \text{information}.$$

Marriage types: Canada–U.S. examples

Goods originate in Canada (i); households live in the U.S. (j).

Type	Spouses' birthplaces	Channel contributions
ii	Canada + Canada	Income + demand + information
ij	Canada + United States	Income + demand + information
iz	Canada + Mexico	Income + demand
jj	United States + United States	Income

Reverse Canada and the U.S. for the opposite trade direction.

The channel assignments include maintained exclusion restrictions.

The gravity equation we estimate

$$X_{ijt} = \exp \left[\mu_{it} + \nu_{jt} + \eta_{ij} + \delta_t B_{ij} + \theta'_Z Z_{ijt} \right. \\ \left. + B_{ij} (\beta_{ii} m_{ijt}^{ii} + \beta_{ij} m_{ijt}^{ij} + \beta_{iz} m_{ijt}^{iz} + \beta_{jj} r_{jt}^{jj}) \right].$$

$m^k = \text{asinh}(M^k)$; $r^{jj} = \text{asinh}(R^{jj})$.

$B_{ij} = 1$ for international trade, zero for domestic flows.

PPML; exporter–year, importer–year, directional-pair and border–year effects.
Standard errors clustered by directional pair.

Z : bilateral migrants and trade-policy controls.

Identification detail

Reading the full tables

Total trade: complete results

	(1) Pooled	(2) ii	(3) Other	(4) Split	(5) $+ jj$
EU	0.486*** (0.0724)	0.484*** (0.0723)	0.484*** (0.0723)	0.484*** (0.0723)	0.463*** (0.0698)
RTA	0.166*** (0.0511)	0.165*** (0.0510)	0.165*** (0.0510)	0.165*** (0.0510)	0.158*** (0.0505)
WTO	0.0850 (0.0924)	0.0844 (0.0924)	0.0845 (0.0923)	0.0840 (0.0920)	0.0768 (0.0913)
IHS migrant stock	0.101*** (0.0260)	0.102*** (0.0258)	0.102*** (0.0259)	0.102*** (0.0259)	0.0971*** (0.0251)
$\text{asinh}(M^{\text{mig}})$	0.0142 (0.0165)				
$\text{asinh}(M^{ii})$		0.0219* (0.0115)	0.0211 (0.0128)	0.0226* (0.0125)	0.0230* (0.0122)
$\text{asinh}(M^{ij} + M^{iz})$			0.00346 (0.0198)		
$\text{asinh}(M^{ij})$				0.00188 (0.0259)	-0.00515 (0.0244)
$\text{asinh}(M^{iz})$				-0.00610 (0.0307)	0.00937 (0.0287)
$\text{asinh}(R^{ij})$					4.106* (2.467)
Observations	239,657	239,657	239,657	239,657	239,657
All four fixed effects	Yes	Yes	Yes	Yes	Yes

Specification, standard errors, and stars

Total trade: all marriage coefficients

	(1) Pooled	(2) ii	(3) Other	(4) Split	(5) $+ jj$
$\text{asinh}(M^{\text{mig}})$	0.0142 (0.0165)				
$\text{asinh}(M^{ii})$		0.0219* (0.0115)	0.0211 (0.0128)	0.0226* (0.0125)	0.0230* (0.0122)
$\text{asinh}(M^{ij} + M^{iz})$			0.00346 (0.0198)		
$\text{asinh}(M^{ij})$				0.00188 (0.0259)	-0.00515 (0.0244)
$\text{asinh}(M^{iz})$				-0.00610 (0.0307)	0.00937 (0.0287)
$\text{asinh}(R^{jj})$					4.106* (2.467)

Specification, standard errors, and stars

Agriculture: complete results

	(1) Pooled	(2) ii	(3) Other	(4) Split	(5) $+ jj$
EU	1.059*** (0.0688)	1.059*** (0.0688)	1.058*** (0.0688)	1.056*** (0.0690)	1.045*** (0.0669)
RTA	0.0480 (0.0354)	0.0479 (0.0355)	0.0479 (0.0355)	0.0472 (0.0353)	0.0423 (0.0340)
WTO	0.484*** (0.0631)	0.485*** (0.0631)	0.482*** (0.0632)	0.480*** (0.0632)	0.472*** (0.0616)
IHS migrant stock	0.0469** (0.0199)	0.0483** (0.0195)	0.0491** (0.0196)	0.0536*** (0.0197)	0.0480** (0.0198)
$\text{asinh}(M^{\text{mig}})$	-0.00654 (0.0169)				
$\text{asinh}(M^{ii})$		0.0103 (0.0157)	0.0201 (0.0209)	0.0367** (0.0177)	0.0399** (0.0185)
$\text{asinh}(M^{ij} + M^{iz})$			-0.0204 (0.0221)		
$\text{asinh}(M^{ij})$				0.00879 (0.0236)	-0.00157 (0.0236)
$\text{asinh}(M^{iz})$				-0.0803*** (0.0275)	-0.0613** (0.0286)
$\text{asinh}(R^{ij})$					6.397*** (2.161)
Observations	209,650	209,650	209,650	209,650	209,650
All four fixed effects	Yes	Yes	Yes	Yes	Yes

Specification, standard errors, and stars

Agriculture: all marriage coefficients

	(1) Pooled	(2) ii	(3) Other	(4) Split	(5) $+ jj$
$\text{asinh}(M^{\text{mig}})$	-0.00654 (0.0169)				
$\text{asinh}(M^{ii})$		0.0103 (0.0157)	0.0201 (0.0209)	0.0367** (0.0177)	0.0399** (0.0185)
$\text{asinh}(M^{ij} + M^{iz})$			-0.0204 (0.0221)		
$\text{asinh}(M^{ij})$				0.00879 (0.0236)	-0.00157 (0.0236)
$\text{asinh}(M^{iz})$				-0.0803*** (0.0275)	-0.0613** (0.0286)
$\text{asinh}(R^{jj})$					6.397*** (2.161)

Specification, standard errors, and stars

Food, beverages, and tobacco: complete results

	(1) Pooled	(2) ii	(3) Other	(4) Split	(5) $+ jj$
EU	0.928*** (0.0623)	0.924*** (0.0621)	0.924*** (0.0621)	0.925*** (0.0620)	0.922*** (0.0631)
RTA	0.113*** (0.0383)	0.110*** (0.0382)	0.111*** (0.0382)	0.111*** (0.0382)	0.110*** (0.0384)
WTO	-0.252*** (0.0783)	-0.253*** (0.0778)	-0.253*** (0.0778)	-0.252*** (0.0779)	-0.253*** (0.0782)
IHS migrant stock	0.0596*** (0.0198)	0.0611*** (0.0195)	0.0609*** (0.0195)	0.0606*** (0.0196)	0.0600*** (0.0195)
$\text{asinh}(M^{\text{mig}})$	0.0385*** (0.0140)				
$\text{asinh}(M^{ii})$		0.0494*** (0.0118)	0.0457*** (0.0145)	0.0441*** (0.0153)	0.0445*** (0.0153)
$\text{asinh}(M^{ij} + M^{iz})$			0.00753 (0.0187)		
$\text{asinh}(M^{ij})$				0.00558 (0.0269)	0.00472 (0.0270)
$\text{asinh}(M^{iz})$				0.00742 (0.0338)	0.00899 (0.0342)
$\text{asinh}(R^{ij})$					0.592 (2.300)
Observations	223,222	223,222	223,222	223,222	223,222
All four fixed effects	Yes	Yes	Yes	Yes	Yes

Specification, standard errors, and stars

Food, beverages, and tobacco: all marriage coefficients

	(1) Pooled	(2) ii	(3) Other	(4) Split	(5) + jj
$\text{asinh}(M^{\text{mig}})$	0.0385*** (0.0140)				
$\text{asinh}(M^{ii})$		0.0494*** (0.0118)	0.0457*** (0.0145)	0.0441*** (0.0153)	0.0445*** (0.0153)
$\text{asinh}(M^{ij} + M^{iz})$			0.00753 (0.0187)		
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$\text{asinh}(M^{iz})$				0.00742 (0.0338)	0.00899 (0.0342)
$\text{asinh}(R^{jj})$					0.592 (2.300)

Specification, standard errors, and stars

Table 8: industry estimates

Results: total trade, then agriculture and food

	Total	Agriculture	Food
Combined ii	0.023*	0.040**	0.044***
Income γ_I	1.260*	1.963***	0.182
Demand γ_D	-1.251*	-2.024***	-0.173
Information γ_F^{ii}	0.014	0.101***	0.035
Information γ_F^{ij}	-0.015	0.060	-0.004

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

Agriculture: positive same-origin information contribution.

Food: precise total association; imprecise individual channels.

Food uncertainty

Channel summary

Industries

Channel attribution depends on the denominator

Same-origin information contribution, γ_F^{ii}

	Total	Agriculture	Food
Population-scaled stocks	0.014	0.101***	0.035
UN-migrant-scaled stocks	0.327***	0.235*	-0.089
Mixed rate / stocks	0.185	0.108	-0.023

*** $p < 0.01$ * $p < 0.10$

Definitions

Full robustness tables

Table 12: full channels

Channel attribution depends on the denominator

Same-origin information contribution, γ_F^{ii}

	Total	Agriculture	Food
Population-scaled stocks	0.014	0.101***	0.035
UN-migrant-scaled stocks	0.327***	0.235*	-0.089
Mixed rate / stocks	0.185	0.108	-0.023

*** $p < 0.01$ * $p < 0.10$

The association is more stable than its channel attribution.

Definitions

Full robustness tables

Table 12: full channels

General equilibrium: summary across 203 economies

Counterfactual: add $0.023 \operatorname{asinh}(M_{ij,2017}^{ii})$ to the bilateral log trade shifter and solve for equilibrium prices and trade.

Trade elasticity 4; zero supply elasticity.

	Exports	Real wage	Price index	Real expenditure
Mean	3.506	0.446	-0.157	0.491
10th percentile	-0.182	-0.034	-1.791	-0.119
Median	2.240	0.212	0.269	0.263
90th percentile	9.310	1.143	0.855	1.340

Percentage changes. Welfare is real expenditure: $W_j = E_j/P_j$.

All economies

General equilibrium: United States and Canada

	United States	Canada
Exports	+19.415%	+17.842%
Real wage	+0.500%	+1.322%
Nominal wage	-2.265%	-0.864%
Price index	-2.751%	-2.157%
Real expenditure	+0.559%	+1.336%

Conditional trade-system simulation; not a causal policy experiment.

Counterfactual: add $0.023 \operatorname{asinh}(M_{ij,2017}^{ii})$ to the bilateral log trade shifter and solve for equilibrium prices and trade.

All economies

Conclusions

A first global migrant-marriage dataset

Spouses' origins reveal household characteristics missing from migrant stocks.

Household heterogeneity in structural gravity

Non-homothetic preferences connect marriage composition to demand.

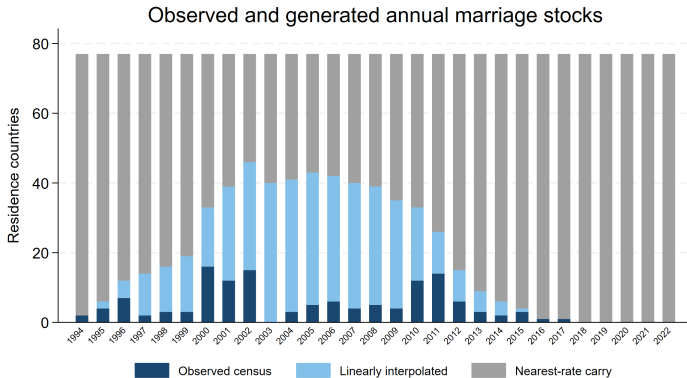
Trade estimates and implied channel contributions

Same-origin marriages have the clearest positive association. Income is the largest positive baseline component in total trade and agriculture; same-origin information is strongest in agriculture.

Counterfactual GE quantification

Translate the estimated association into trade and real expenditure.

Observed, interpolated, and carried country-years



Nearest-rate carry is used only before a country's first census or after its last census.

[Back to census coverage](#)

Appendix: choose a topic

Literature

Dataset

Data tables

Robustness

Other sectors

170 industries

Country marriage rates

GE by economy

Channels

Table notes

Main results

Appendix tables: interpretation and exceptions

Industry tables retain the full paper's 170-industry screen.

Industries 79 and 170 did not converge in the full specification; their daggered rows retain the earlier *ii*-only estimates.

Selected-industry lists are descriptive, without multiple-testing adjustment.

Repeated columns (3) and (4) in alternative-measure regressions reproduce the estimation output.

Rates and shares use different denominators; raw counts are extract weights, not population totals.

Appendix index

Literature: three connected areas

Household decisions

Trade

Migration

Main literature slide

Household decisions: specialization and market demand

Becker (1973, 1974)

Marriage, household production and specialization.

Buera and Kaboski (2012), AER

The Rise of the Service Economy: specialized market services relative to home production.

Buera, Kaboski and Zhao (2019), JHC

Skills, scale and female labor supply; multiperson households.

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Household decisions: specialization and market demand

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Skills, scale and female labor supply; multiperson households.

Our margin is the origin of purchases, not an estimated cooking decision.

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Trade: preferences, networks and structural gravity

Gould (1994); Head and Ries (1998)

Immigrant links, demand and trade creation in the U.S. and Canada.

Rauch (1999); Rauch and Trindade (2002)

Information frictions and ethnic networks in differentiated goods.

Anderson and van Wincoop (2003)

Structural gravity and multilateral resistance.

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Trade: preferences, networks and structural gravity

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Anderson and van Wincoop (2003)

Structural gravity and multilateral resistance.

We add spouses' origins and a conditional channel decomposition.

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Migrant heterogeneity: education, occupations, households

Aleksynska and Peri (2014)

Business-network occupations and migrants' trade links.

Cuadros, Martín-Montaner and Paniagua (2019)

Migration and FDI: The role of job skills. Occupations and skills shape international economic links.

Bahar and Rapoport (2018)

Migration, knowledge diffusion, and comparative advantage.

Dziadula and Zavodny (2023)

Cross-border marriage and household formation.

[Back to literature](#)

What the regression identifies

$$\mathbb{E}[X_{ijt} \mid \cdot] = \exp \left[\mu_{it} + \nu_{jt} + \eta_{ij} + \delta_t B_{ij} + \theta' Z_{ijt} + B_{ij} \sum_k \beta_k q_{ijt}^k \right]$$

q^k : IHS migrant-marriage stocks and the native-marriage rate.

$B_{ij} = 1$ for international trade; zero for domestic trade.

Exporter-year, importer-year, directional-pair and border-year effects. Migrant stocks and trade-policy controls.

PPML; standard errors clustered by directional pair.

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What the regression identifies

$$\mathbb{E}[X_{ijt} \mid \cdot] = \exp \left[\mu_{it} + \nu_{jt} + \eta_{ij} + \delta_t B_{ij} + \theta' Z_{ijt} + B_{ij} \sum_k \beta_k q_{ijt}^k \right]$$

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PPML; standard errors clustered by directional pair.

The native-rate interaction identifies an international/domestic margin.

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Food: why significant totals can have imprecise parts

$$\gamma_I + \gamma_D + \gamma_F^{ii} = \tilde{\beta}_{ii}$$

	Estimate	Standard error
Income	0.1817	0.7059
Demand	-0.1727	0.7030
Same-origin information	0.0355	0.0417
Combined ii	0.0445	0.0153

Use the full clustered covariance matrix: $V_\gamma = AV_\beta A'$.

The income–demand error correlation is approximately -0.999 .

Reference rates are held fixed. [Back to results](#)

Denominators and elasticity conversions

Population-scaled: census marriage rates expanded by population.

UN-scaled: migrant marriage stocks scaled by UN migrant counts.

Mixed: ii is a rate; ij , iz remain UN-scaled stocks.

For an IHS rate coefficient, $\tilde{\beta} = \beta R / \sqrt{1 + R^2}$.

$R_0^{ij} = 0.3224$ is population-based; 92% is a different denominator.

Mixed ii reference rates: 0.0000748, 0.0000825, 0.0000777
for total trade, agriculture and food, respectively.

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How to read the regression tables

Each regression specification is shown in full on one slide.

PPML with exporter-year, importer-year, directional-pair and international-border-year fixed effects.

Standard errors clustered by directional pair; parentheses below coefficients.

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

Baseline observations: total 239,657; agriculture 209,650; food 223,222.

Total Agriculture Food

Data: construction and interpretation

Regional birthplaces receive fractional country weights from UN origin shares.

Marriage rates are invariant to the number of released census records.

Linear interpolation between waves; nearest-rate carry outside the observed span.

Population scaling is the baseline; UN migrant scaling changes the denominator.

Weighted married respondents, not unique couples or annual weddings.

[Tables](#)[U.S./Canada](#)[Back to construction](#)

U.S.–Canada: sources and denominators

UN stocks refer to birthplace, not citizenship; year 2024.

U.S. marriage profiles: 2015; Canadian profiles: 2011.

Other destinations use their latest available census, shown on the chart.

Marriage shares divide by extract respondent weight; spouse shares divide by married weight.

“Other respondents” does not mean single. Historical marriage shares are not applied to 2024 stocks.

The U.S. foreign-origin and foreign-destination charts exclude Puerto Rico. Birthplace is not citizenship.

Bilateral profiles U.S. abroad

Data tables: complete paper summaries

Annual stock panel: coverage

Marriage types and average stocks

Country-year stock summary

Trade and marriage summary

Largest marriage-stock corridors

Population and migrant scaling

Raw census coverage

Raw marriage types

Raw country-year summary

Raw annual marriage series

Raw marriage corridors

Raw trade merge coverage

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Annual stock panel: coverage

Statistic	Value
Residence countries	77
Origin-country codes	236
Observed country–census samples	133
Annual years, 1994–2022	29
Directional country pairs	55,696
Marriage-stock pair–years	526,988
Average annual covered population	2,371,087,749
Average annual married respondents	931,566,256
Average annual migrant married respondents	74,446,104

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Marriage types and average stocks

Marriage type	Origins and residence	Model channel	Mean annual stock	Share (%)
All marriages	All combinations	Income benchmark	931,566,256	100.00
Domestic	$j-j$, living in j	Income; no bilateral migrant link	857,120,152	92.01
Bilateral native-migrant	$i-j$, living in j	Income, origin demand, and bilateral information	41,875,197	4.50
Same-origin migrant	$i-i$, living in j	Strong income, demand, and migrant-network information	24,700,712	2.65
Cross-foreign	$i-z$, living in j , $i \neq z$	Income and origin demand; weaker bilateral information	7,870,195	0.84

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Country-year stock summary

	N	Mean	SD	Min.	Max.
World Bank Population, total	2233	30793347.39	51508541.36	422375.00	3.34e+08
Estimated married respondents	2233	12098263.06	22431269.33	46206.91	1.40e+08
Estimated domestic married respondents	2233	11131430.54	20305378.66	273.70	1.31e+08
WB-population-scaled migrant/cross-border marriages	2233	966832.52	3501990.43	1913.73	32999487.08
WB-population-scaled bilateral native-migrant marriages	2233	543833.73	1699773.26	1134.34	13917049.05
WB-population-scaled same-origin migrant marriages	2233	320788.47	1454826.31	0.00	14590757.27
WB-population-scaled cross-foreign marriages	2233	102210.33	449458.64	0.00	4491680.76
rate_total	2233	35.58	8.70	4.15	57.50
rate_domestic	2233	32.24	7.72	0.02	49.23
rate_migrant	2233	3.34	6.12	0.03	44.35
rate_bilateral	2233	2.04	3.28	0.01	21.94
rate_same_migrant	2233	0.88	1.44	0.00	7.77
rate_cross_foreign	2233	0.42	1.71	0.00	14.63
Observations	2233				

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Trade and marriage summary

	N	Mean	SD	Median	Min.	Max.
Bilateral trade (current USD millions)	365122	359.44	5204.70	0.14	0.00	527456.58
WB-population-scaled bilateral i-j marriage stock	365122	2577.42	36311.60	11.54	0.00	3067867.97
WB-population-scaled same-origin i-i marriage stock	365122	1532.81	34548.79	0.00	0.00	4022235.27
WB-population-scaled cross-foreign i-z stock	365122	469.98	3672.38	0.00	0.00	225963.56
WB-population-scaled domestic j-j stock	365122	11435288.23	20429704.89	4205174.45	273.70	1.25e+08
Observations	365122					

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Largest marriage-stock corridors

Rank	Migrant origin <i>i</i>	Residence <i>j</i>	Mean annual stock	Share (%)
1	Ukraine	Russian Federation	2,790,373	6.66
2	Kazakhstan	Russian Federation	1,857,746	4.44
3	Mexico	United States	1,663,246	3.97
4	Germany	United States	969,411	2.32
5	Belarus	Russian Federation	743,604	1.78
6	Canada	United States	731,642	1.75
7	Algeria	France	675,958	1.61
8	United Kingdom	United States	664,858	1.59
9	Uzbekistan	Russian Federation	581,382	1.39
10	India	Nepal	556,593	1.33
11	Philippines	United States	515,660	1.23
12	United Kingdom	Canada	404,599	0.97
13	Colombia	Venezuela, RB	382,031	0.91
14	Morocco	France	376,387	0.90
15	Puerto Rico (US)	United States	350,411	0.84
16	Azerbaijan	Russian Federation	331,441	0.79
17	Japan	United States	329,673	0.79
18	Kyrgyz Republic	Russian Federation	302,364	0.72
19	Kazakhstan	Belarus	284,738	0.68
20	Georgia	Russian Federation	284,144	0.68
21	Italy	United States	276,823	0.66
22	United States	Canada	240,581	0.57
23	Korea, Rep.	United States	233,779	0.56
24	Italy	France	218,005	0.52
25	Tajikistan	Russian Federation	214,848	0.51

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Population and migrant scaling

Marriage type	Population-scaled	Migrant-scaled	Ratio
Bilateral native–migrant	33,824,738	333,470	101.4
Same-origin migrant	23,379,983	310,492	75.3
Cross-foreign	4,813,619	30,419	158.2
All migrant marriages	62,018,340	674,381	92.0

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Raw census coverage

Statistic	Value
Residence countries	77
Country–year census samples	133
Distinct census years	23
Census-year range	1994–2017
Weighted respondent population	350,963,141
Weighted married respondents	135,127,007
Weighted migrant/cross-border married respondents	9,623,639
Pooled marriage rate (%)	38.50
Pooled migrant marriage rate (%)	2.74
Migrant share of marriages (%)	7.12

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Raw marriage types

Measure	Composition	Connection to the model	Weighted count	Share (%)
All marriages	All spouse-origin combinations	Household-income channel common to married households	135,127,007	100.00
Domestic marriage	$j-j$, living in j	Income benchmark without a bilateral migrant link	125,503,368	92.88
Bilateral native-migrant	$i-j$, living in j	Income, origin demand, and an information bridge from i to j	5,676,153	4.20
Same-origin migrant	$i-i$, living in j	Income, reinforced origin demand, and the strongest origin-network information link	3,030,846	2.24
Cross-foreign	$i-z$, living in j , $i \neq z$	Income and origin demand; the exporter-specific information link is more indirect	916,640	0.68

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Raw country-year summary

	<i>N</i>	Mean	SD	Median	Min.	Max.
Total marriage rate	133	35.39	8.46	35.73	4.15	57.50
Domestic <i>jj</i> rate	133	32.34	7.82	32.14	0.02	49.23
All migrant-marriage rate	133	3.05	5.06	1.35	0.03	44.35
Bilateral <i>ij</i> rate	133	1.90	2.77	0.84	0.01	21.94
Same-origin <i>ii</i> rate	133	0.82	1.30	0.24	0.00	7.77
Cross-foreign <i>iz</i> rate	133	0.34	1.33	0.07	0.00	14.63
Migrant share of marriages	133	8.48	12.74	4.31	0.07	99.41

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Raw annual marriage series

Year	Countries	Total	Domestic	Migrant	<i>ij</i>	<i>ii</i>	<i>iz</i>
1994	2	32.37	31.97	0.40	0.33	0.05	0.03
1995	4	44.08	28.76	15.32	7.69	2.65	4.98
1996	7	31.84	30.94	0.90	0.61	0.23	0.07
1997	2	31.10	30.53	0.57	0.42	0.13	0.02
1998	3	32.69	32.10	0.59	0.38	0.17	0.04
1999	3	35.89	33.89	2.00	1.35	0.44	0.21
2000	16	40.56	38.63	1.94	0.90	0.83	0.21
2001	12	34.56	31.49	3.07	1.92	1.00	0.15
2002	15	38.10	35.32	2.78	2.04	0.57	0.17
2004	3	32.37	32.02	0.35	0.26	0.07	0.02
2005	5	36.34	33.17	3.17	1.45	1.33	0.39
2006	6	38.48	32.44	6.04	3.57	1.92	0.54
2007	4	34.22	33.59	0.63	0.47	0.11	0.04
2008	5	30.95	30.59	0.36	0.25	0.10	0.01
2009	4	31.45	29.39	2.06	1.56	0.42	0.09
2010	12	42.73	41.53	1.20	0.76	0.34	0.10
2011	14	38.27	31.26	7.01	4.26	2.15	0.60
2012	6	29.62	29.13	0.49	0.33	0.12	0.03
2013	3	27.23	25.75	1.48	0.89	0.51	0.08
2014	2	38.91	37.00	1.91	1.87	0.03	0.02
2015	3	40.96	38.63	2.34	1.08	0.96	0.30
2016	1	21.11	19.51	1.60	0.79	0.73	0.08
2017	1	36.78	36.70	0.08	0.08	0.00	0.00

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Raw marriage corridors

Rank	Migrant origin <i>i</i>	Residence <i>j</i>	Weighted count	Share (%)
1	Algeria	France	427,511	7.53
2	Ukraine	Russia	255,378	4.50
3	Morocco	France	238,199	4.20
4	Kazakhstan	Russia	167,192	2.95
5	Italy	France	137,764	2.43
6	Tunisia	France	130,500	2.30
7	Portugal	France	122,792	2.16
8	Mexico	United States	116,432	2.05
9	Spain	France	104,512	1.84
10	India	Nepal	103,244	1.82
11	Germany	United States	72,901	1.28
12	Belarus	Russia	68,569	1.21
13	United Kingdom	Ireland	62,813	1.11
14	Canada	United States	54,720	0.96
15	Uzbekistan	Russia	51,772	0.91
16	United Kingdom	United States	48,569	0.86
17	Kazakhstan	Belarus	41,886	0.74
18	Turkey	France	35,792	0.63
19	Philippines	United States	33,979	0.60
20	Colombia	Venezuela	31,678	0.56
21	Azerbaijan	Russia	29,895	0.53
22	United States of America	Mexico	28,314	0.50
23	Kyrgyzstan	Russia	27,073	0.48
24	Germany	France	26,720	0.47
25	Puerto Rico	United States	25,952	0.46

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Raw trade merge coverage

Statistic	Value
Collapsed ITPD exporter–importer–year observations	1,471,429
First trade year	1986
Last trade year	2022
Exporters	255
Importers	255
Directional country pairs	47,676
Zero-trade observations (%)	38.05
Pair–years matched to the raw marriage panel	875,718
International pair–years in observed importer census years	27,468

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Raw trade summary

	<i>N</i>	Mean	SD	Median	Min.	Max.
Trade (USD millions)	27,468	545.94	7,700.09	0.14	0.00	523,001.13
<i>ij</i> marriage count	27,468	212.51	2,647.39	0.00	0.00	217,148.00
<i>ii</i> marriage count	27,468	99.48	2,216.49	0.00	0.00	171,938.00
Exclusive <i>iz</i> marriage count	27,468	44.41	512.30	0.00	0.00	31,185.00
<i>jj</i> marriage count	27,468	875,813.89	1,812,389.56	257,337.00	0.00	10,646,890.00
Bilateral migrant stock	27,468	8,739.05	153,427.76	0.00	0.00	11,938,908.00

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Raw annual trade series

Year	Importer countries	Pair observations	Mean trade	Mean <i>ij</i> marriages
1994	2	411	22.83	20.67
1995	4	829	152.48	299.93
1996	7	1,208	39.80	62.05
1997	2	357	3.57	37.11
1998	3	592	3.78	20.22
1999	3	587	15.75	51.19
2000	16	3,284	575.21	231.56
2001	12	2,597	149.94	129.19
2002	15	3,298	75.77	45.94
2004	3	609	37.89	11.10
2005	5	923	2,267.46	154.81
2006	6	1,193	811.94	1,101.75
2007	4	900	37.93	31.26
2008	4	810	34.62	22.66
2009	4	851	49.57	107.85
2010	12	2,488	1,380.77	104.83
2011	14	3,138	729.80	625.76
2012	6	1,289	28.54	17.53
2013	3	636	32.17	31.96
2014	2	422	121.16	309.95
2015	3	635	4,978.63	275.00
2016	1	232	350.98	115.86
2017	1	179	30.05	2.02

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Raw marriage rates by residence (1/10)

Country	Waves	Years	Total	Domestic % of respondents	Migrant	Migrant share % of marriages
Argentina	1	2001–2001	29.77	26.96	2.81	9.44
Armenia	1	2011–2011	47.23	41.97	5.26	11.14
Austria	1	2001–2001	42.67	33.71	8.96	21.00
Belarus	2	1999–2009	47.66	43.15	4.51	9.47
Benin	2	2002–2013	28.20	26.05	2.15	7.63
Bolivia	2	2001–2012	28.46	27.92	0.55	1.92
Botswana	2	2001–2011	19.79	16.44	3.35	16.93
Brazil	2	2000–2010	41.38	41.06	0.33	0.79

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Raw marriage rates by residence (2/10)

Country	Waves	Years	Total	Domestic % of respondents	Migrant	Migrant share % of marriages
Burkina Faso	2	1996–2006	31.79	29.92	1.88	5.90
Cambodia	4	1998–2013	35.60	35.09	0.51	1.44
Cameroon	1	2005–2005	26.49	25.71	0.78	2.93
Canada	1	2011–2011	53.07	32.50	20.57	38.76
Chile	1	2002–2002	38.22	37.49	0.72	1.90
Colombia	1	2005–2005	34.41	34.31	0.10	0.29
Costa Rica	2	2000–2011	39.02	32.33	6.69	17.15
Cuba	2	2002–2012	44.62	44.44	0.18	0.40

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Raw marriage rates by residence (3/10)

Country	Waves	Years	Total	Domestic % of respondents	Migrant	Migrant share % of marriages
Dominican Republic	2	2002–2010	34.23	32.22	2.02	5.90
Ecuador	1	2010–2010	36.86	35.56	1.29	3.51
Egypt	2	1996–2006	38.10	37.97	0.13	0.34
El Salvador	1	2007–2007	32.80	32.30	0.50	1.52
Fiji	2	1996–2007	38.30	36.68	1.63	4.24
France	2	2006–2011	37.50	28.51	8.98	23.96
Greece	1	2001–2001	50.12	43.87	6.24	12.46
Guatemala	2	1994–2002	33.55	33.04	0.51	1.52

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Raw marriage rates by residence (4/10)

Country	Waves	Years	Total	Domestic % of respondents	Migrant	Migrant share % of marriages
Guinea	2	1996–2014	31.05	29.49	1.56	5.03
Honduras	1	2001–2001	30.08	29.41	0.67	2.22
Indonesia	3	1995–2010	45.39	45.36	0.03	0.07
Iran	1	2006–2006	45.86	45.26	0.60	1.31
Iraq	1	1997–1997	29.60	29.35	0.25	0.85
Ireland	4	1996–2011	36.13	28.41	7.72	21.37
Israel	1	1995–1995	57.50	13.16	44.35	77.12
Jamaica	1	2001–2001	16.26	14.45	1.81	11.13

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Raw marriage rates by residence (5/10)

Country	Waves	Years	Total	Domestic % of respondents	Migrant	Migrant share % of marriages
Kenya	2	1999–2009	26.70	25.98	0.72	2.70
Kyrgyz Republic	2	1999–2009	38.16	33.18	4.98	13.05
Lesotho	2	1996–2006	28.94	27.74	1.20	4.15
Liberia	1	2008–2008	25.25	24.21	1.05	4.15
Malawi	2	1998–2008	32.80	31.90	0.90	2.76
Malaysia	1	2000–2000	38.39	35.25	3.14	8.19
Mali	2	1998–2009	30.53	29.50	1.03	3.37
Mauritius	2	2000–2011	31.26	28.62	2.63	8.43

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Raw marriage rates by residence (6/10)

Country	Waves	Years	Total	Domestic % of respondents	Migrant	Migrant share % of marriages
Mexico	4	1995–2015	40.00	39.75	0.25	0.63
Mongolia	1	2000–2000	34.73	34.58	0.15	0.42
Morocco	3	1994–2014	37.46	36.22	1.24	3.31
Mozambique	2	1997–2007	32.18	31.17	1.01	3.13
Nepal	2	2001–2011	42.67	39.92	2.75	6.44
Nicaragua	2	1995–2005	31.17	30.74	0.43	1.39
Palestine	1	2017–2017	36.78	36.70	0.08	0.22
Panama	2	2000–2010	37.23	33.31	3.91	10.51

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Raw marriage rates by residence (7/10)

Country	Waves	Years	Total	Domestic % of respondents	Migrant	Migrant share % of marriages
Papua New Guinea	1	2000–2000	33.65	33.23	0.42	1.24
Paraguay	1	2002–2002	33.16	30.17	2.98	8.99
Peru	1	2007–2007	36.42	36.10	0.32	0.88
Philippines	2	2000–2010	37.32	37.14	0.19	0.51
Poland	1	2002–2002	44.84	42.91	1.93	4.31
Portugal	2	2001–2011	49.05	44.01	5.03	10.26
Puerto Rico	3	2000–2010	37.89	31.66	6.22	16.43
Romania	2	2002–2011	49.04	48.43	0.61	1.25

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Raw marriage rates by residence (8/10)

Country	Waves	Years	Total	Domestic % of respondents	Migrant	Migrant share % of marriages
Russia	2	2002–2010	45.05	37.62	7.43	16.50
Rwanda	2	2002–2012	26.29	24.88	1.42	5.39
Senegal	2	2002–2013	26.37	25.56	0.81	3.09
Sierra Leone	2	2004–2015	25.04	24.46	0.58	2.33
Slovenia	1	2002–2002	43.91	36.69	7.23	16.46
South Africa	4	1996–2016	23.50	21.79	1.70	7.25
South Sudan	1	2008–2008	23.64	23.55	0.09	0.36
Spain	2	2001–2011	45.88	42.26	3.62	7.89

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Raw marriage rates by residence (9/10)

Country	Waves	Years	Total	Domestic % of respondents	Migrant	Migrant share % of marriages
Sudan	1	2008–2008	29.97	29.92	0.06	0.19
Suriname	1	2012–2012	20.12	18.38	1.74	8.65
Switzerland	1	2000–2000	51.68	29.50	22.17	42.91
Tanzania	2	2002–2012	26.93	26.62	0.32	1.18
Thailand	1	2000–2000	45.16	44.71	0.45	1.00
Togo	1	2010–2010	28.80	24.78	4.03	13.98
Trinidad and Tobago	2	2000–2011	28.88	25.44	3.44	11.91
Uganda	1	2002–2002	27.66	26.77	0.88	3.19

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Raw marriage rates by residence (10/10)

Country	Waves	Years	Total	Domestic % of respondents	Migrant	Migrant share % of marriages
United States	4	2000–2015	42.79	34.10	8.69	20.31
Uruguay	1	2011–2011	42.62	38.96	3.66	8.59
Venezuela	1	2001–2001	33.90	29.79	4.11	12.11
Zambia	2	2000–2010	27.76	26.68	1.07	3.87
Zimbabwe	1	2012–2012	28.55	27.68	0.87	3.06

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Marriage stocks by residence (1/10)

Country	Annual stock	Total rate	Domestic rate % of population	Migrant rate	Bilateral rate	Migrant share % of marriages
Argentina	12,035,848	29.77	26.96	2.81	1.78	9.44
Armenia	1,466,148	47.23	41.97	5.26	3.48	11.14
Austria	3,571,085	42.67	33.71	8.96	4.61	21.00
Belarus	4,592,626	47.48	41.67	5.82	4.72	12.32
Benin	2,670,786	28.27	26.12	2.15	1.34	7.62
Bolivia	2,812,986	28.46	27.92	0.55	0.36	1.92
Botswana	389,712	19.84	16.47	3.37	1.44	16.96
Brazil	78,767,690	41.70	41.40	0.30	0.23	0.73

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Marriage stocks by residence (2/10)

Country	Annual stock	Total rate	Domestic rate % of population	Migrant rate	Bilateral rate	Migrant share % of marriages
Burkina Faso	5,001,757	31.91	29.94	1.97	1.64	6.18
Cambodia	5,277,402	37.31	36.78	0.53	0.32	1.47
Cameroon	5,081,734	26.49	25.71	0.78	0.39	2.93
Canada	17,776,660	53.07	32.50	20.57	12.79	38.76
Chile	6,464,738	38.22	37.49	0.72	0.53	1.90
Colombia	14,972,953	34.41	34.31	0.10	0.09	0.29
Costa Rica	1,722,867	39.15	32.30	6.86	3.67	17.44
Cuba	4,981,910	44.56	44.38	0.19	0.18	0.42

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Marriage stocks by residence (3/10)

Country	Annual stock	Total rate	Domestic rate % of population	Migrant rate	Bilateral rate	Migrant share % of marriages
Dominican Republic	3,273,003	34.24	32.18	2.06	1.07	6.01
Ecuador	5,385,019	36.86	35.56	1.29	0.96	3.51
Egypt, Arab Rep.	33,825,655	38.67	38.54	0.13	0.07	0.34
El Salvador	1,982,795	32.80	32.30	0.50	0.44	1.52
Fiji	339,904	38.56	36.83	1.73	1.00	4.48
France	23,988,914	37.53	28.56	8.97	5.36	23.93
Greece	5,429,162	50.12	43.87	6.24	3.12	12.46
Guatemala	4,677,151	33.51	32.97	0.54	0.45	1.62

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Marriage stocks by residence (4/10)

Country	Annual stock	Total rate	Domestic rate % of population	Migrant rate	Bilateral rate	Migrant share % of marriages
Guinea	3,174,881	31.05	29.49	1.56	1.11	5.03
Honduras	2,408,147	30.08	29.41	0.67	0.60	2.22
Indonesia	109,178,583	45.35	45.31	0.04	0.03	0.08
Iran, Islamic Rep.	34,475,911	45.86	45.26	0.60	0.08	1.31
Iraq	9,190,912	29.60	29.35	0.25	0.13	0.85
Ireland	1,574,406	36.21	27.91	8.30	5.24	22.90
Israel	4,255,721	57.50	13.16	44.35	21.94	77.12
Jamaica	439,615	16.26	14.45	1.81	1.72	11.13

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Marriage stocks by residence (5/10)

Country	Annual stock	Total rate	Domestic rate % of population	Migrant rate	Bilateral rate	Migrant share % of marriages
Kenya	10,538,064	26.59	25.79	0.80	0.53	3.05
Kyrgyz Republic	2,105,765	38.20	33.51	4.69	3.10	12.29
Lesotho	581,734	28.44	27.33	1.11	1.04	3.90
Liberia	955,489	25.25	24.21	1.05	0.63	4.15
Malawi	4,699,108	32.63	31.64	0.99	0.79	3.07
Malaysia	10,526,223	38.39	35.25	3.14	1.63	8.19
Mali	4,689,904	30.45	29.40	1.05	0.83	3.46
Mauritius	359,443	28.75	25.98	2.77	2.52	31.49

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Marriage stocks by residence (6/10)

Country	Annual stock	Total rate	Domestic rate % of population	Migrant rate	Bilateral rate	Migrant share % of marriages
Mexico	44,018,402	39.79	39.45	0.34	0.29	0.85
Mongolia	946,531	34.73	34.58	0.15	0.05	0.42
Morocco	11,803,082	36.87	35.79	1.08	1.05	2.75
Mozambique	7,242,220	31.98	30.97	1.01	0.75	3.16
Nepal	11,242,009	42.65	39.90	2.75	2.45	6.46
Nicaragua	1,795,915	31.89	31.52	0.37	0.33	1.17
Panama	1,318,301	37.35	33.38	3.97	2.41	10.61
Papua New Guinea	2,439,534	33.65	33.23	0.42	0.19	1.24

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Marriage stocks by residence (7/10)

Country	Annual stock	Total rate	Domestic rate % of population	Migrant rate	Bilateral rate	Migrant share % of marriages
Paraguay	1,871,985	33.16	30.17	2.98	1.75	8.99
Peru	10,467,608	36.42	36.10	0.32	0.27	0.88
Philippines	34,820,290	37.40	37.22	0.18	0.08	0.49
Poland	17,086,310	44.84	42.91	1.93	1.57	4.31
Portugal	5,030,368	48.58	43.52	5.07	3.58	10.50
Puerto Rico (US)	1,320,444	36.22	30.45	5.77	4.54	15.91
Romania	10,248,498	49.18	48.54	0.64	0.55	1.29
Russian Federation	65,337,888	45.04	37.61	7.43	5.55	16.50

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Marriage stocks by residence (8/10)

Country	Annual stock	Total rate	Domestic rate % of population	Migrant rate	Bilateral rate	Migrant share % of marriages
Rwanda	2,652,168	26.18	24.77	1.41	0.73	5.40
Senegal	3,277,883	26.48	25.69	0.79	0.46	3.03
Sierra Leone	1,500,572	25.40	24.78	0.62	0.42	2.43
Slovenia	892,384	43.91	36.69	7.23	4.04	16.46
South Africa	12,041,592	23.26	21.55	1.70	0.89	7.32
South Sudan	2,006,584	23.64	23.55	0.09	0.03	0.36
Spain	20,266,310	45.81	42.32	3.49	1.95	7.61
Sudan	10,405,051	29.97	29.92	0.06	0.02	0.19

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Marriage stocks by residence (9/10)

Country	Annual stock	Total rate	Domestic rate % of population	Migrant rate	Bilateral rate	Migrant share % of marriages
Suriname	107,107	20.12	18.38	1.74	0.82	8.65
Switzerland	4,010,642	51.68	29.50	22.17	12.82	42.91
Tanzania	11,882,196	26.94	26.62	0.32	0.20	1.19
Thailand	30,148,709	45.16	44.71	0.45	0.31	1.00
Togo	1,724,271	28.80	24.78	4.03	2.88	13.98
Trinidad and Tobago	385,659	29.01	25.60	3.41	2.77	11.76
Uganda	8,739,463	27.66	26.77	0.88	0.50	3.19
United States	129,454,690	42.83	33.66	9.16	3.87	21.42

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Marriage stocks by residence (10/10)

Country	Annual stock	Total rate	Domestic rate % of population	Migrant rate	Bilateral rate	Migrant share % of marriages
Uruguay	1,410,179	42.62	38.96	3.66	2.98	8.59
Venezuela, RB	9,187,326	33.90	29.79	4.11	2.47	12.11
West Bank and Gaza	1,340,105	36.78	36.70	0.08	0.08	0.22
Zambia	3,732,248	27.72	26.66	1.06	0.75	3.81
Zimbabwe	3,769,321	28.55	27.68	0.87	0.73	3.06

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Country marriage tables

Raw rates

Annual stocks

Same-origin coefficient by industry (1/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
1	Wheat	0.0188	0.0510	74,469
2	Rice (raw)	-0.193***	0.0391	110,089
3	Corn	-0.00788	0.0939	90,513
4	Other cereals	-0.0731	0.173	96,285
5	Cereal products	0.134	0.0880	60,680
6	Soybeans	0.122	0.106	61,755

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Same-origin coefficient by industry (2/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
7	Other oilseeds (excluding peanuts)	0.0308	0.0416	140,207
8	Animal feed ingredients and pet foods	0.0340	0.0430	113,560
9	Raw and refined sugar and sugar crops	-0.0847	0.500	27,320
10	Other sweeteners	-0.278*	0.143	82,037
11	Pulses and legumes, dried, preserved	-0.0666	0.0866	122,350
12	Fresh fruit	0.000802	0.0368	157,154

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Same-origin coefficient by industry (3/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
13	Fresh vegetables	0.103***	0.0320	145,132
14	Prepared fruits and fruit juices	-0.106	0.0695	105,874
15	Prepared vegetables	-0.410	0.290	22,282
16	Nuts	-0.0137	0.0538	114,530
17	Live Cattle	0.0436	0.143	38,311
18	Live Swine	0.155	0.180	21,375

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Same-origin coefficient by industry (4/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
19	Eggs	0.0349	0.122	67,520
20	Other meats, livestock products, and live animals	0.00412	0.0322	146,542
21	Cocoa and cocoa products	0.206***	0.0629	43,753
22	Beverages, nec	-0.0621*	0.0368	144,257
23	Cotton	0.00370	0.0350	89,140
24	Tobacco leaves and cigarettes	0.0300	0.0370	88,420

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Same-origin coefficient by industry (5/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
25	Spices	-0.0529	0.0336	144,209
26	Other agricultural products, nec	-0.00207	0.0230	176,984
27	Forestry	-0.0518	0.0824	145,478
28	Fishing	-0.160***	0.0565	133,535
29	Mining of hard coal	0.136	0.109	74,966
30	Mining of lignite	-0.126	0.195	26,492

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Same-origin coefficient by industry (6/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
31	Extraction crude petroleum and natural gas	0.0570	0.0577	84,371
32	Mining of iron ores	-0.0845	0.123	47,316
33	Other mining and quarrying	0.0802*	0.0478	188,717
34	Electricity production, collection, and distribution	0.447	0.520	26,553
35	Gas production and distribution	0.412*	0.244	11,533
36	Processing/preserving of meat	-0.00312	0.0369	166,554

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Same-origin coefficient by industry (7/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
37	Processing/preserving of fish	0.0383	0.0362	176,027
38	Processing/preserving of fruit & vegetables	0.0140	0.0238	191,148
39	Vegetable and animal oils and fats	0.0833	0.0540	175,958
40	Dairy products	0.0339	0.0335	159,066
41	Grain mill products	-0.105***	0.0346	174,395
42	Starches and starch products	0.0127	0.0354	143,370

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Same-origin coefficient by industry (8/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
43	Prepared animal feeds	0.00851	0.0382	135,017
44	Bakery products	-0.0315*	0.0171	167,090
45	Sugar	0.112	0.0739	143,536
46	Cocoa chocolate and sugar confectionery	0.0241	0.0239	177,017
47	Macaroni noodles & similar products	0.0606	0.0387	141,464
48	Other food products n.e.c.	-0.0412	0.0263	198,685

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Same-origin coefficient by industry (9/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
49	Distilling rectifying & blending of spirits	0.162***	0.0520	163,456
50	Wines	0.0776*	0.0397	148,635
51	Malt liquors and malt	-0.123**	0.0494	138,959
52	Soft drinks; mineral waters	0.0774	0.0572	170,062
53	Tobacco products	0.217***	0.0707	151,993
54	Textile fibre preparation; textile weaving	0.0449	0.0281	192,960

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Same-origin coefficient by industry (10/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
55	Made-up textile articles except apparel	0.0802***	0.0252	206,664
56	Carpets and rugs	0.0267	0.0264	176,134
57	Cordage rope twine and netting	0.0299	0.0235	160,085
58	Other textiles n.e.c.	0.0388**	0.0180	179,973
59	Knitted and crocheted fabrics and articles	-0.00290	0.0213	198,678
60	Wearing apparel except fur apparel	0.0486	0.0403	220,963

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Same-origin coefficient by industry (11/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
61	Dressing & dyeing of fur; processing of fur	0.0935**	0.0427	115,140
62	Tanning and dressing of leather	0.0331	0.0456	136,151
63	Luggage handbags etc.; saddlery & harness	0.0760*	0.0456	199,704
64	Footwear	0.00452	0.0388	203,580
65	Sawmilling and planing of wood	0.000652	0.0510	162,087
66	Veneer sheets plywood particle board etc.	-0.0267	0.0358	155,003

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Same-origin coefficient by industry (12/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
67	Builders' carpentry and joinery	0.0589*	0.0353	151,919
68	Wooden containers	0.0480	0.0473	146,412
69	Other wood products; articles of cork/straw	-0.0127	0.0378	195,418
70	Pulp paper and paperboard	0.00630	0.0195	175,283
71	Corrugated paper and paperboard	0.00546	0.0242	176,884
72	Other articles of paper and paperboard	0.0317	0.0216	191,519

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Same-origin coefficient by industry (13/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
73	Publishing of books and other publications	-0.00421	0.0156	201,421
74	Publishing of newspapers journals etc.	0.0778	0.0643	136,950
75	Publishing of recorded media	0.0261	0.0433	110,106
76	Other publishing	0.0570*	0.0327	189,513
77	Printing	0.0326	0.0343	191,896
78	Service activities related to printing	0.0459	0.0699	94,729

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Same-origin coefficient by industry (14/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
79	Coke oven products	0.0492 [†]	0.0930	58,059
80	Refined petroleum products	0.00618	0.0270	180,522
81	Processing of nuclear fuel	-0.0814	0.119	72,677
82	Basic chemicals except fertilizers	0.0249 [*]	0.0143	194,361
83	Fertilizers and nitrogen compounds	-0.0220	0.0436	144,263
84	Plastics in primary forms; synthetic rubber	-0.00999	0.0150	173,613

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Same-origin coefficient by industry (15/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
85	Pesticides and other agro-chemical products	0.0534**	0.0212	148,251
86	Paints varnishes printing ink and mastics	0.0800***	0.0275	175,078
87	Pharmaceuticals medicinal chemicals etc.	0.00433	0.0237	197,223
88	Soap cleaning & cosmetic preparations	0.0497**	0.0197	204,824
89	Other chemical products n.e.c.	-0.0257	0.0193	206,533
90	Man-made fibres	0.0626**	0.0247	135,324

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Same-origin coefficient by industry (16/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
91	Rubber tyres and tubes	-0.0157	0.0252	165,520
92	Other rubber products	-0.00537	0.0200	197,073
93	Plastic products	0.00496	0.0126	217,760
94	Glass and glass products	0.0144	0.0306	198,487
95	Pottery china and earthenware	0.0955***	0.0312	190,499
96	Refractory ceramic products	0.0514*	0.0281	130,365

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Same-origin coefficient by industry (17/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
97	Struct.non-refractory clay; ceramic products	0.160***	0.0326	144,465
98	Cement lime and plaster	-0.0624	0.0473	131,955
99	Articles of concrete cement and plaster	-0.0433	0.0313	146,371
100	Cutting shaping & finishing of stone	0.0938***	0.0319	149,238
101	Other non-metallic mineral products n.e.c.	0.0171	0.0215	172,903
102	Basic iron and steel	0.0183	0.0168	192,950

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Same-origin coefficient by industry (18/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
103	Basic precious and non-ferrous metals	-0.00435	0.0401	186,597
104	Structural metal products	0.0418**	0.0201	175,949
105	Tanks reservoirs and containers of metal	-0.0391	0.0379	155,630
106	Steam generators	-0.0321	0.0426	116,080
107	Cutlery hand tools and general hardware	-0.0705**	0.0315	207,730
108	Other fabricated metal products n.e.c.	0.0124	0.0205	216,128

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Same-origin coefficient by industry (19/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
109	Engines & turbines (not for transport equipment)	0.0127	0.0355	153,619
110	Pumps compressors taps and valves	-0.00851	0.0130	203,946
111	Bearings gears gearing & driving elements	-0.00981	0.0165	185,055
112	Ovens furnaces and furnace burners	0.00604	0.0202	154,253
113	Lifting and handling equipment	0.0345	0.0227	181,248
114	Other general purpose machinery	0.00624	0.0126	208,268

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Same-origin coefficient by industry (20/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
115	Agricultural and forestry machinery	-0.0302*	0.0156	161,289
116	Machine tools	0.0164	0.0137	191,131
117	Machinery for metallurgy	0.0819**	0.0396	101,403
118	Machinery for mining & construction	0.00497	0.0231	185,495
119	Food/beverage/tobacco processing machinery	-0.0278*	0.0167	166,349
120	Machinery for textile apparel and leather	0.00763	0.0279	166,239

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Same-origin coefficient by industry (21/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
121	Weapons and ammunition	0.0137	0.0297	116,986
122	Other special purpose machinery	0.00392	0.0152	193,920
123	Domestic appliances n.e.c.	-0.00839	0.0254	197,445
124	Office accounting and computing machinery	-0.0166	0.0220	212,073
125	Electric motors generators and transformers	0.0273	0.0257	202,683
126	Electricity distribution & control apparatus	0.0152	0.0188	201,468

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Same-origin coefficient by industry (22/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
127	Insulated wire and cable	0.0315	0.0273	188,377
128	Accumulators primary cells and batteries	0.0204	0.0296	171,942
129	Lighting equipment and electric lamps	0.0847**	0.0363	192,868
130	Other electrical equipment n.e.c.	0.0457**	0.0219	198,777
131	Electronic valves tubes etc.	0.0509*	0.0269	190,958
132	TV/radio transmitters; line comm. apparatus	0.0231	0.0212	200,040

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Same-origin coefficient by industry (23/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
133	TV and radio receivers and associated goods	0.0990***	0.0363	206,646
134	Medical surgical and orthopaedic equipment	-0.00195	0.00952	193,886
135	Measuring/testing/navigating appliances etc.	0.0154	0.0110	208,036
136	Optical instruments & photographic equipment	0.0213	0.0416	185,221
137	Watches and clocks	0.0528	0.0374	172,314
138	Motor vehicles	0.0129	0.0279	194,063

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Same-origin coefficient by industry (24/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
139	Automobile bodies trailers & semi-trailers	-0.0639**	0.0311	164,816
140	Parts/accessories for automobiles	-0.0571**	0.0254	206,346
141	Building and repairing of ships	0.0227	0.0558	130,226
142	Building/repairing of pleasure/sport. boats	0.148**	0.0676	123,047
143	Railway/tramway locomotives & rolling stock	-0.0280	0.0488	109,011
144	Aircraft and spacecraft	0.0454*	0.0251	163,776

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Same-origin coefficient by industry (25/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
145	Motorcycles	0.0400	0.0316	155,681
146	Bicycles and invalid carriages	0.0382	0.0474	161,567
147	Other transport equipment n.e.c.	-0.0266	0.0303	130,933
148	Furniture	0.0203	0.0336	207,845
149	Jewellery and related articles	-0.0146	0.0161	166,218
150	Musical instruments	0.0689*	0.0391	165,186

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Same-origin coefficient by industry (26/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
151	Sports goods	0.00571	0.0384	180,495
152	Games and toys	0.0406	0.0453	188,280
153	Other manufacturing n.e.c.	0.0425*	0.0221	210,034
154	Manufacturing services on physical inputs	-0.410	0.304	17,291
155	Maintenance and repair services n.i.e.	0.00493	0.0599	24,792
156	Transport	0.0498**	0.0221	53,913

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Same-origin coefficient by industry (27/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
157	Travel	0.00132	0.0299	43,505
158	Construction	0.116*	0.0618	39,716
159	Insurance and pension services	0.0593	0.0672	42,447
160	Financial services	-0.0606	0.0446	44,543
161	Charges for use of intellectual property	-0.0503	0.0575	40,909
162	Telecom, computer, information services	-0.0885***	0.0245	51,201

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Same-origin coefficient by industry (28/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
163	Other business services	-0.0543*	0.0312	52,222
164	Heritage and recreational services	0.854	0.693	9,877
165	Health services	0.0193	0.0597	27,655
166	Education services	0.00512	0.0205	35,210
167	Government goods and services n.i.e.	-0.108*	0.0578	39,672
168	Services not allocated	0.174	0.261	26,946

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Same-origin coefficient by industry (29/29)

ITPD ID	Industry	<i>ii</i> coefficient	S.e.	Obs.
169	Trade-related services	0.0538	0.0530	38,217
170	Other personal services	1.726 [†]	1.548	8,975

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General equilibrium by economy (1/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
AFG	Afghanistan	1.439	-0.007	0.619	0.626	-0.108
ALB	Albania	2.622	0.136	0.996	0.859	0.146
DZA	Algeria	3.832	0.129	0.985	0.855	0.110
ASM	American Samoa	0.720	-0.005	0.213	0.219	-0.061
AND	Andorra	-0.186	0.468	-0.383	-0.847	0.819
AGO	Angola	1.484	0.294	1.026	0.730	0.862
ATG	Antigua and Barbuda	-0.710	0.053	-0.647	-0.700	0.402
ARG	Argentina	8.584	1.774	-0.260	-1.999	1.750
ARM	Armenia	9.700	0.584	0.251	-0.331	0.555

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General equilibrium by economy (2/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
ABW	Aruba	-1.735	0.105	-1.015	-1.119	0.846
AUS	Australia	2.177	0.234	0.841	0.605	0.277
AUT	Austria	8.040	1.017	-0.864	-1.862	1.001
AZE	Azerbaijan	1.038	0.081	0.636	0.554	0.170
BHS	Bahamas, The	0.687	0.030	-0.176	-0.207	0.086
BHR	Bahrain	0.035	-0.122	0.222	0.345	-0.150
BGD	Bangladesh	1.220	0.035	0.831	0.796	-0.020
BRB	Barbados	1.818	0.000	-0.390	-0.391	0.001
BLR	Belarus	9.294	3.268	1.346	-1.861	3.095

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General equilibrium by economy (3/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
BEL	Belgium	2.466	0.262	0.884	0.620	0.282
BLZ	Belize	0.984	0.569	0.067	-0.500	0.529
BEN	Benin	3.587	0.383	0.103	-0.279	0.366
BMU	Bermuda	1.643	1.373	0.462	-0.899	2.018
BTN	Bhutan	0.872	-0.102	0.851	0.953	-0.533
BOL	Bolivia	8.977	1.940	0.115	-1.791	1.935
BIH	Bosnia and Herze- govina	3.366	0.153	0.983	0.829	0.038
BWA	Botswana	5.225	1.933	-0.684	-2.568	2.014
BRA	Brazil	10.988	0.382	-0.823	-1.200	0.372

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General equilibrium by economy (4/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
VGB	British Virgin Is-lands	-0.636	-0.008	-0.075	-0.067	0.006
BRN	Brunei Darussalam	1.033	0.084	0.683	0.599	0.149
BGR	Bulgaria	2.473	0.177	0.910	0.732	0.168
BFA	Burkina Faso	0.125	0.069	-0.651	-0.720	0.102
BDI	Burundi	1.072	-0.005	0.479	0.484	-0.102
CPV	Cabo Verde	7.264	0.094	0.178	0.084	0.046
KHM	Cambodia	3.986	0.389	0.540	0.150	0.428
CMR	Cameroon	5.864	0.786	-0.234	-1.012	0.797
CAN	Canada	17.842	1.322	-0.864	-2.157	1.336

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General equilibrium by economy (5/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
CYM	Cayman Islands	0.829	0.004	0.226	0.222	-0.013
CAF	Central African Re- public	0.731	0.121	0.485	0.363	-0.228
TCD	Chad	0.489	0.036	0.455	0.419	0.124
CHL	Chile	9.884	0.691	-0.691	-1.372	0.686
CHN	China	4.229	0.129	1.433	1.302	0.181
COL	Colombia	12.450	0.463	-0.316	-0.776	0.469
COM	Comoros	1.616	0.311	0.750	0.438	-0.164
COD	Congo, Dem. Rep.	2.256	0.623	0.942	0.317	0.785
COG	Congo, Rep.	0.970	0.353	1.048	0.693	2.079

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General equilibrium by economy (6/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
COK	Cook Islands	-0.413	-0.639	-0.040	0.603	-0.606
CRI	Costa Rica	11.051	0.796	-1.166	-1.946	0.791
CIV	Cote d'Ivoire	0.704	0.069	0.576	0.507	0.117
HRV	Croatia	2.395	0.154	0.900	0.745	0.114
CUB	Cuba	1.937	1.364	0.848	-0.510	0.738
CYP	Cyprus	0.895	0.054	0.375	0.321	0.039
CZE	Czechia	1.246	0.054	0.764	0.710	0.043
DNK	Denmark	1.233	0.069	0.626	0.557	0.088
DJI	Djibouti	0.059	-0.151	0.700	0.853	-0.683

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General equilibrium by economy (7/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
DMA	Dominica	1.759	0.701	-0.327	-1.021	0.983
DOM	Dominican Republic	15.653	1.047	-0.846	-1.874	1.122
ECU	Ecuador	9.818	0.565	-0.404	-0.964	0.548
EGY	Egypt, Arab Rep.	7.822	1.034	-0.742	-1.757	1.211
SLV	El Salvador	14.096	0.951	-0.415	-1.354	1.022
GNQ	Equatorial Guinea	0.798	0.940	0.770	-0.168	3.743
ERI	Eritrea	1.677	0.306	0.800	0.492	0.426
EST	Estonia	0.184	-0.031	0.390	0.421	-0.029
SWZ	Eswatini	2.223	0.293	1.084	0.789	0.572

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General equilibrium by economy (8/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
ETH	Ethiopia	2.398	0.007	0.785	0.778	-0.336
FRO	Faroe Islands	-1.046	-0.113	0.302	0.416	-0.139
FJI	Fiji	7.383	0.329	-0.450	-0.776	0.427
FIN	Finland	0.981	0.040	0.515	0.475	0.045
FRA	France	11.166	0.709	-0.996	-1.693	0.713
PYF	French Polynesia	-1.026	0.017	-0.299	-0.316	0.245
GAB	Gabon	1.140	0.025	0.846	0.820	0.092
GMB	Gambia, The	1.427	0.006	0.396	0.391	-0.017
GEO	Georgia	4.803	0.123	0.783	0.659	-0.047

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General equilibrium by economy (9/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
DEU	Germany	4.195	0.238	1.188	0.948	0.261
GHA	Ghana	1.105	0.011	0.698	0.687	0.026
GRC	Greece	7.759	0.765	-0.817	-1.570	0.781
GRL	Greenland	1.123	0.146	0.525	0.378	0.208
GRD	Grenada	4.069	0.352	-0.310	-0.660	0.574
GUM	Guam	0.550	-0.095	0.590	0.686	-0.472
GTM	Guatemala	4.656	4.517	1.314	-3.064	4.017
GIN	Guinea	1.410	1.088	0.686	-0.397	1.340
GNB	Guinea-Bissau	2.221	0.076	0.505	0.429	0.036

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General equilibrium by economy (10/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
GUY	Guyana	0.900	0.352	0.123	-0.229	0.296
HTI	Haiti	11.564	0.221	0.527	0.306	0.160
HND	Honduras	4.206	5.061	1.510	-3.379	5.035
HKG	Hong Kong SAR, China	1.535	-0.014	0.717	0.730	-0.119
HUN	Hungary	1.517	0.137	0.832	0.694	0.179
ISL	Iceland	0.614	0.018	0.358	0.340	0.007
IND	India	5.223	0.101	1.126	1.023	0.070
IDN	Indonesia	4.842	0.814	0.292	-0.518	0.829
IRN	Iran, Islamic Rep.	1.969	0.012	0.913	0.901	-0.003

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General equilibrium by economy (11/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
IRQ	Iraq	1.991	1.845	1.060	-0.771	2.510
IRL	Ireland	6.592	1.983	-0.375	-2.312	1.914
ISR	Israel	-0.075	0.032	-0.717	-0.748	0.054
ITA	Italy	4.119	0.178	1.191	1.011	0.194
JAM	Jamaica	7.967	2.229	-0.289	-2.463	2.416
JPN	Japan	3.776	0.092	1.033	0.941	0.099
JOR	Jordan	3.771	0.159	0.739	0.579	0.027
KAZ	Kazakhstan	2.240	0.132	1.097	0.964	0.237
KEN	Kenya	11.059	0.278	-0.953	-1.228	0.379

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General equilibrium by economy (12/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
PRK	Korea, Dem. Peo- ple's Rep.	-0.474	0.000	1.084	1.084	-0.001
KOR	Korea, Rep.	3.382	0.176	1.125	0.947	0.208
KWT	Kuwait	1.281	0.082	0.910	0.828	0.245
KGZ	Kyrgyz Republic	4.244	0.098	1.033	0.935	-0.098
LAO	Lao PDR	3.961	0.282	1.496	1.211	0.287
LVA	Latvia	1.339	0.045	0.634	0.588	0.029
LBN	Lebanon	3.077	0.080	0.368	0.288	-0.028
LSO	Lesotho	7.360	0.286	-1.269	-1.551	0.315
LBR	Liberia	-0.243	-0.622	0.233	0.860	-0.813

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General equilibrium by economy (13/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
LBY	Libya	0.613	0.043	0.615	0.572	0.591
LIE	Liechtenstein	-0.702	-0.315	-0.223	0.093	-0.218
LTU	Lithuania	1.677	0.148	0.764	0.615	0.125
LUX	Luxembourg	-0.029	-0.026	0.118	0.143	-0.012
MAC	Macao SAR, China	0.897	-0.007	0.452	0.460	-0.043
MDG	Madagascar	-0.103	-0.087	0.229	0.317	-0.089
MWI	Malawi	6.035	0.240	-1.060	-1.297	0.403
MYS	Malaysia	4.173	1.652	-0.006	-1.631	1.650
MDV	Maldives	-2.590	-0.196	0.332	0.529	-0.400

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General equilibrium by economy (14/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
MLI	Mali	2.542	1.143	-0.750	-1.871	1.012
MLT	Malta	-0.128	-0.037	0.297	0.334	-0.062
MRT	Mauritania	0.619	0.355	0.612	0.257	0.262
MUS	Mauritius	3.319	0.202	-0.613	-0.814	0.294
MEX	Mexico	17.416	1.539	0.457	-1.065	1.552
FSM	Micronesia, Fed. Sts.	-0.437	-0.220	-0.407	-0.188	-0.264
MDA	Moldova	4.799	0.196	1.258	1.060	0.051
MNG	Mongolia	6.638	0.049	-0.325	-0.374	0.047
MNE	Montenegro	0.411	-0.045	0.465	0.511	-0.220

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General equilibrium by economy (15/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
MAR	Morocco	6.303	0.824	1.487	0.658	0.579
MOZ	Mozambique	6.775	0.622	-0.024	-0.643	0.624
MMR	Myanmar	1.487	0.705	1.472	0.762	0.660
NAM	Namibia	2.357	0.203	0.473	0.269	0.124
NPL	Nepal	16.450	0.251	-2.467	-2.711	0.795
NLD	Netherlands	2.360	0.219	0.883	0.662	0.229
NCL	New Caledonia	1.191	0.989	0.922	-0.066	0.742
NZL	New Zealand	1.862	0.055	0.612	0.557	0.050
NIC	Nicaragua	5.675	3.230	1.291	-1.878	3.151

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General equilibrium by economy (16/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
NER	Niger	2.424	0.030	0.442	0.412	-0.018
NGA	Nigeria	2.294	0.035	0.877	0.842	0.047
MKD	North Macedonia	1.417	0.061	0.665	0.604	0.026
NOR	Norway	1.139	0.034	0.492	0.458	0.028
OMN	Oman	1.030	0.214	0.771	0.555	0.390
PAK	Pakistan	3.028	0.041	0.877	0.835	-0.013
PAN	Panama	10.269	2.021	-1.275	-3.230	2.839
PNG	Papua New Guinea	3.136	0.506	0.243	-0.261	0.589
PRY	Paraguay	15.700	1.111	-1.052	-2.139	1.199

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General equilibrium by economy (17/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
PER	Peru	9.814	0.444	-0.675	-1.114	0.435
PHL	Philippines	7.458	1.036	0.042	-0.984	1.033
POL	Poland	6.826	0.528	-0.052	-0.577	0.527
PRT	Portugal	12.181	0.987	-0.549	-1.521	1.011
QAT	Qatar	0.787	0.079	0.606	0.527	0.279
ROU	Romania	6.733	0.540	0.093	-0.444	0.538
RUS	Russian Federation	7.476	0.348	-0.056	-0.403	0.345
RWA	Rwanda	4.496	0.449	-0.636	-1.080	0.668
WSM	Samoa	0.823	-0.003	0.370	0.372	-0.238

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General equilibrium by economy (18/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
SMR	San Marino	-2.085	-0.037	0.000	0.037	-0.037
STP	Sao Tome and Principe	-0.952	-0.034	-0.157	-0.124	0.041
SAU	Saudi Arabia	1.168	0.215	0.640	0.424	0.400
SEN	Senegal	6.379	0.309	-0.220	-0.527	0.334
SRB	Serbia	-0.182	-0.056	0.273	0.329	-0.065
SYC	Seychelles	-1.011	-0.054	0.020	0.073	-0.055
SLE	Sierra Leone	2.486	0.413	0.347	-0.066	0.325
SGP	Singapore	1.919	0.212	0.632	0.419	0.158
SXM	Sint Maarten (Dutch part)	-0.748	0.677	-1.077	-1.742	1.743

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General equilibrium by economy (19/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
SVK	Slovak Republic	0.903	0.043	0.675	0.632	0.051
SVN	Slovenia	2.550	0.411	0.025	-0.384	0.411
SLB	Solomon Islands	1.036	0.260	0.995	0.733	0.884
SOM	Somalia, Fed. Rep.	0.686	-0.013	0.564	0.577	-0.066
ZAF	South Africa	5.306	1.456	-0.041	-1.475	1.450
SSD	South Sudan	3.301	1.143	0.583	-0.554	1.338
ESP	Spain	12.644	0.761	-1.047	-1.794	0.783
LKA	Sri Lanka	2.185	0.025	0.912	0.887	-0.022
KNA	St. Kitts and Nevis	-3.983	0.013	-1.204	-1.217	0.347

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General equilibrium by economy (20/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
LCA	St. Lucia	-0.344	0.118	-0.384	-0.502	0.460
VCT	St. Vincent and the Grenadines	1.180	0.632	0.185	-0.444	0.545
SDN	Sudan	3.798	0.279	0.026	-0.252	0.275
SUR	Suriname	-0.226	0.772	-0.611	-1.372	0.315
SWE	Sweden	0.955	0.031	0.549	0.517	0.027
CHE	Switzerland	9.310	1.107	-0.939	-2.023	1.135
SYR	Syrian Arab Republic	1.350	-0.046	0.706	0.752	-0.552
TWN	Taiwan	1.600	0.642	1.190	0.545	1.177
TJK	Tajikistan	0.622	-0.055	0.600	0.655	-0.283

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General equilibrium by economy (21/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
TZA	Tanzania	8.494	0.558	-0.316	-0.870	0.618
THA	Thailand	4.884	1.184	0.065	-1.106	1.192
TLS	Timor-Leste	0.262	-0.160	0.463	0.624	-0.476
TGO	Togo	3.111	0.950	0.890	-0.060	1.075
TON	Tonga	1.509	0.552	0.750	0.197	-0.152
TTO	Trinidad and To- bago	2.771	0.355	0.168	-0.186	0.390
TUN	Tunisia	3.383	0.675	1.407	0.727	0.498
TUR	Turkiye	2.926	0.272	1.044	0.770	0.265
TKM	Turkmenistan	1.150	0.368	1.245	0.874	2.518

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General equilibrium by economy (22/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
UGA	Uganda	3.332	1.107	0.575	-0.526	0.885
UKR	Ukraine	4.057	0.169	1.248	1.077	0.148
ARE	United Arab Emirates	0.800	0.027	0.539	0.512	0.018
GBR	United Kingdom	5.671	0.231	1.020	0.788	0.167
USA	United States	19.415	0.500	-2.265	-2.751	0.559
URY	Uruguay	5.505	0.829	0.159	-0.665	0.842
UZB	Uzbekistan	2.385	0.059	0.975	0.915	-0.043
VUT	Vanuatu	-0.051	-0.228	0.404	0.633	-0.337
VEN	Venezuela, RB	6.692	1.999	-0.032	-1.991	1.988

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General equilibrium by economy (23/23)

ISO3	Economy	Exports	Real wage	Nominal wage	Price index	Welfare
VNM	Viet Nam	2.922	0.072	1.348	1.275	0.110
PSE	West Bank and Gaza	-1.699	-0.005	-0.278	-0.273	0.054
YEM	Yemen, Rep.	2.505	0.032	0.534	0.502	-0.078
ZMB	Zambia	3.548	0.371	-0.562	-0.930	0.310
ZWE	Zimbabwe	5.793	0.633	0.188	-0.442	0.607

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Table 8: Agriculture and food industry estimates

Sector	ID	ITPD-E industry	<i>ii</i> coefficient	S.e.
Agriculture	2	Rice (raw)	-0.193***	0.0391
	10	Other sweeteners	-0.278*	0.143
	13	Fresh vegetables	0.103***	0.0320
	21	Cocoa and cocoa products	0.206***	0.0629
	22	Beverages, nec	-0.0621*	0.0368
Food, beverages, and tobacco	41	Grain mill products	-0.105***	0.0346
	44	Bakery products	-0.0315*	0.0171
	49	Distilling rectifying & blending of spirits	0.162***	0.0520
	50	Wines	0.0776*	0.0397
	51	Malt liquors and malt	-0.123**	0.0494
	53	Tobacco products	0.217***	0.0707

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Additional sectors: industry detail

Sector	ID	ITPD-E industry	<i>ii</i> coefficient	S.e.
Non-metal group	90	Man-made fibres	0.0626**	0.0247
	95	Pottery china and earthenware	0.0955***	0.0312
	96	Refractory ceramic products	0.0514*	0.0281
	97	Struct.non-refractory clay; ceramic products	0.160***	0.0326
	100	Cutting shaping & finishing of stone	0.0938***	0.0319
Computers/electronics	131	Electronic valves tubes etc.	0.0509*	0.0269
	133	TV and radio receivers and associated goods	0.0990***	0.0363

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Additional sector channel contributions

	Non-metal group	Computers
Combined ii elasticity	0.0216** (0.0105)	0.0393** (0.0168)
Income, γ_I	1.0415 (0.7471)	-1.7711* (0.9451)
Demand, γ_D	-0.9519 (0.7483)	1.7060* (0.9377)
Information, γ_F^{ii}	-0.0680*** (0.0248)	0.1044** (0.0503)
Information, γ_F^{ij}	-0.1499*** (0.0401)	0.0699 (0.0918)

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Table 12: A. UN-scaled stocks

	Total trade	Agriculture	Food
<i>A. UN-migrant-scaled stocks</i>			
Combined ii elasticity	0.1329*** (0.0499)	0.1080 (0.0681)	-0.0031 (0.0685)
Income, γ_I	0.8511 (0.7836)	1.9980*** (0.6908)	0.1688 (0.7106)
Demand, γ_D	-1.0452 (0.7814)	-2.1248*** (0.6873)	-0.0832 (0.6973)
Information, γ_F^{ii}	0.3270*** (0.1244)	0.2348* (0.1331)	-0.0888 (0.1385)
Information, γ_F^{ij}	0.1200 (0.1669)	0.0750 (0.1283)	-0.1174 (0.1280)
Observations	239,657	209,650	223,222

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[Mixed-rate panel](#)
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Table 12: B. Mixed rate and stocks

	Total trade	Agriculture	Food
<i>B. Mixed rate and UN-migrant-scaled stocks</i>			
Combined ii elasticity	0.0171** (0.0077)	0.0088 (0.0061)	0.0150** (0.0059)
Income, γ_I	0.8846 (0.7659)	1.9851*** (0.6871)	0.2451 (0.7214)
Demand, γ_D	-1.0521 (0.7738)	-2.0844*** (0.6832)	-0.2067 (0.7034)
Information, γ_F^{ii}	0.1846 (0.1259)	0.1081 (0.0942)	-0.0233 (0.0894)
Information, γ_F^{ij}	0.1367 (0.1877)	0.0931 (0.1329)	-0.0758 (0.1307)
Bilateral reference rate R_0^{ii}	0.0000748	0.0000825	0.0000777
Observations	239,657	209,650	223,222

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Additional sectors and the broad sector screen

All 17 sectors

Non-metal minerals

Computers

Industry detail

Channel contributions

Non-metal minerals/plastics/rubber

	(1) Pooled	(2) ii	(3) Other	(4) Split	(5) $+ jj$
EU	0.325*** (0.0687)	0.324*** (0.0688)	0.323*** (0.0687)	0.322*** (0.0689)	0.308*** (0.0674)
RTA	0.0580 (0.0475)	0.0573 (0.0476)	0.0566 (0.0475)	0.0529 (0.0478)	0.0492 (0.0472)
WTO	0.128*** (0.0495)	0.128*** (0.0495)	0.128*** (0.0495)	0.134*** (0.0495)	0.128** (0.0498)
IHS migrant stock	0.0731*** (0.0163)	0.0730*** (0.0162)	0.0735*** (0.0162)	0.0725*** (0.0162)	0.0691*** (0.0161)
$\text{asinh}(M^{\text{mig}})$	0.000263 (0.0135)				
$\text{asinh}(M^{ij})$		0.0216** (0.0104)	0.0256** (0.0104)	0.0213** (0.0106)	0.0216** (0.0105)
$\text{asinh}(M^{ij} + M^{iz})$			-0.0152 (0.0139)		
$\text{asinh}(M^{ij})$				-0.0572*** (0.0202)	-0.0603*** (0.0196)
$\text{asinh}(M^{iz})$				0.0810*** (0.0255)	0.0896*** (0.0235)
$\text{asinh}(R^{ij})$					3.394 (2.435)
Observations	224,242	224,242	224,242	224,242	224,242
All four fixed effects	Yes	Yes	Yes	Yes	Yes

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Computers/electronics/optics

	(1) Pooled	(2) ii	(3) Other	(4) Split	(5) $+ jj$
EU	0.245 (0.163)	0.244 (0.163)	0.241 (0.162)	0.240 (0.162)	0.259 (0.162)
RTA	-0.143* (0.0739)	-0.143* (0.0738)	-0.143* (0.0736)	-0.143* (0.0733)	-0.139* (0.0738)
WTO	-0.00320 (0.148)	-0.00908 (0.149)	-0.00891 (0.149)	-0.0117 (0.149)	0.00266 (0.151)
IHS migrant stock	0.0420 (0.0294)	0.0407 (0.0291)	0.0417 (0.0292)	0.0415 (0.0291)	0.0457 (0.0294)
$\text{asinh}(M^{\text{mig}})$	-0.00922 (0.0259)				
$\text{asinh}(M^{ii})$		0.0302** (0.0140)	0.0407** (0.0173)	0.0396** (0.0170)	0.0393** (0.0168)
$\text{asinh}(M^{ij} + M^{iz})$			-0.0404 (0.0286)		
$\text{asinh}(M^{ij})$				-0.00567 (0.0458)	0.00473 (0.0477)
$\text{asinh}(M^{iz})$				-0.0455 (0.0469)	-0.0651 (0.0489)
$\text{asinh}(R^{ij})$					-5.772* (3.080)
Observations	227,017	227,017	227,017	227,017	227,017
All four fixed effects	Yes	Yes	Yes	Yes	Yes

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Same-origin coefficient: sector screen

Sector	Coefficient	S.e.	Obs.
Agriculture	0.0399**	0.0185	209,650
Mining and energy	0.0728	0.0546	177,184
Food, beverages, and tobacco	0.0445***	0.0153	223,222
Textiles and leather	0.0183	0.0180	228,359
Wood, paper, and printing	0.0314	0.0271	218,791
Petroleum	0.0160	0.0320	182,708
Chemicals	-0.00349	0.0107	223,722
Non-metal minerals, plastics, and rubber	0.0216**	0.0105	224,242
Metal products	0.000833	0.0157	224,648
Computers, electronics, and optics	0.0393**	0.0168	227,017
Electrical equipment	0.0303*	0.0180	221,301
Mechanical and other machinery	-0.0000434	0.00999	224,623
Transport equipment	-0.000454	0.0184	221,629
Other manufacturing	0.0302	0.0252	223,325
Utilities	0.0797*	0.0482	189,114
Construction	0.116*	0.0618	39,716
Services	-0.0205	0.0196	59,070

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Robustness: complete specifications

Aggregate: UN-scaled

Aggregate: rates

UN-scaled sectors:

Agriculture

Food

Non-metals

Computers

Rate specifications:

Agriculture

Food

Non-metals

Computers

Channel tables

Conversions

Main comparison

Aggregate: UN scaling

	(1) Pooled	(2) ii	(3) Other	(4) Other	(5) $+ jj$
EU	0.477*** (0.0726)	0.483*** (0.0723)	0.473*** (0.0727)	0.473*** (0.0727)	0.441*** (0.0691)
RTA	0.161*** (0.0512)	0.165*** (0.0511)	0.160*** (0.0512)	0.160*** (0.0512)	0.150*** (0.0508)
WTO	0.0791 (0.0920)	0.0836 (0.0924)	0.0753 (0.0914)	0.0753 (0.0914)	0.0616 (0.0909)
IHS migrant stock	0.119*** (0.0278)	0.106*** (0.0266)	0.121*** (0.0275)	0.121*** (0.0275)	0.110*** (0.0256)
$\text{asinh}(M^{\text{mig},UN})$	-0.0752* (0.0427)				
$\text{asinh}(M^{ii,UN})$		-0.0307 (0.0431)	0.0792 (0.0503)	0.0792 (0.0503)	0.133*** (0.0499)
$\text{asinh}(M^{ij,UN} + M^{iz,UN})$			-0.151*** (0.0562)	-0.151*** (0.0562)	
$\text{asinh}(M^{ij,UN})$					-0.0741 (0.0766)
$\text{asinh}(M^{iz,UN})$					-0.194* (0.106)
$\text{asinh}(R^{ij})$					2.774 (2.554)
Observations	239,657	239,657	239,657	239,657	239,657
All four fixed effects	Yes	Yes	Yes	Yes	Yes

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Aggregate: rate measure

	(1) Pooled	(2) ii	(3) Other	(4) Other	(5) $+ jj$
EU	0.488*** (0.0728)	0.487*** (0.0722)	0.474*** (0.0723)	0.474*** (0.0723)	0.445*** (0.0689)
RTA	0.166*** (0.0511)	0.167*** (0.0509)	0.163*** (0.0509)	0.163*** (0.0509)	0.155*** (0.0504)
WTO	0.0864 (0.0924)	0.0816 (0.0914)	0.0700 (0.0903)	0.0700 (0.0903)	0.0562 (0.0895)
IHS migrant stock	0.102*** (0.0258)	0.101*** (0.0261)	0.124*** (0.0276)	0.124*** (0.0276)	0.114*** (0.0257)
$\text{asinh}(R^{\text{mig}})$	25.34 (26.11)				
$\text{asinh}(R^{ij})$		96.24 (80.72)	186.4** (88.51)	186.4** (88.51)	228.9** (103.3)
$\text{asinh}(M^{ij,UN} + M^{iz,UN})$			-0.123** (0.0494)	-0.123** (0.0494)	
$\text{asinh}(M^{ij,UN})$					-0.0308 (0.0775)
$\text{asinh}(M^{iz,UN})$					-0.168 (0.121)
$\text{asinh}(R^{ij})$					2.883 (2.496)
Observations	239,657	239,657	239,657	239,657	239,657
All four fixed effects	Yes	Yes	Yes	Yes	Yes

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UN: Agriculture

	(1) Pooled	(2) <i>ii</i>	(3) Other	(4) Other	(5) + <i>jj</i>
EU	1.053*** (0.0694)	1.057*** (0.0690)	1.051*** (0.0697)	1.051*** (0.0697)	1.032*** (0.0671)
RTA	0.0479 (0.0354)	0.0476 (0.0354)	0.0479 (0.0354)	0.0479 (0.0354)	0.0416 (0.0339)
WTO	0.474*** (0.0618)	0.480*** (0.0619)	0.473*** (0.0617)	0.473*** (0.0617)	0.458*** (0.0598)
IHS migrant stock	0.0575*** (0.0215)	0.0507** (0.0209)	0.0575*** (0.0213)	0.0575*** (0.0213)	0.0468** (0.0217)
$\text{asinh}(M^{\text{mig},UN})$	-0.0546 (0.0461)				
$\text{asinh}(M^{ii,UN})$		-0.0413 (0.0505)	0.0339 (0.0747)	0.0339 (0.0747)	0.108 (0.0681)
$\text{asinh}(M^{ij,UN} + M^{iz,UN})$			-0.0863 (0.0778)	-0.0863 (0.0778)	
$\text{asinh}(M^{ij,UN})$					-0.0518 (0.0705)
$\text{asinh}(M^{iz,UN})$					-0.127 (0.0895)
Domestic-marriage rate, R^{ij}					6.511*** (2.251)
All four fixed effects	Yes	Yes	Yes	Yes	Yes

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UN: Food, beverages, and tobacco

	(1) Pooled	(2) <i>ii</i>	(3) Other	(4) Other	(5) + <i>jj</i>
EU	0.928*** (0.0620)	0.928*** (0.0620)	0.928*** (0.0620)	0.928*** (0.0620)	0.931*** (0.0626)
RTA	0.113*** (0.0383)	0.113*** (0.0382)	0.113*** (0.0382)	0.113*** (0.0382)	0.114*** (0.0384)
WTO	-0.252*** (0.0782)	-0.252*** (0.0781)	-0.252*** (0.0781)	-0.252*** (0.0781)	-0.248*** (0.0787)
IHS migrant stock	0.0548*** (0.0205)	0.0564*** (0.0195)	0.0572*** (0.0204)	0.0572*** (0.0204)	0.0580*** (0.0207)
$\text{asinh}(M^{\text{mig},UN})$	0.0228 (0.0416)				
$\text{asinh}(M^{ij,UN})$		0.0263 (0.0444)	0.0348 (0.0596)	0.0348 (0.0596)	-0.00309 (0.0685)
$\text{asinh}(M^{ij,UN} + M^{iz,UN})$			-0.00943 (0.0669)	-0.00943 (0.0669)	
$\text{asinh}(M^{ij,UN})$					-0.0317 (0.0692)
$\text{asinh}(M^{iz,UN})$					0.0857 (0.0920)
Domestic-marriage rate, R^{ij}					0.550 (2.316)
All four fixed effects	Yes	Yes	Yes	Yes	Yes

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UN: Non-metal minerals, plastics, and rubber

	(1) Pooled	(2) <i>ii</i>	(3) Other	(4) Other	(5) + <i>jj</i>
EU	0.316*** (0.0675)	0.317*** (0.0675)	0.314*** (0.0676)	0.314*** (0.0676)	0.300*** (0.0672)
RTA	0.0528 (0.0462)	0.0543 (0.0462)	0.0529 (0.0462)	0.0529 (0.0462)	0.0492 (0.0460)
WTO	0.123** (0.0496)	0.125** (0.0496)	0.123** (0.0496)	0.123** (0.0496)	0.116** (0.0500)
IHS migrant stock	0.0893*** (0.0183)	0.0840*** (0.0160)	0.0885*** (0.0177)	0.0885*** (0.0177)	0.0819*** (0.0164)
$\text{asinh}(M^{\text{mig},UN})$	-0.0584 (0.0435)				
$\text{asinh}(M^{ii,UN})$		-0.0692 (0.0492)	-0.0372 (0.0524)	-0.0372 (0.0524)	-0.0268 (0.0476)
$\text{asinh}(M^{ij,UN} + M^{iz,UN})$			-0.0400 (0.0509)	-0.0400 (0.0509)	
$\text{asinh}(M^{ij,UN})$					-0.00531 (0.0497)
$\text{asinh}(M^{iz,UN})$					-0.0544 (0.0796)
Domestic-marriage rate, R^{ij}					2.462 (2.298)
All four fixed effects	Yes	Yes	Yes	Yes	Yes

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UN: Computers, electronics, and optical products

	(1) Pooled	(2) <i>ii</i>	(3) Other	(4) Other	(5) + <i>jj</i>
EU	0.241 (0.162)	0.245 (0.163)	0.239 (0.162)	0.239 (0.162)	0.241 (0.159)
RTA	-0.148** (0.0748)	-0.146* (0.0747)	-0.149** (0.0746)	-0.149** (0.0746)	-0.161** (0.0745)
WTO	-0.000391 (0.145)	0.00144 (0.145)	-0.00337 (0.145)	-0.00337 (0.145)	-0.00447 (0.145)
IHS migrant stock	0.0639** (0.0300)	0.0509* (0.0279)	0.0650** (0.0298)	0.0650** (0.0298)	0.0602** (0.0286)
$\text{asinh}(M^{\text{mig}, UN})$	-0.0969 (0.0598)				
$\text{asinh}(M^{ii, UN})$		-0.0663 (0.0564)	0.0525 (0.0616)	0.0525 (0.0616)	0.136** (0.0607)
$\text{asinh}(M^{ij, UN} + M^{iz, UN})$			-0.159** (0.0805)	-0.159** (0.0805)	
$\text{asinh}(M^{ij, UN})$					0.0343 (0.0722)
$\text{asinh}(M^{iz, UN})$					-0.507*** (0.0940)
Domestic-marriage rate, R^{ij}					-12.08*** (3.072)
All four fixed effects	Yes	Yes	Yes	Yes	Yes

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Rates: Agriculture

	(1) Pooled	(2) <i>ii</i>	(3) Other	(4) Other	(5) + <i>jj</i>
EU	1.063*** (0.0686)	1.060*** (0.0687)	1.051*** (0.0693)	1.051*** (0.0693)	1.035*** (0.0668)
RTA	0.0490 (0.0353)	0.0481 (0.0354)	0.0481 (0.0355)	0.0481 (0.0355)	0.0420 (0.0339)
WTO	0.488*** (0.0628)	0.485*** (0.0632)	0.472*** (0.0613)	0.472*** (0.0613)	0.460*** (0.0593)
IHS migrant stock	0.0470** (0.0198)	0.0470** (0.0199)	0.0577*** (0.0217)	0.0577*** (0.0217)	0.0476** (0.0221)
Migrant-marriage rate, R^{mig}	16.67 (25.73)				
Same-origin marriage rate, R^{ii}		11.55 (52.82)	57.88 (67.72)	57.88 (67.72)	106.3 (73.68)
$\text{asinh}(M^{ij,UN} + M^{iz,UN})$			-0.0704 (0.0573)	-0.0704 (0.0573)	
$\text{asinh}(M^{ij,UN})$					-0.00623 (0.0610)
$\text{asinh}(M^{iz,UN})$					-0.0994 (0.0907)
Domestic-marriage rate, R^{ij}					6.469*** (2.239)
All four fixed effects	Yes	Yes	Yes	Yes	Yes

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Rates: Food, beverages, and tobacco

	(1) Pooled	(2) ii	(3) Other	(4) Other	(5) $+ jj$
EU	0.934*** (0.0617)	0.929*** (0.0621)	0.926*** (0.0616)	0.926*** (0.0616)	0.926*** (0.0622)
RTA	0.112*** (0.0380)	0.114*** (0.0379)	0.114*** (0.0379)	0.114*** (0.0379)	0.114*** (0.0380)
WTO	-0.244*** (0.0784)	-0.251*** (0.0783)	-0.253*** (0.0782)	-0.253*** (0.0782)	-0.252*** (0.0786)
IHS migrant stock	0.0580*** (0.0194)	0.0575*** (0.0197)	0.0606*** (0.0206)	0.0606*** (0.0206)	0.0605*** (0.0208)
Migrant-marriage rate, R^{mig}	78.31*** (27.40)				
Same-origin marriage rate, R^{ii}		189.5*** (61.11)	199.8*** (70.55)	199.8*** (70.55)	193.6** (75.63)
$\text{asinh}(M^{ij,UN} + M^{iz,UN})$			-0.0159 (0.0507)	-0.0159 (0.0507)	
$\text{asinh}(M^{ij,UN})$					-0.0374 (0.0595)
$\text{asinh}(M^{iz,UN})$					0.0384 (0.0872)
Domestic-marriage rate, R^{jj}					0.799 (2.351)
All four fixed effects	Yes	Yes	Yes	Yes	Yes

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Rates: Non-metal minerals, plastics, and rubber

	(1) Pooled	(2) <i>ii</i>	(3) Other	(4) Other	(5) + <i>jj</i>
EU	0.329*** (0.0685)	0.323*** (0.0685)	0.315*** (0.0678)	0.315*** (0.0678)	0.300*** (0.0674)
RTA	0.0574 (0.0476)	0.0550 (0.0467)	0.0518 (0.0460)	0.0518 (0.0460)	0.0482 (0.0459)
WTO	0.133*** (0.0489)	0.129*** (0.0497)	0.124** (0.0497)	0.124** (0.0497)	0.117** (0.0501)
IHS migrant stock	0.0715*** (0.0160)	0.0748*** (0.0161)	0.0877*** (0.0177)	0.0877*** (0.0177)	0.0805*** (0.0166)
Migrant-marriage rate, R^{mig}	45.03* (26.61)				
Same-origin marriage rate, R^{ii}		-108.8 (78.43)	-64.27 (73.05)	-64.27 (73.05)	-54.10 (74.43)
$\text{asinh}(M^{ij,UN} + M^{iz,UN})$			-0.0573 (0.0462)	-0.0573 (0.0462)	
$\text{asinh}(M^{ij,UN})$					-0.0105 (0.0454)
$\text{asinh}(M^{iz,UN})$					-0.0615 (0.0807)
Domestic-marriage rate, R^{ij}					2.417 (2.276)
All four fixed effects	Yes	Yes	Yes	Yes	Yes

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Rates: Computers, electronics, and optical products

	(1) Pooled	(2) <i>ii</i>	(3) Other	(4) Other	(5) + <i>jj</i>
EU	0.243 (0.163)	0.245 (0.163)	0.241 (0.161)	0.241 (0.161)	0.249 (0.158)
RTA	-0.143* (0.0739)	-0.144** (0.0733)	-0.147** (0.0738)	-0.147** (0.0738)	-0.157** (0.0741)
WTO	-0.00379 (0.147)	-0.00225 (0.148)	-0.00350 (0.145)	-0.00350 (0.145)	-0.00184 (0.145)
IHS migrant stock	0.0405 (0.0295)	0.0423 (0.0289)	0.0654** (0.0300)	0.0654** (0.0300)	0.0619** (0.0295)
Migrant-marriage rate, R^{mig}	-37.53 (34.49)				
Same-origin marriage rate, R^{ii}		-30.43 (84.35)	68.34 (87.37)	68.34 (87.37)	104.3 (86.99)
$\text{asinh}(M^{ij,UN} + M^{iz,UN})$			-0.129* (0.0699)	-0.129* (0.0699)	
$\text{asinh}(M^{ij,UN})$					0.0981 (0.0678)
$\text{asinh}(M^{iz,UN})$					-0.465*** (0.0938)
Domestic-marriage rate, R^{ij}					-11.76*** (3.111)
All four fixed effects	Yes	Yes	Yes	Yes	Yes

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