The Challenges of Global Trade: Globalization or Fragmentation?

Dany Bahar, PhD

The Brookings Institution
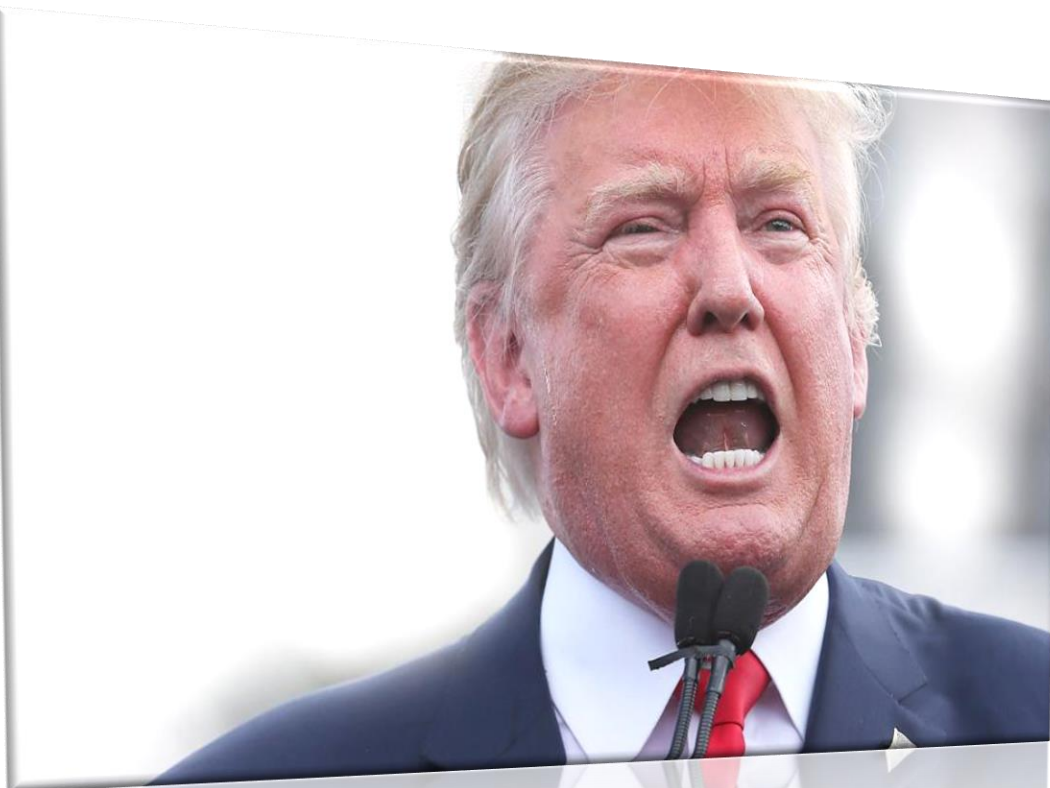
The city of Pittsburgh, and the State of Pennsylvania, have lost one-third of their manufacturing jobs since the Clintons put China into the WTO […] Fifty thousand factories across America have shut their doors in that time.

"NAFTA, supported by the secretary, cost us 800,000 jobs nationwide, tens of thousands of jobs in the Midwest."

@dany_bahar

Unemployment explains rise of anti-globalization politicians all over the globe

- Some politicians have successfully used trade and migration as scapegoats to explain slow economic growth for the middle class...
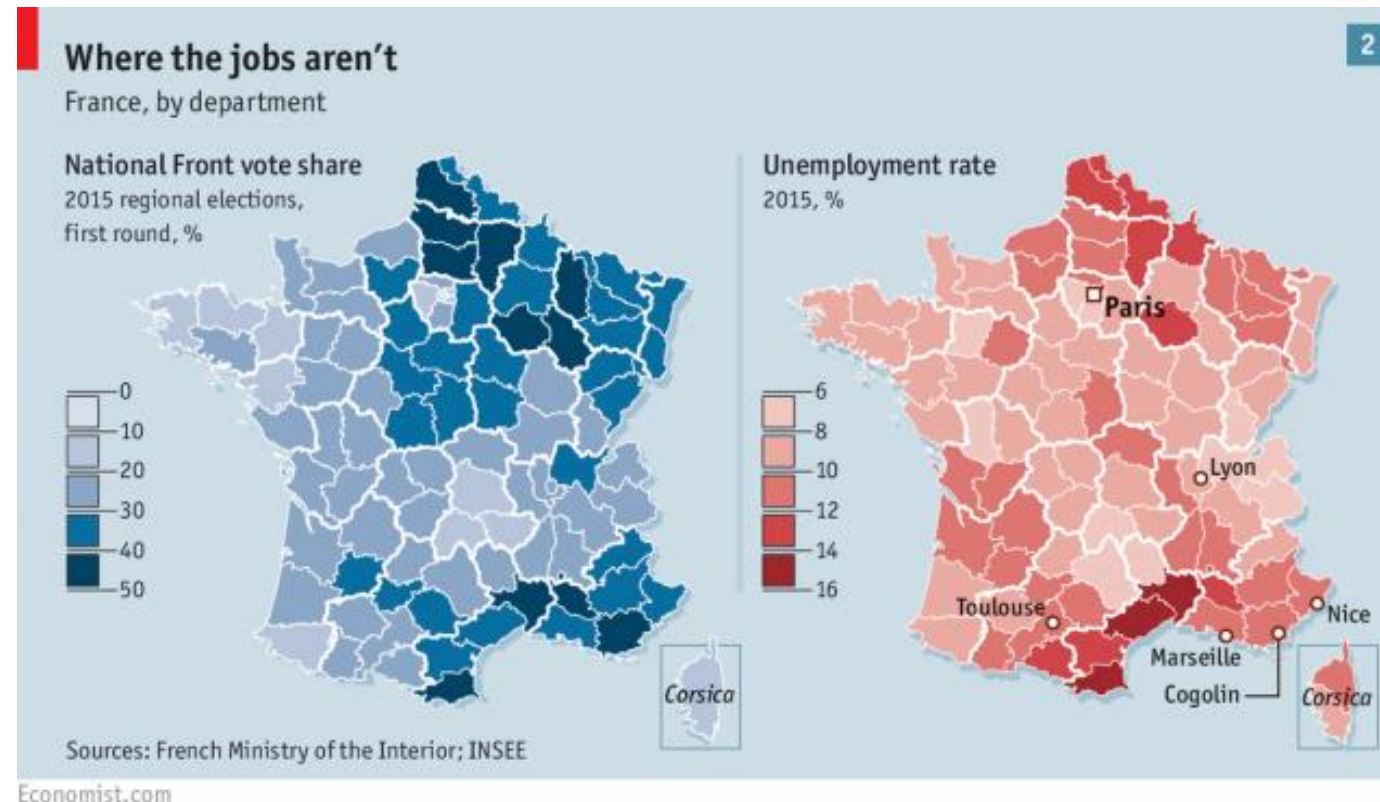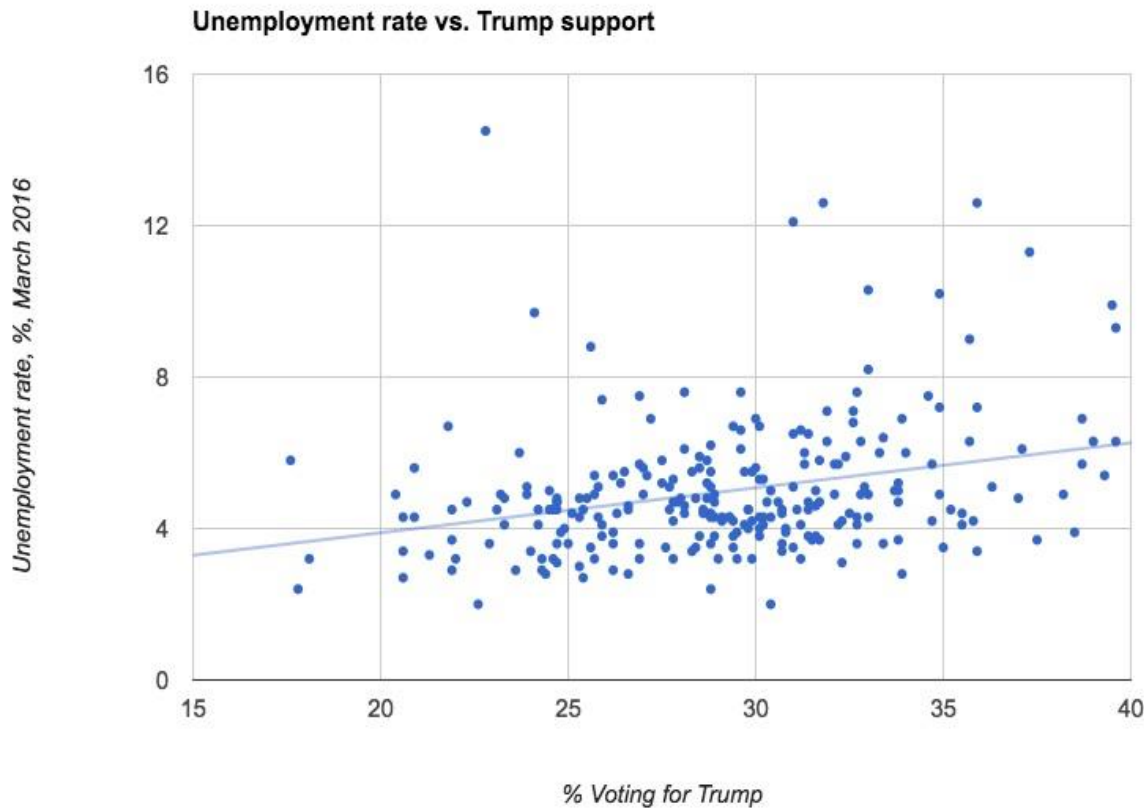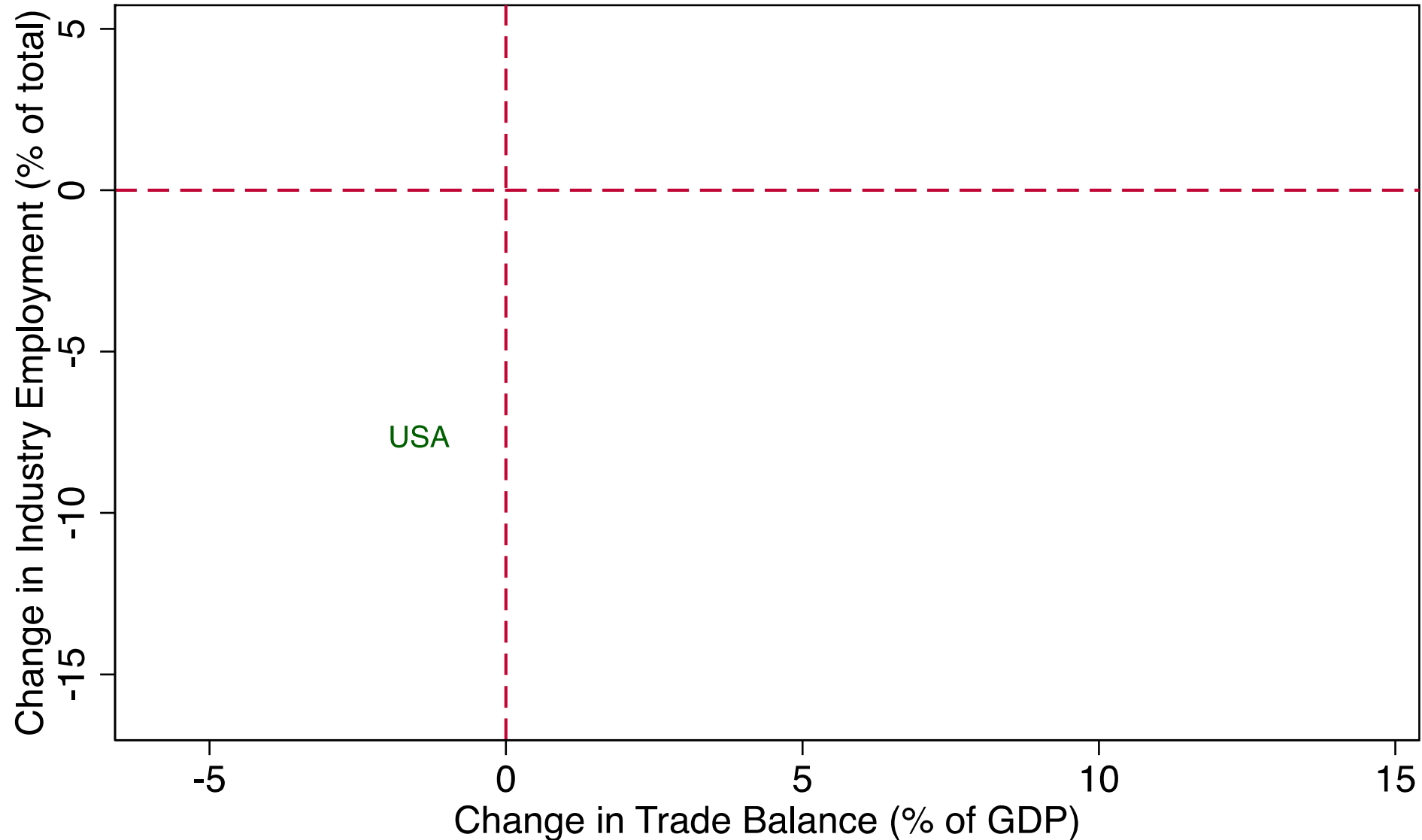
@dany_bahar

Trade Balance vs. Industry Employment 1995-2010
OECD Countries

Source: WDI and author's calculation. Prepared by @dany_bahar

@dany_bahar

Trade Balance vs. Industry Employment 1995-2010
OECD Countries
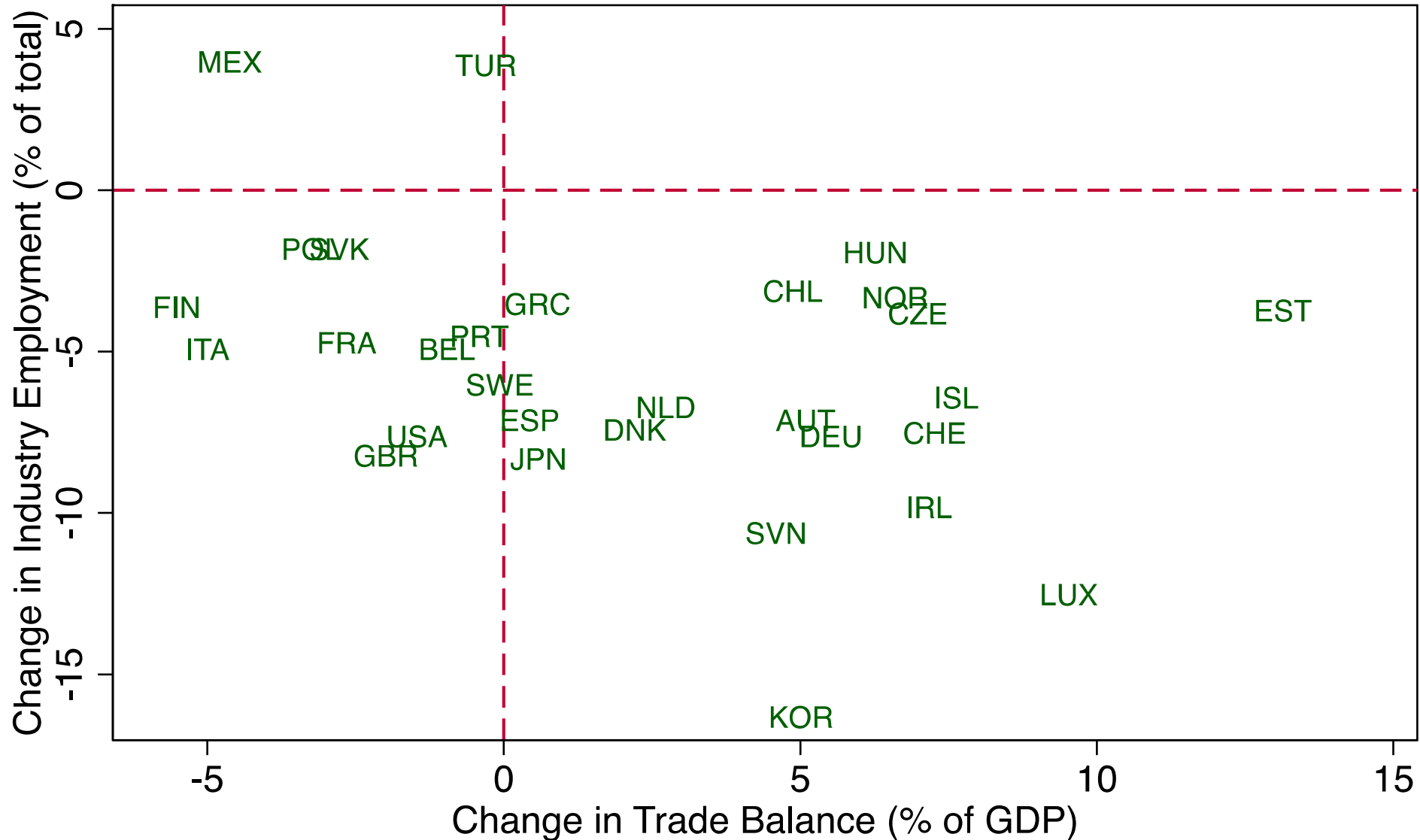
Source: WDI and author's calculation. Prepared by @dany_bahar

@dany_bahar

Share of employment in industry on negative trend

Industry Employment (%) vs Log GDPpc

Legend: 1992 (green solid), 2012 (orange dashed)
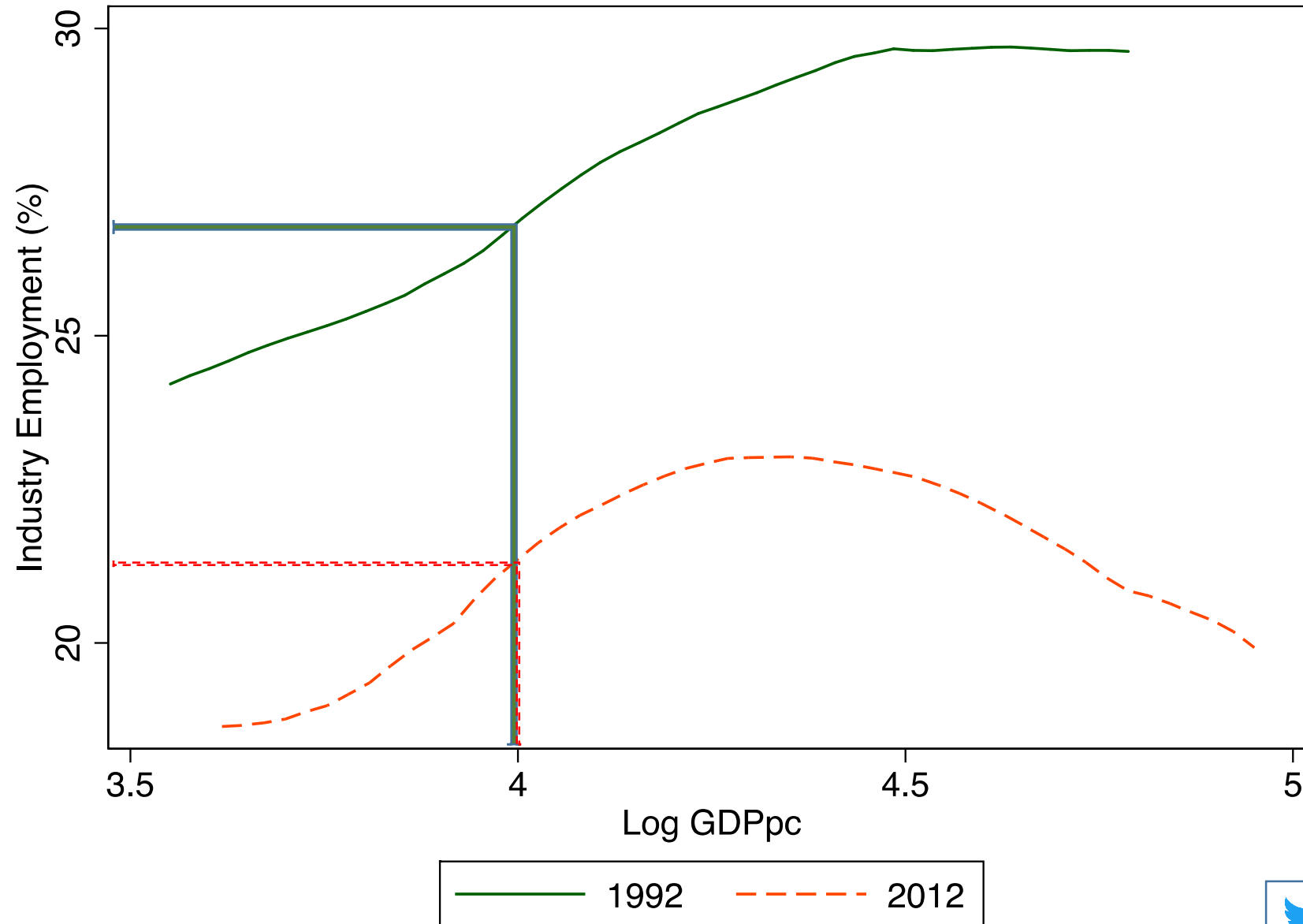
@dany_bahar

productivity

US Real Manufacturing Output vs. Employment, 1947 to 2014

Manufacturing Output (billions of 2014 dollars)
Manufacturing Employment (millions)
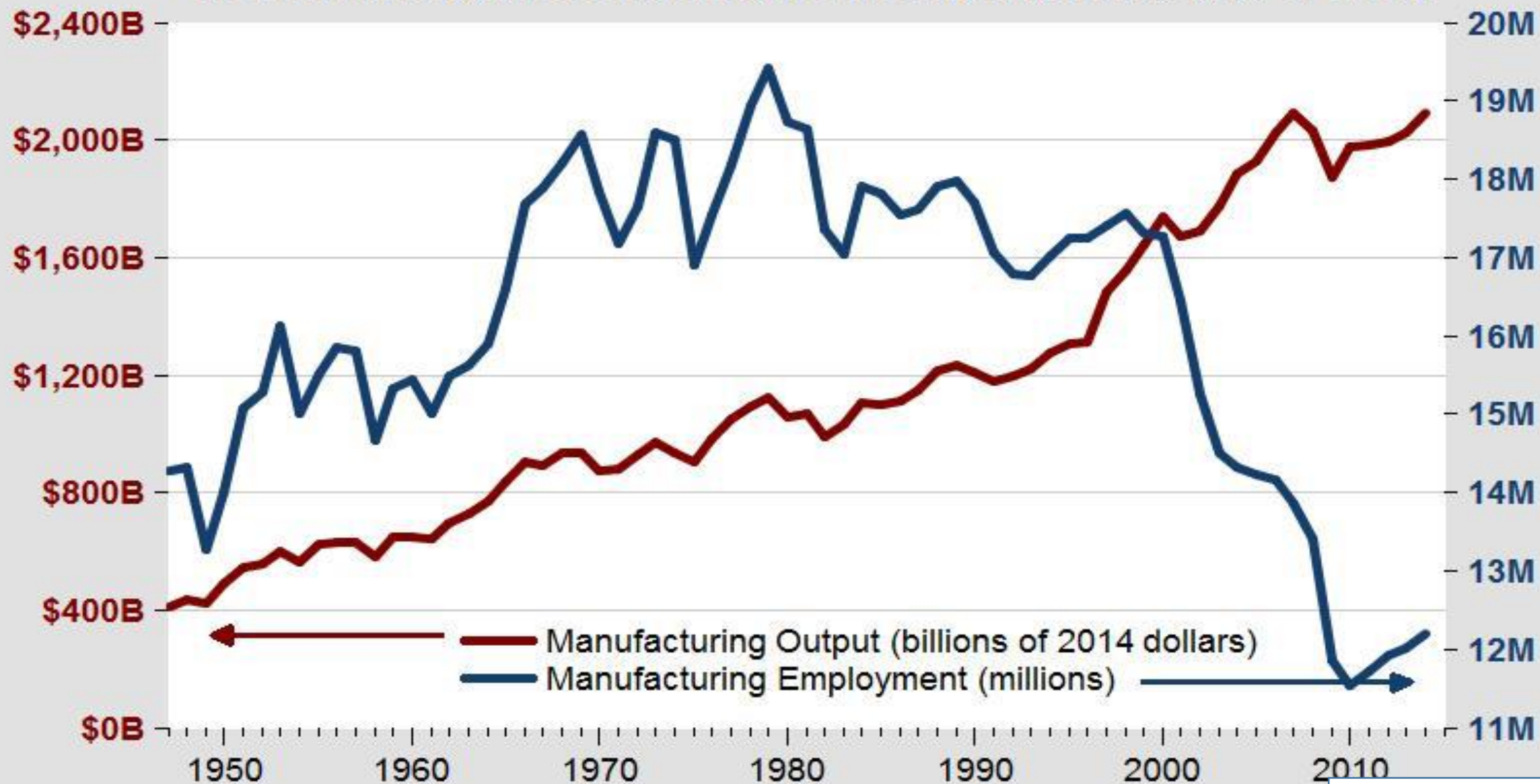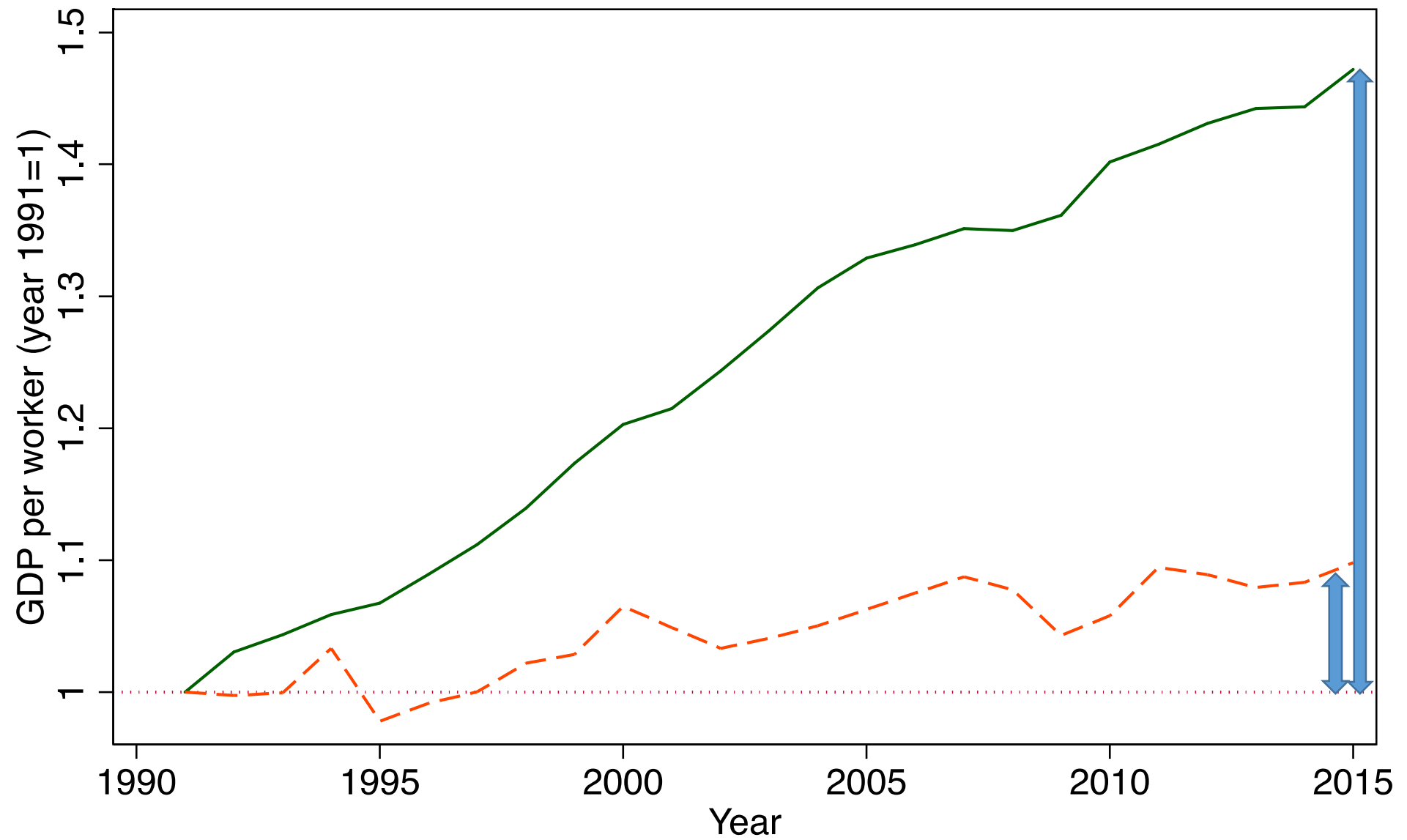
@dany_bahar

Source: WDI

@dany_bahar

It cannot be THAT simple…

TABLE 5.—DIFFERENCES BETWEEN INITIAL-TARIFF AND IMPACT EFFECT, EXCLUDING AGRICULTURE

Parameter Difference	Point Estimate	F-Value
Location effect		
Less than high school, $\delta_{2,lhs} - \delta_{4,lhs}$	-2.110^{***}	11.59
High school graduate, $\delta_{2,hs} - \delta_{4,hs}$	-0.915^{**}	6.48
Some college, $\delta_{2,scol} - \delta_{4,scol}$	-1.538^{***}	7.51
College graduate, $\delta_{2,col} - \delta_{4,col}$	-0.936	1.46
Industry effect		
Less than high school, $\theta_{2,lhs} - \theta_{4,lhs}$	-2.143^{***}	16.33
High school graduate, $\theta_{2,hs} - \theta_{4,hs}$	-1.232^{***}	6.76
Some college, $\theta_{2,scol} - \theta_{4,scol}$	-1.131^{***}	6.90
College graduate, $\theta_{2,col} - \theta_{4,col}$	-0.302	0.11

The table reports the overall impact on wages (computed as a difference between initial-tariff and impact effect reported in column 2 of table 4) and its significance for each education group when a location or an industry loses all of its protection within the sample period. Significant at ***1%, **5%, *10%.

Hakobyan and McLaren (RESTAT 2016)

@dany_bahar
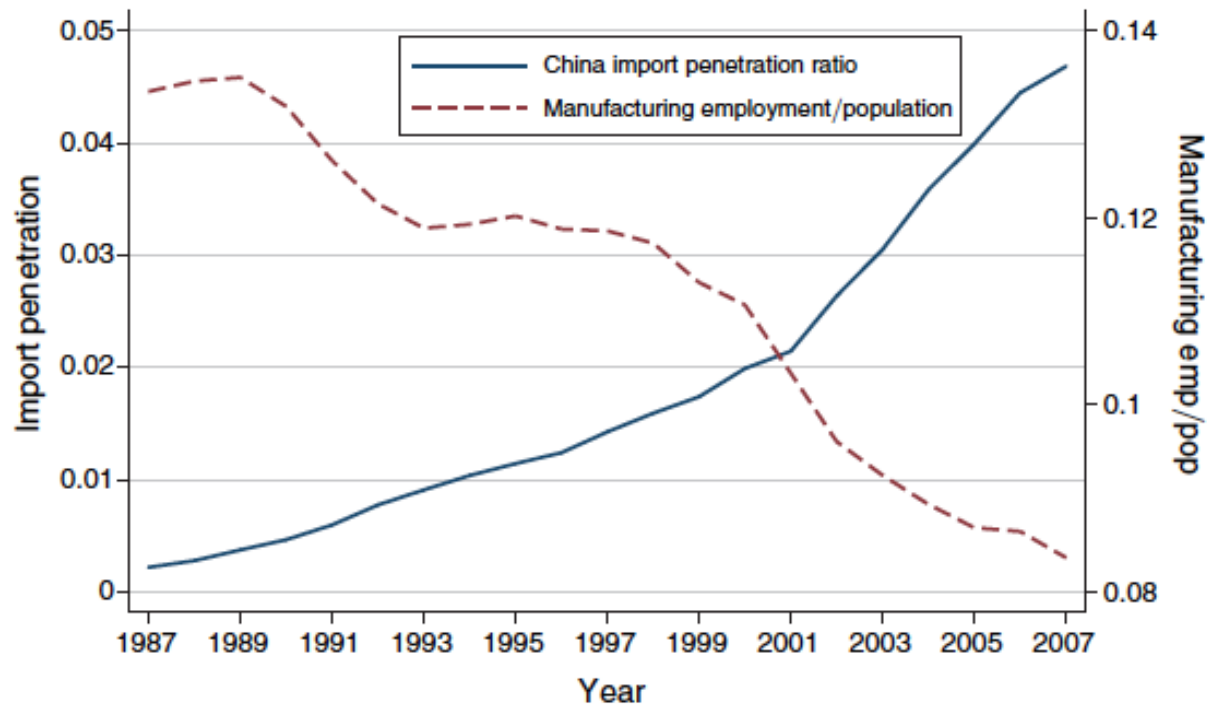
FIGURE 1. IMPORT PENETRATION RATIO FOR US IMPORTS FROM CHINA (*left scale*),
AND SHARE OF US WORKING-AGE POPULATION EMPLOYED IN MANUFACTURING (*right scale*)
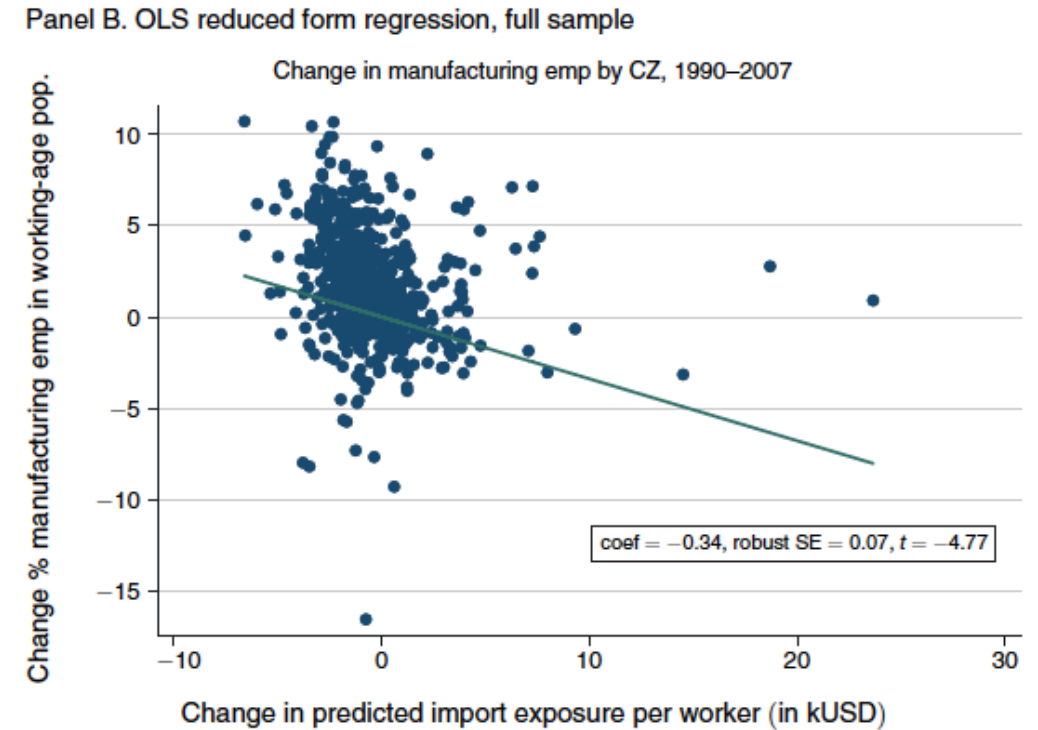
FIGURE 2. CHANGE IN IMPORT EXPOSURE PER WORKER AND DECLINE OF MANUFACTURING EMPLOYMENT:
ADDED VARIABLE PLOTS OF FIRST STAGE AND REDUCED FORM ESTIMATES

Commuting zones in the 75th percentile of exposure to Chinese imports is experienced to lose 4.5% of manufacturing jobs as compared to a CZ in 25th percentile.

Autor, Dorn and Hanson (AER 2013)

🐦 **@dany_bahar**

How do we maintain the balance between integration and prosperity for all?

@dany_bahar

"Some suggest trade is problematic because it redistributes income. The basis for that claim is true, but trivial. Pretty much everything else that happens in a market economy somehow redistributes income" (...)

"[C]ertain kinds of international competition can undermine domestic norms with regards to what's an acceptable redistribution..."

@dany_bahar

Three reasons on why curbing trade could be highly detrimental

1 We are all highly dependent on trade to be able to export more, be more competitive and create more jobs

@dany_bahar

Partners Across The Globe Are Bringing The 787 Together — 787 Dreamliner

THE COMPANIES

U.S.	CANADA	AUSTRALIA	JAPAN	KOREA	EUROPE
Boeing	Boeing	Boeing	Kawasaki	KAL-ASD	Messier-Dowty
Spirit	Messier-Dowty		Mitsubishi		Rolls-Royce
Vought			Fuji		Latecoere
GE					Alenia
Goodrich					Saab

WING TIPS — Korea
FIXED TRAILING EDGE — Nagoya, Japan
WING — Nagoya, Japan
ENGINE NACELLES — Chula Vista, CA
CENTER FUSELAGE — Grottaglie, Italy
FORWARD FUSELAGE — Nagoya, Japan
FORWARD FUSELAGE — Wichita, Kansas
MOVABLE TRAILING EDGE — Australia
TAIL FIN — Fredrickson, Washington
PASSENGER ENTRY DOORS — France
CARGO/ACCESS DOORS — Sweden
WING/BODY FAIRING LANDING GEAR DOORS — Winnipeg, Canada
HORIZONTAL STABILIZER — Foggia, Italy
MAIN LANDING GEAR WHEEL WELL — Nagoya, Japan
CENTER WING BOX — Nagoya, Japan
ENGINES — GE-Evendale, Ohio / Rolls-Royce-Derby, UK
AFT FUSELAGE — Charleston, S.C.
LANDING GEAR — Gloucester, UK
FIXED AND MOVABLE LEADING EDGE — Tulsa, Oklahoma

COPYRIGHT © 2007 THE BOEING COMPANY

@dany_bahar

Looking at imports by end-use, over 50% of imports from Mexico are intermediate goods

US Imports from Mexico, by end-use category

Share of total imports

.4

.3

.2

.1

0

2010   2011   2012   2013   2014   2015

xvar

Foods and beverages

Industrial supplies and materials

Capital goods, except automotives

Automotive vehicles, parts and engines

Consumer goods (nonfood), except auto

Other goods
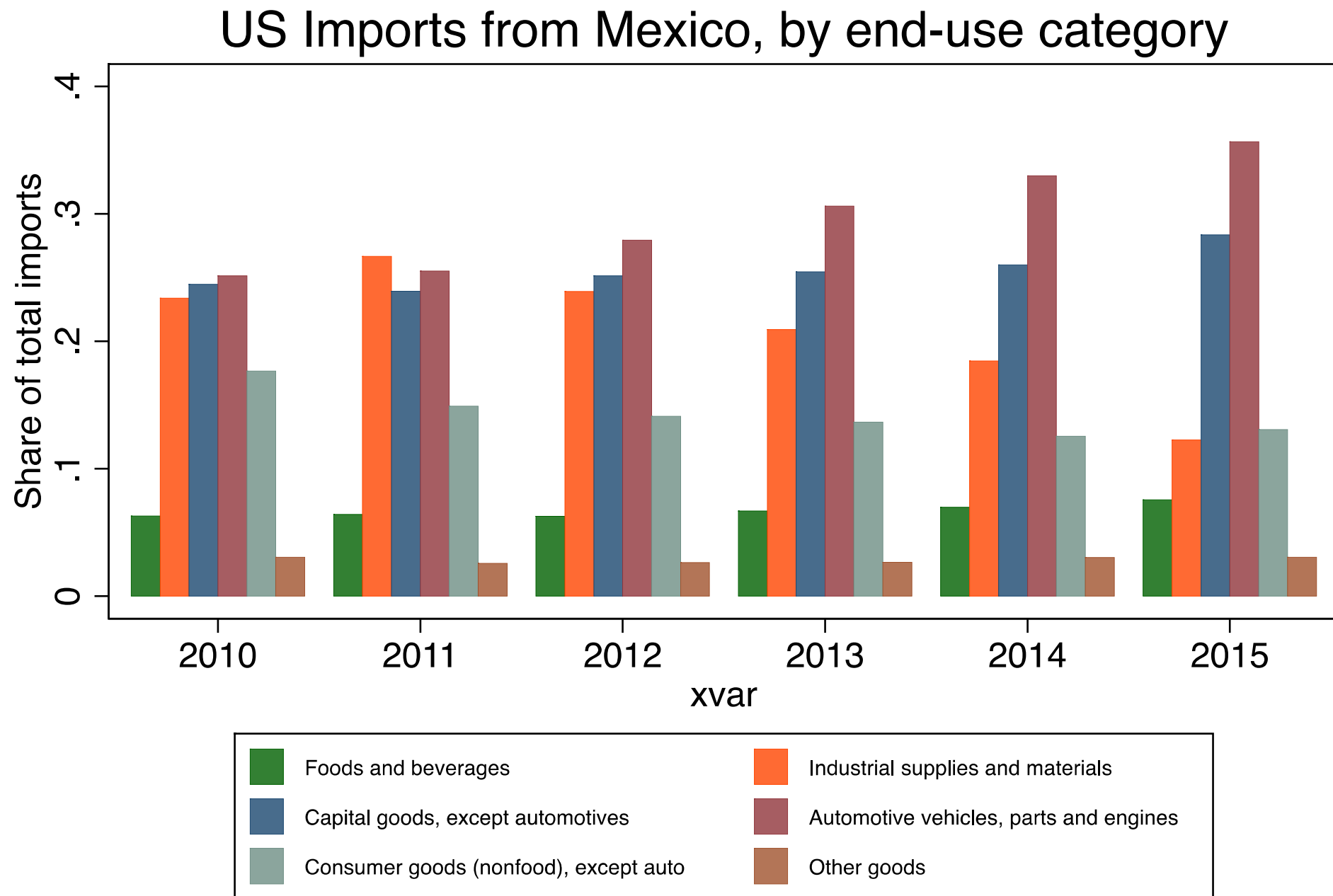
Source: US Census and author's calculation

Even within the auto category, almost half imports engines and other parts and accessories

US Imports from Mexico, Year 2015

Automotive vehicles, parts and engines

- (30000) Passenger cars, new and used
- (30100) Trucks, buses, and special purpose vehicles
- (30110) Bodies and chassis for trucks and buses
- (30200) Engines and engine parts
- (30210) Bodies and chassis for passenger cars
- (30220) Automotive tires and tubes
- (30230) Other parts and accessories of vehicles

Share of total imports

0   .1   .2   .3   .4

Source: US Census and author's calculation

@dany_bahar
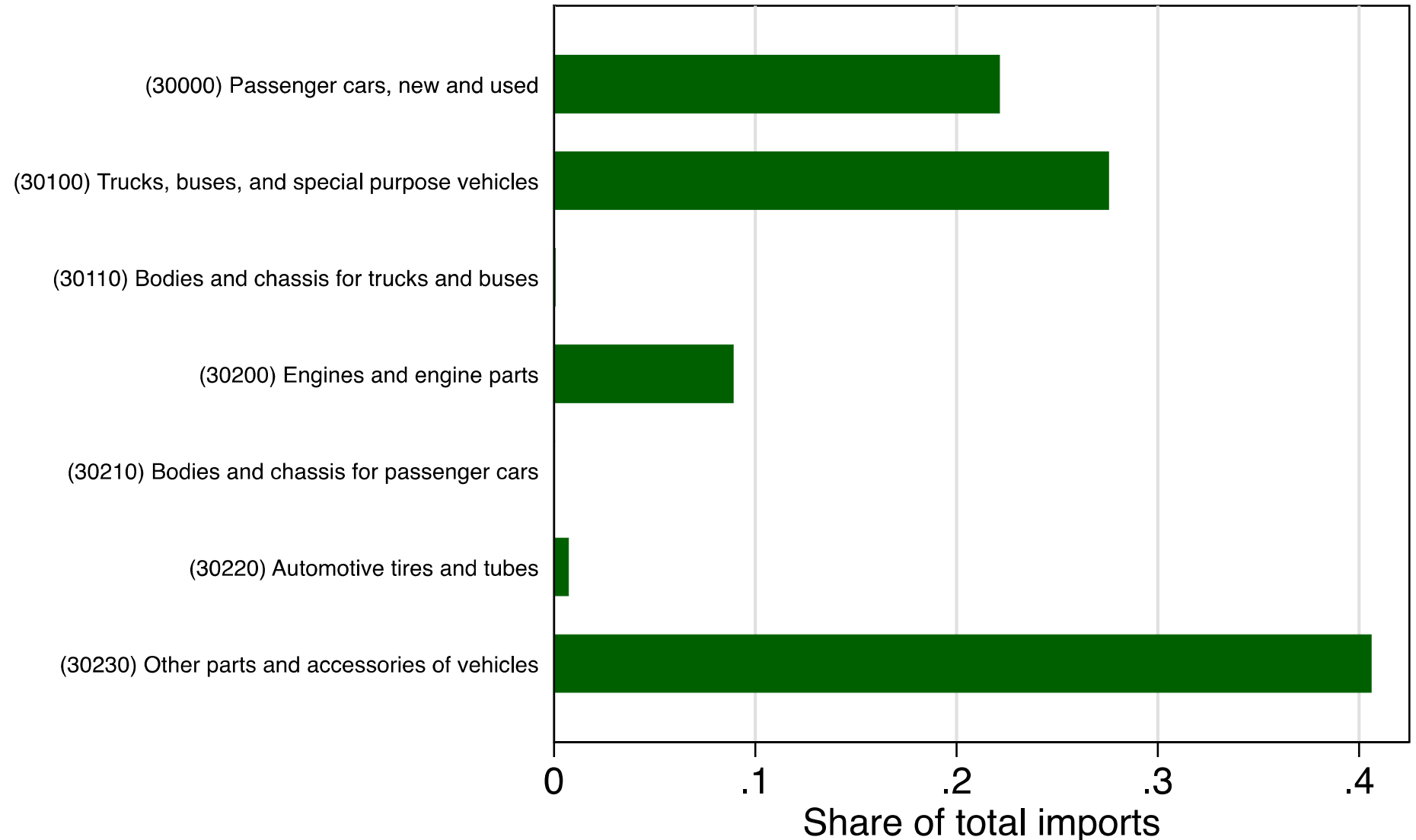
They need each other

Exports of goods between Britain and EU, 2014, % of national totals

From Britain to:

To Britain from:

| 15 | 10 | 5 | 0 | | 0 | 5 | 10 | 15 |

Germany
Netherlands
France
Ireland
Spain
Italy
Sweden
Poland
Greece
Romania

51.4% of British goods exports go to the EU

6.6% of EU goods exports go to Britain

Source: IMF Direction of Trade Statistics
Economist.com

@dany_bahar
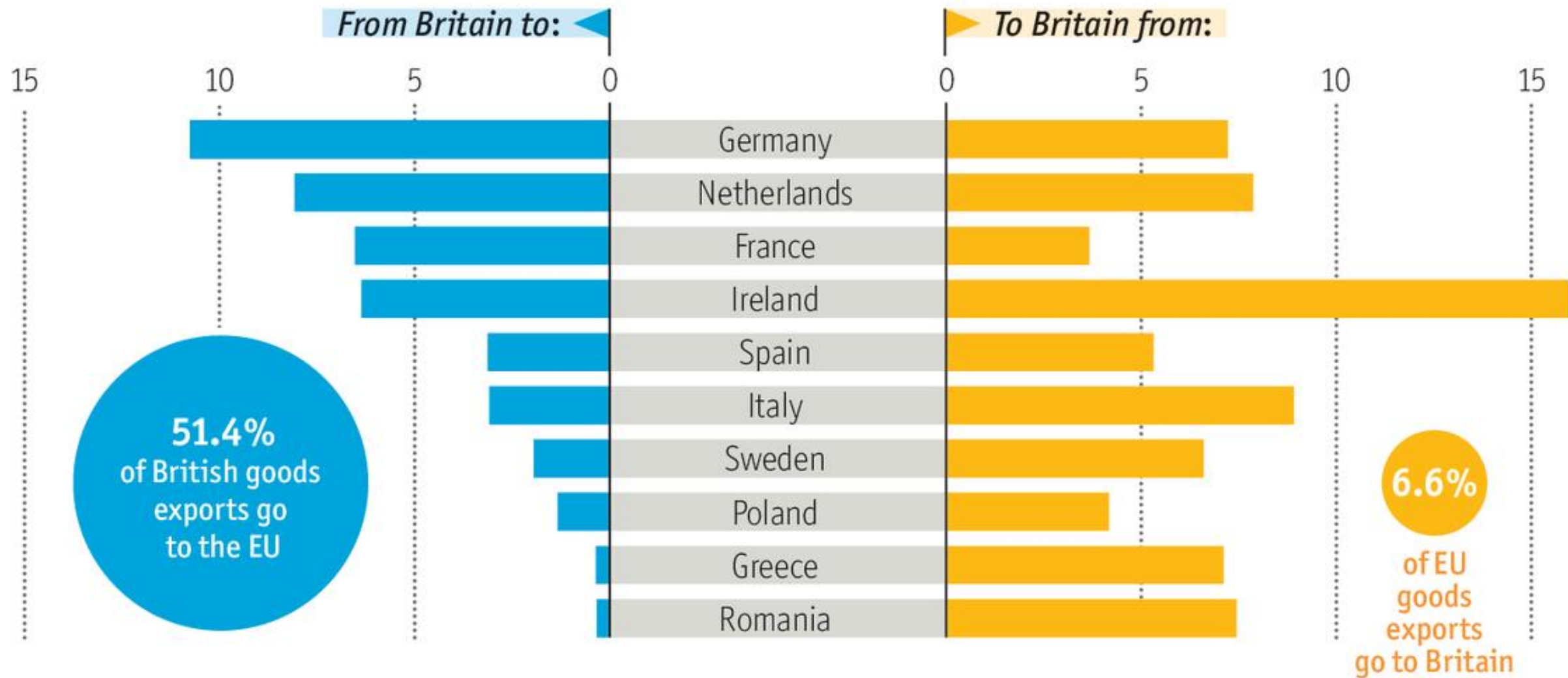
Three reasons on why curbing trade could be highly detrimental

2

Trade has helped consumers to increase their purchasing power significantly.

Consumer also matters!

Figure 5. Estimates of the size of the global middle class, 1950-2030 (billions)

World Middle Class — World Population — — World Middle Class Share (rhs)

Source: Author's calculations

@dany_bahar
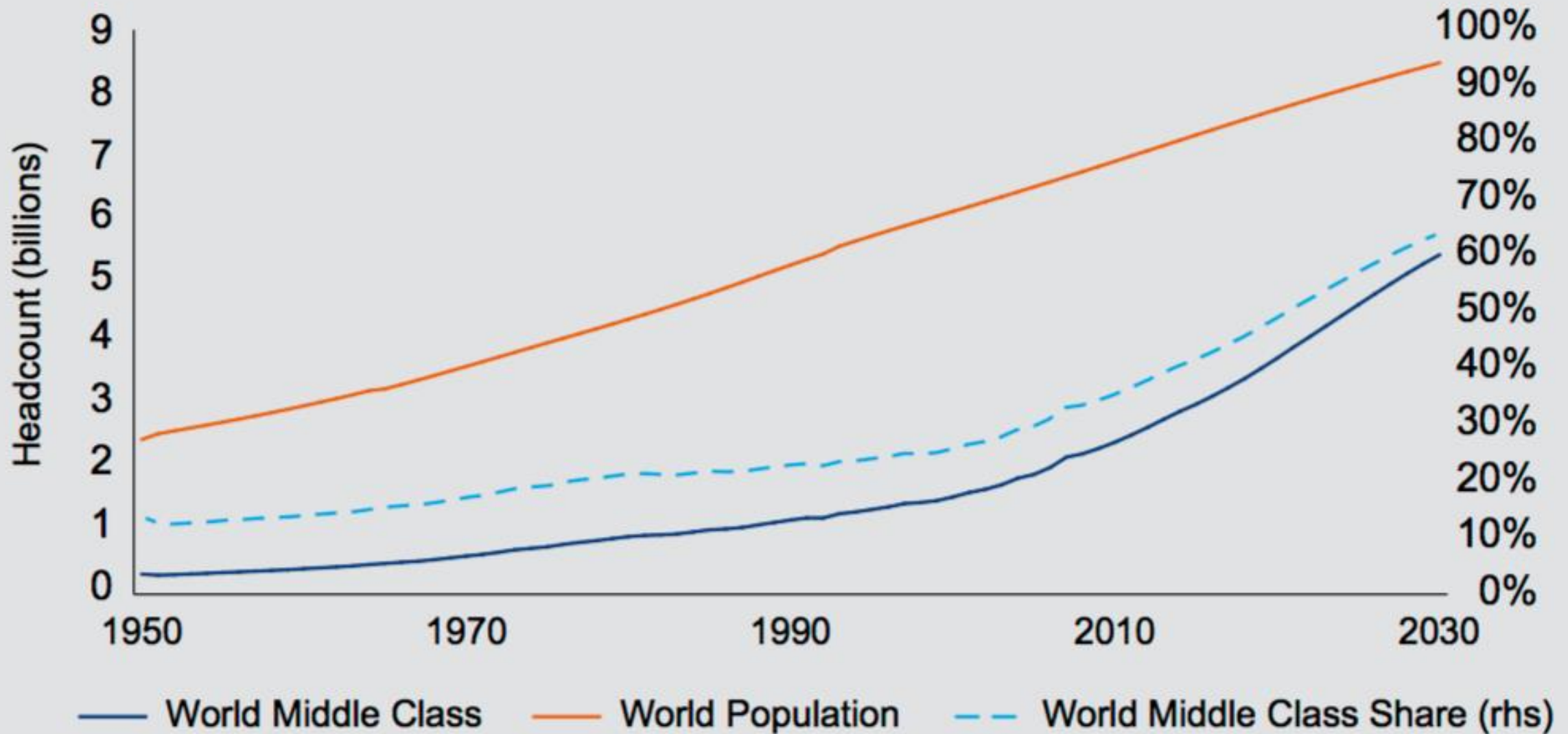
Figure 4. The size of the global middle class, 2000, 2015, and 2030 (billion people)

Legend:
- Sub-Saharan Africa
- North America
- Middle East and North America
- Europe
- Central and South America
- Asia Pacific

X-axis: OLD NEW (2000), OLD NEW (2015), OLD NEW (2030)

Y-axis: Billions (0 to 6)

Source: Author's calculations

@dany_bahar
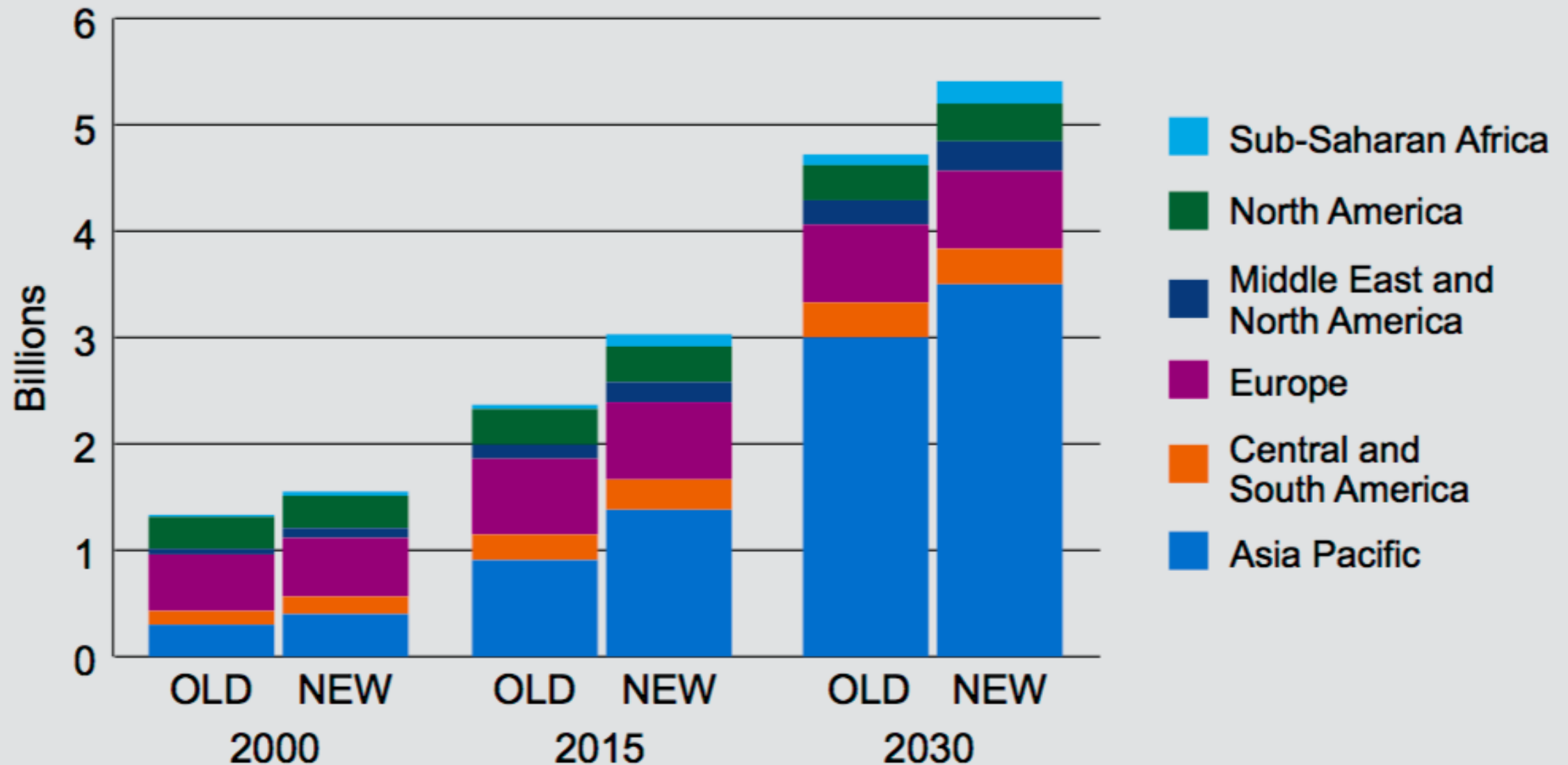
Historic US Import Tariffs
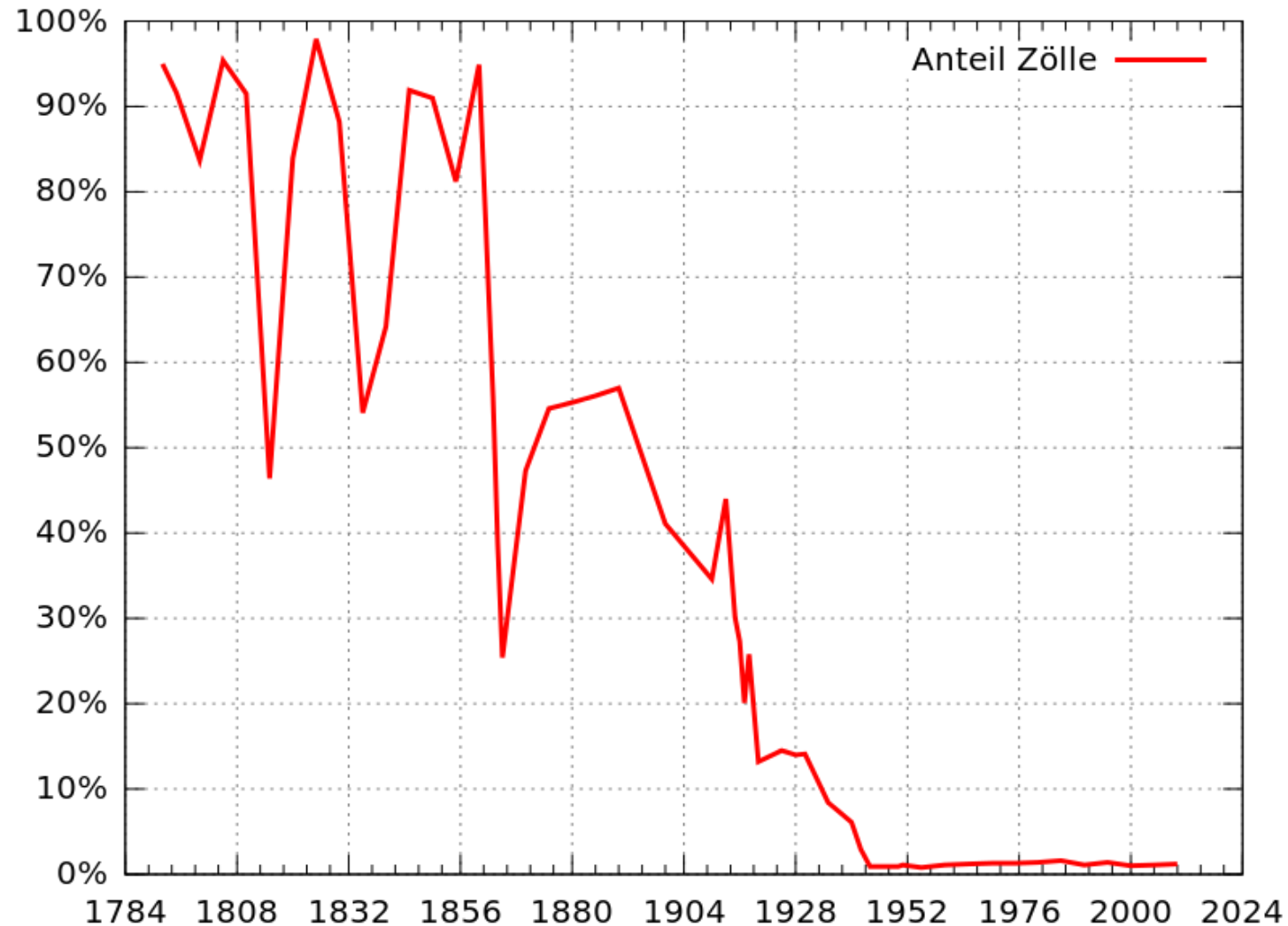
Three reasons on why curbing trade could be highly detrimental
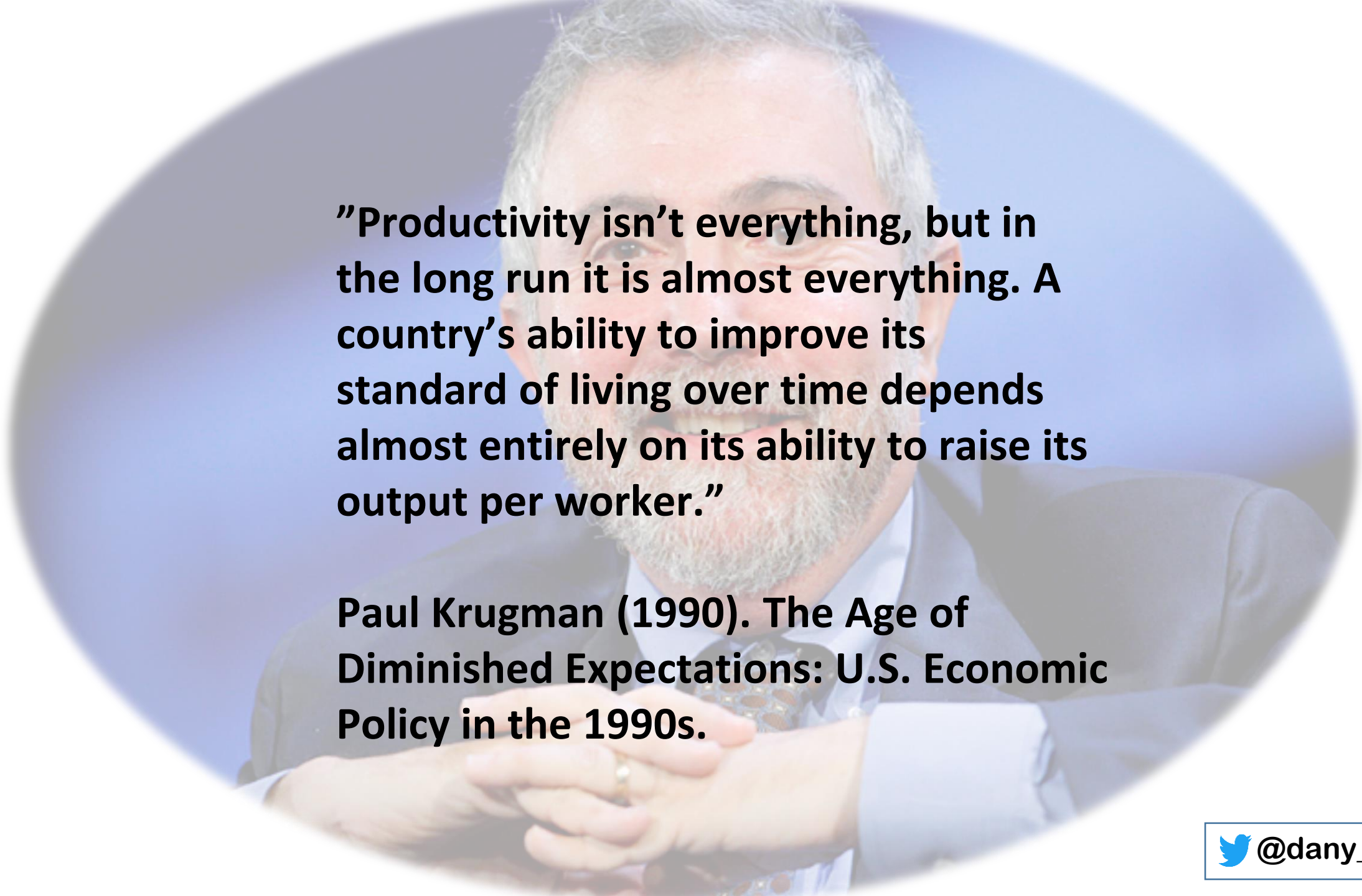
3 Trade raises competition and therefore improves productivity. Productivity differences explain more than half of cross-country income differences

U.S. Total Factor Business Productivity

— Actual (1947=100) — If TFP growth had maintained 1947-1969 trend
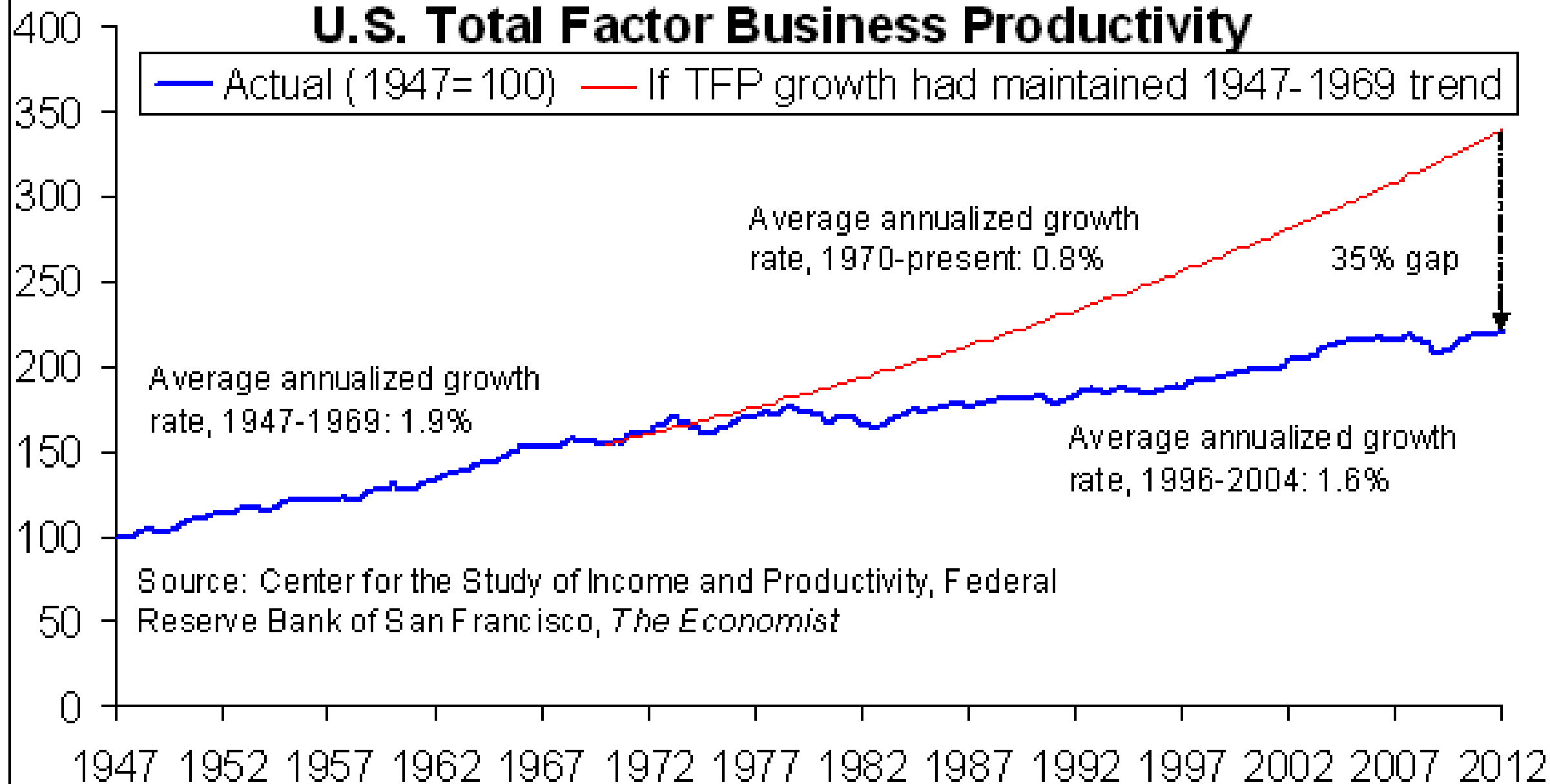
Average annualized growth
rate, 1970-present: 0.8%

35% gap

Average annualized growth
rate, 1947-1969: 1.9%

Average annualized growth
rate, 1996-2004: 1.6%

Source: Center for the Study of Income and Productivity, Federal
Reserve Bank of San Francisco, *The Economist*

@dany_bahar

"Productivity isn't everything, but in the long run it is almost everything. A country's ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker."

Paul Krugman (1990). The Age of Diminished Expectations: U.S. Economic Policy in the 1990s.

@dany_bahar

Economic growth = structural transformation

- As countries move towards **more productive** activities, they **grow faster**

- Two components play a role:
    - **Productivity increase** within sectors
    - **Entry, exit and reallocation** of resources from least to more productive sectors

🐦 @dany_bahar

Distribution of the labor force by sector, 1840-2010

Agriculture
Industry
Services

percent of labor force

Decade

1962 — $55.4M

- Metalliferous ores and metal scrap — **21.90%**
- Textile fibres (not wool tops) and their wastes (not in yarn) — **8.11%**
- Crude animal and vegetable materials, nes — **4.95%**
- Crude fertilizer and crude minerals — **3.87%**
- 0.21%
- Fish, crustacean and molluscs, and preparations thereof — 14.75%
- Cereals and cereal preparations — **11.77%**
- Cork and wood, cork manufactures — **5.01%**
- Textile yarn, fabrics, made-up articles, nes, and related products — **3.70%**
- Manufactures | Non-ferrous

2016 — $520B

- ...d ...icles — 1.46%
- Iron and steel — **3.94%**
- Manufactures of metals, nes — 2.19%
- Textile yarn, fabrics, made-up articles, nes, and related products — 1.94%
- Non-ferrous metals — **1.94%**
- Rubber... — 0.96%
- Non-met — 0.69%
- 0.22%
- Artificial resins and plastic materials, and cellulose esters etc — **4.53%**
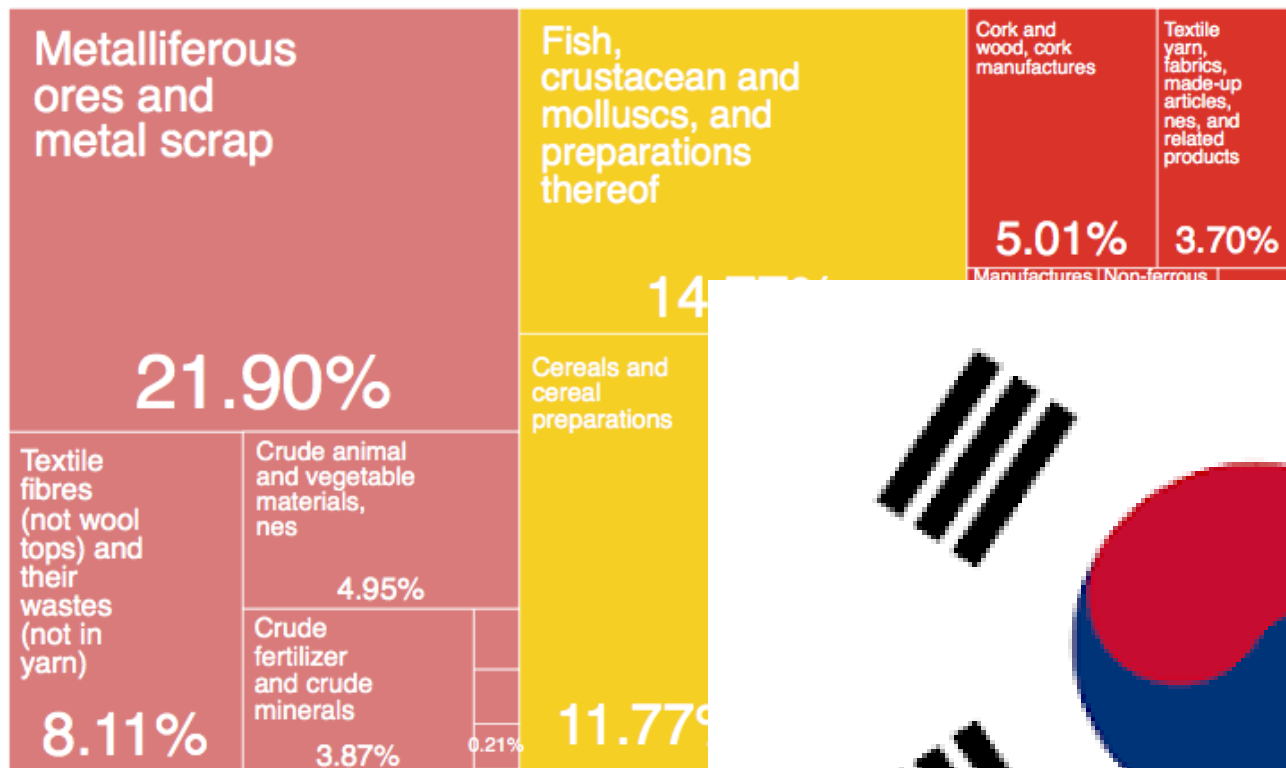- Organic chemicals — **3.37%**
- Medicinal and pharmaceutical products — 0.98%
- Chemical org... — 0.86% — 0.68%
- Oils and ...t and... — 0.87%
- 0.38%
- 7.33%
- 6.20%
- ...nes, and parts of, nes — **4.03%**
- Machinery specialized for particular industries — 3.37%
- Office machines and automatic data processing equipment — **2.04%**
- Power generating machinery and equipment — 1.74%
- Professional, scientific, controlling instruments, apparatus, nes — **4.21%**
- Miscellaneous manufactured articles, nes — 1.87%
- Photographic equipment and optical... — 0.90%
- Artic... — 0.34% — 0.21% — 0.15%
- Petroleum, petroleum products and related materials — **5.44%**
- 0.43%
- 0.15%
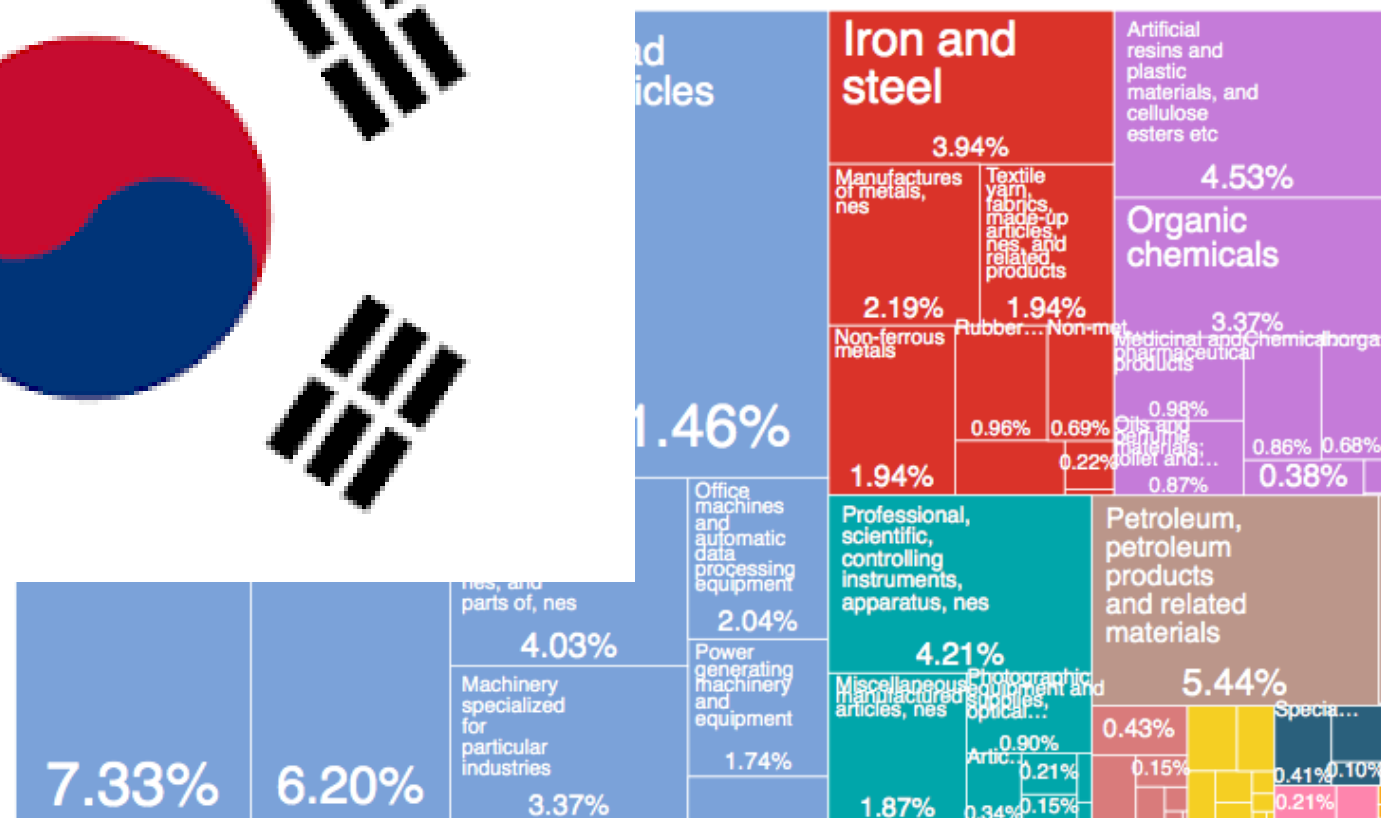- Specia... — 0.41% — 0.10%
- 0.21%

What can governments do?

@dany_bahar

The solution is not likely to be found at the GLOBAL negotiating table, but at home

wtf?

What's the (market) failure?

www.atticarts.org

Market failures that stop the "invisible hand"

- Unequal access to economic resources (i.e. credit, full information)
- Social and private returns differ, externalities (i.e. pollution, workers' trainings, etc.)
- Institutional failures (e.g. corruption, too much or too little regulation, etc.)
- Poor macroeconomics (e.g. inflation or deflation)
- Coordination failures (e.g. lack of infrastructure, lack of complementary markets)

@dany_bahar

Is there a market failure to be

```
reghdfe poor_hcr c.trade_pct##c.covr_total_poor lgdp, a(countryid year) cluster(countryid)
(dropped 41 singleton observations)
(converged in 12 iterations)

HDFE Linear regression                              Number of obs    =         146
Absorbing 2 HDFE groups                             F(   4,      42) =        4.60
Statistics robust to heteroskedasticity             Prob > F         =      0.0036
                                                    R-squared        =      0.9947
                                                    Adj R-squared    =      0.9913
                                                    Within R-sq.     =      0.2927
Number of clusters (countryid) =          43        Root MSE         =      0.0243

                                          (Std. Err. adjusted for 43 clusters in countryid)
------------------------------------------------------------------------------------------
                           |               Robust
                  poor_hcr |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
---------------------------+--------------------------------------------------------------
                 trade_pct |   .0039944    .001055     3.79   0.000     .0018654    .0061234
           covr_total_poor |   .0016658   .0004342     3.84   0.000     .0007895     .002542
                           |
 c.trade_pct#c.covr_total_poor | -.0000568  .0000179    -3.18   0.003    -.0000929   -.0000207
                           |
                      lgdp |  -.1639551   .0834841    -1.96   0.056    -.3324327    .0045226
------------------------------------------------------------------------------------------

Absorbed degrees of freedom:
-----------------------------------------------------+
  Absorbed FE | Num. Coefs.  =  Categories  -  Redundant  |
--------------+--------------------------------------------|
    countryid |           0          43          43 *      |
         year |          10          11           1        |
-----------------------------------------------------+
* = fixed effect nested within cluster; treated as redundant for DoF computation
```

🐦 **@dany_bahar**

Globalization has taken us far... but we've understated the losses

The challenge ahead is how can governments and private sector together can create the proper safety nets to protect those most vulnerable to the process

@dany_bahar

Thank you

Please feel free to email or follow me at:

dbahar@brookings.edu
@dany_bahar