IMCO

A BIGGER MELTING POT:

MIGRATION, COMPETITIVENESS AND GROWTH IN NORTH-AMERICA (AND BEYOND)

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A BIGGER MELTING POT

1. The politics of migration in the US
2. Economic effects of anti-migration policies
3. Our general equilibrium model
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5. And the real question is…

THE POLITICS OF MIGRATION

IN THE US

INTERNATIONAL MIGRATION IS A HOT TOPIC

FOR SOME POLITICIANS IN THE UNITED STATES

End birthright citizenship

Immigration moderation

Make Mexico Pay For The Wall

Increase prevailing wage for H-1Bs

Enhanced penalties for overstaying a visa

Triple the number of ICE officers

Refugee program for American children

Mandatory return of all criminal aliens

Put American Workers First

Nationwide e-verify

Cooperate with local gang task forces

Requirement to hire American workers first

Defund sanctuary cities

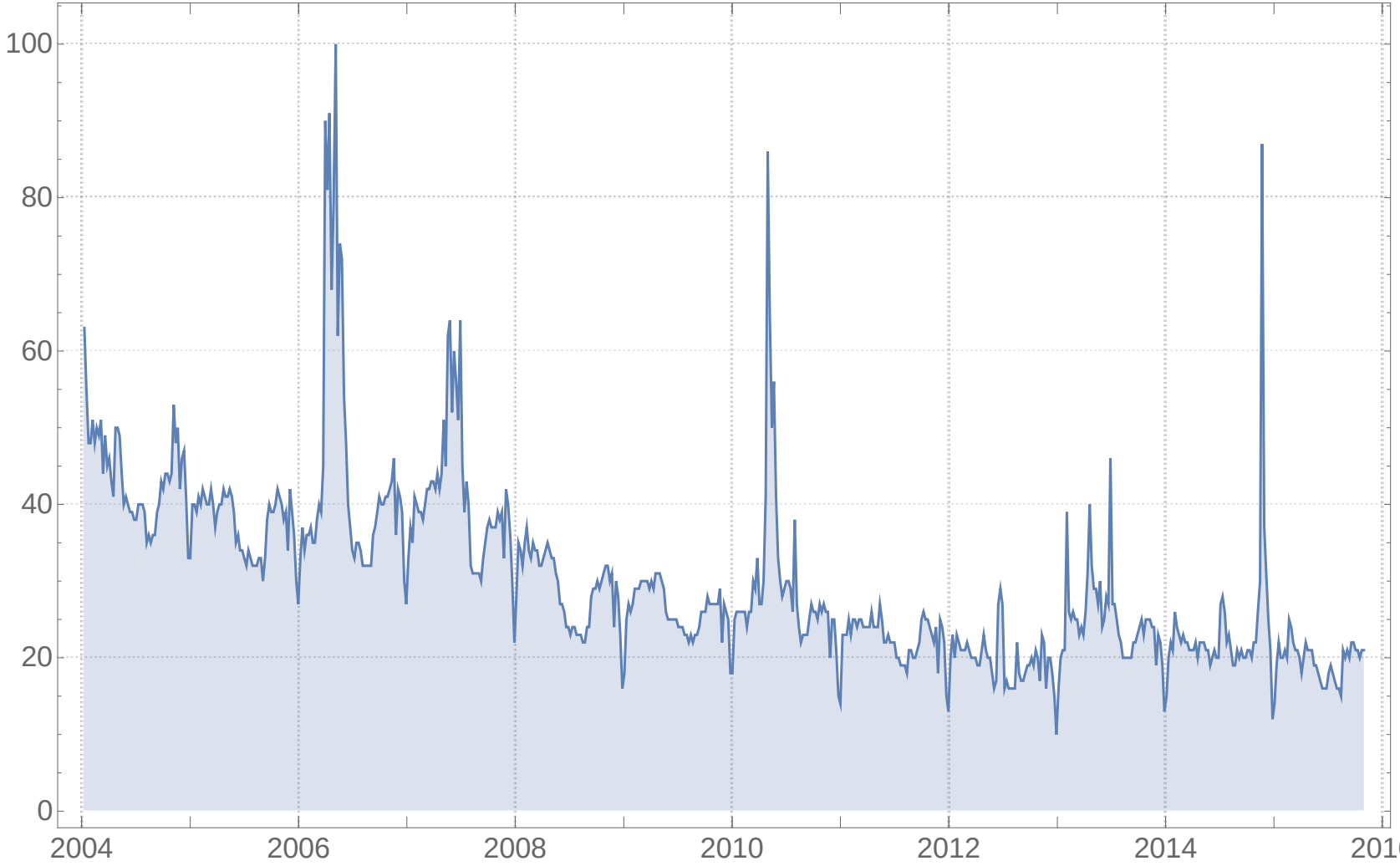
End welfare abuse

Detention—not catch-and-release

www.donaldjtrump.com,

THE PUBLIC IS LESS INTERESTED…

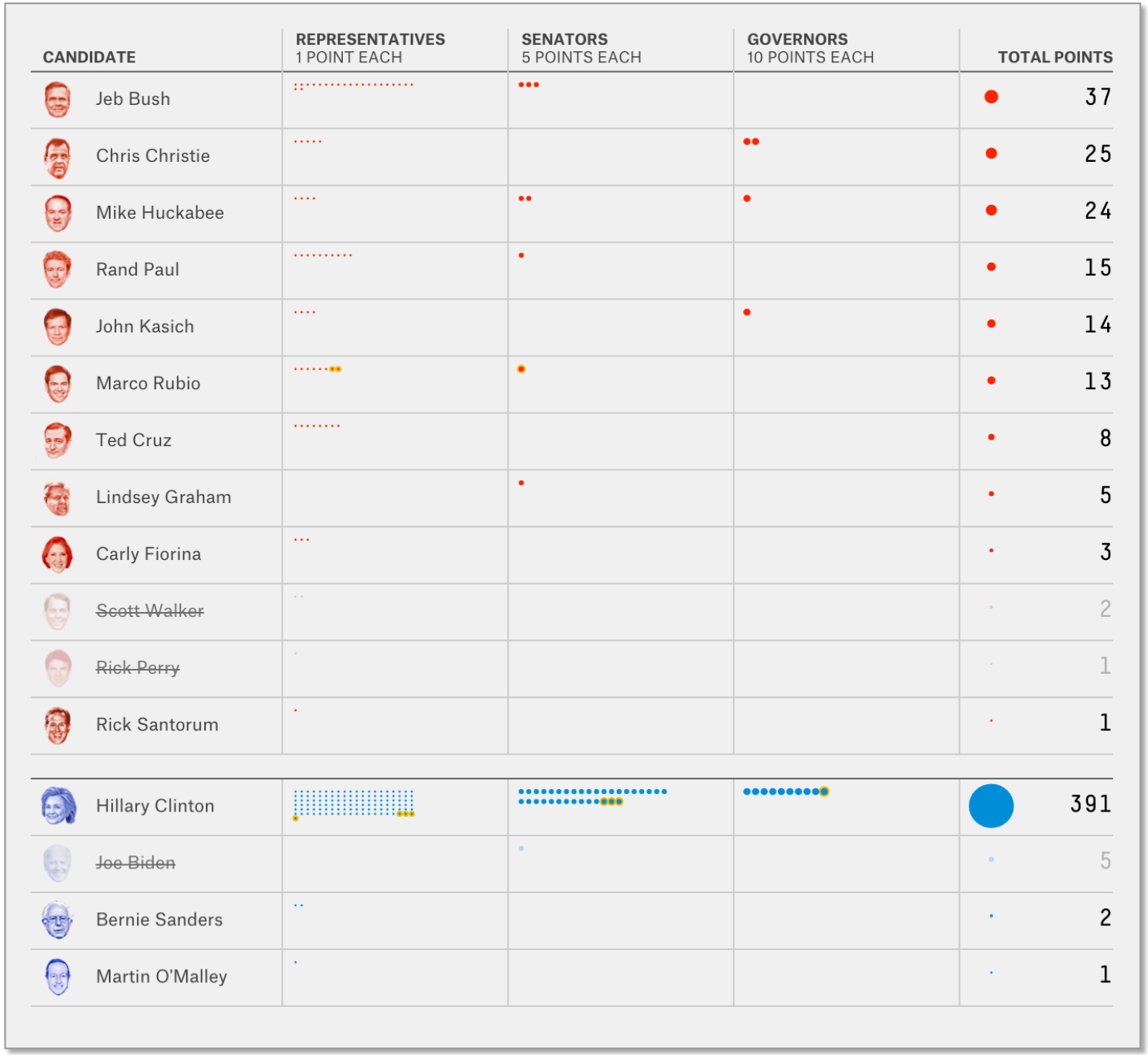
GOOGLE SEARCHES FOR 'IMMIGRATION' IN THE US(100=APR 2006)



https://www.google.com/trends/explore#q=Immigration&geo=US&cmpt=q&tz=Etc%2FGMT%2B6

ENDORSEMENTS

ARE BETTER PREDICTORS OF PRESIDENTIAL ELECTIONS IN THE US THAN POPULARITY



fivethirtyeight.com

IMCO.org.mx

ECONOMIC EFFECTS OF ANTI-MIGRATION POLICIES

MIGRATION IS A COMPLEX PHENOMENON
REGRESSION ANALYSIS

Variable in the country of origin…

Explains net migration

- ▼ Population Density
- ▽ Gross net income (Atlas)
- ▼ Gross net income per capita
- ▼ Purchasing Power Parity
- △ Gross net income (USD)

Does not explain net migration*

- Country surface
- GDP growth
- GDP per capita growth
- Adjusted National Savings

IMCO analysis with World Bank Data (2010-2014).
* P-Values significantly different to zero

▼▲ Significant direction of change ▽△ Weak

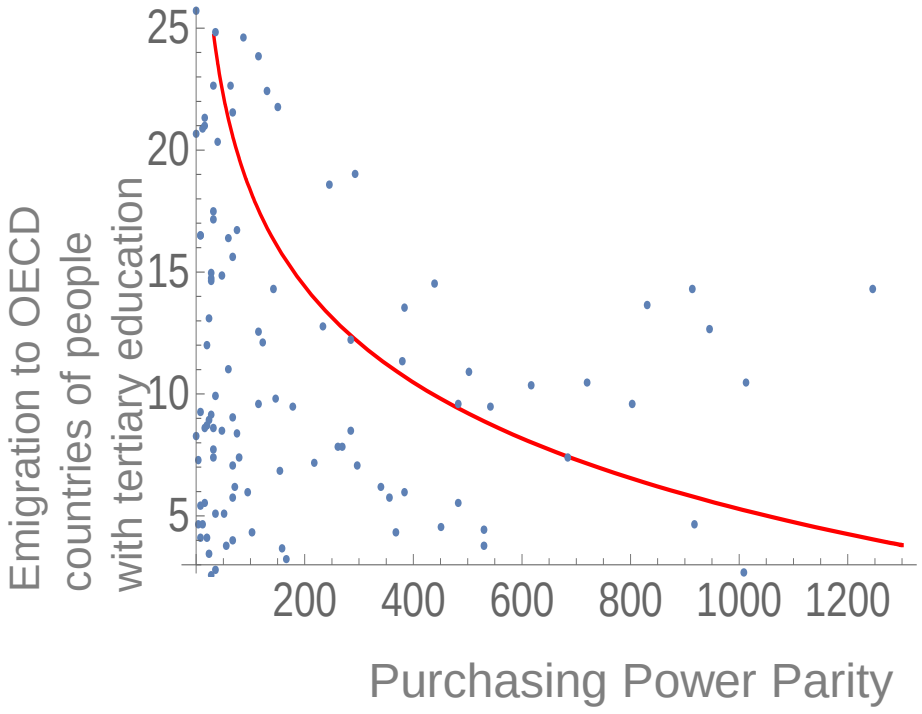
COMPETITIVENESS
THE MEXICAN DEFINITION

A country is competitive if it consistently attracts and retains

investment and talent

COUNTRIES COMPETITIVENESS
EXPLAIN MIGRATION FLOWS BETWEEN THEM

THE LOWER THE PURCHASING POWER PARITY, THE LARGER EXPULSION OF EDUCATED PEOPLE

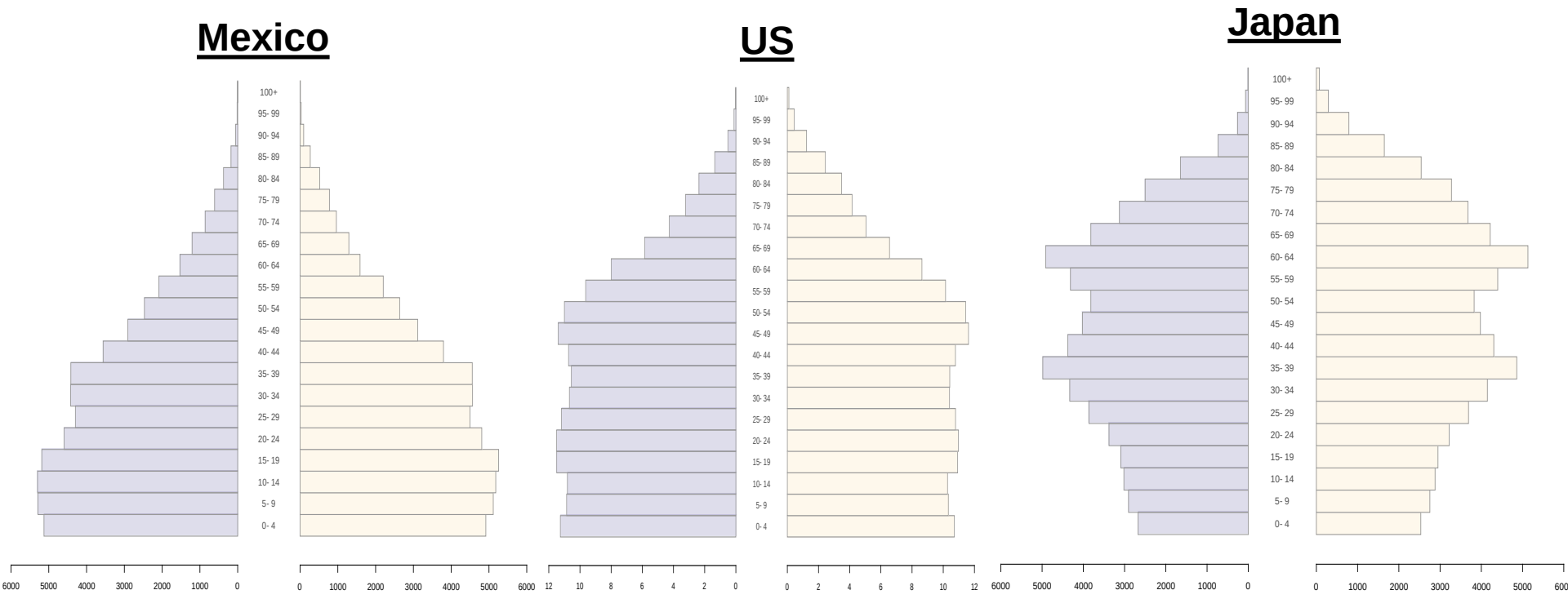


Migration is costly and it is likely that the poorest are not able to cover the costs associated with migration.*

IMCO Analysis with World Bank Data
* OECD (2009), The Future of international migration to OECD countries, OECD, page 156

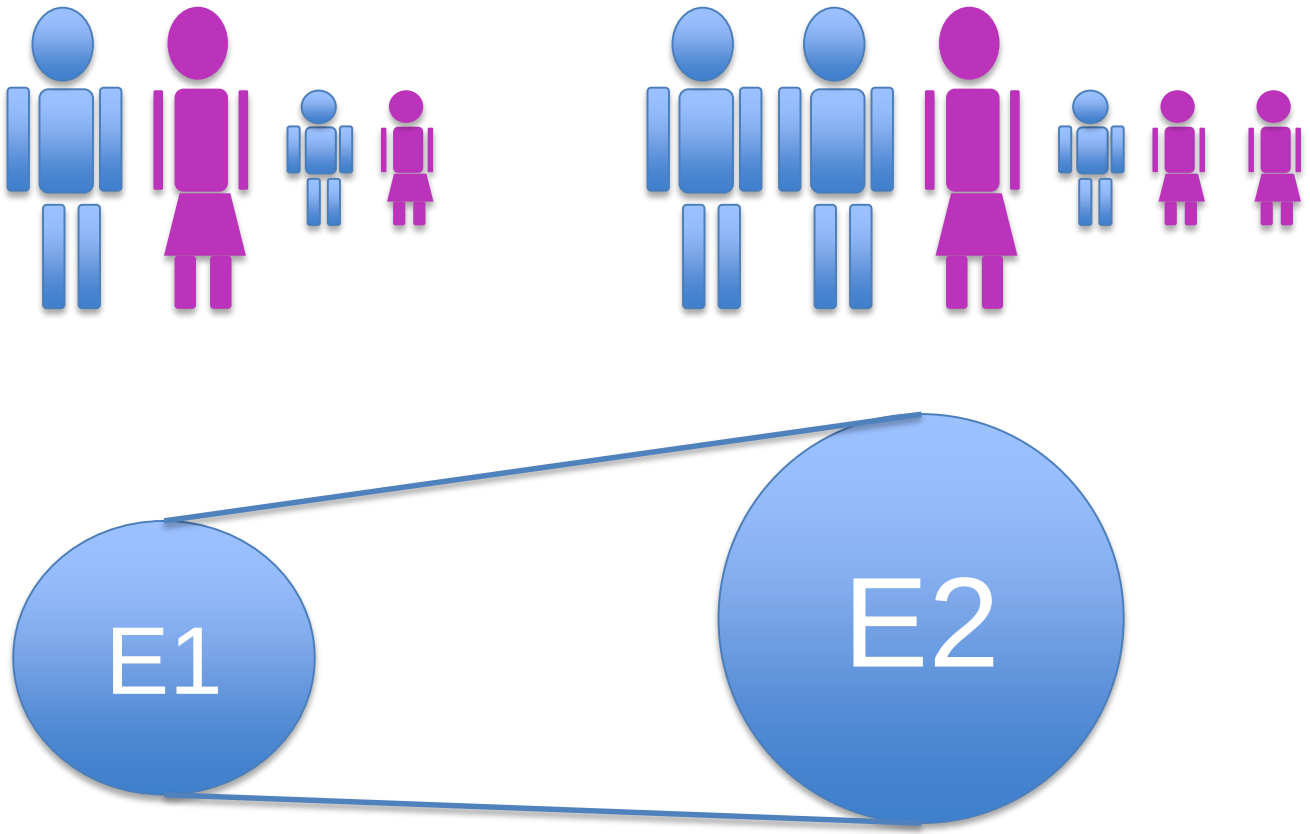
IN FACT, EXPULSOR COUNTRIES RELINQUISH
THEIR DEMOGRAPHIC DIVIDEND IN FAVOR OF RECEIVER COUNTRIES

The US population pyramid would look more like Japan's if not for international migration



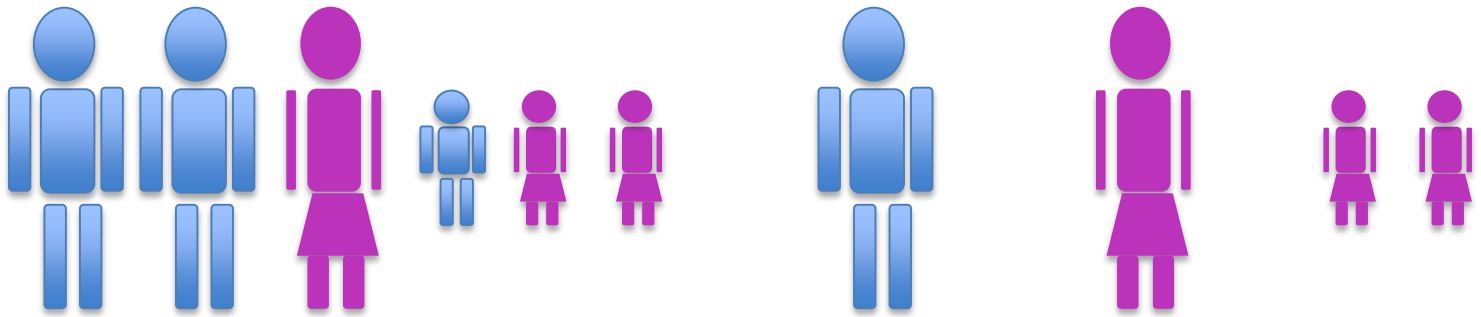
WolframAlpha Data

MORE CONSUMERS AND WORKERS
MAKE ECONOMIES BIGGER



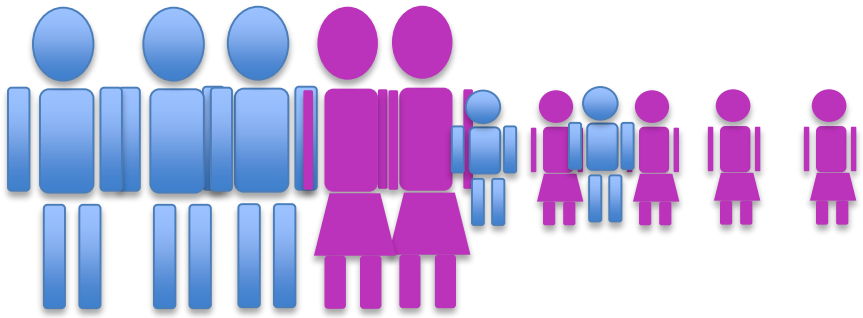
POPULATION SHOCKS WILL REDUCE GDP

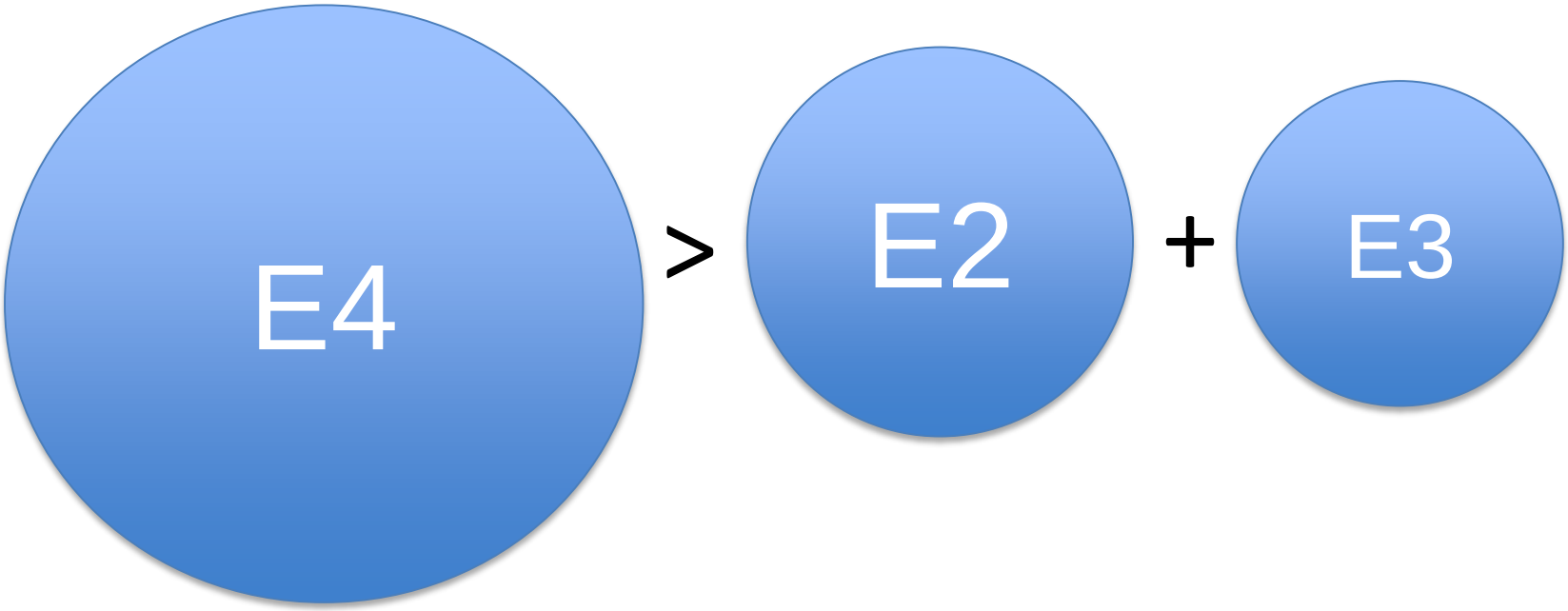
EVEN IF MORE OF THE DEPORTED ARE CONSUMERS



WORKERS FOLLOW PRODUCTIVITY

INTEGRATED SOCIETIES CREATE SYNERGIES



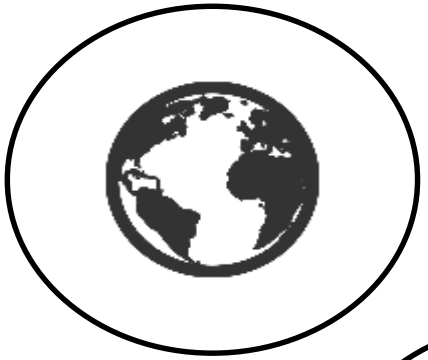


OUR GENERAL EQUILIBRIUM MODEL

GEMS SIMULATE HOW ECONOMIES WORK

Public and Private Agents

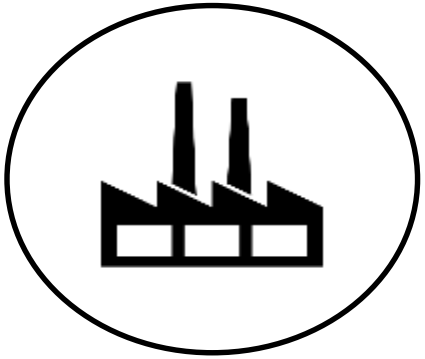
Macro Regions



Agent Choice: Consumption and Savings

Determine **price** and **quantity** of goods for which the economy is at equilibrium.

Primary Factors



Production of goods and services

GTAP IN GAMS
BASE MODEL

- **GTAP7 Database**
  - 113 regions
  - 57 sectors
  - 5 primary factors
- **Simplified Economy**
  - 3 Macro Regions: USA, Mexico, Rest of the World
  - 5 Sectors: Services, Finance, Manufacturing, Agriculture, Infrastructure & Natural Resources
  - 4 Primary Factors: Skilled and Unskilled Labor, Land, Capital
- **Trade** allowed across regions

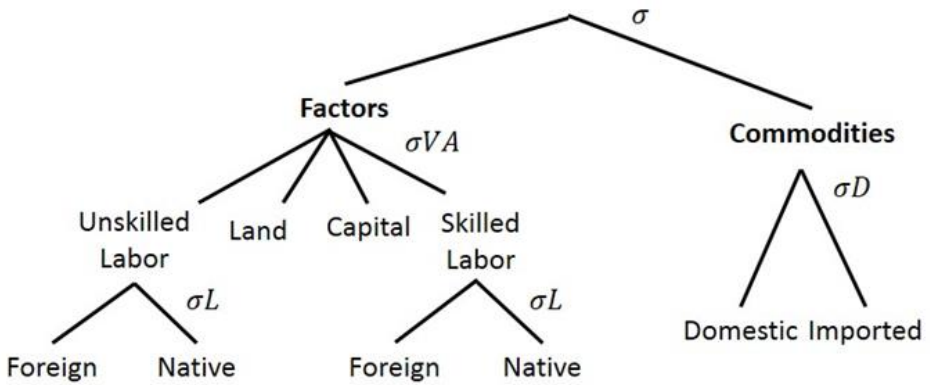
NO MIGRATION

In the original model labor is not mobile.

MODEL AND DATABASE EXTENSION
TO ACCOMODATE FOR LABOR MOBILITY

1. **Factors of Production**

   The labor force can be native-born or foreign-born.



2. **Income**

   Foreign-born labor sends remittances home.

3. **Database**

   World Bank, PEW Research Center and Migration Policy Institute data.

GEM SIMULATION RESULTS

SHOCKS TO THE MODEL
TO SIMULATE SOME OF THE PROPOSALS

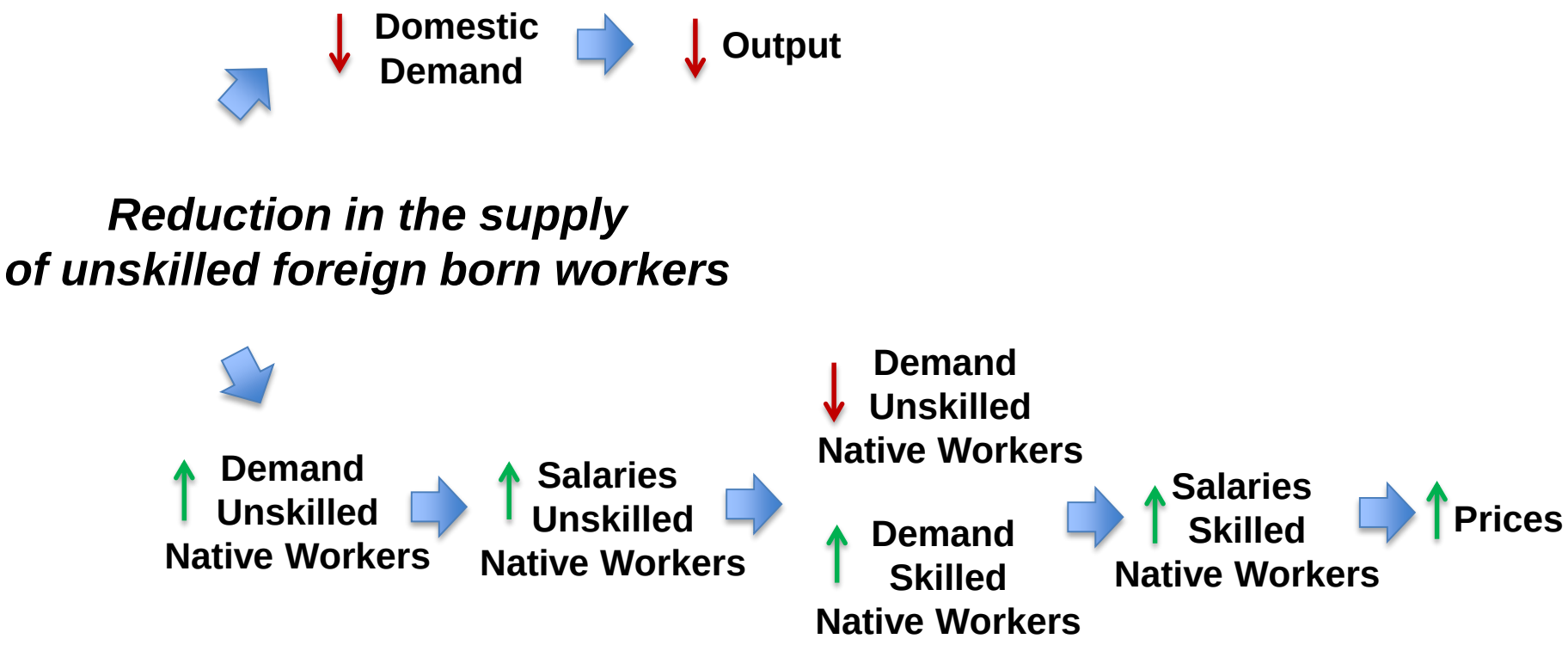
1. ***Policy 1:*** Reduction in the supply of unskilled foreign-born labor in the U.S.

2. ***Policy 2:*** Deportation of 1M illegal immigrants per year in a 10 year period from the U.S.

3. ***Policy 3:*** Training of 0.1% of the unskilled foreign-born population in the U.S. every year (16K people the first year).

SHOCK PROPAGATION IN THE ECONOMY

POLICY 1: REDUCTION IN THE SUPPLY OF UNSKILLED FOREIGN BORN WORKERS



Source: IMCO, with GTAPinGAMS model

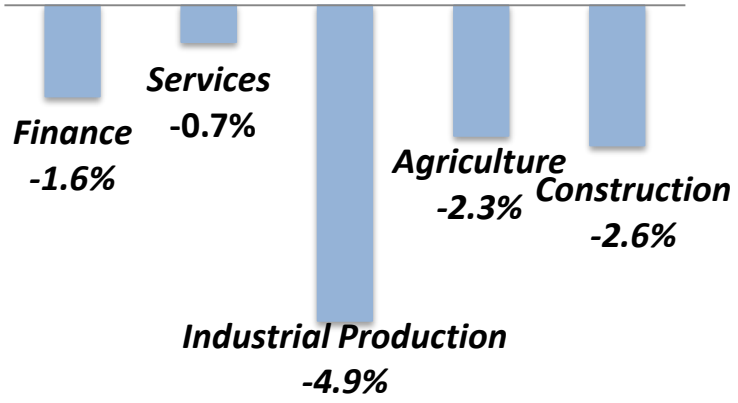
SHOCK EFFECTS ON OUTPUT AND NATIVE LABOR

POLICY 1: REDUCTION IN THE SUPPLY OF UNSKILLED FOREIGN BORN WORKERS

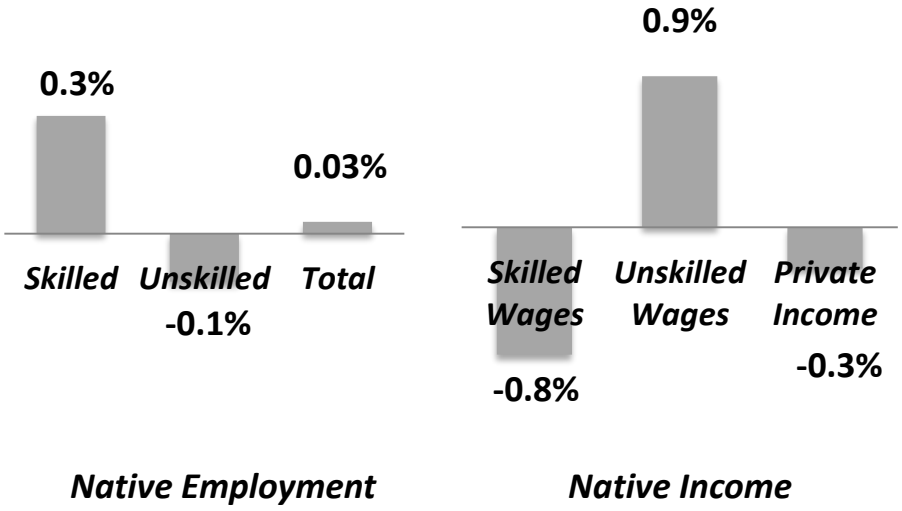
-20%

Unskilled foreign born workers

OUTPUT LOSS



NATIVE LABOR



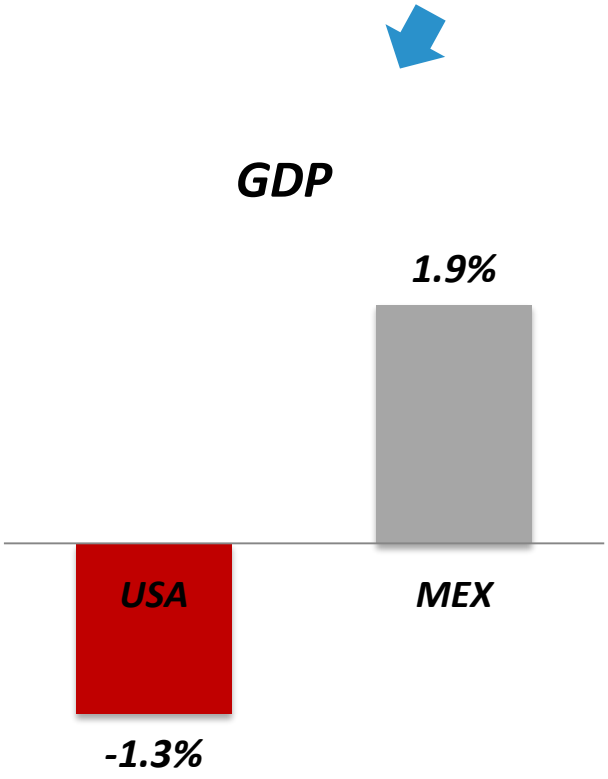
Source: IMCO, with GTAPinGAMS model

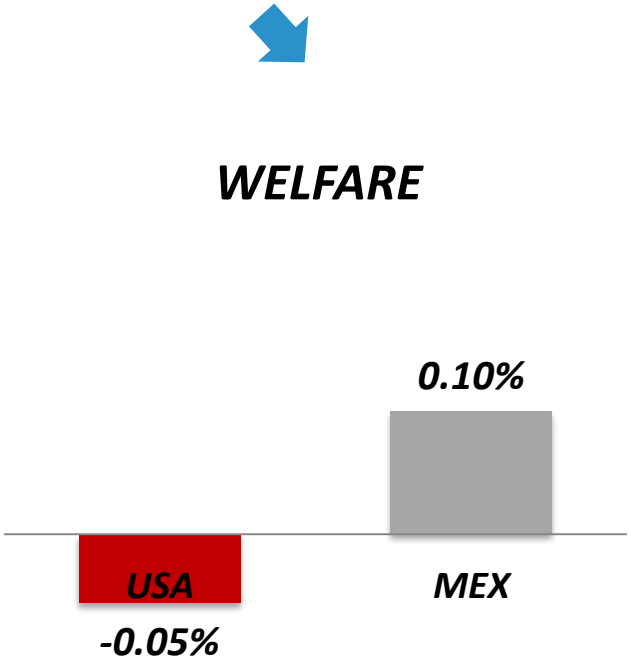
SHOCK EFFECTS ON GDP AND WELFARE

POLICY 1: REDUCTION IN THE SUPPLY OF UNSKILLED FOREIGN BORN WORKERS

-20%

Unskilled foreign born workers





Source: IMCO, with GTAPinGAMS model

TAKE HOME

POLICY 1: REDUCTION IN THE SUPPLY OF UNSKILLED FOREIGN BORN WORKERS

A reduction in the supply of unskilled foreign-born workers

produces

small positive effects on U.S. native employment

that are not compensated by

large negative effects on U.S. prices, GDP, and welfare.

Source: IMCO, with GTAPinGAMS model

SHOCKS TO THE MODEL
TO SIMULATE SOME OF THE PROPOSALS

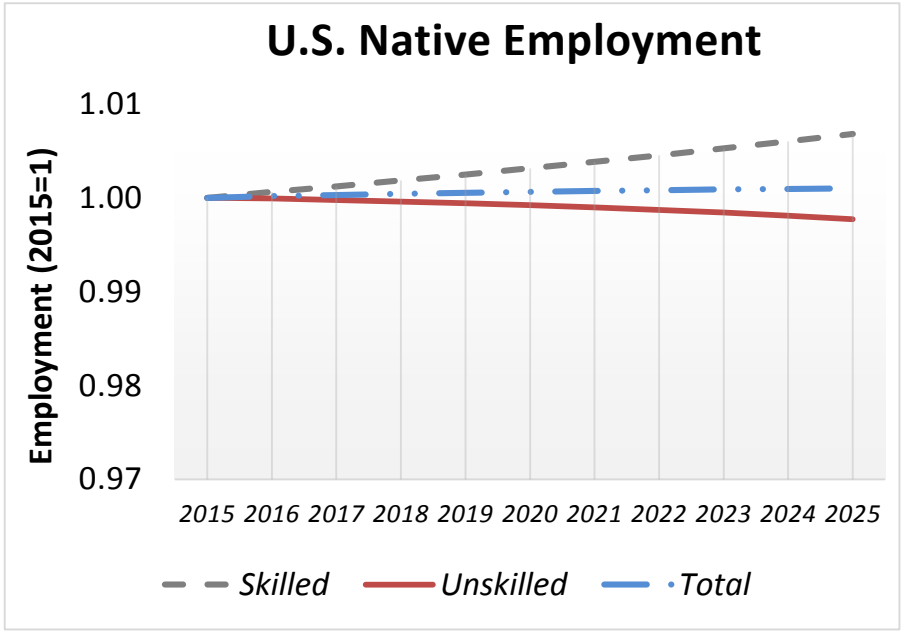
1. ***Policy 1:*** Variation in the supply of foreign-born labor in the U.S.

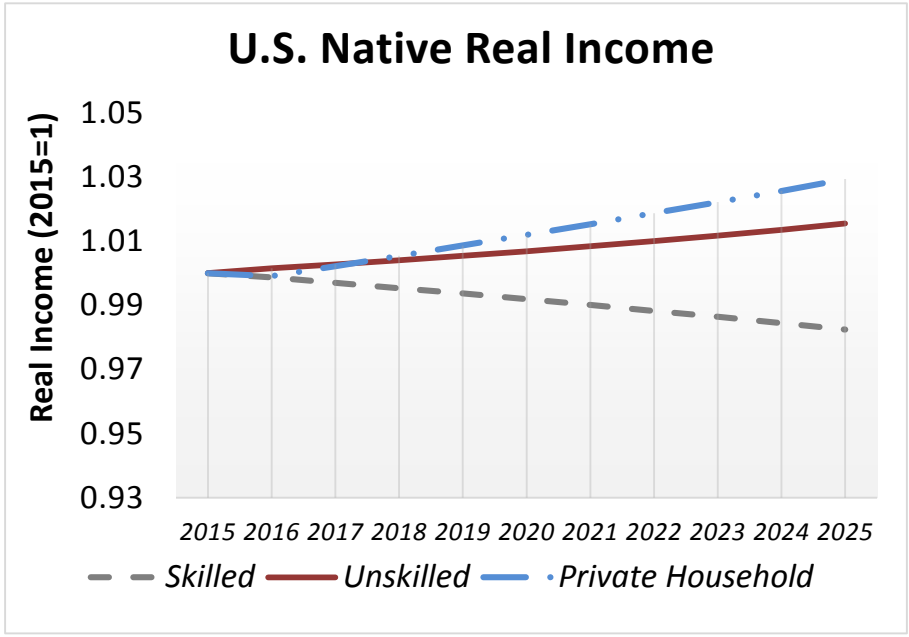
2. ***Policy 2:*** Deportation of 1M illegal immigrants per year in a 10 year period from the U.S.

3. ***Policy 3:*** Training of 0.1% of the unskilled foreign-born population in the U.S. every year (16K people the first year).

EFFECT ON NATIVE LABOR MARKET

POLICY 2: DEPORTATION OF 1M ILLEGAL IMMIGRANTS PER YEAR



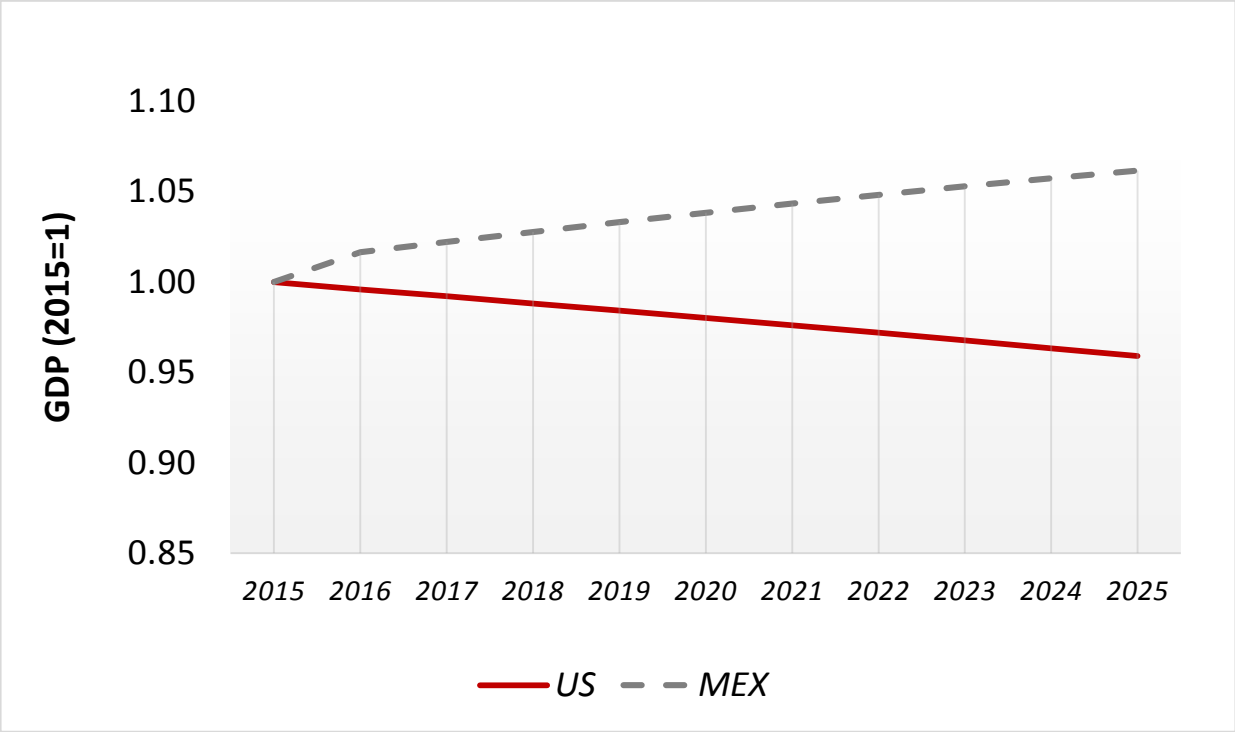


Deporting illegal immigrants produces:

- Minimal **native job creation (0.1%)**.
- Total **job loss (-6.78%).**
- An **increase** in **real wages** of **unskilled** labor **(+1.6%).**
- A **decrease** in real wages of **skilled** labor **(-1.8%)**.
- An increase in **private household income (+2.9%).**

EFFECT ON REAL GDP

POLICY 2: DEPORTATION OF 1M ILLEGAL IMMIGRANTS PER YEAR

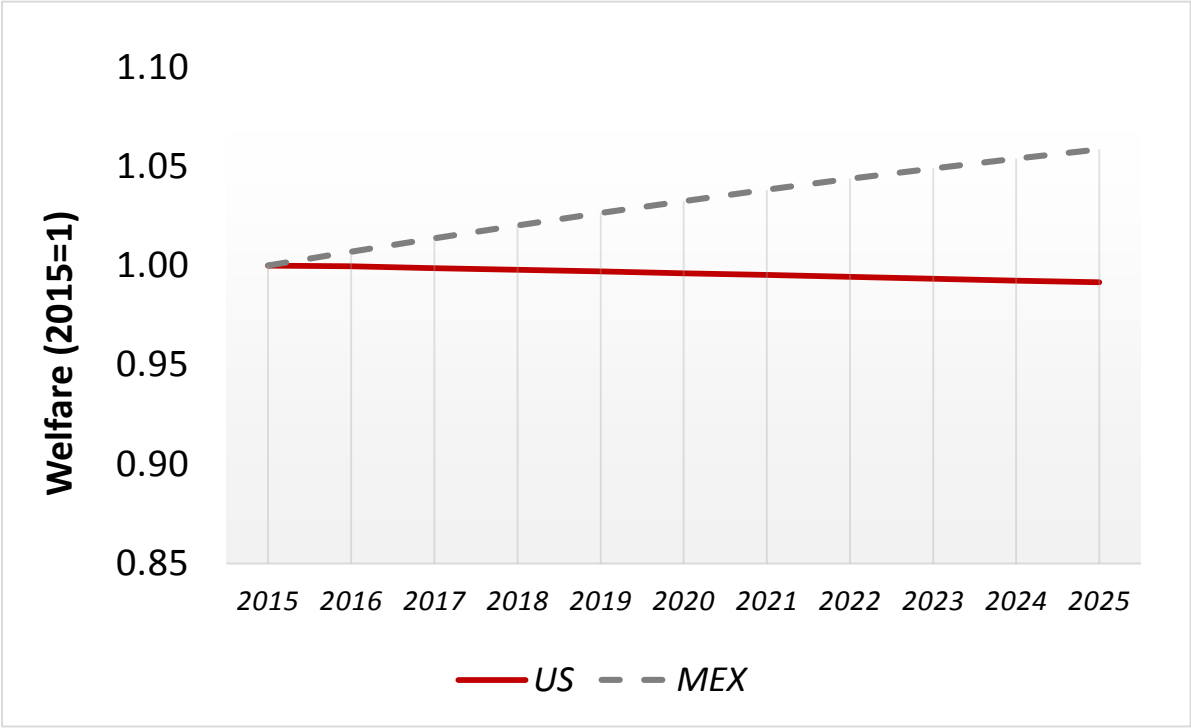


Deporting illegal immigrants has:

- A **negative impact** on **U.S. GDP (-4%).**
- A **positive impact** on **Mexican GDP (+6%).**

EFFECT ON WELFARE

POLICY 2: DEPORTATION OF 1M ILLEGAL IMMIGRANTS PER YEAR



Deporting illegal immigrants produces:

- A **negative impact** on **U.S. welfare (-1%).**
- A **positive impact** on **Mexican welfare (+6%).**

TAKE HOME

POLICY 2: DEPORTATION OF 1M ILLEGAL IMMIGRANTS PER YEAR

Deporting 1M illegal immigrants per year in a ten-year period

produces

a small positive effect on U.S. native labor

and negative effects on U.S. GDP and welfare.

Source: IMCO, with GTAPinGAMS model

SHOCKS TO THE MODEL
TO SIMULATE SOME OF THE PROPOSALS

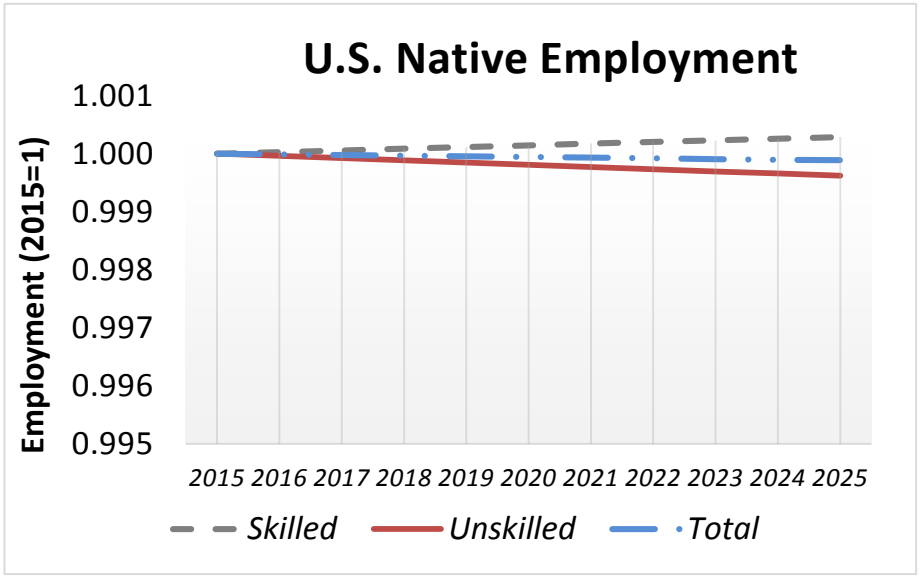
1. ***Policy 1:*** Variation in the supply of foreign-born labor in the U.S.

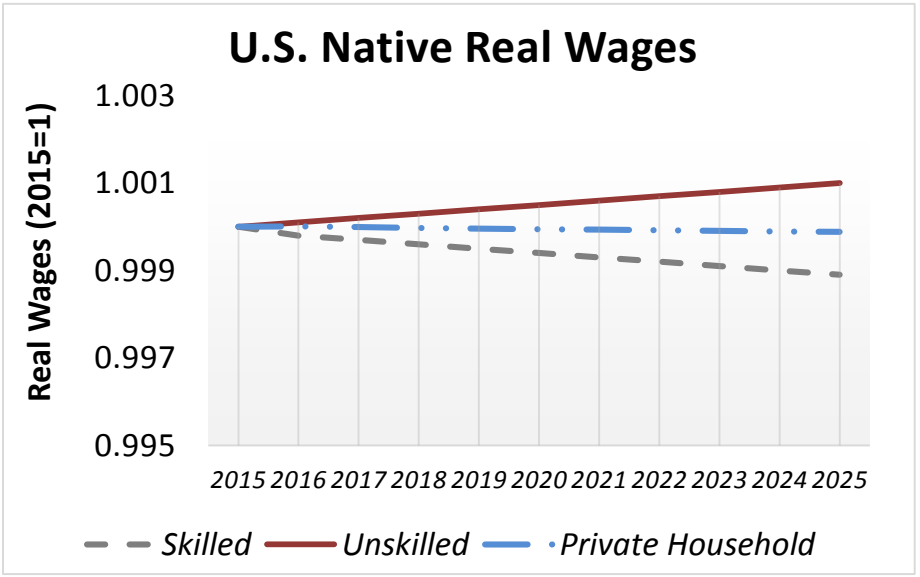
2. ***Policy 2:*** Deportation of 1M illegal immigrants per year in a 10 year period from the U.S.

3. ***Policy 3:*** Training of 0.1% of the unskilled foreign-born population in the U.S. every year (16K people the first year).

EFFECT ON NATIVE LABOR MARKET

POLICY 3: FORMATION OF 0.1% OF UNSKILLED FOREIGN-BORN LABOR FORCE PER YEAR



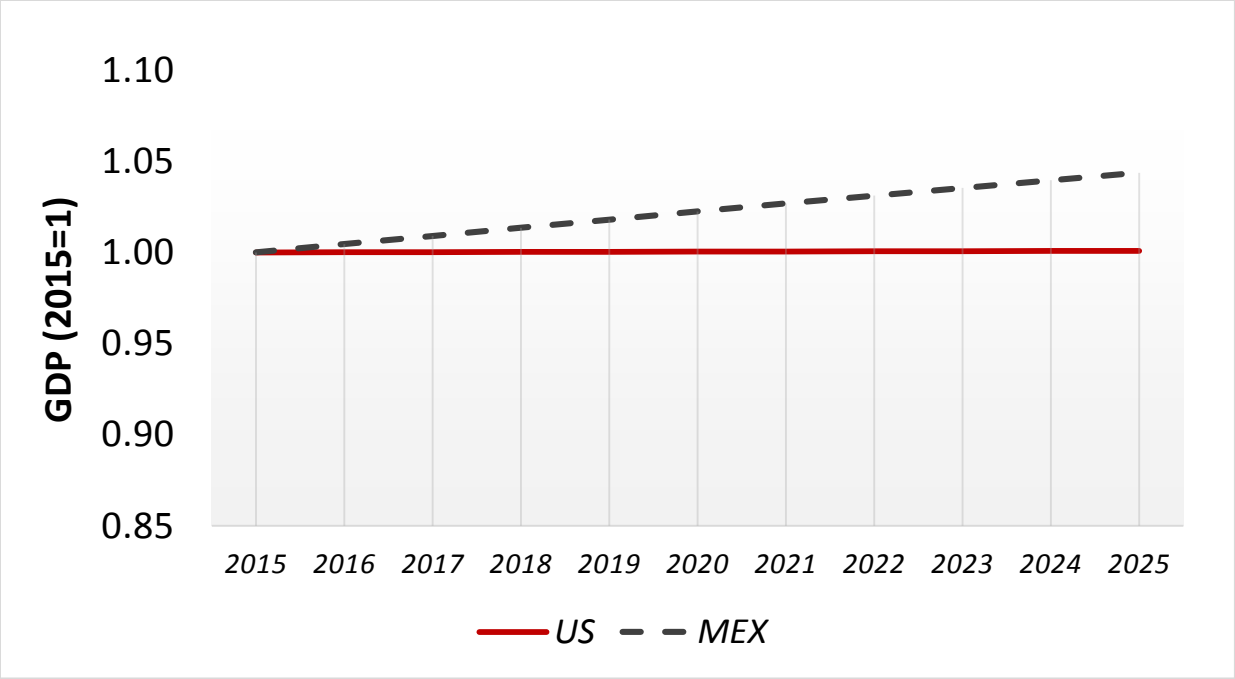


Investing in human-capital formation of unskilled migrants produces:

- **Minimal job reduction (-0.10%)**.
- An **increase** in **real wages** of **unskilled** labor **(+0.10%).**
- A **decrease** in real wages of **skilled** labor **(-0.11%)**.
- A decrease in **private household income (-0.01%).**

EFFECT ON REAL GDP

POLICY 3: FORMATION OF 0.1% OF UNSKILLED FOREIGN-BORN LABOR FORCE PER YEAR

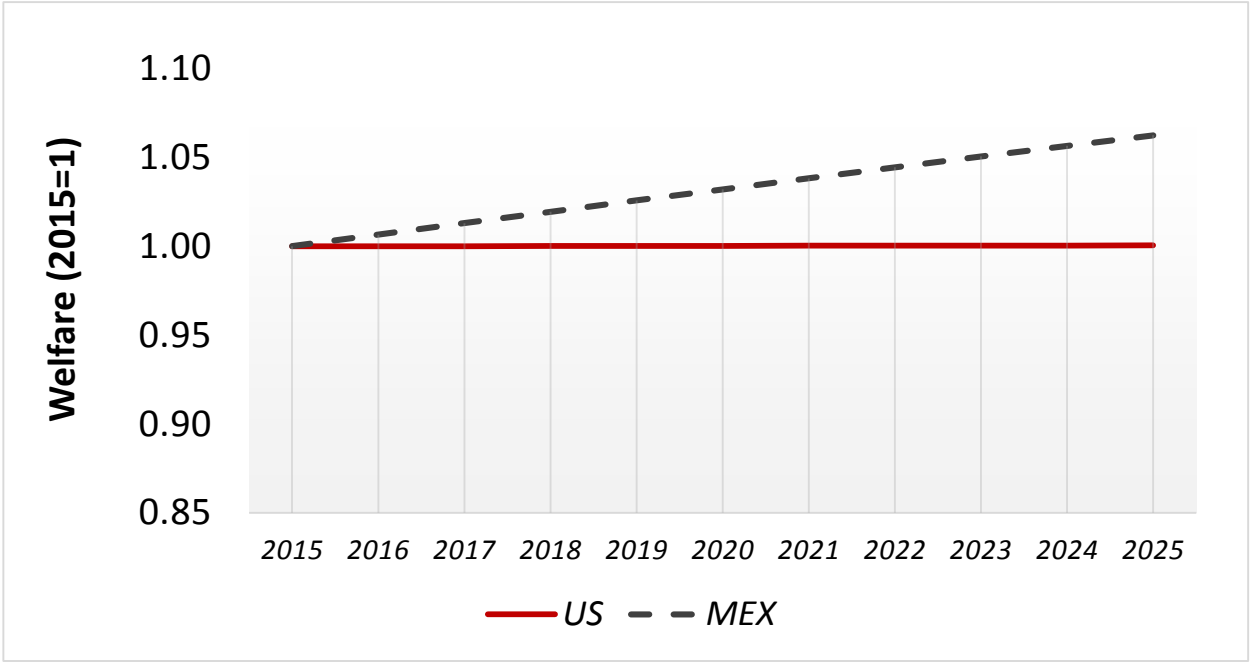


The policy has a **positive** impact on both economies:

- **U.S.** GDP increases by **0.1%** in the 10-year period.
- **Mexican** GDP increases by **4.4%** in the 10-year period.

EFFECT ON WELFARE

POLICY 3: FORMATION OF 0.1% OF UNSKILLED FOREIGN-BORN LABOR FORCE PER YEAR



The policy has a **positive** impact on both economies:

- **U.S.** welfare increases by **0.1%** in the 10-year period.
- **Mexican** welfare increases by **6.3%** in the 10-year period.

TAKE HOME

POLICY 3: FORMATION OF 0.1% OF UNSKILLED FOREIGN-BORN LABOR FORCE PER YEAR

Investing in unskilled foreign-born human-capital formation

produces

small negative effects on U.S. native employment

that are compensated by

positive effects on U.S. GDP and welfare.

Source: IMCO, with GTAPinGAMS model

AND THE REAL QUESTION IS…

THE QUESTIONS AND THE ANSWERS
TO THE MIGRATION POLICY CONUNDRUMS

Is migration good?

YES.

Policies to stop migration will hurt the economy?

DEFINITELY.

POLICY PRESCRIPTIONS
TO THE MIGRATION POLICY CONUNDRUMS

Assimilation

Human capital formation

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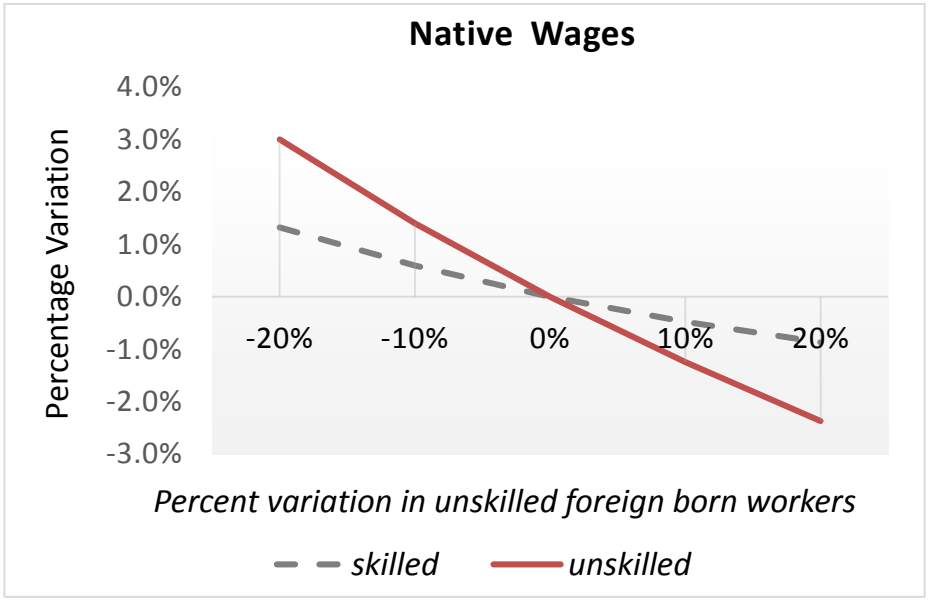
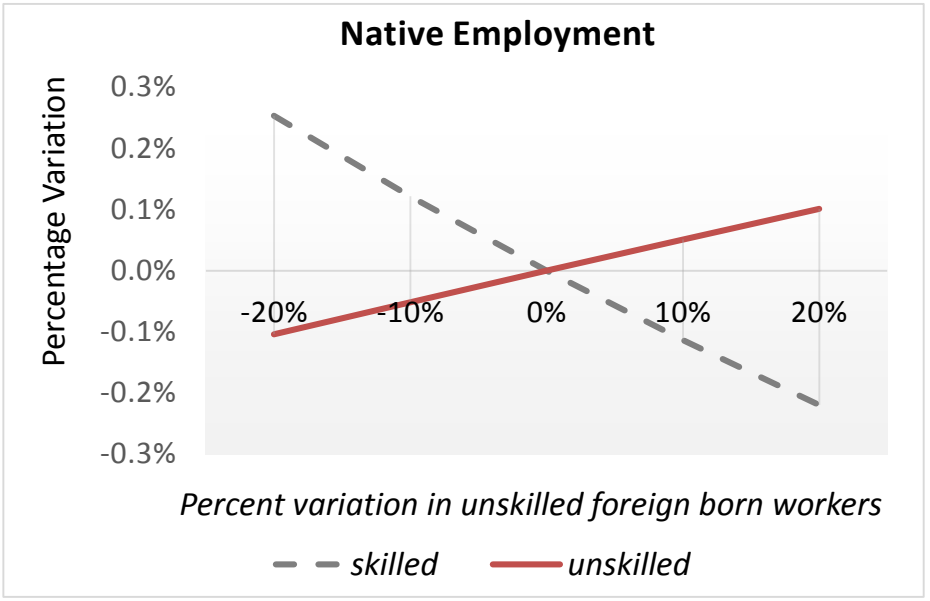
EFFECT ON NATIVE WAGES AND EMPLOYMENT

POLICY 1: VARIATION IN THE SUPPLY OF UNSKILLED FOREIGN BORN WORKERS





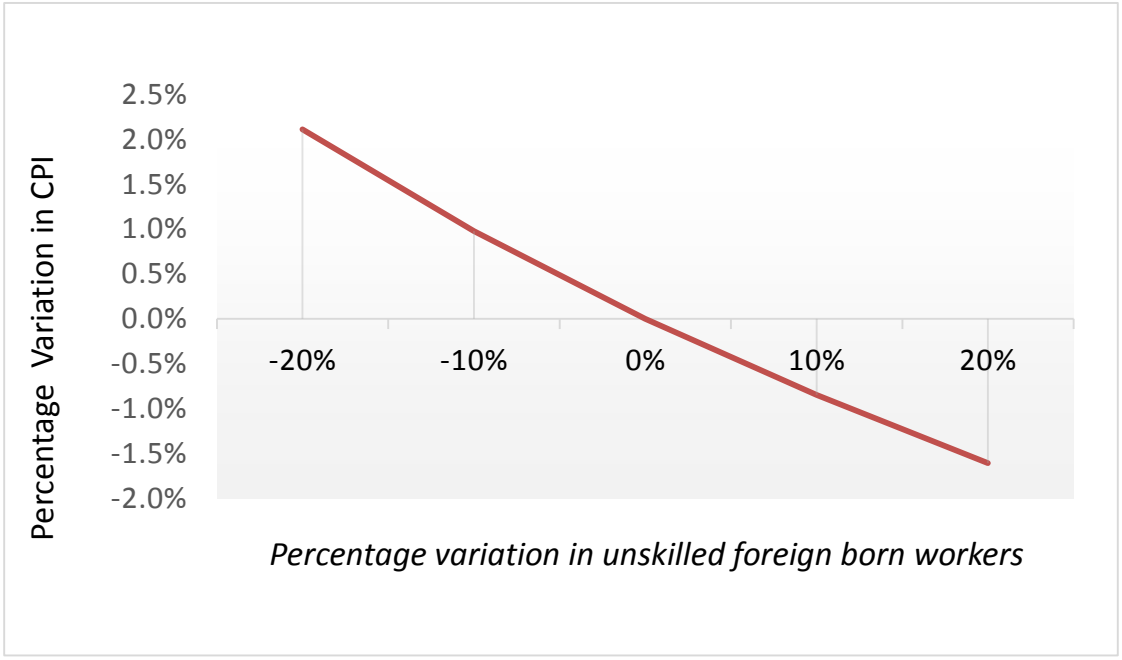
A 20% reduction in the supply of unskilled foreign born workers produces:

- 3% **increase** in the **wages** of unskilled native workers
- 1.5% **increase** in the wages of skilled native workers
- 0.1% **reduction** in **unskilled** native workers **employed**
- 0.3% **increase** in **skilled** native workers **employed**

Source: IMCO, with GTAPinGAMS model

SHOCK EFFECTS ON PRICES

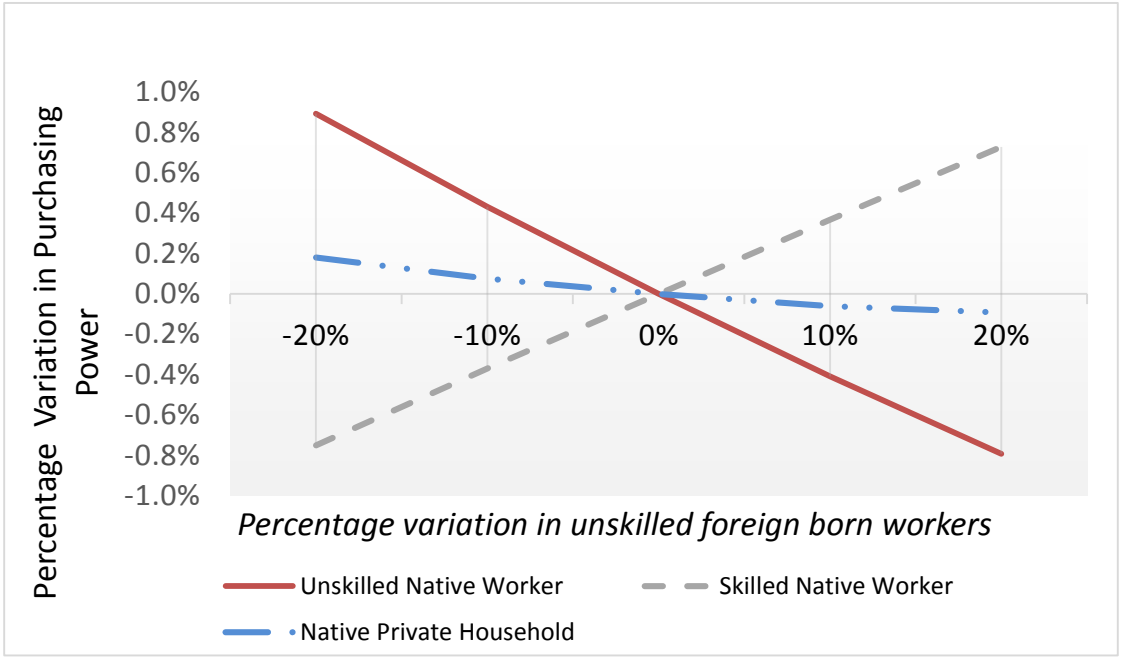
POLICY 1: VARIATION IN THE SUPPLY OF UNSKILLED FOREIGN BORN WORKERS



A reduction in the supply of unskilled foreign born workers leads to an **increase in CPI higher than 2%**.

SHOCK EFFECTS ON NATIVE PURCHASING POWER

POLICY 1: VARIATION IN THE SUPPLY OF UNSKILLED FOREIGN BORN WORKERS



A 20% reduction in the supply of unskilled foreign born workers produces:

- **1% Increase** in the purchasing power of **unskilled** native workers.
- **-1% reduction** in the purchasing power of **skilled** native workers.
- **Negligible effect** in the purchasing power of **private households**.

THE US CURRENTLY HAS 11 M ILLEGAL IMMIGRANTS

WHAT IF THEY GET DEPORTED OVER THE NEXT 10 YEARS?

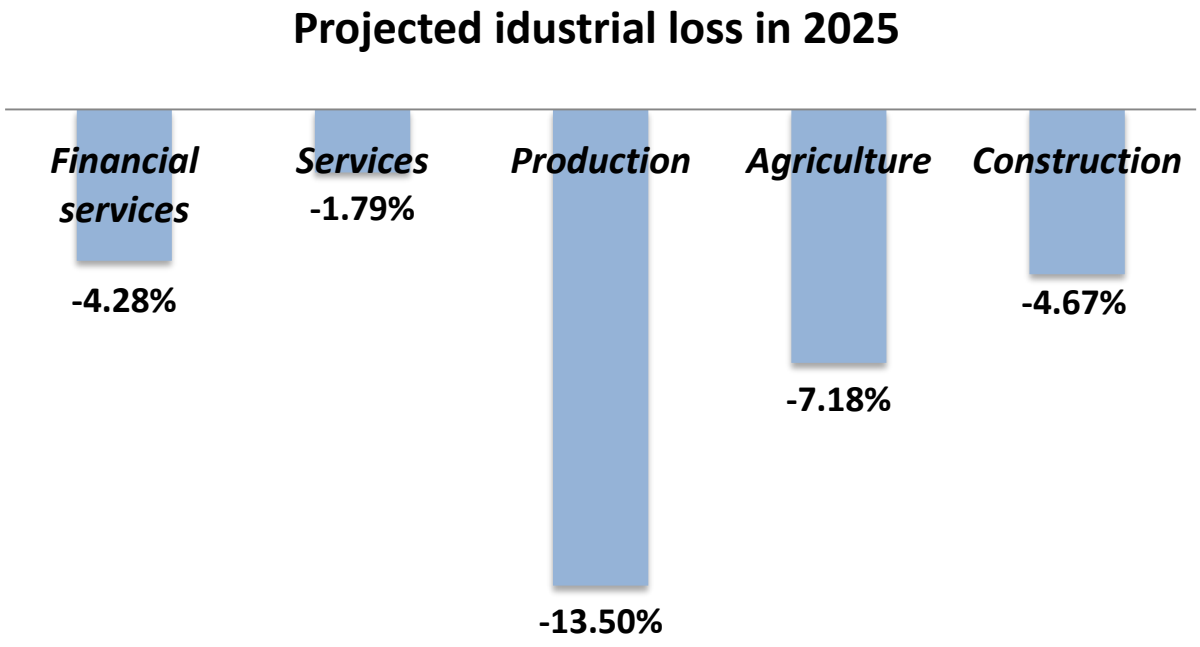
CHARACTERISTICS OF US ILLEGAL IMMIGRANTS

- **26 M** immigrants in the labor force.
- **11 M Illegal** immigrants;
- **56%** of **Mexican** origin;
- **19%** with more than a **high school** degree;
- **50%** of current **unskilled** migrant in the labor force are **illegal**;
- **13%** of current **skilled** migrant in the labor force are **illegal**.

Sources: US Bureau of Labor Statistics, Migration Policy Institute

EFFECT ON SECTORAL OUTPUT

POLICY 2: DEPORTATION OF 1M ILLEGAL IMMIGRANTS PER YEAR

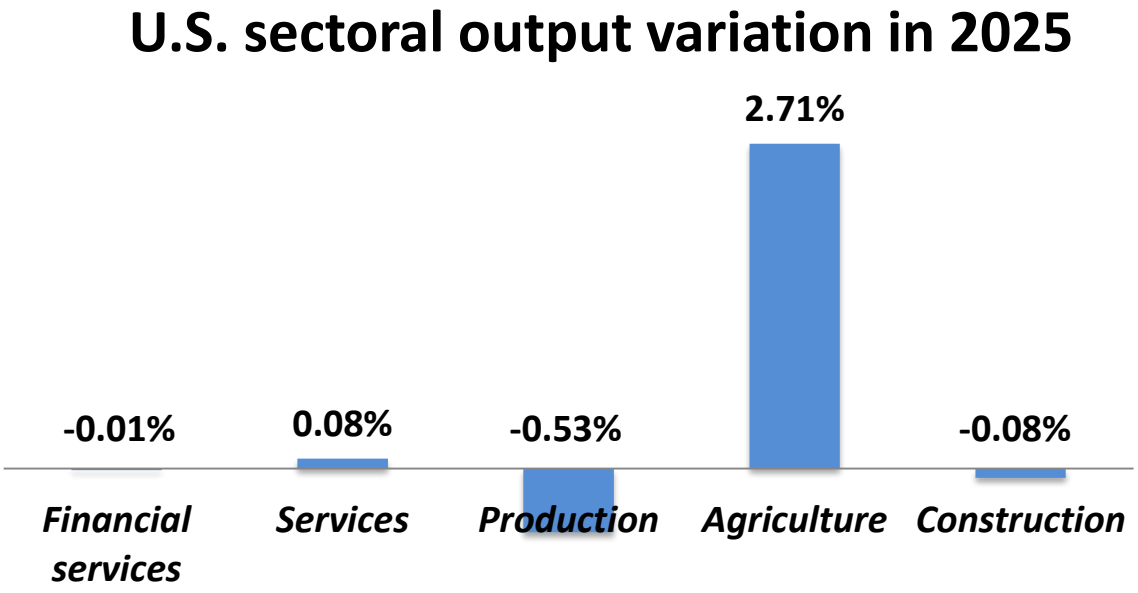


- **Industrial production** is the **most negatively affected**.
- **Services** are the **least negatively affected**.

Source: IMCO, with GTAPinGAMS model

EFFECT ON SECTORAL OUTPUT

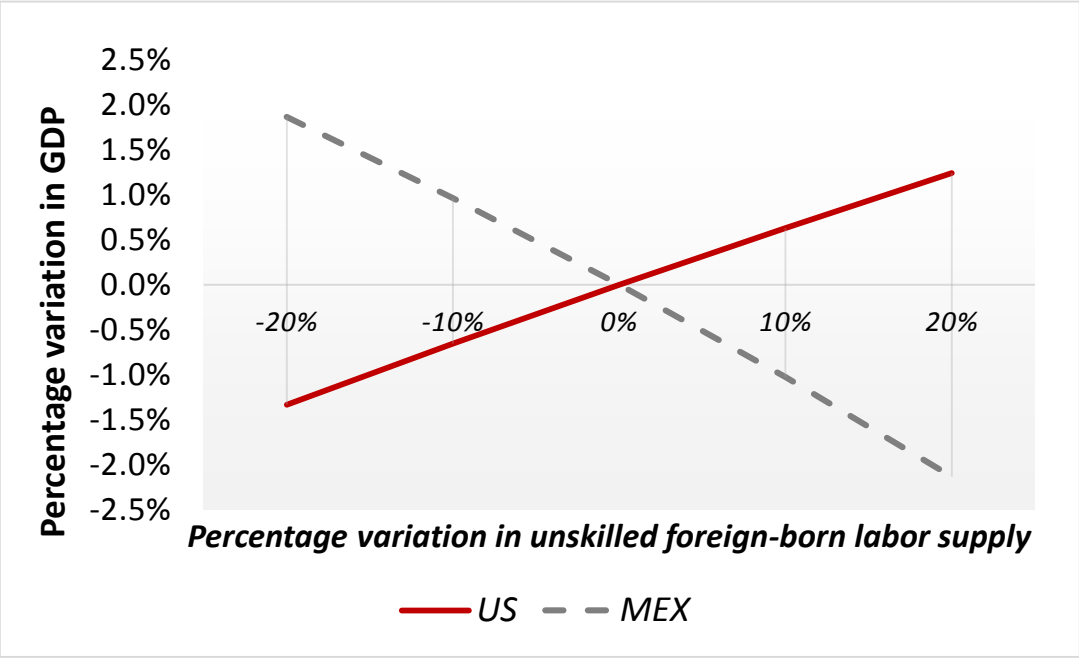
POLICY 3: FORMATION OF 0.1% OF UNSKILLED FOREIGN-BORN LABOR FORCE PER YEAR



- **Agriculture benefits** the most from the policy.
- **Production** is the most **negatively affected**.

SHOCK EFFECTS ON GDP

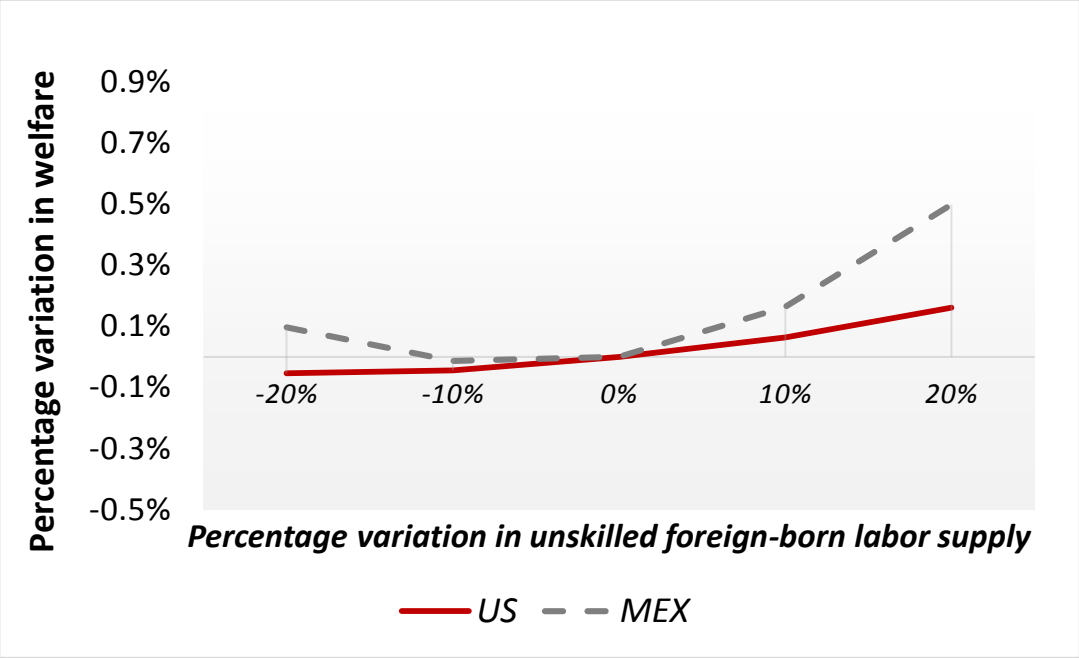
POLICY 1: VARIATION IN THE SUPPLY OF UNSKILLED FOREIGN BORN WORKERS



- A 20% reduction in the supply of unskilled foreign born workers in the U.S. leads to a **1.3% reduction in U.S. GDP**.
- A 20% reduction in the supply of unskilled foreign born workers in the U.S. produces a **1.9% increase in Mexican GDP**.

SHOCK EFFECTS ON WELFARE

POLICY 1: VARIATION IN THE SUPPLY OF UNSKILLED FOREIGN BORN WORKERS



- A 20% reduction in the supply of unskilled foreign born workers in the U.S. leads to a **0.05% reduction in U.S. welfare**.
- A 20% reduction in the supply of unskilled foreign born workers in the U.S. leads to a **0.1% increase in Mexican welfare**.

Source: IMCO, with GTAPinGAMS model