

# THE GREAT CONVERGENCE

Information technology and the New Globalization

A NEW BOOK BY RICHARD BALDWIN

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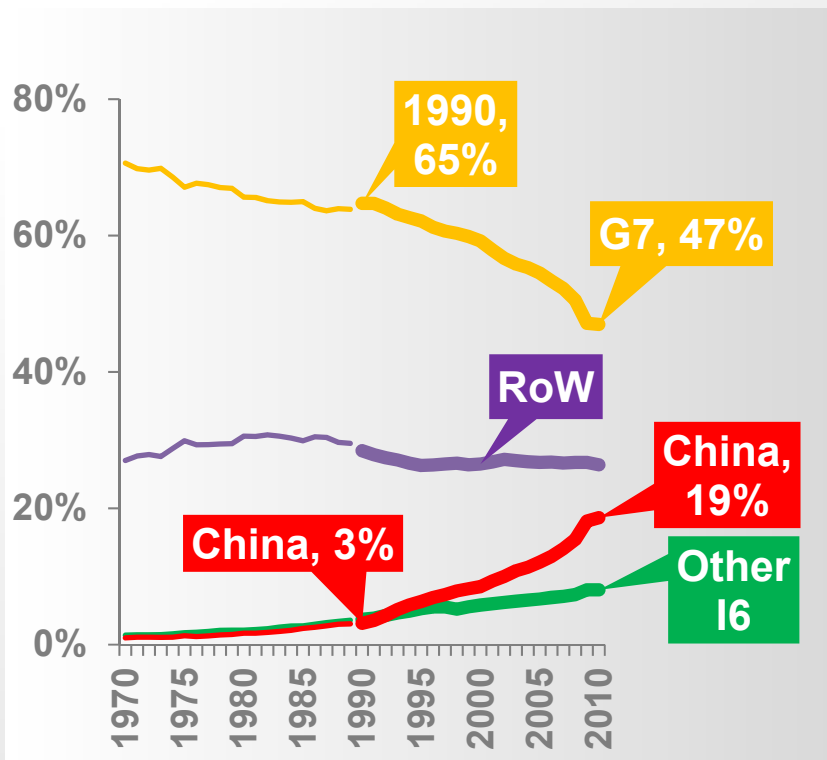
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28 November 2016

FACTS

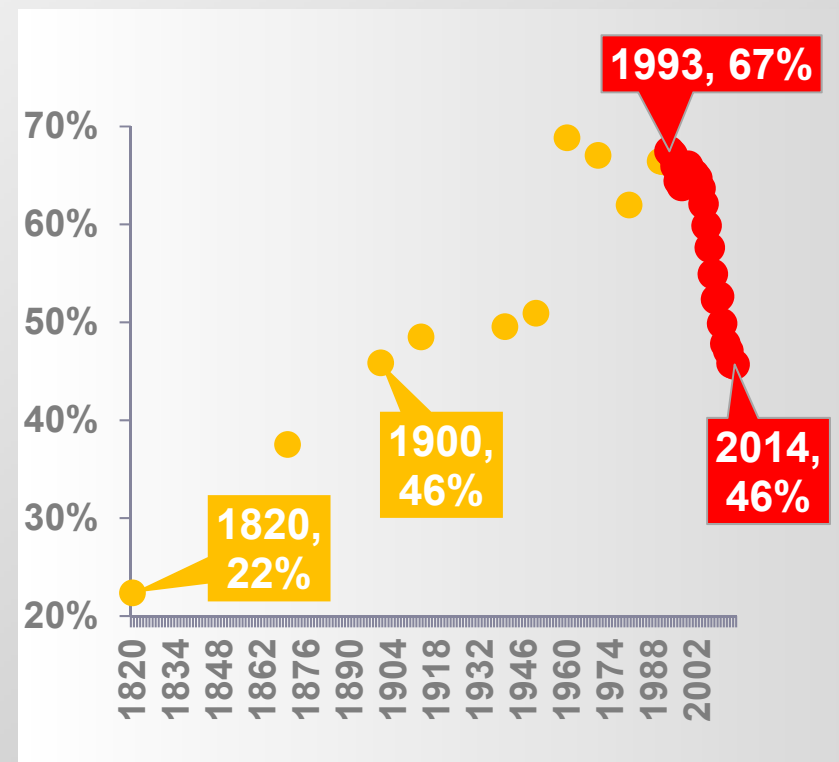
# Manufacturing & GDP shares shifted from G7 to a few developing countries

Shares of world manufacturing



I6: China, Korea, India, Poland, Indonesia, Thailand

G7's share of world GDP



## FACTS

# Globalisation's asymmetric impacts & “hyper-globalisation”

- Globalisation was disruptive in G7
  - Labour's GDP-shares fell; Reward to knowledge rose.
- Globalisation was cohesive in emerging markets
  - Middle class flourished; 650 million rose out of poverty.
- Many developing nations de-industrialised “prematurely.”
- Nature of trade agreements changed; “Hyper-globalisation.”

What if globalisation were about knowledge flows instead of trade flows?



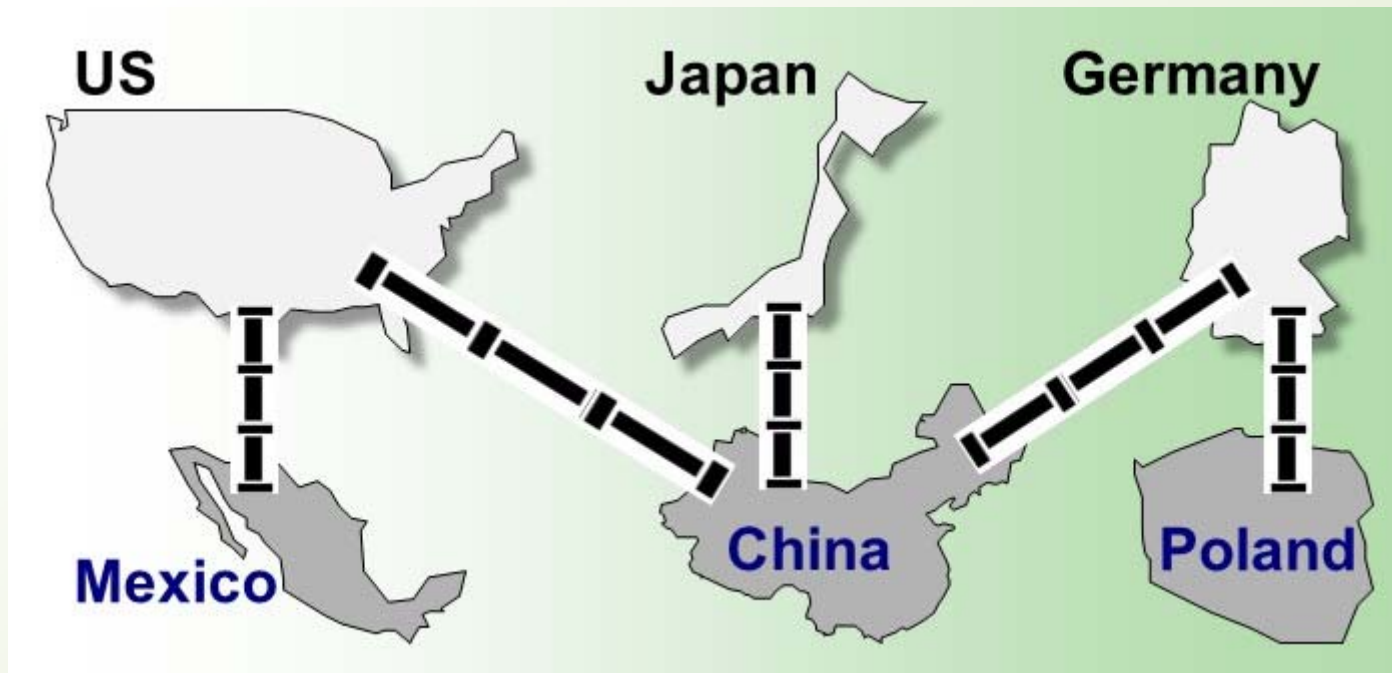
## THOUGHT EXPERIMENT

**Be extreme to be extremely clear**

- Suppose everything is made from knowhow & labour.
- Suppose trade costs & barriers unchanged since 1990.
- Suppose in 1990 'pipelines' opened that allowed knowhow to flow across borders.

THOUGHT EXPERIMENT

# Assume this pipeline pattern



## THOUGHT EXPERIMENT

# Review 1990 situation

- Headquarter Economies (G7)
  - High  $\frac{\text{Knowhow}}{\text{Labour}}$  implies High wages
- Factory Economies
  - Low  $\frac{\text{Knowhow}}{\text{Labour}}$  implies Low wages

THOUGHT EXPERIMENT

# Pipeline opens; Globalisation as “knowledge arbitrage” begins

- Headquarter Economies (G7)

- High  $\frac{\text{Knowhow}}{\text{Labour}}$  High wages

- Factory Economies

- Low  $\frac{\text{Knowhow}}{\text{Labour}}$  Low wages





Thought experiment

# What would international impact be?

- Manufacturing shifts HQ Economies to Factory Economies.
- Factory-Economy growth take off.  
→ Great Convergence explained.
- Factory Economies embrace policies that foster knowledge flows; HQ Economies embrace policies that protect them.  
→ Hyper-globalisation & 'globalisation paradox' explained.
- Other developing nations puzzled; Why not growing like China?

THOUGHT EXPERIMENT

# What would happen inside Headquarter and Factory Economies?

- In Headquarter Economies:
  - Labour GDP share falls; Knowledge-owners' shares of GDP rise.
    - Globalisation is disruptive.
- In Factory Economies:
  - Middle class flourishes; Hundreds of million rise out of poverty.
    - Globalisation is cohesive.

**How do we put  
knowledge back  
in the box?**



BROADER PERSPECTIVE ON GLOBALISATION

# Focus on 3 costs that form 3 constraints on globalisation

## Trade costs

(cost of moving goods)



## Communication costs

(cost of moving ideas)



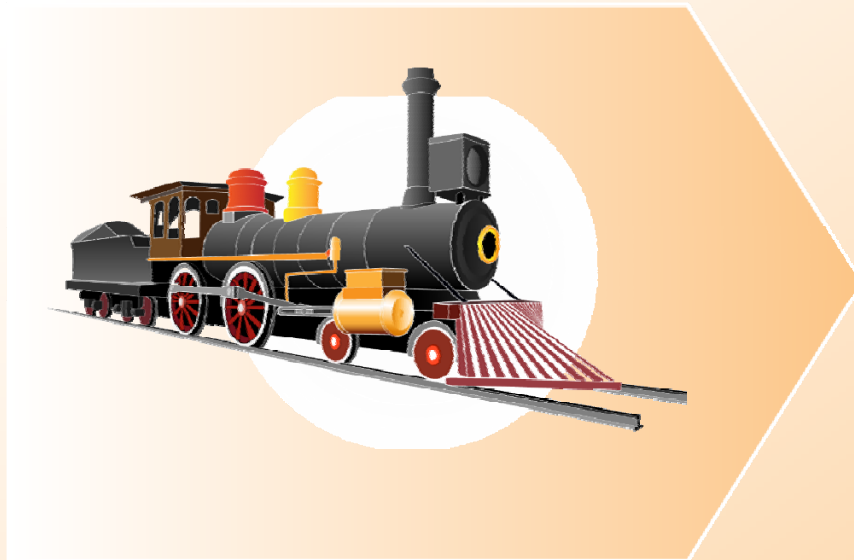
## Face-to-face costs

(cost of moving people)



AROUND 1820

# Steam Revolution & Pax Britannica lowered the cost of moving goods



**LOWER**



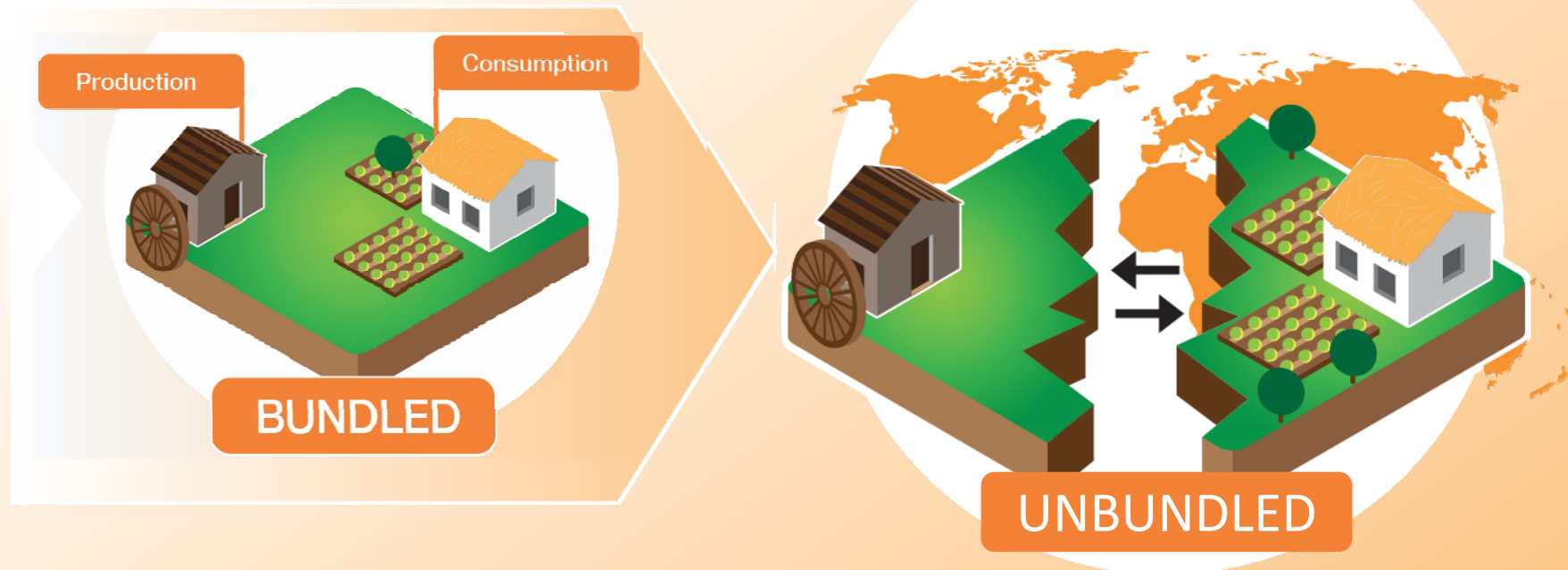
High  
Communication costs



High  
Face 2 face costs

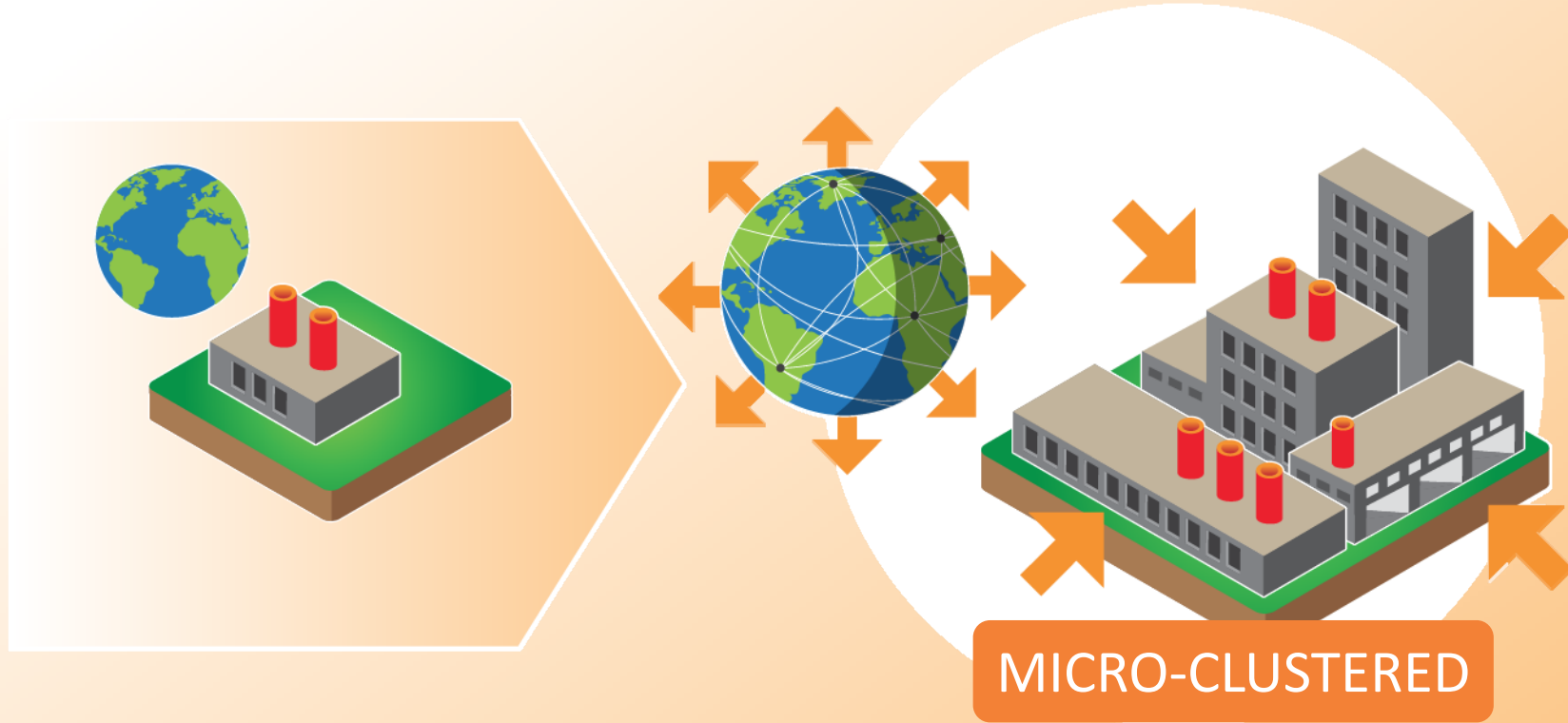
'OLD GLOBALISATION' STARTS

**Low trade costs made high volume trade feasible; Comparative advantage made it profitable**



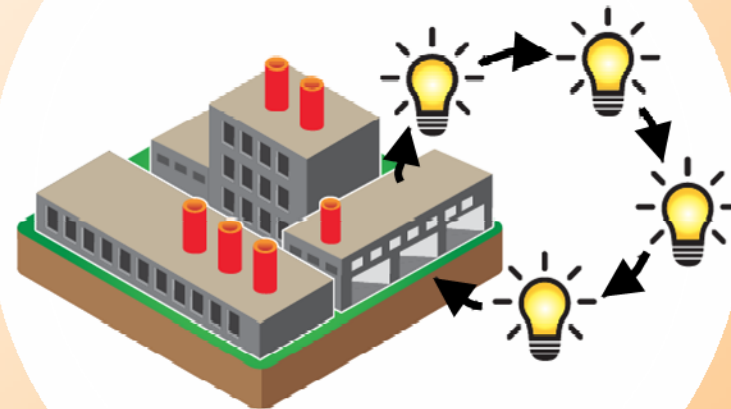
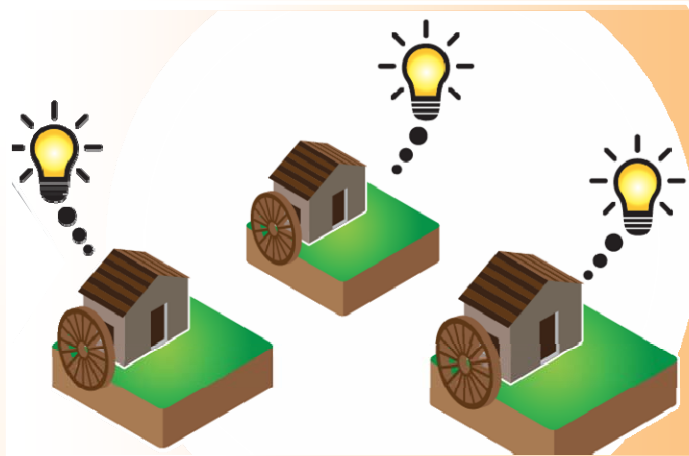
OLD GLOBALISATION

**Production clustered locally as markets expanded globally (to reduce communication costs, not trade costs)**



## OLD GLOBALISATION

**Micro-clustering fostered innovation;  
Bonfire of innovation & modern growth  
ignited**

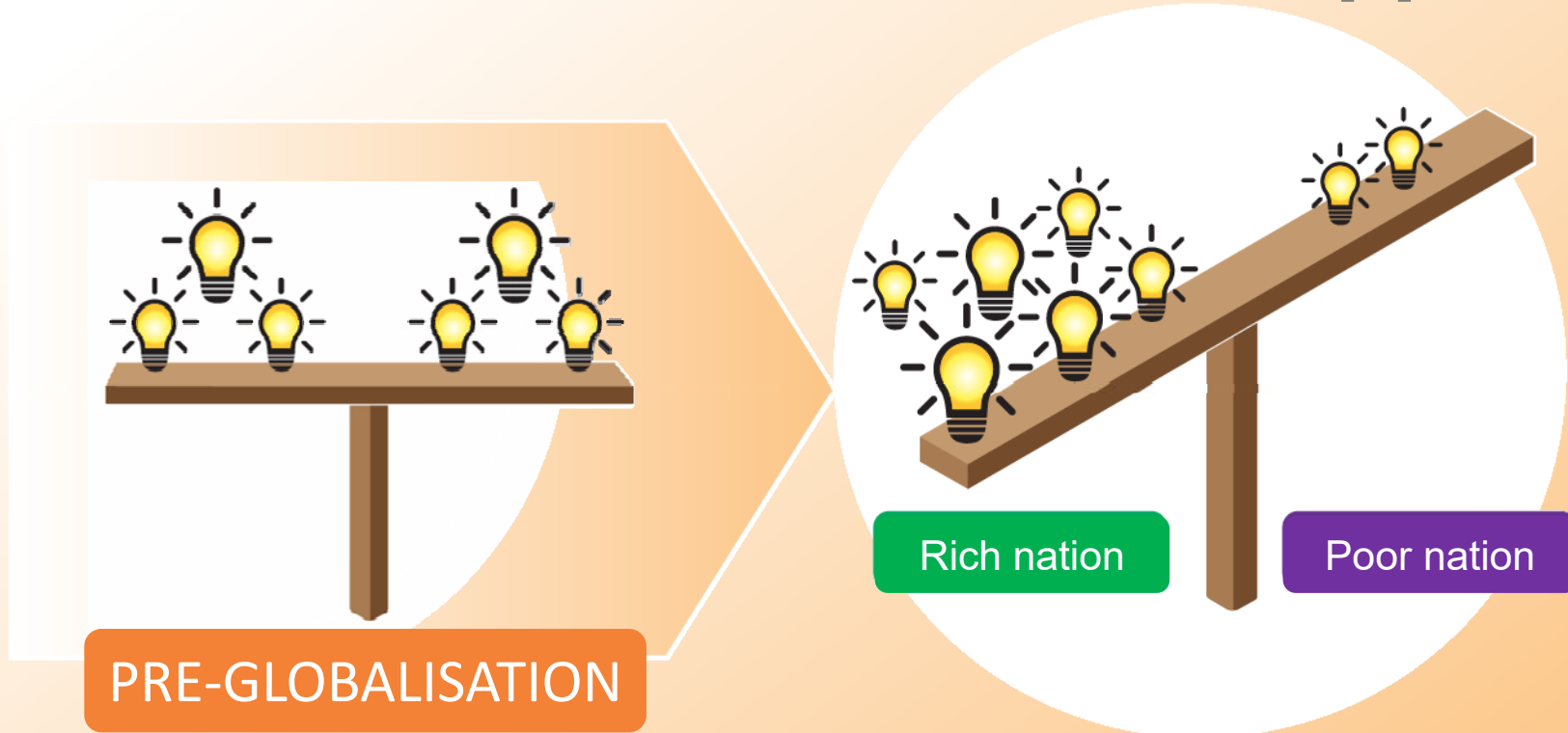


**INSIDE RICH NATIONS**



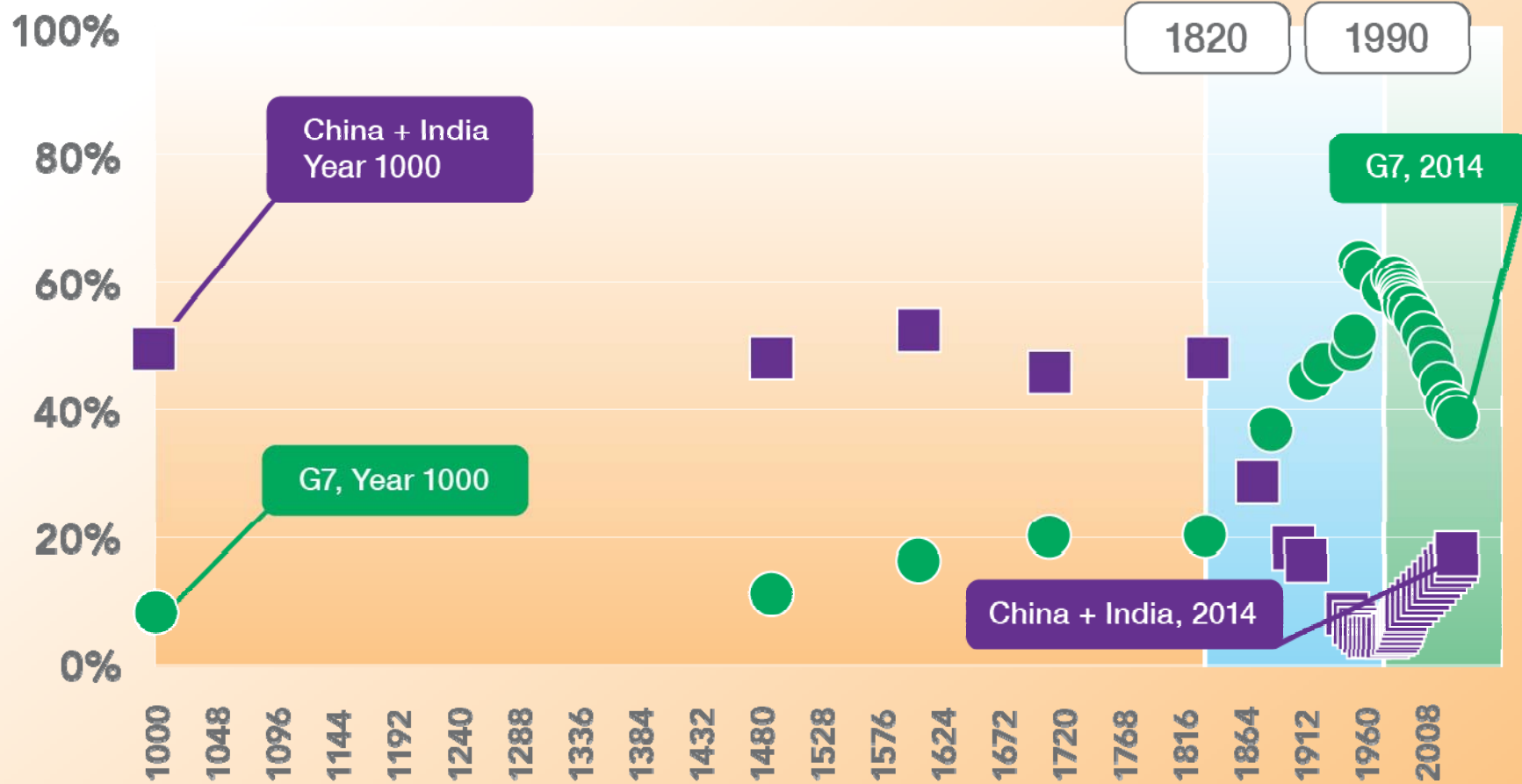
OLD GLOBALISATION

**High communication costs meant Northern innovations stayed in the North; Knowhow imbalances appear**



OLD GLOBALISATION

# Result: "The Great Divergence" (1820 to 1990)



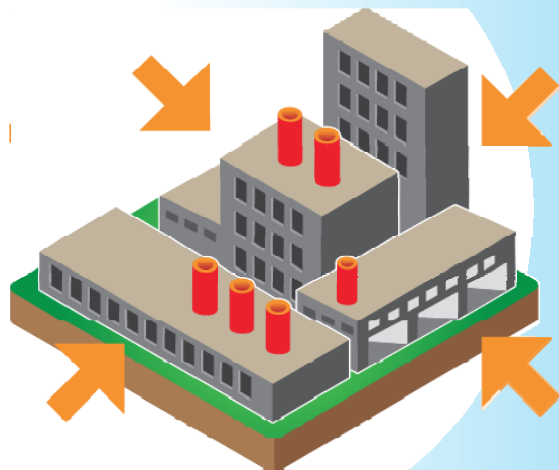
AROUND 1990

# Revolution in information & communications technology (ICT) lowered the cost of moving ideas



ICT REVOLUTION LAUNCHES THE 'NEW GLOBALISATION'

**Lower communication costs made offshoring feasible; Vast wage differences made it profitable**



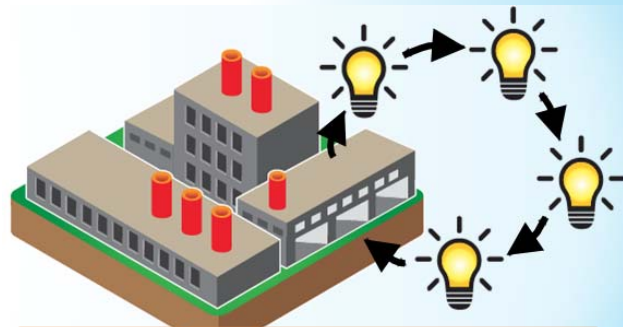
MICRO-CLUSTERED



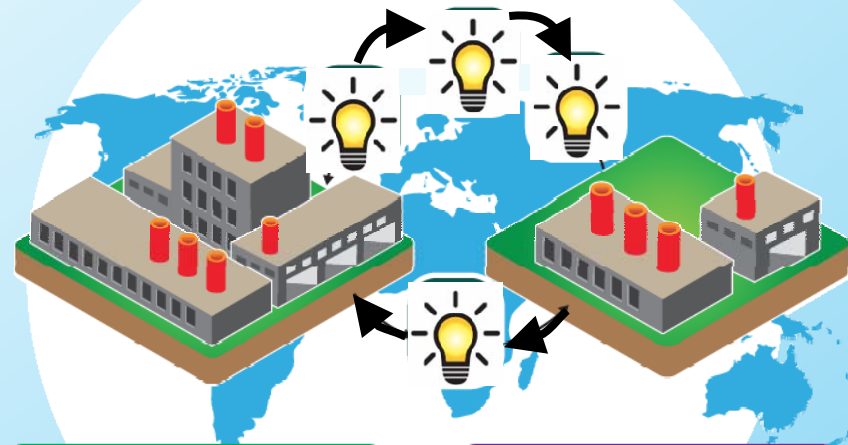
PRODUCTION UNBUNDLED

NEW GLOBALISATION

To ensure offshored production meshed seamlessly, G7 firms offshored knowhow with the jobs



INSIDE RICH NATIONS



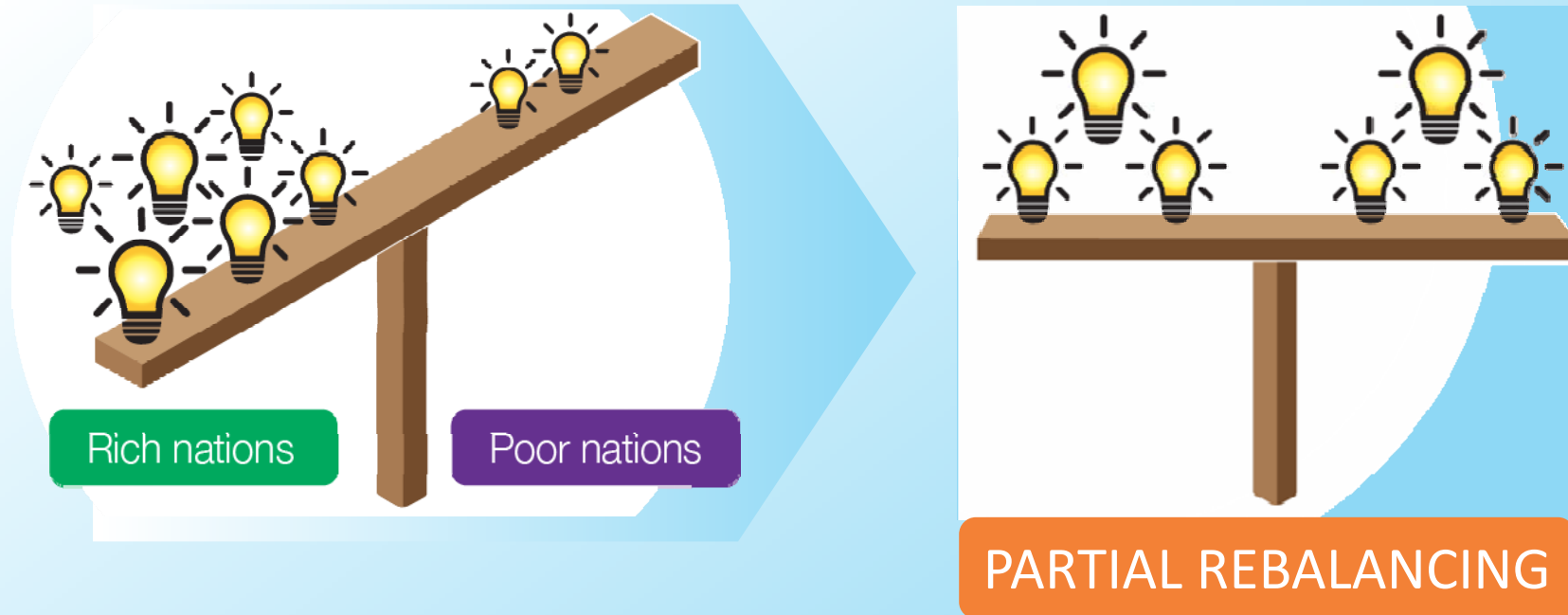
High tech nations

Low wage nations

KNOWLEDGE OFFSHORING

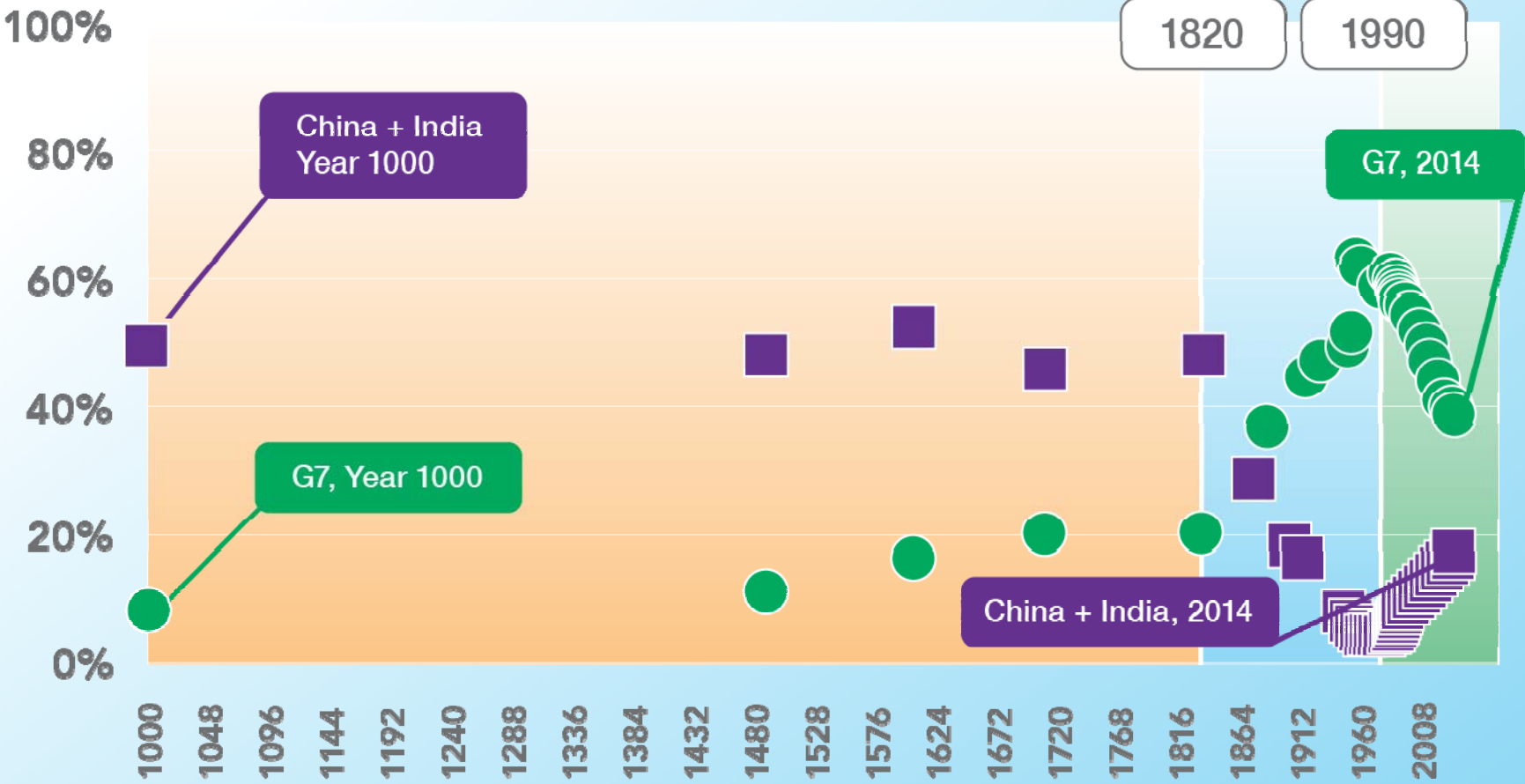
NEW GLOBALISATION

**The new 'hi-tech-low-wage' mix shifted manufacturing & knowhow massively to a handful of developing nations**



NEW GLOBALISATION

# Result: 'The Great Convergence' (1990 to 2014)



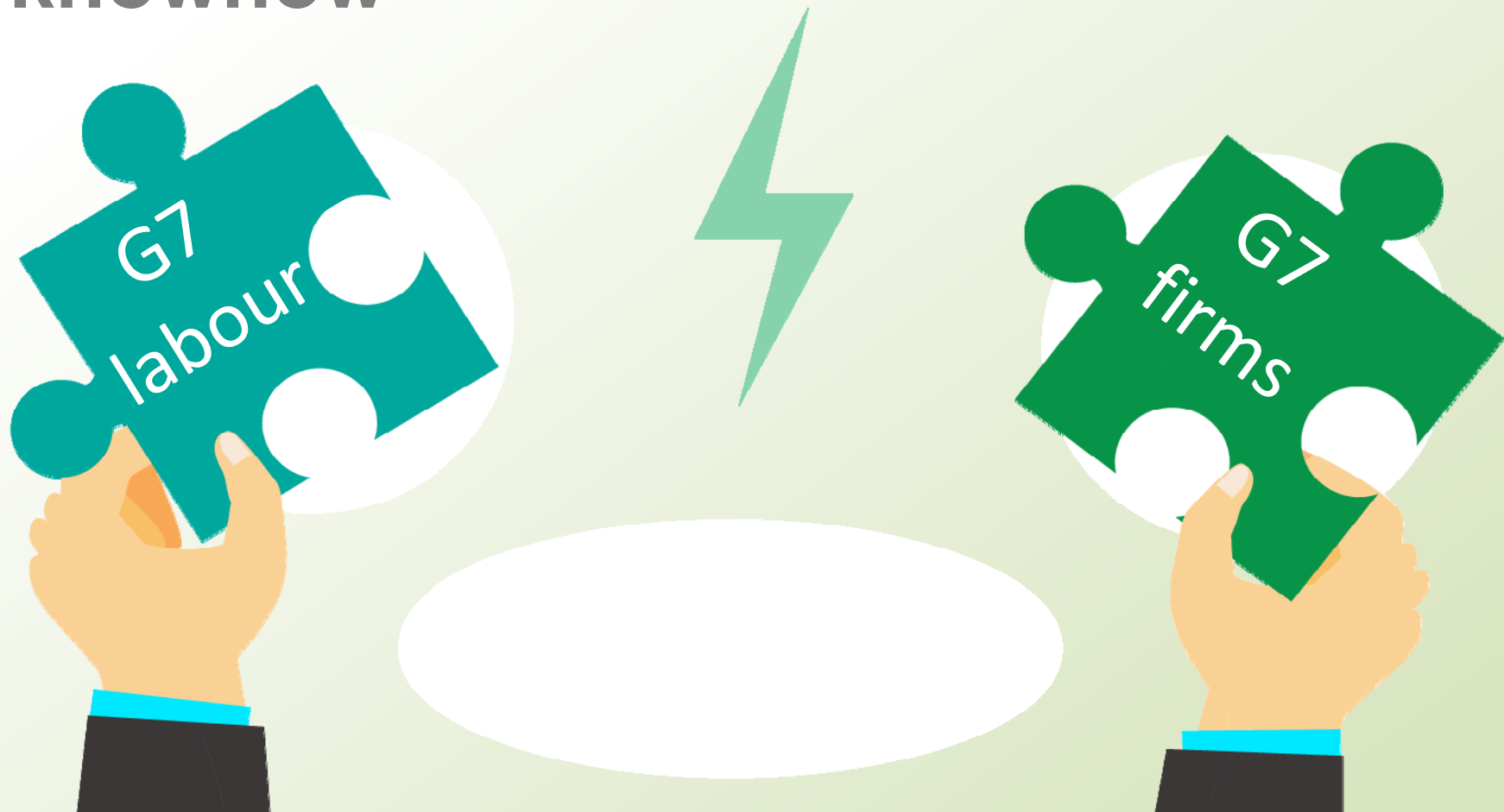
# How it explains today's anti- globalisation in many rich nations





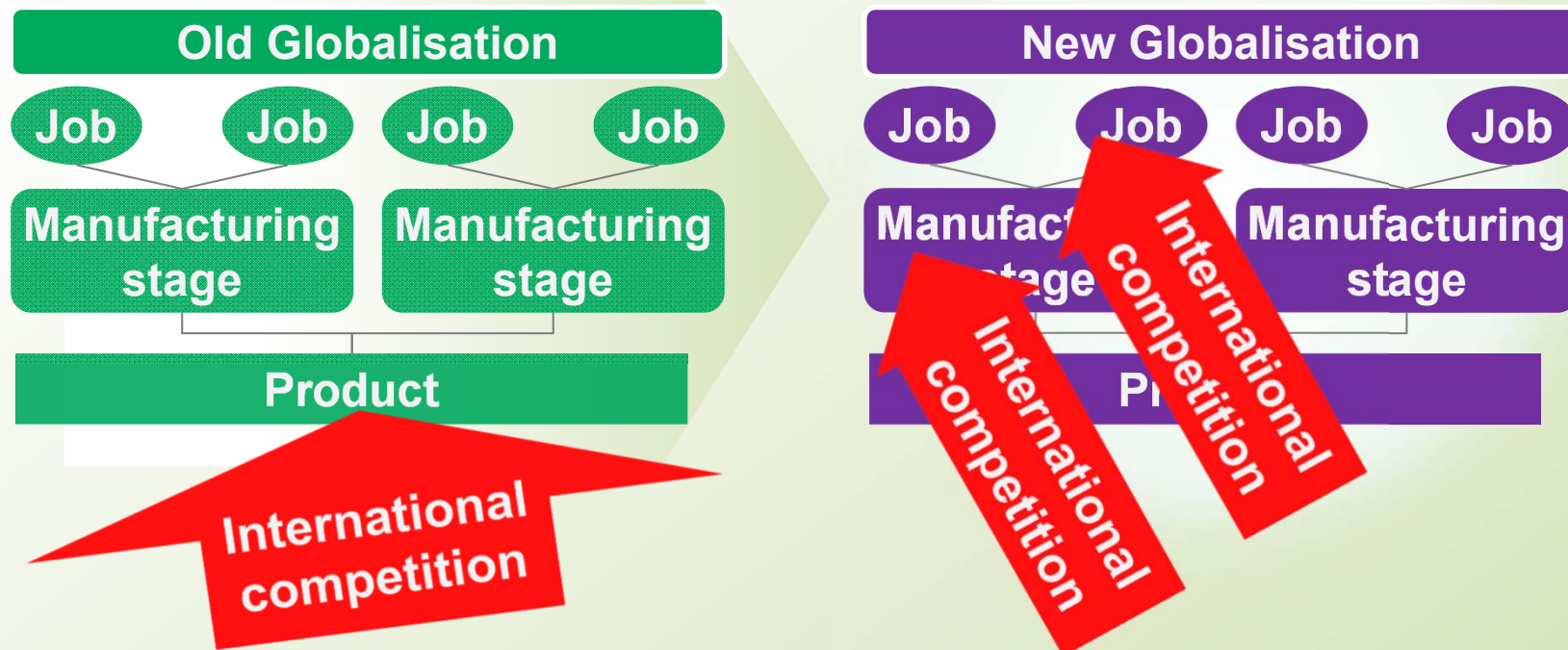
KEY CHANGES

# #1) New Globalisation breaks monopoly that G7 labour had on G7 knowhow



## KEY CHANGES

## #2) New Globalisation affects economies with finer resolution; It's not sectors & skill groups anymore



## KEY CHANGES

# Result in most G7 nations: Economic anxiety, fragility & disenfranchisement

- #1 & #2 mean New Globalisation's impact is:
  - More sudden;
  - More individual;
  - More unpredictable;
  - More uncontrollable.

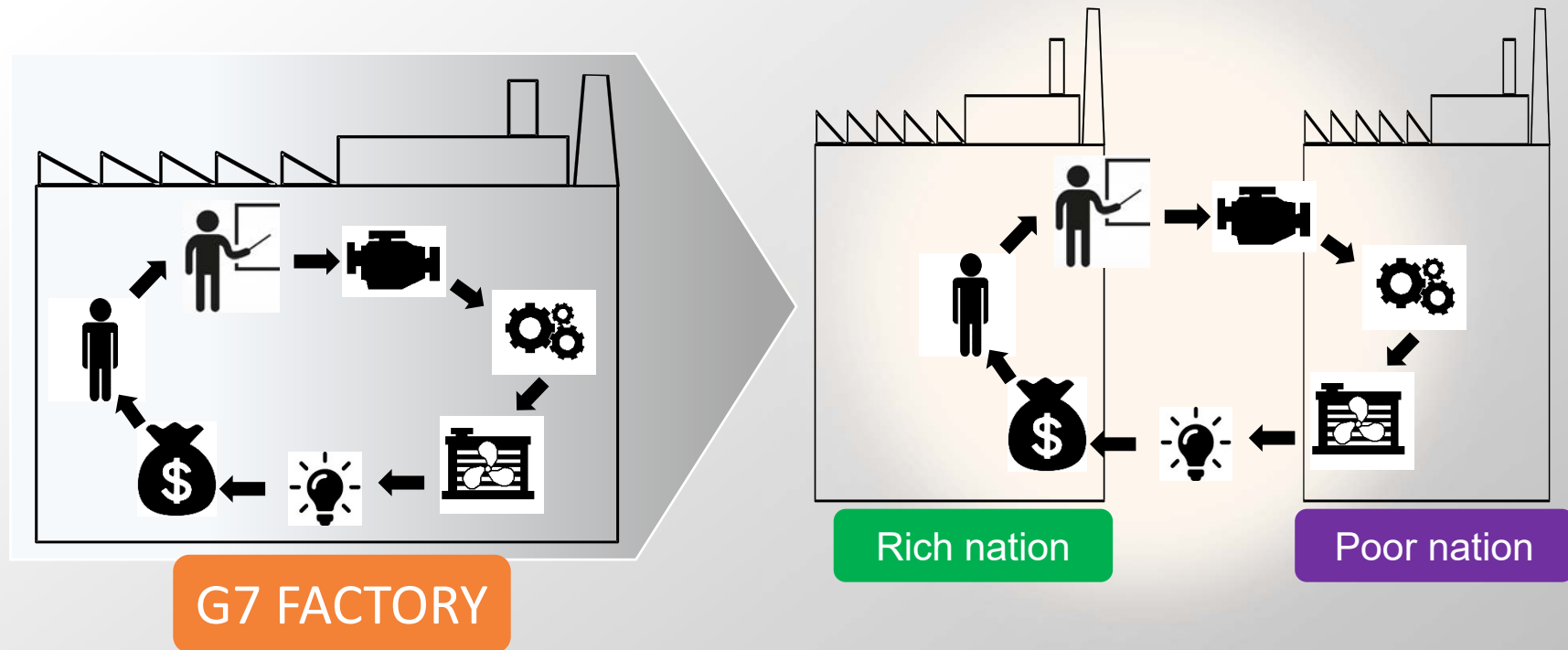
*No matter what job or skills you have, you can't really be sure your job won't be next.*

**What does the  
New Globalisation  
mean for global  
trade  
governance?**



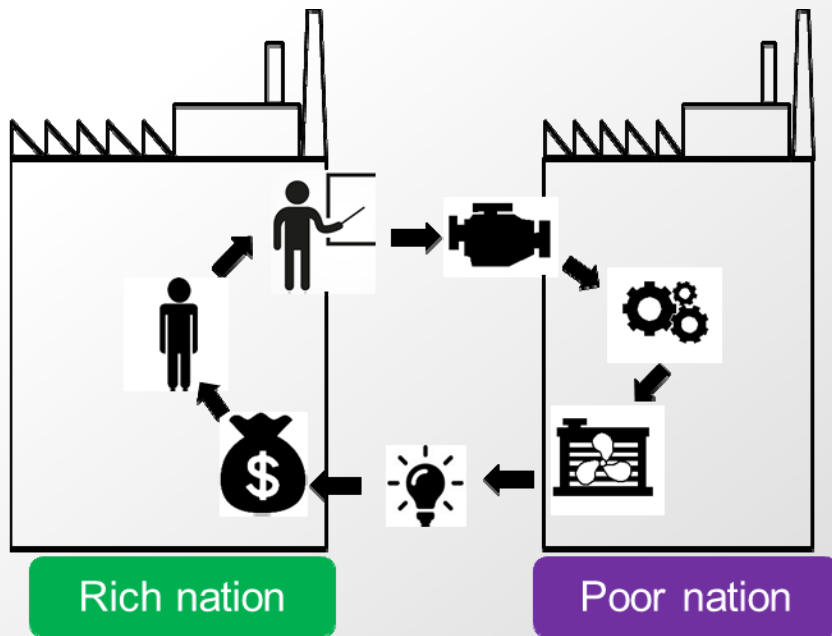
TRADE CHANGED

**Within factory flows became international commerce (goods, services, capital, people, knowhow)**



## KEY IMPLICATIONS

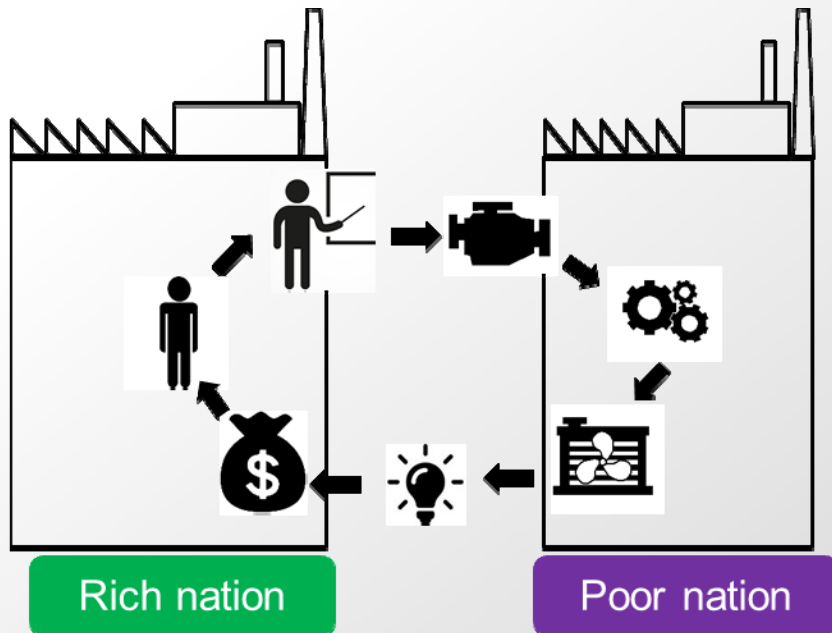
# #1) National competitiveness is de-nationalised



- Production offshored with necessary knowledge.
- Opened new industrialisation pathway for poor nations;
  - Can join instead of having to build industrial supply chain.
- G7 competitiveness now required offshoring;
  - Importing necessary for exporting.

## KEY IMPLICATIONS

## #2) Trade-services-capital-intellectual property “nexus” emerges

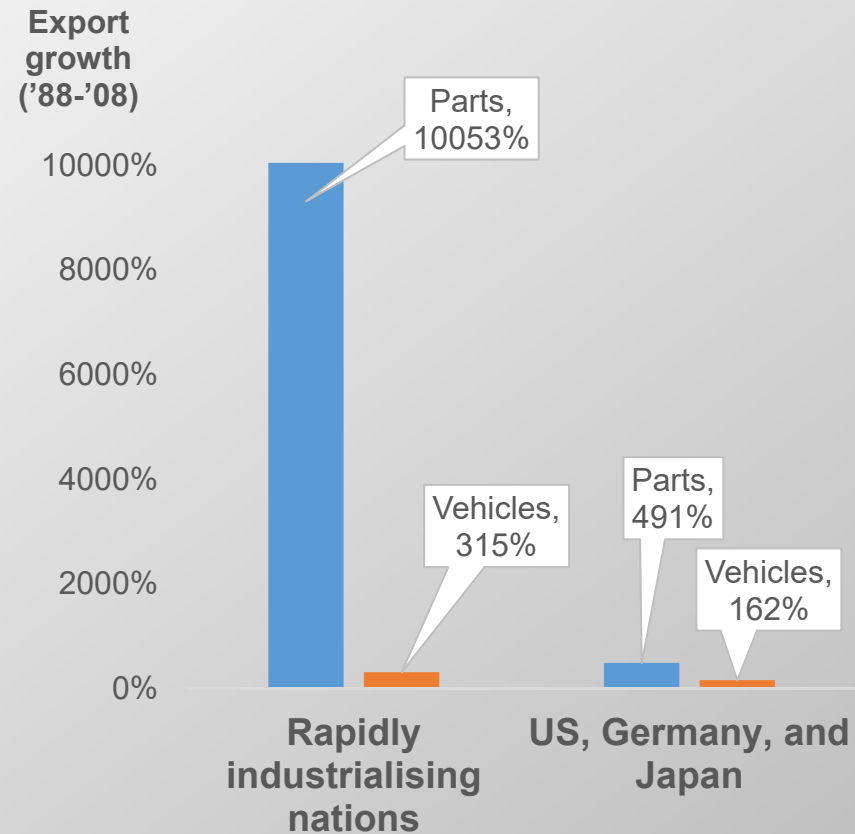


- “Nexus” required new package of disciplines (domestic & international).
  - “Deep” regional trade agreements arose; WTO side-lined; Mega-regionals designed to knit together deep bilaterals.
- New political economy: “Northern factories for Southern reform”, not “market for market.”

## KEY IMPLICATIONS

## #3) New Globalisation was like an asymmetric liberalisation

- Factory-Economy exports rose MUCH more than HQ-Economy exports (especially in parts).
- GVC revolution leaves many developing nations behind;
  - Face2Face constraint still binding;
  - Most production networks are regional not global.



China, India, Indonesia, Ireland, Korea, Malaysia, Poland, Singapore, Thailand, and Turkey

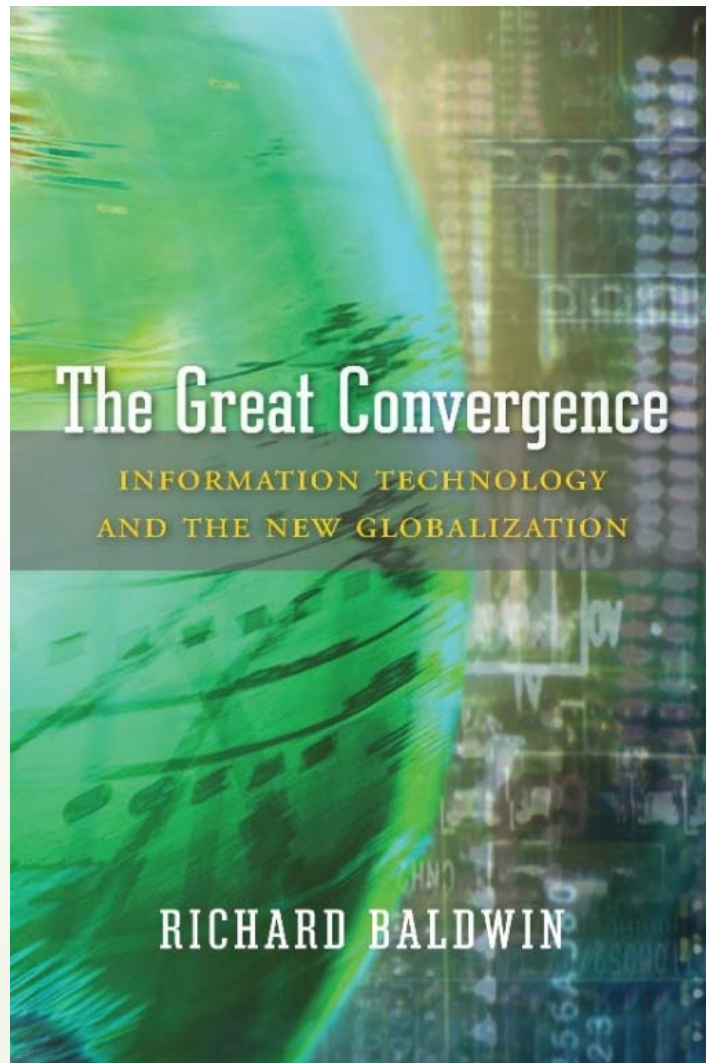


## KEY IMPLICATIONS

# WTO focused on 20<sup>th</sup> century policy; 21<sup>st</sup> century policy went elsewhere

- Since only minority of WTO members are fully engaged in GVC revolution, it is difficult to update WTO agenda to include GVC disciplines.
  - 21<sup>st</sup> century trade governance thus advancing unilaterally, bilaterally and regionally, but not multilaterally.
- Recent death of TPP & TTIP provide breathing room for WTO to regain centrality in global trade governance.

# END - Thanks for listening



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# Future globalisation



THE 3<sup>RD</sup> UNBUNDLING?

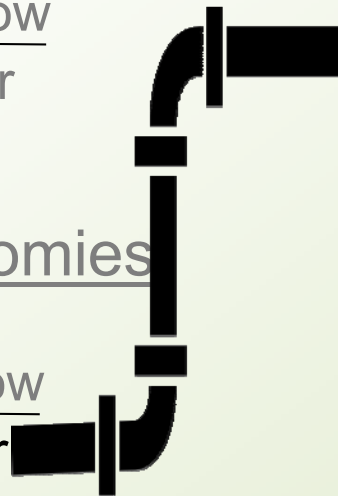
# Pipeline allowing labour services to cross borders without labourers

- Headquarter Economies (G7)

- High  $\frac{\text{Knowhow}}{\text{Labour}}$  High wages

- Factory Economies

- Low  $\frac{\text{Knowhow}}{\text{Labour}}$  Low wages



- 3<sup>RD</sup> UNBUNDLING?

## Heart-warming story; Or massive disruption foretold?



- Technology allows ‘unbundling’ labour & labourers.
- Could telepresence & telerobotics allow individual jobs to be replaced by “virtual” migrants?

3<sup>RD</sup> UNBUNDLING?

# Robots vs telerobots

Robot & Artificial Intelligence  
(AI)



Pepper

Telerobot & Remote  
Intelligence (RI)



Beam

3<sup>RD</sup> UNBUNDLING?

# Telerobotics today



The image shows a screenshot of a BBC News article. At the top, the BBC logo is on the left, and navigation links for News, Sport, Weather, Shop, Earth, and More are on the right. Below the navigation is a search icon and a 'Menu' button. The main image shows a surgical team in an operating room, with a patient lying on a table. The text 'future' is overlaid on the top left of the image. Below the image, there are tags for 'Tomorrow's Lives', 'Hospital', and 'Human body'. The main headline reads 'The surgeon who operates from 400km away' with a credit to '(St Joseph's Healthcare) (Credit: St Jose)'. Below the headline is a sub-headline: 'Doctors are controlling scalpel-wielding robots in real operations from afar, finds Rose Eveleth. Is this the future of surgery?'.



3<sup>RD</sup> UNBUNDLING?

# Jobs that telerobotics could offshore?





3<sup>RD</sup> UNBUNDLING?

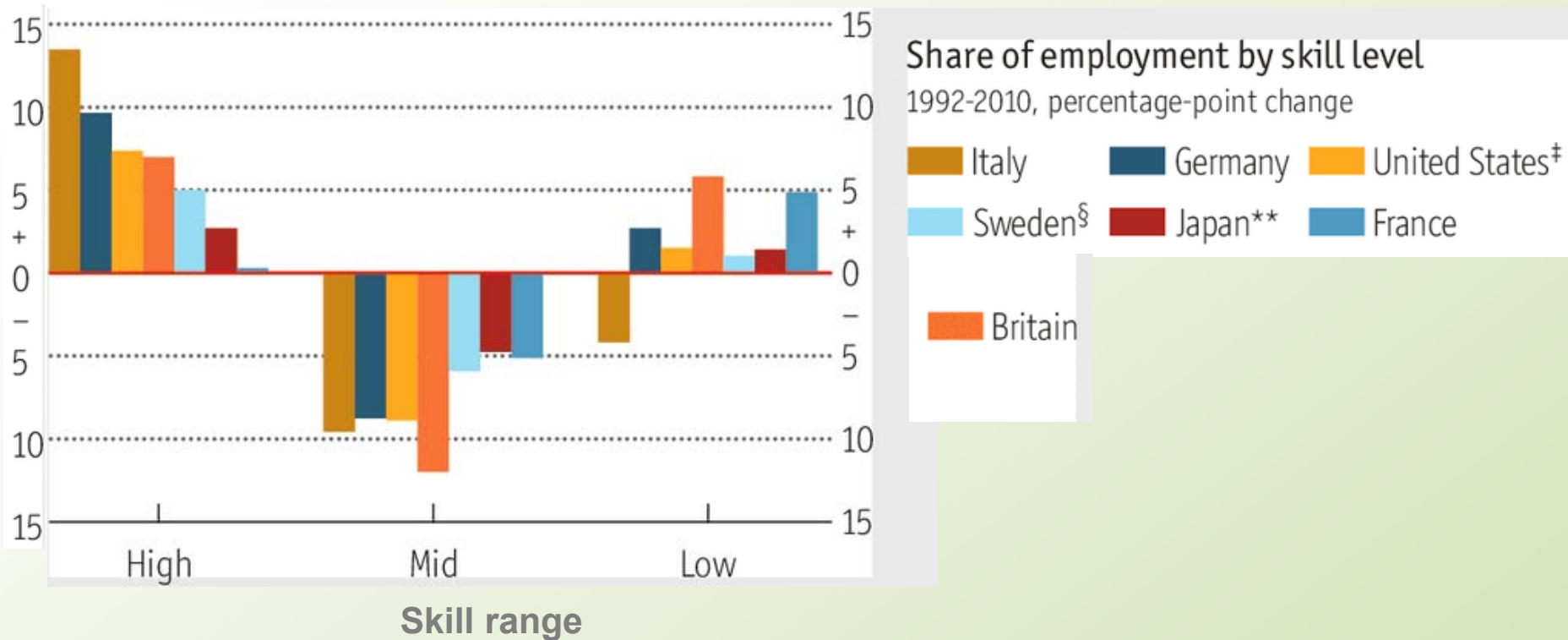
# Brain jobs that telepresence could offshore?

Average monthly salaries in USD		
	US	Philippines
University Professor	6,100	400
School Teacher	4,100	300
Engineer	6,200	570

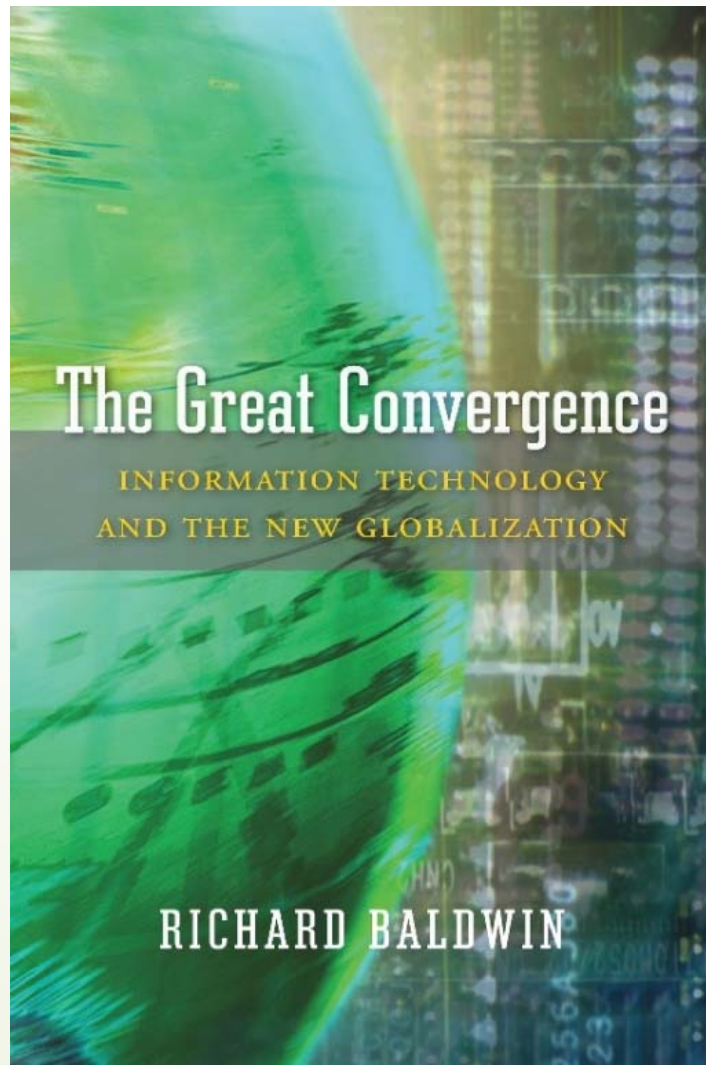


3<sup>RD</sup> UNBUNDLING?

# Remote Intelligence: More rich nation disruption; More developing nation opportunities



# END - Thanks for listening



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# How not to address anti-globalisation

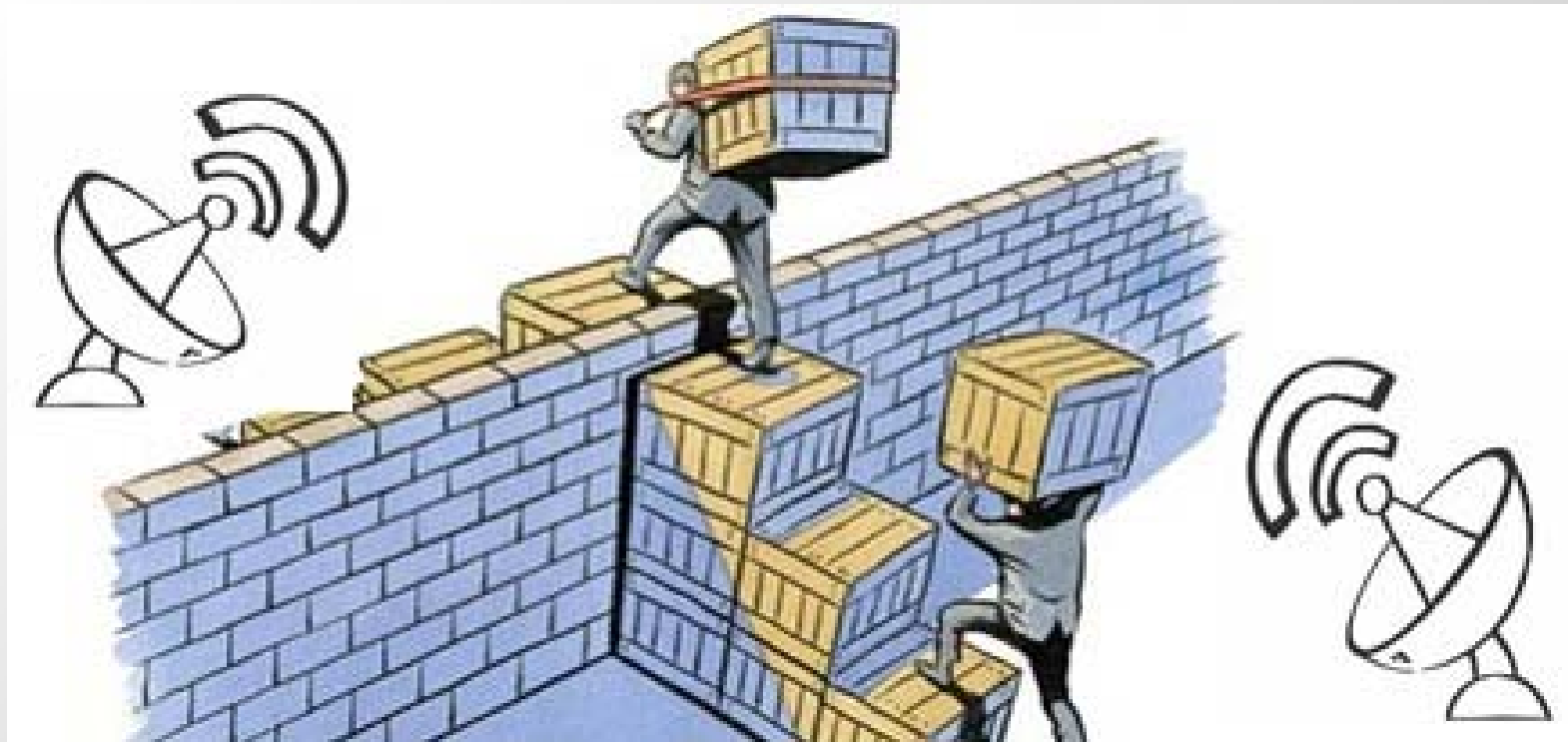


“Trump Tariff Act of 2017”

# Will US manufacturing stages rebundle? Will rebundling take place in US (or abroad)?

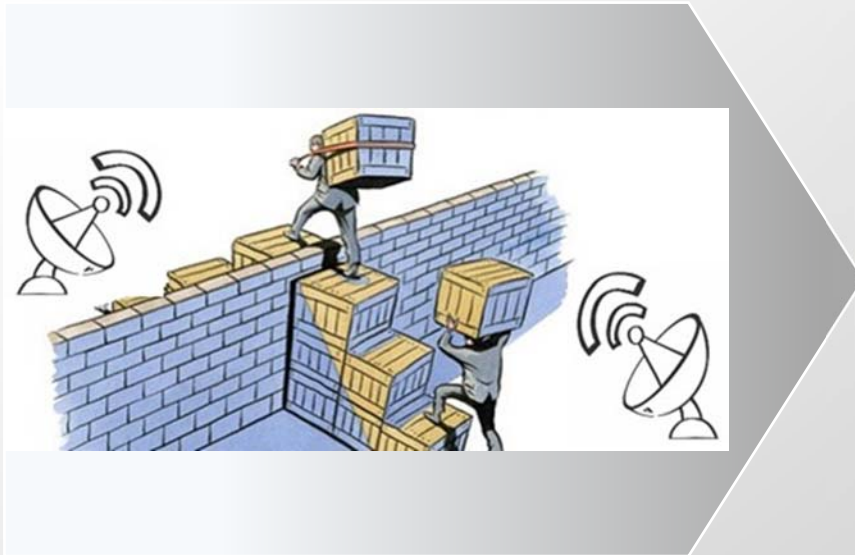


**Raising US trade barriers will not stop offshoring of US knowhow but will raise cost of industrial inputs inside US**



“Trump Tariff Act of 2017”

# Will US manufacturing stages rebundle? Will rebundling take place in US (or abroad)?



Manufacturing partly rebundles in US for domestic sales, but abroad for non-US sales; Exports replaced partly by US foreign affiliates sales

**Will manufacturing jobs return?  
Offshored jobs typically low-skill &  
routine → Jobs for robots, not workers**





# What way forward?

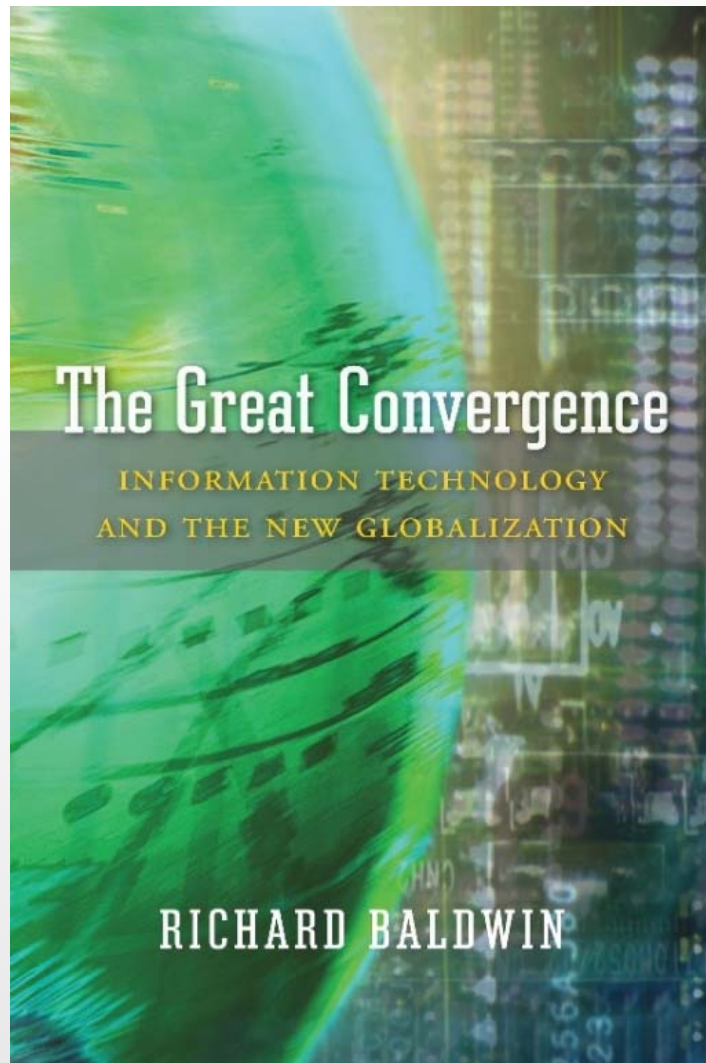
## Step 1: Accept 21st century realities

- New Globalisation isn't something foreigners doing to US.
- You can't vote against the New Globalisation by voting against the agreements that shape & control it.
- Old Globalisation tools that control trade flows don't work on New Globalisation knowledge flows.
  - G7 nations must import to export; comparative advantage is de-nationalised.

## Step 2: Rebuild the team with policies to share the gains and pains

- Rebuild the team:
  - Restore social cohesion with policies that protect individual workers, not individual jobs.
    - Retraining, education, mobility support, income support, maybe even active ‘clusters policy’.
- Package it politically:
  - “Trade policy in the service of society;” When proposing more open trade & international production share policies, also propose policies that help economically disenfranchised.

# END - Thanks for listening



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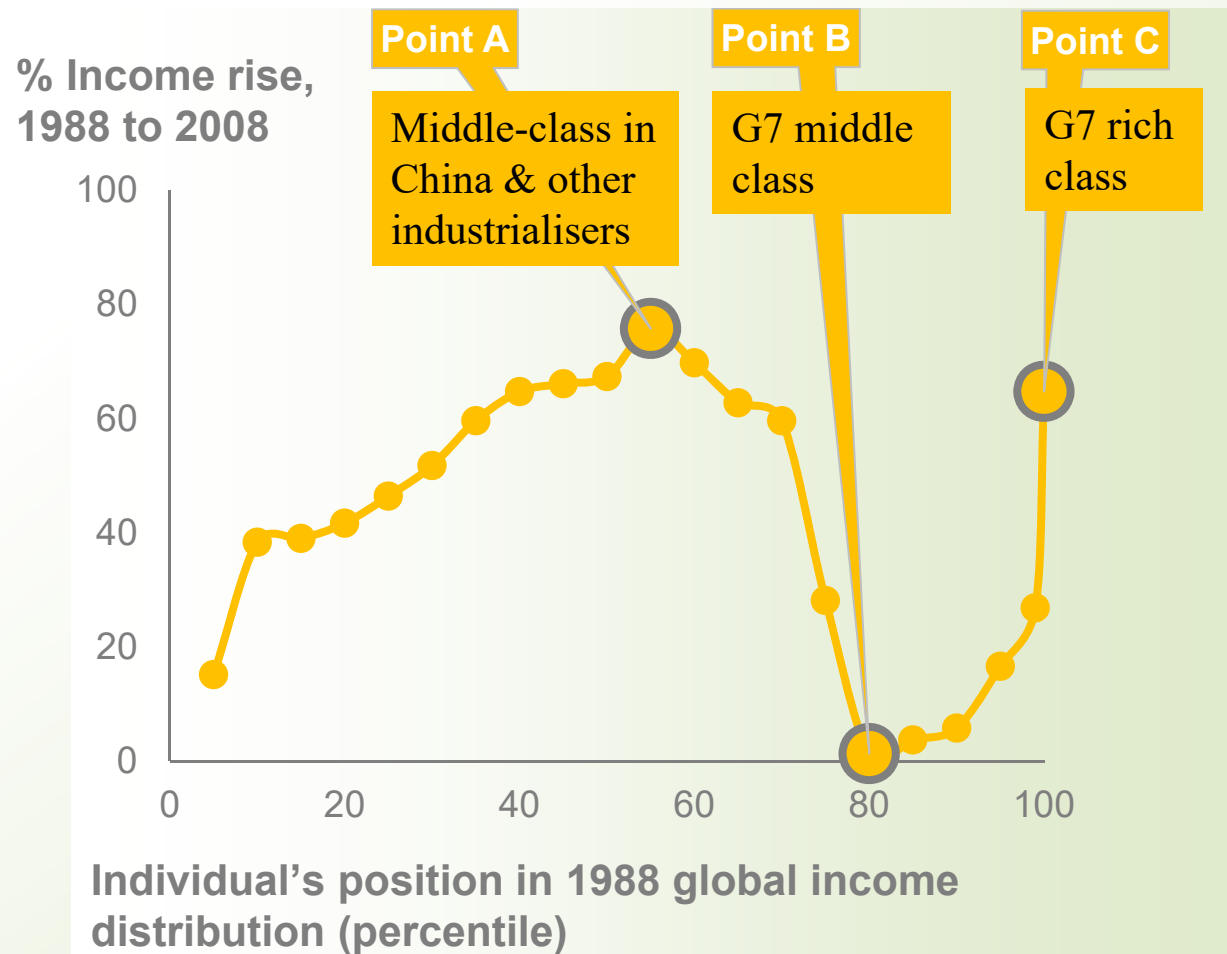
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Extra slides for:



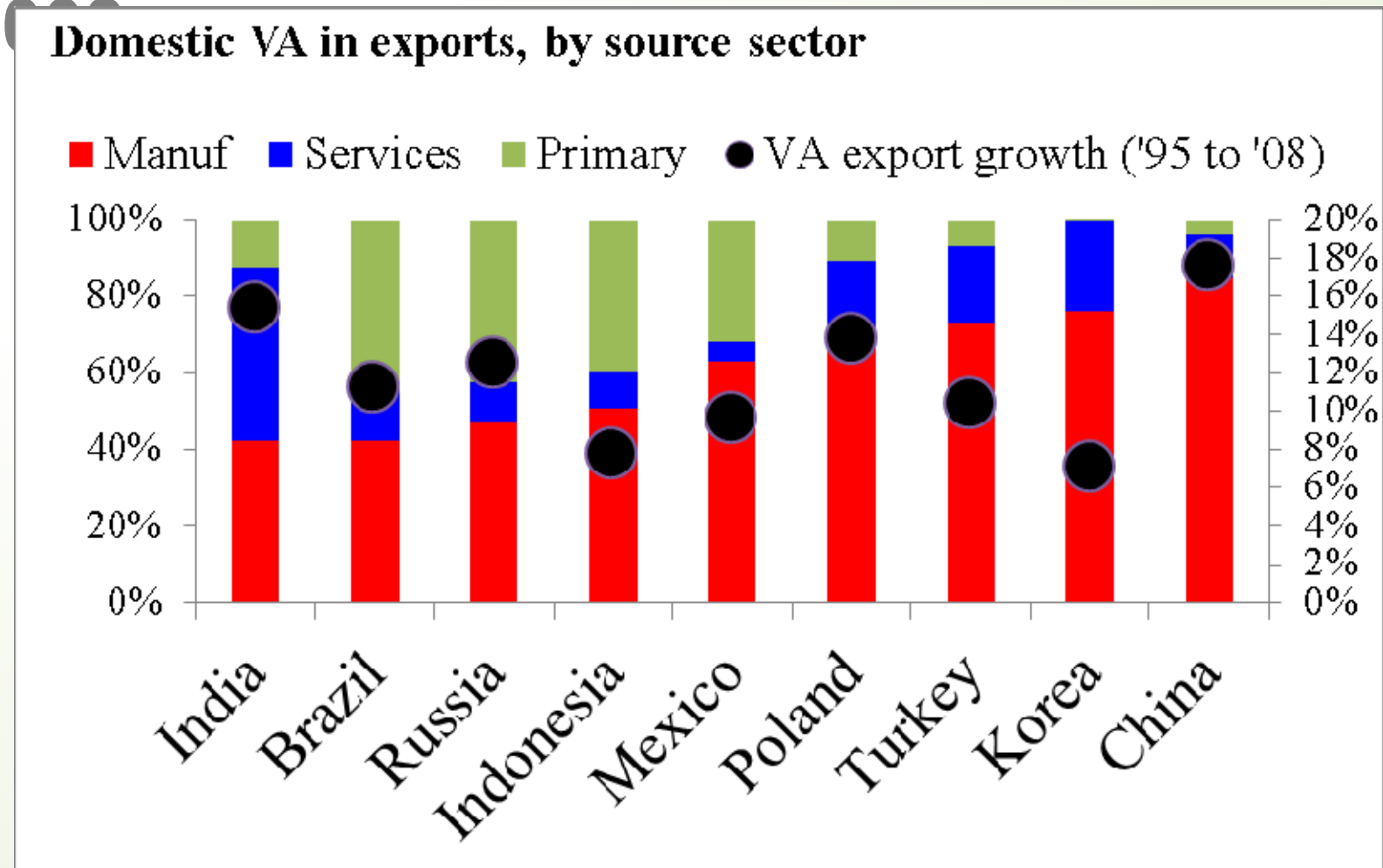
## THOUGHT EXPERIMENT

# Explaining Milanovic 'Elephant Chart'

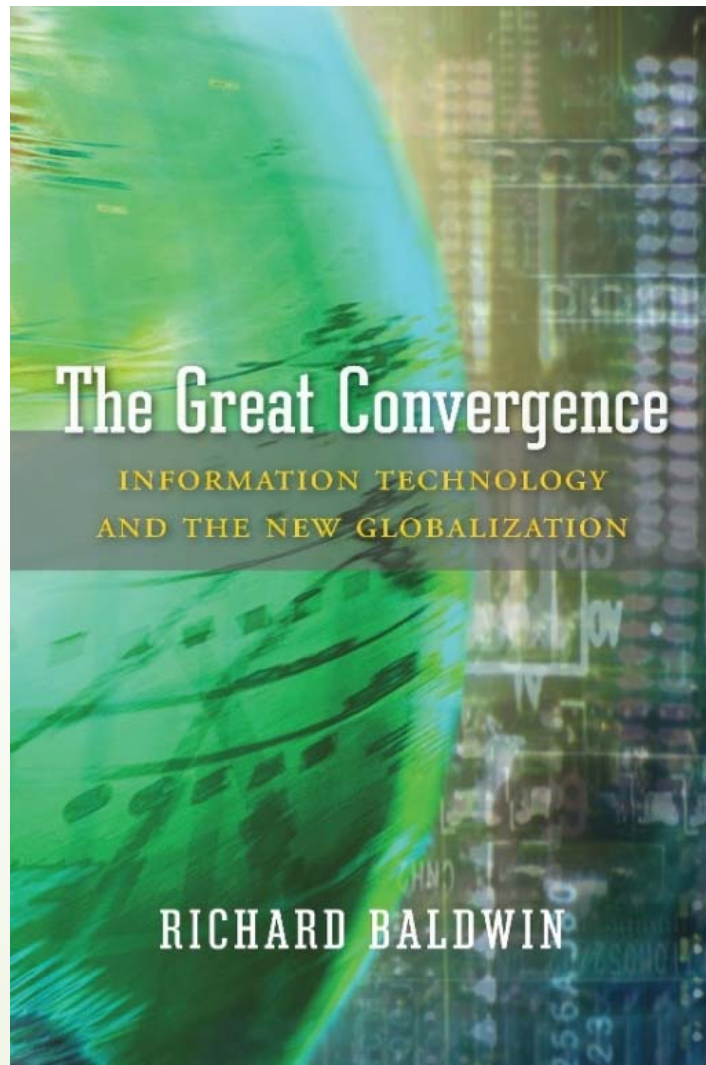


- Points A & B:
  - Knowhow moves to Factory-Economy workers.
- Point C:
  - G7 knowledge owners prosper.
- Other poor nations puzzled:
  - Why not growing like China?

# Source of Value-Added Export growth 1995-2008



# END - Thanks for listening



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