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## **Session II: Unpacking Linkages between migration and trade from the trade perspective**

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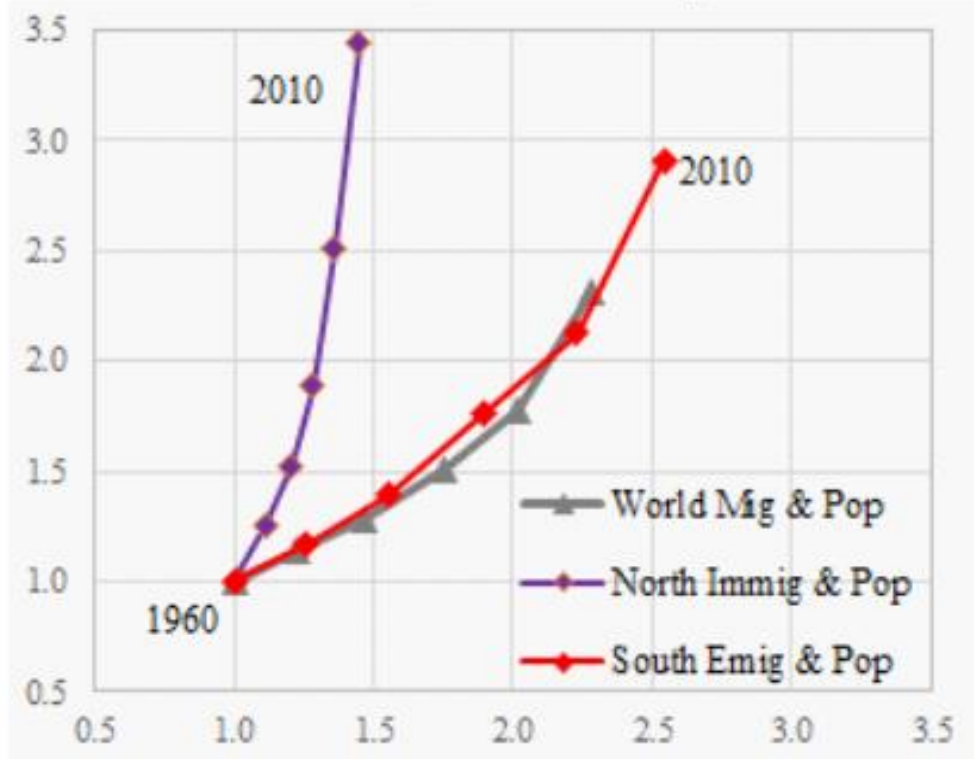
# Trade and Migration: In History, Now, and in the Future (?)

# Outline

- ❑ Background: S-N Migration has been increasing (1960-2010)
- ❑ Trade-Migration Theory Facing the Past
- ❑ 3 pieces of evidence From the Present
  - ❑ The Migration-Development nexus (positive migration effects for LICs and MICs)
  - ❑ Summary of literature survey of Labor Market effects of RTAs
  - ❑ Climate-related conflicts induce migration
- ❑ Case study: Detecting Labor Market effects of NAFTA in Mexico
- ❑ Simulating the Future (time permitting)

# Background: S-N Migration has been increasing

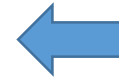
## Migration & Population (1960-2010)



- Migration rates on vertical axis
- Population growth on horizontal axis.
- Stocks normalized to 1 in 1960 [13]

## Global Trends

- Flow of migrants relative to population (see below) has been constant at 3%
- ...but over 1960-2010, S-N migration was 3 times higher than N-N migration



## Change in decadal rates

- S-N (1.5% → 8.0%)
- N-N (4.6% → 10.9%)

Share of foreign-born in HICs X3 since 1960 (X2 since 1990) [7]

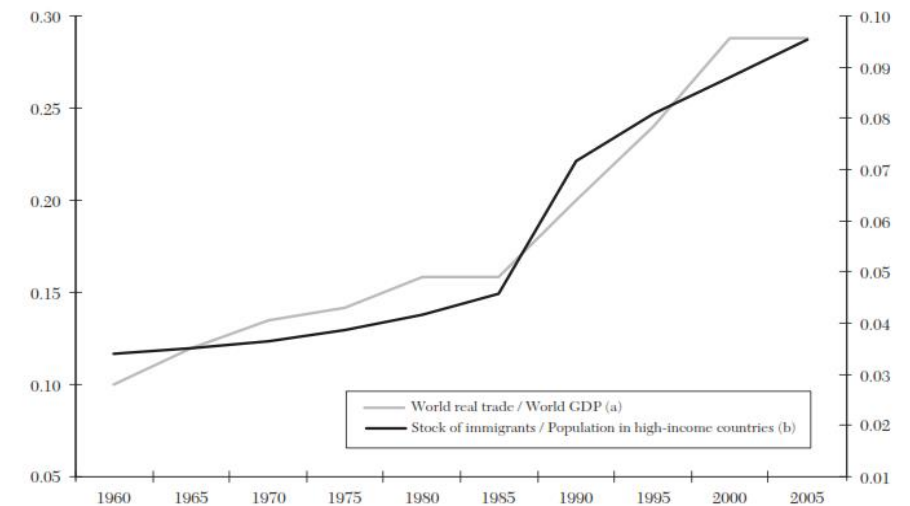


Figure 1. Globalization, Migration to the North and Trade

# Trade-Migration Theory Facing the Past

■ Well-received theory predicts that trade and migration are **substitutes** (famous paper by Mundell) based on trade determined by factor endowments with trade equalizing factor prices (relative wage of scarce factor up).

NAFTA :  $(W_S/W_U) \uparrow_{\text{Mexico}}$  and  $(W_S/W_U) \downarrow_{\text{US}}$

■ Other contributions recognizing FDI suggest that trade and migration can be **complements** (see [10 ])

---- Trade economists view of labor markets (goods prices determine wages or perfectly elastic demand curve for labor) markets. Popular with politicians . For NAFTA : 'sucking sound' (Ross Perot) or «we want to export goods not people» (by Salinas)

----- Labor economists view: (Wages are determined in local labor markets)....rather than in Beijing [11]

....but for the past (19th. C Atlantic trade), all evidence (confronted to many unmeasurable confounding factors) suggests that trade and migration have been complements [2]

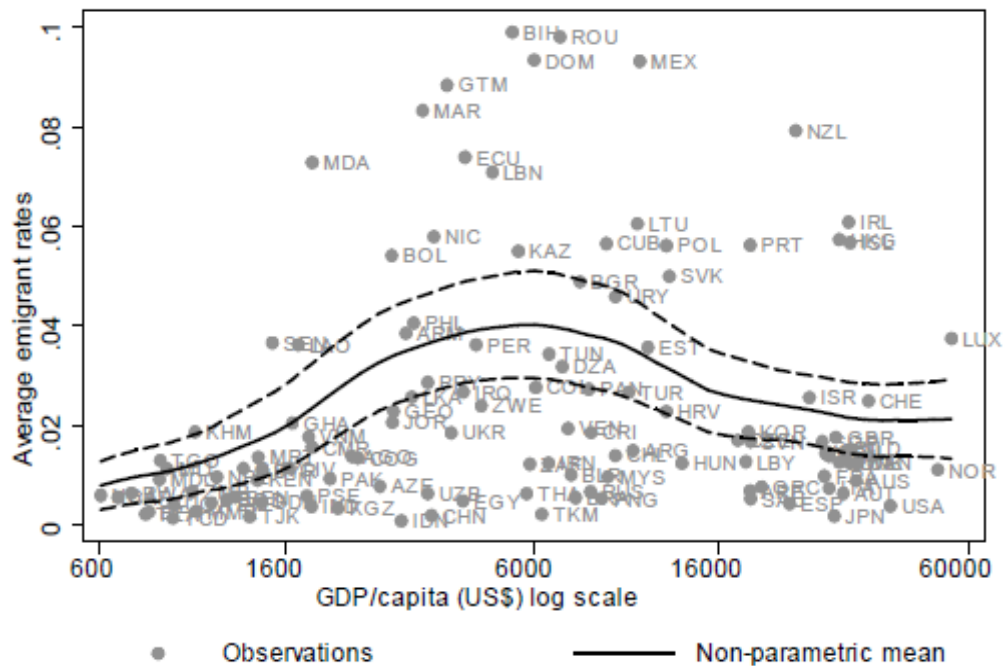
.... And that climate has been a source of migration (the +2° from 9th. to 14th. C medieval warming period) [8]

## 3 pieces of evidence from the Present

1. ... New evidence: Migration and growth linkages go two-way (in spite of an earlier well-received literature on the brain drain). Emigration likely to generate positive effects on  $y_c$  for LICs and MICs when taking all evidence into account (see [3] and [6])
2. ... Labor market measures and labor market effects of RTAs [14] and case study of NAFTA [16]
3. ....Evidence that climate change is already having an impact on migration via displacements caused by conflicts (see summary [13]).

# The Migration-Development Nexus

# Development ➔ Emigration



## Inverted-U shaped relationship (mig. to OECD)

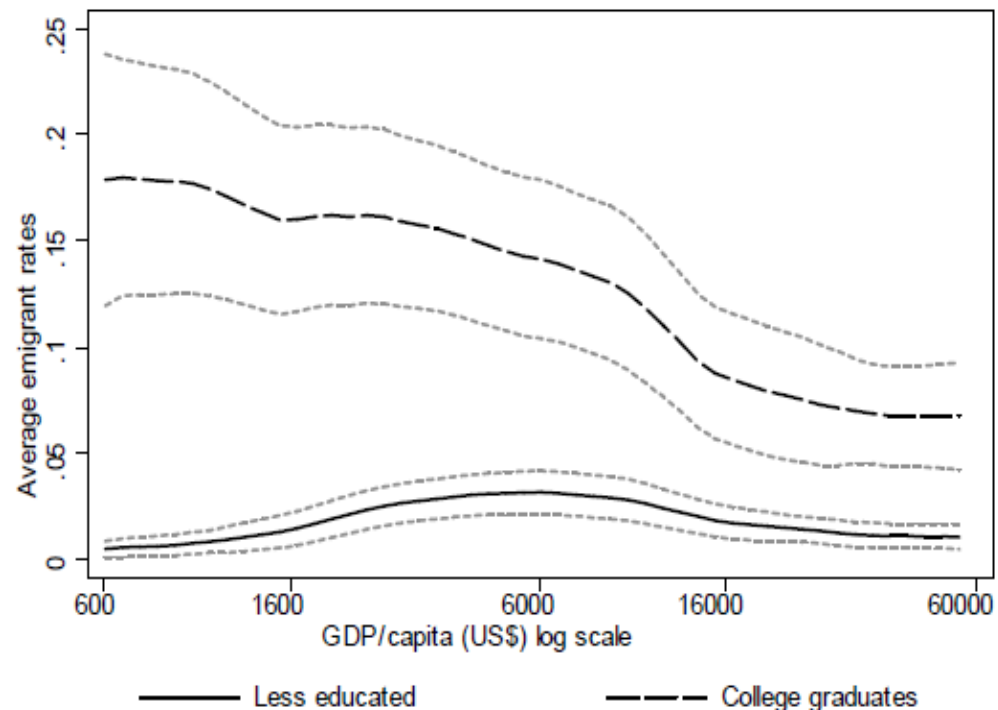
Development produces additional emigration if  $y < \$6,000$

## What accounts for migration transition?

## Two-thirds of the world population in these countries

## Traditional explanation: financial constraints

## Emigration → Development



## Brain drain and development

## Skilled people emigrate more than the less educated

Ratio of emigration rates = 20/1 in poorest countries

And human capital increases development!

## These patterns have suggested that ...

- Development & migration policies should be conducted in an integrated manner. But how? (see [3] and [6] )
  - Development policies can generate massive migration pressures
    - Average emig rate of poor countries (below \$6,000): 2%
    - Helping them to reach \$6,000: 4% (+2pp)
    - Implications for OECD (pop ratio: 4): +8pp
  - Immigration barriers attenuate the brain drain and migration pressures
- ⇒ Development policies should be accompanied by stronger migration restrictions (to prevent brain drain and lift pressure in receiving countries)

➔ but simulating recent evidence from FDI, remittances, on education and higher TFP growth sum up to positive effect of emigration on  $y_c$  (see extra slides taken from [6]).



## Summary of survey on RTAs and Labor Market Integration [14]

- Extra slides gives details on factor mobility measures in 7 RTAs
- Increase in Skill wage premium in developing countries is difficult to identify because of confounding factors (see Mercosur summary in [14 ])
- Illustration of NAFTA (See below and extra slides)
  - Other policies (tightening on illegal immigration)
  - Increase in supply of skilled labors after NAFTA
  - Mexican and US shift from substitutes to complements as they cooperate in a production chain (maquilas) made possible by NAFTA
- Ex-ante CGEs preclude large effects by construction.
- Ex post econometric estimates find trade diversion while ALL ex-ante CGE estimates predict trade creation.

# Detecting effects Labor Market effects of NAFTA: Mexico case study [16]

- ❑ NAFTA:1994 Mexican tariff: 12%→0%: US: 2% →0% +FDI (MFN,NT, +no trade-related performance requirements; freedom to buy Fx, to transfer funds). Only limited mobility of professionals.
- ❑ Confounding factors: Peso depreciation of 40% in 1995 + tightening of borders on illegal immigrants + supply of Skilled labor up sharply.
- ❑ If trade and FDI substitutes →  $W_U \uparrow$ , Mig↓ but border enforcement opposite effects. Robertson [16] shows enforcement effect dominates so  $W \downarrow$
- ❑ US & Mexican workers shift from substitutes (ante NAFTA) to complements under NAFTA because of outsourcing. See extra slides

# Simulating the Future

Summary of past (45) studies: Migration only from fast-onset climactic events (hurricanes, floods) [1].

...but rapidly growing «climate-economy» literature simulating effects of slow-onset aspect of climate change (temperature, sea-level rise, water stress) at high geographic resolution ( $1^{\circ} \times 1^{\circ}$ ) or 14 km<sup>2</sup>. expects strong effects on migration.

- Socio-economic gravity model. Under «moderate» Representative Concentration Pathways (RCP) scenario, climate-induced internal migration estimated at 17 mil. in LA, 40 mil. in SSA and 86 mil. in SA by 2050 [12]
- Climate-coupled spatial growth model. Lower (higher) productivity in agriculture in low (high) latitude zones calls for labore reallocation towards Northern regions. With barrier at 45th. Parallel North gains both via increased labor productivity and lower wages in the South (polar regions twice as well off as equatorial regions) [4]
- Spatial Model (no climate). Fully liberalization migration along a balanced-growth path would increase world welfare by a factor of 3 [5]



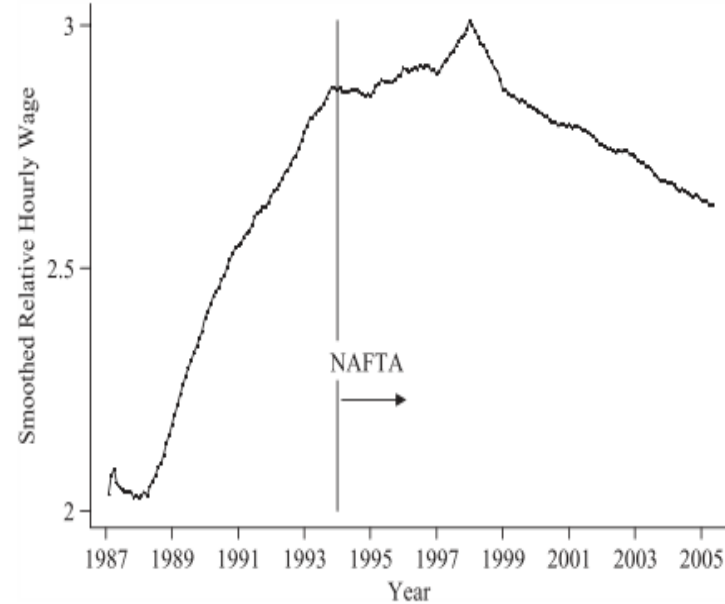
**Table 1: Main Labor-market related Provisions in major Regional Trade Agreements.**

RTA	Number of countries	Number of WTO+ and legal enforcement	Number of WTO-X and legal enforcement	Provisions on factor mobility ●Investment measure, ●Labor Market Regulation, ●Movement of Capital, ●Intellectual Property Rights	Labor Mobility measures
Column (1)	(2)	(3)	(4)	(5)	(6)
ASEAN	10	2 <sup>2</sup>	0 <sup>0</sup>	None	- Mutual Recognition Agreement - Mode 4 of GATS
COMESA	20	10 <sup>7</sup>	19 <sup>6</sup>	Investment measure Labor Market Regulation Movement of Capital	
ECOWAS	15	7 <sup>5</sup>	13 <sup>3</sup>	Investment measure, Movement of Capital	- Harmonizing of passports. - Joint operations at borders for customs and migration officers
MERCOSUR	5	9 <sup>9</sup>	3 <sup>3</sup>	Movement of Capital Intellectual Property Rights	- Agreement on Residency: Promote the right to work and to carry out any legal activity for the citizens of the Mercosur Community
NAFTA	3	14 <sup>14</sup>	8 <sup>7</sup>	Investment measure Labor Market Regulation Movement of Capital Intellectual Property Rights	- "Temporary Movement of Business Persons" - TN visa - Annex on professionals: mutual recognition and definition of mutually acceptable standards and criteria.
SACU	5	7 <sup>4</sup>	4 <sup>0</sup>	None	
SADC	15	11 <sup>10</sup>	1 <sup>0</sup>	None	
EC (27)	27	9 <sup>9</sup>	11 <sup>11</sup>	Investment measure Labor Market Regulation Movement of Capital Intellectual Property Rights	- Labor mobility is guaranteed

**Source:** Author's compilation. Cols 3-5 from appendix Table D1 WTO (2011). Col. 6 from Stephenson and Hufbauer (2011).

**\*Notes:** Entries in the cells in columns (3) and (4) are the number of provisions in the corresponding column; exponents refer to the number of WTO+ and WTO-X provisions that are legally enforced, as defined by Horn et al (2010).

# Wages and Employment under NAFTA



Relative wage Mexican manufacturing:

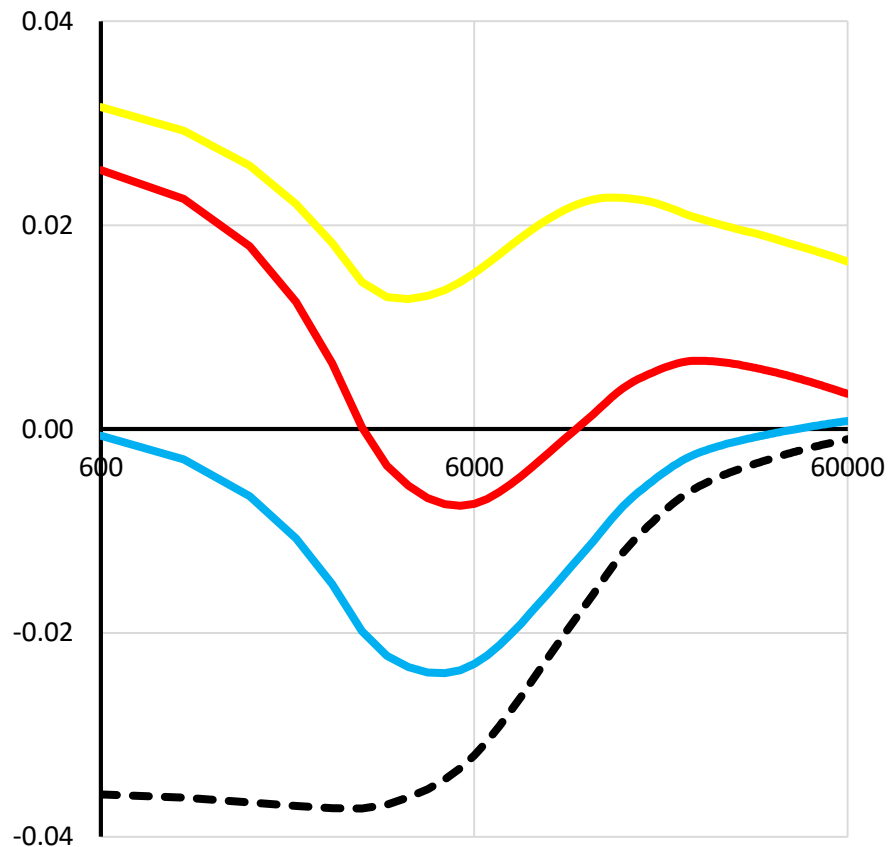
...from substitutes (ante NAFTA) to complements (NAFTA) with outsourcing

Relative price of skill intensive activities and relative wage of skilled fall.

But manufacturing is only 20% of skilled workers and college enrolment up sharply under NAFTA ... so attribution problem (discussion in [ ] )....



# Simulations of emigration channels on per capita income [6]



- Average effect of emigration on  $y$  (inc. per cap. on Y-axis) at hump
  - Simulated impact by income level
  - Computed using average country characteristics

- Traditional view (LIC, \$1,000)
  - Pessimistic model: -3.8% (dashed lines)

- Newer literature (LIC, \$1,000)
  - Adding remittances (-0.1%)
  - Education affected by emigration prospects (+1.1%)
  - Network effects (trade, FDI) + political remit. (+2.0%)

⇒ Skill-biased emigration is rarely harmful for growth

(reference to detailed supporting evidence for parameters used in simulations in [6])

# References (1)

- [1] Beine, and Jeusette (2018) «Climactic Factors and Human Mobility: A Meta Analysis of the literature» (in progress)
- [2 ] Collins, O'Rourke and Williamson (1999) «Were Trade and Factor Mobility substitutes in History» in Faini et al. eds.
- [3] Dao, Docquier, Parsons, Peri (2018) « Migration and Development: Dissecting the Anatomy of Mobility Transition», *Journal of Development Economics*, 132, 86-101
- [4] Desmet, Rossi-Hansberg (2015) «On the Spatial Economic Impact of Global Warming», *Journal of Urban Economics*
- [5] Desmet, Nagy, Rossi-Hansberg (2018) «The Geography of Development», *Journal of Political Economy*,
- [6] Docquier (2017) «The Emigration-Development Nexus: Recent Advances from the Growth Theory Perspective», *Revue d'économie du développement* 2017/3-4 (Vol. 25).
- [7] Docquier, Rapoport (2012) «Globalization, Brain Drain, and Development», *Journal of Economic Literature*
- [8] Fagan (2008) *The Great Warming: Climate Change and the Rise and Fall of Civilizations*, New York



## References (2)

- [9] Faini, Melo and Zimmermann eds. (1999) *Migration: The Controversies and the Evidence*, CUP
- [10] Faini, Melo and Zimmermann «Trade and Migration: An Introduction» in Faini et al. eds.
- [11] Freeman (2015) «Are your Wages Set in Beijing», *Journal of Economic Perspectives*,
- [12] Kumani-Rigaud, A. de Sherbinin et al. (2018) «Groundswell: Preparing for Internal Migration», WB
- [13] Melo (2015) “Climate Change and the Growing Challenge of Migration”  
<http://www.brookings.edu/blogs/planetpolicy/posts/2015/08/24-climate-change-migration-challenges-de-melo>
- [14] Melo and Régolo (2013) “Labor Markets in Regional Trade Agreements: What do we Know”, Ferdi WP #69
- [15] Rintal, Chown, et al. (2018) «Choosing the Future of Antarctica», *Nature*, 558,233-41
- [16] Robertson (2005) «Has NAFTA Increased Labor Market Integration between Mexico and the US», *World Bank Economic Review*, 30(9), 425-48.