

Lecture 12

The 3 Cascading Constraints Narrative of Globalisation

Richard Baldwin

A framework for thinking about
how and why globalisation
changed so much in the past

Lecture outline (segments)

1. Introduction and motivation
2. Phases I and II: Pre-Steam
3. 3CC (Ricardo's imaginary voyage); Phase III – 1UB
4. Phase IV; 2nd unbundling (2UB)
5. What really changed with 2UB?
6. Impact of the fundament change
7. Comparative advantage is denationalised

Segment 1

Introduction and motivation

And lecture outline

My perspective on globalisation

- Three cascading constraints (3CC) view, or 'globalisation as the great unbundlings'
- The changing nature of globalisation is due to the sequential relaxation of three constraints:
 - The cost of moving goods, ideas, and labour services.
- Presented in my 2016 book but based on a view I developed in 2006.

Simplify to
clarify



**Arbitrage drives
globalisation**

Arbitrage in 3 things

Goods

Knowhow

Labour services

Arbitrage/Globalisation constrained by 3 costs

Trade costs



Communication
costs



Face-to-face costs



Past, Present & Future Globalisation

Trade costs



Past

Communication costs



Present

Face-to-face costs

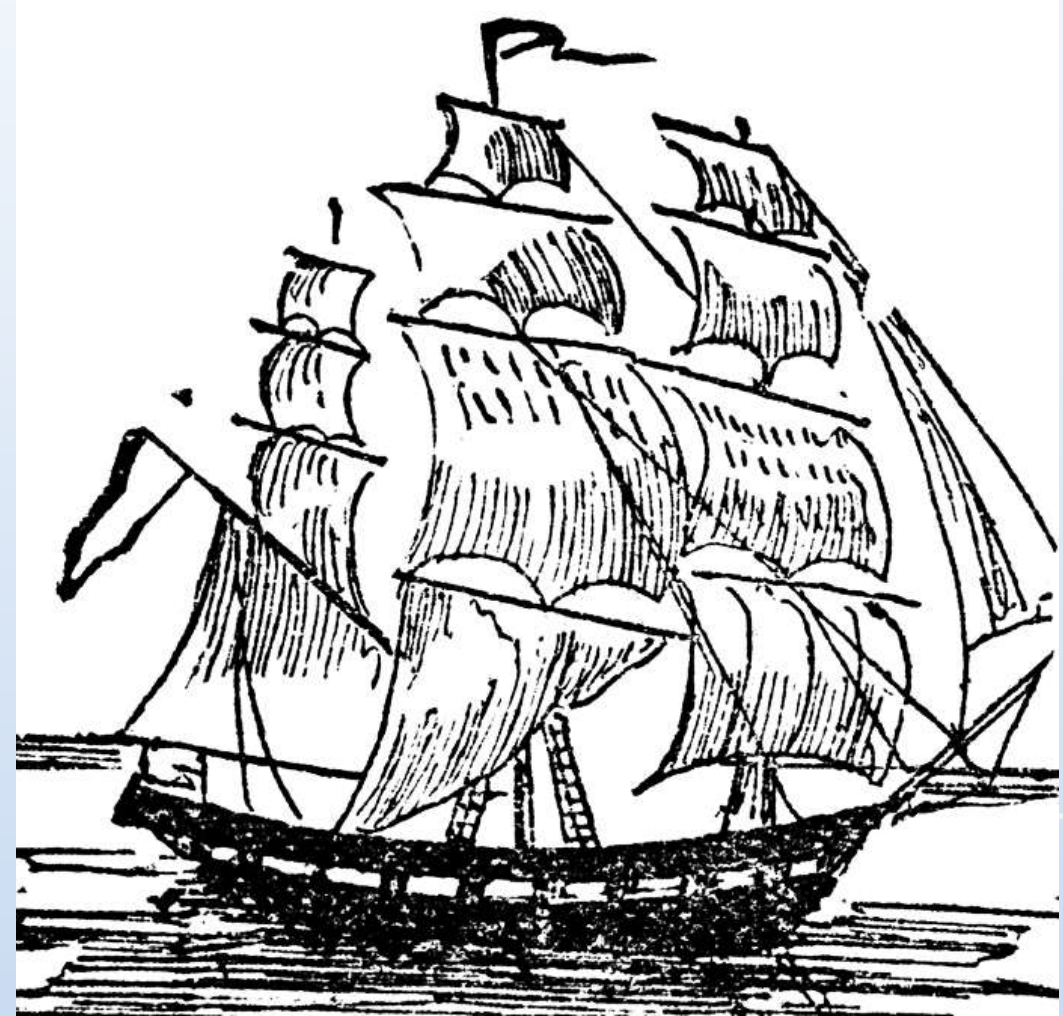


Future

Segment 2

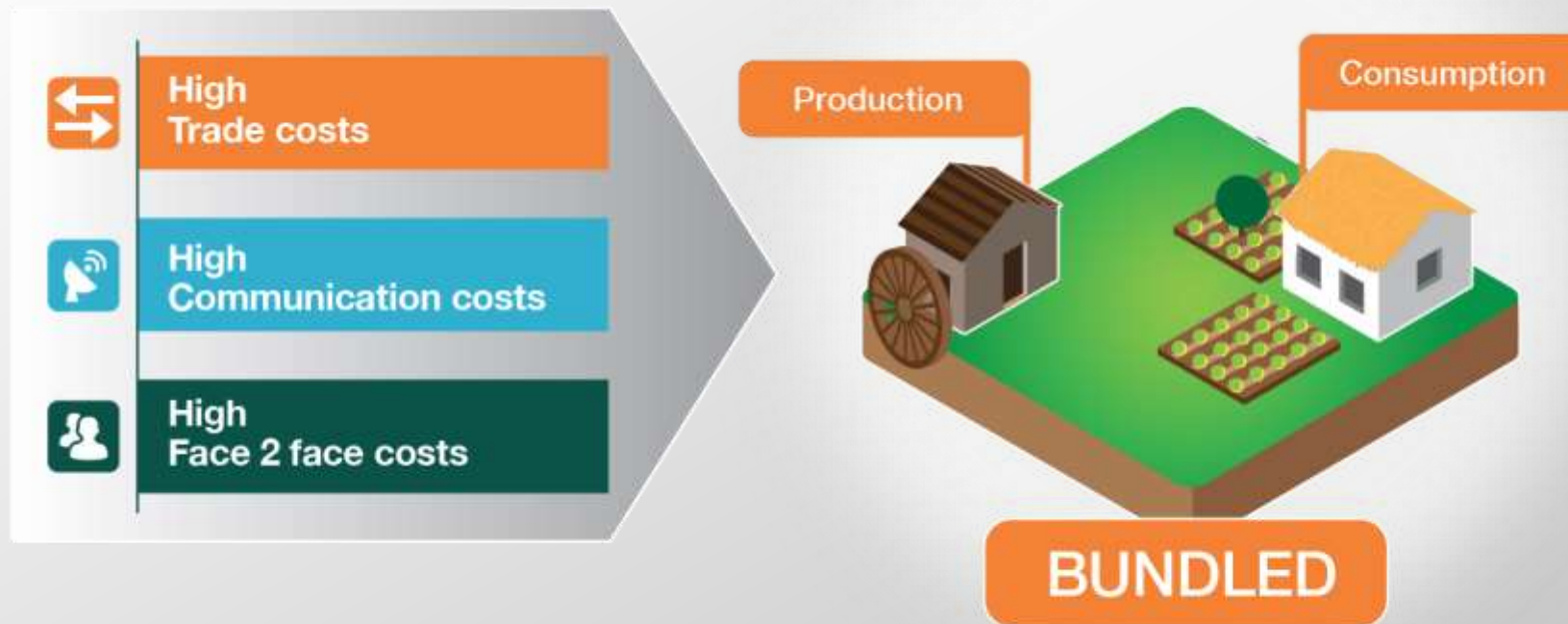
Pre Globalisation

Moving anything
internationally was expensive,
slow & dangerous



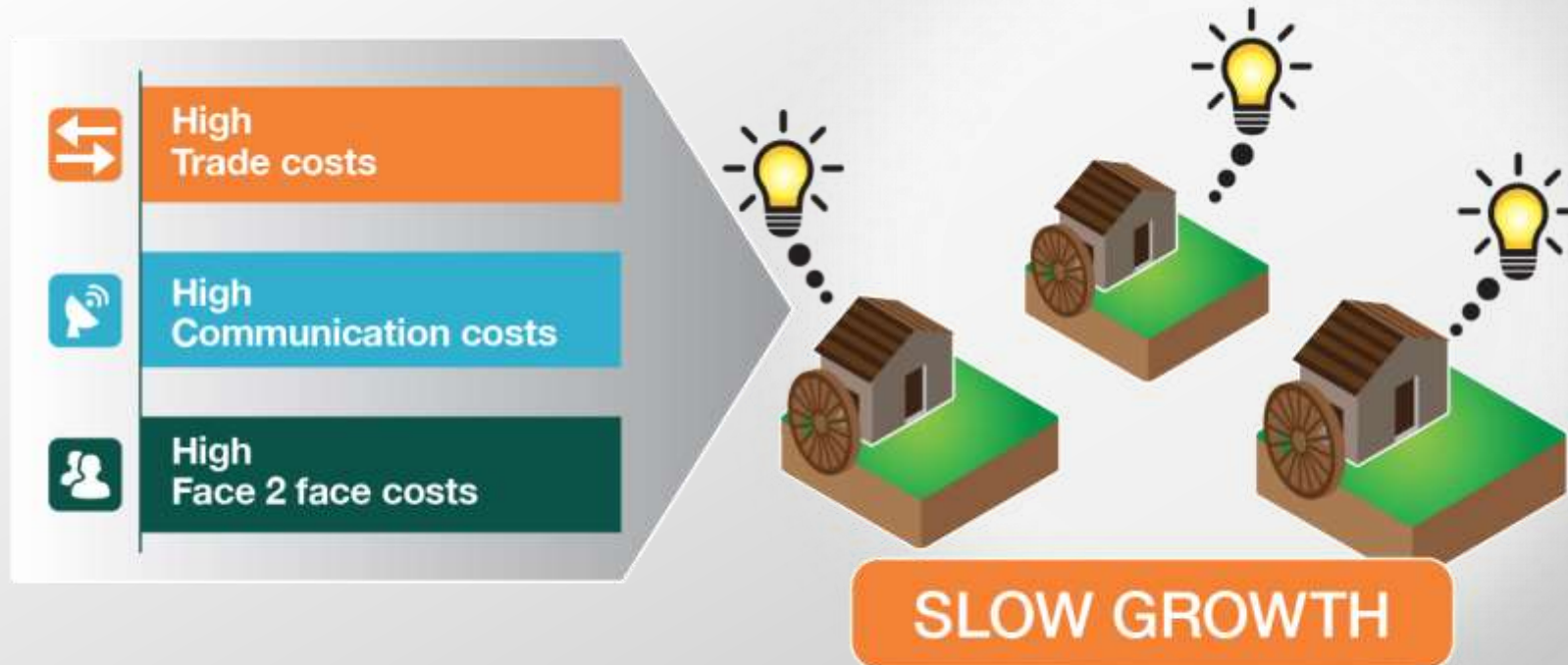
PRE-GLOBALISED WORLD

Production & consumption are “bundled” geographically; little trade



PRE-GLOBALISED WORLD

Isolated production & high cost of communication meant slow innovation & thus slow growth

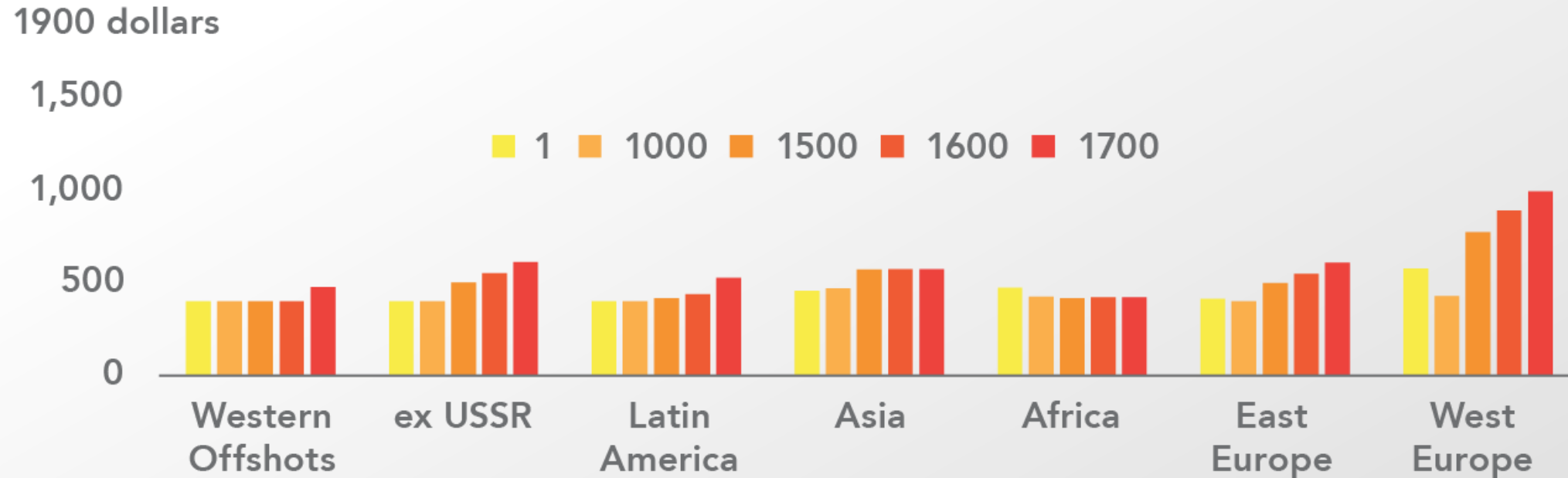


PRE-GLOBALISED WORLD

Result: “The Great Stagnation”



Per GDP growth stagnated from year 1 to 1700

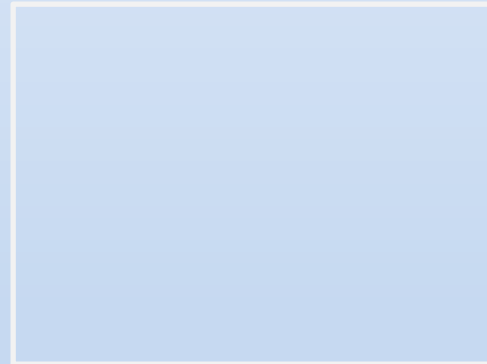


Asian incomes - rose just **25%** during the whole 17 centuries;
European incomes - grew at just **3%** per century.

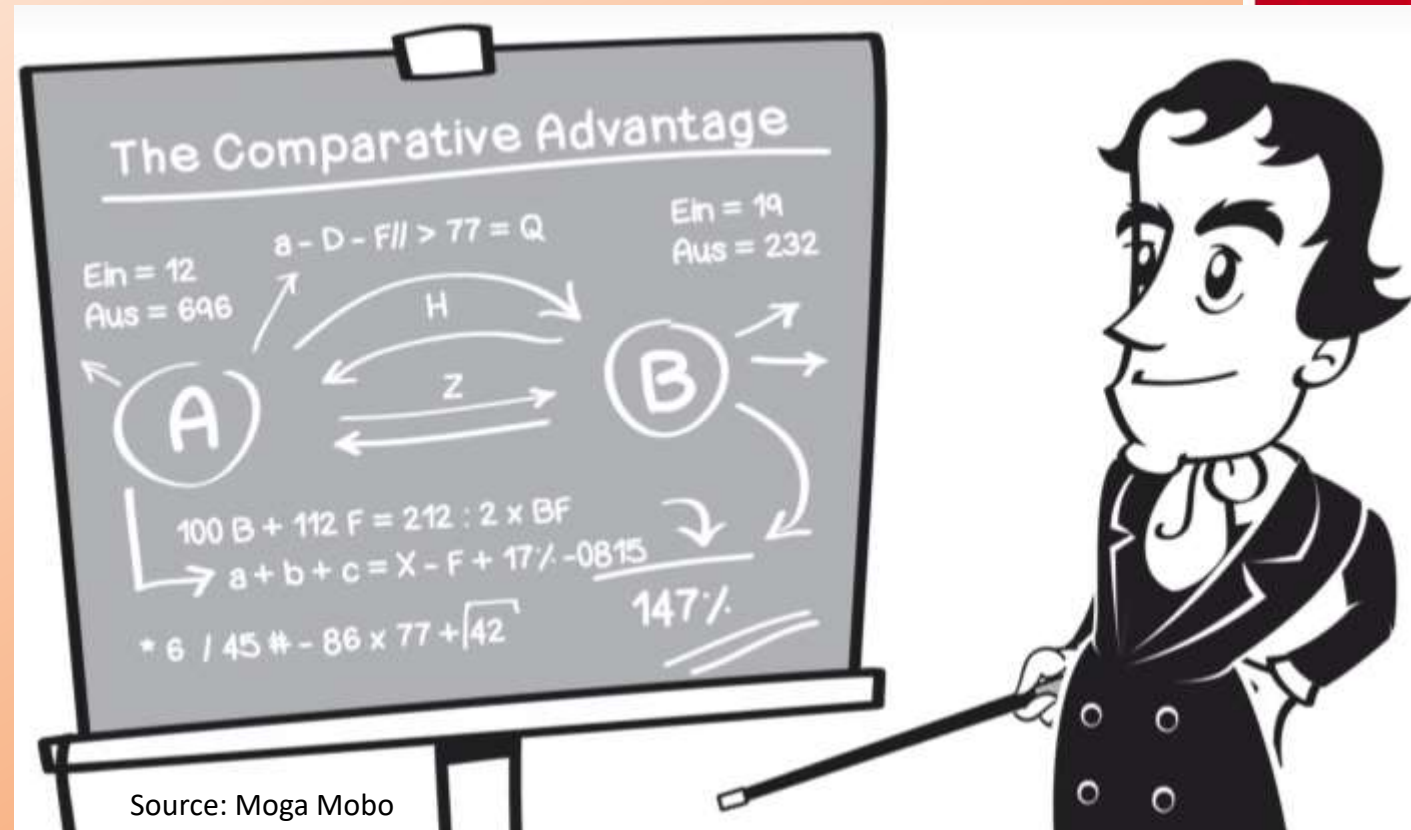
Segment 3

3CC as a story with David Ricardo as the hero, 1st leg

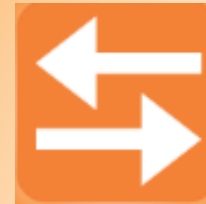
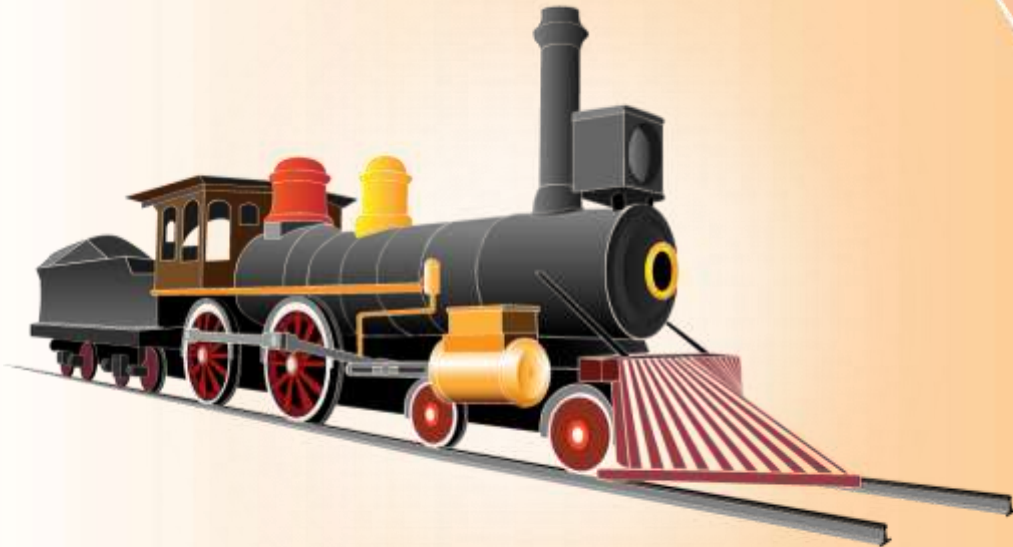
First leg of Ricardo's imaginary
voyage



David Ricardo's imaginary journey of discovery



Trade cost fell radically, the cost of moving knowhow and people fell much less; Arbitrage in goods began



Lower



High communication costs



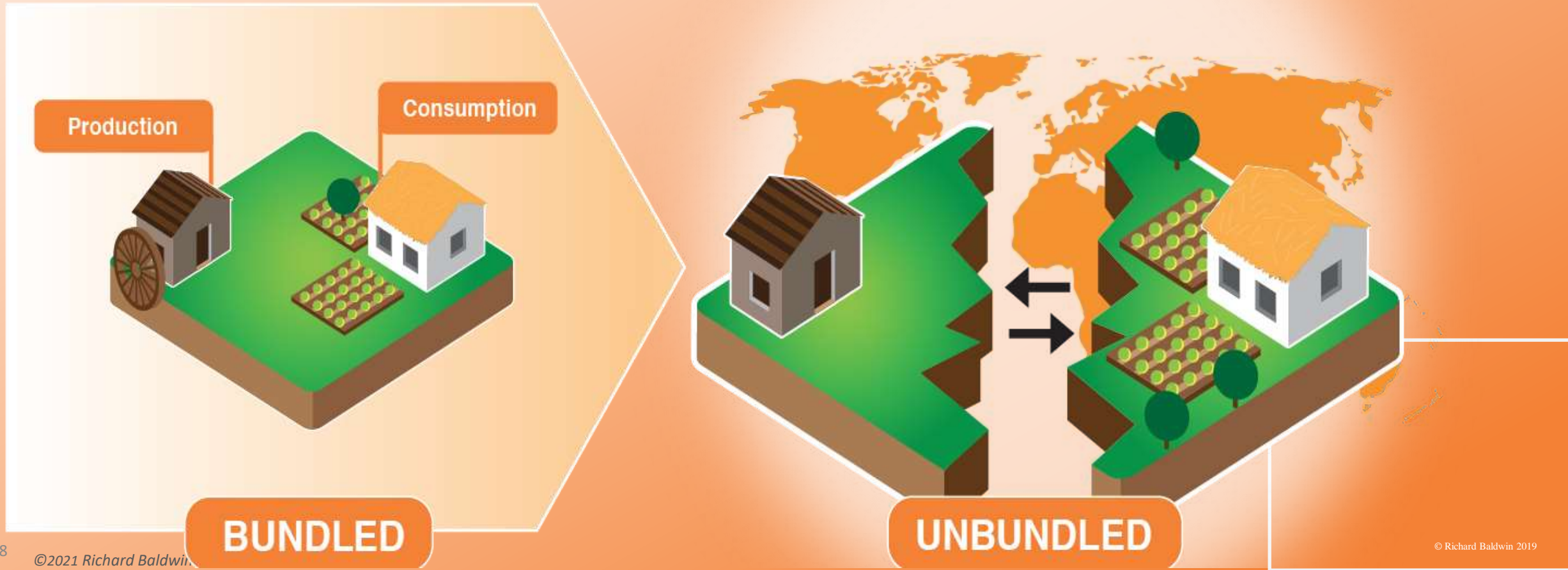
High face-to-face costs

Low trade costs made goods trade feasible; National 'competitive advantage' made it profitable

Richard Baldwin



Happy



Strange thing happens: Production clusters locally as markets expand globally (to save communication, not trade costs)

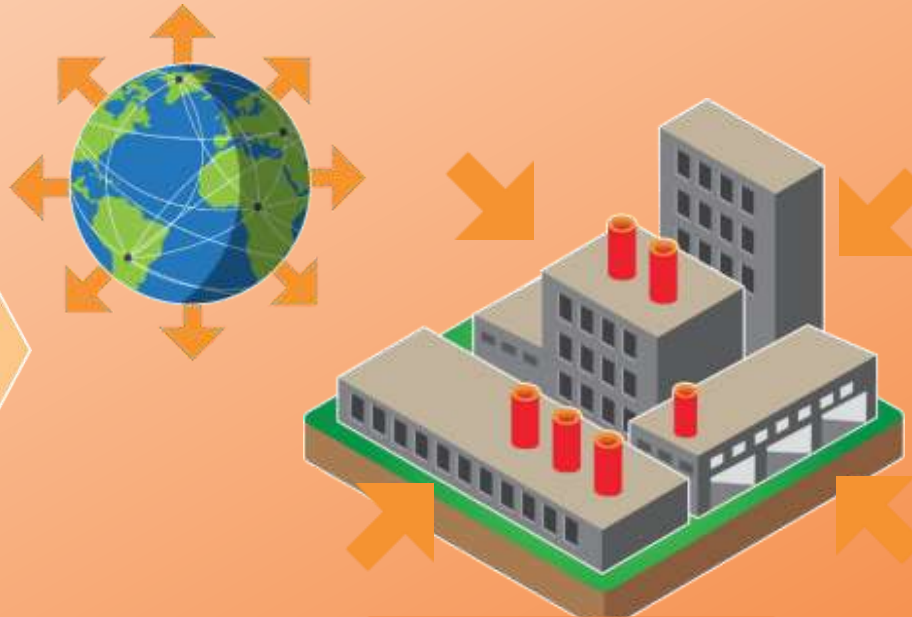
Ricardo



A bit surprised



DISPERSED PRODUCTION



MICRO-CLUSTERED

Extreme clustering: Ford's River Rouge plant



Figure 1: Ford River Rouge production plant

Source: Library of Congress, public domain image.

- Ford refined methods of assembly-line production.

River Rouge plant:

- 1.5 square kilometres of floor space, own docks, electric power plant, ore processing facility & over a 100km railroad track.
- Employed over 100,000 workers.

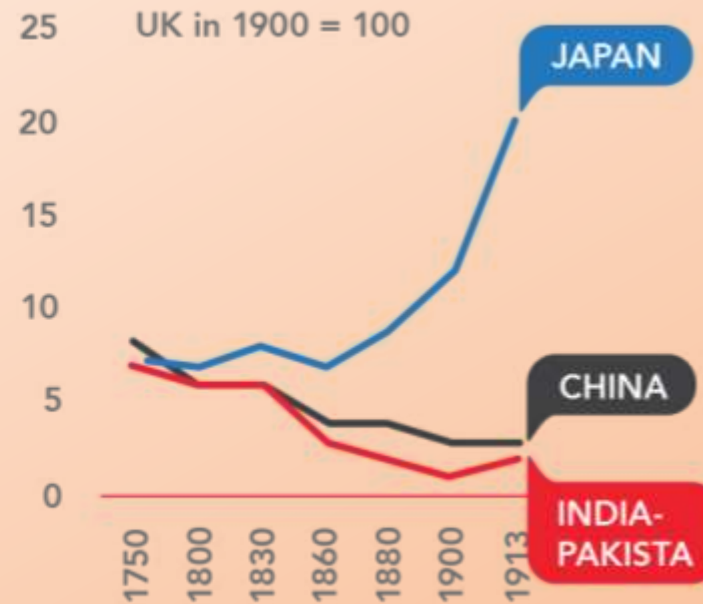
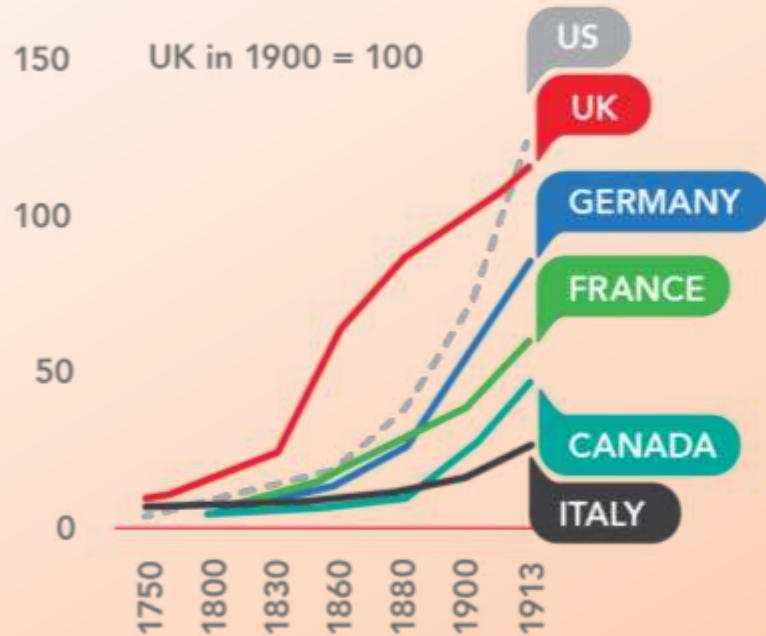
Industrialisation: Virtuous cycle for North; Vicious cycle for South



Example: Albert Bridge in Adelaide shipped 13,000km from UK in 1850s



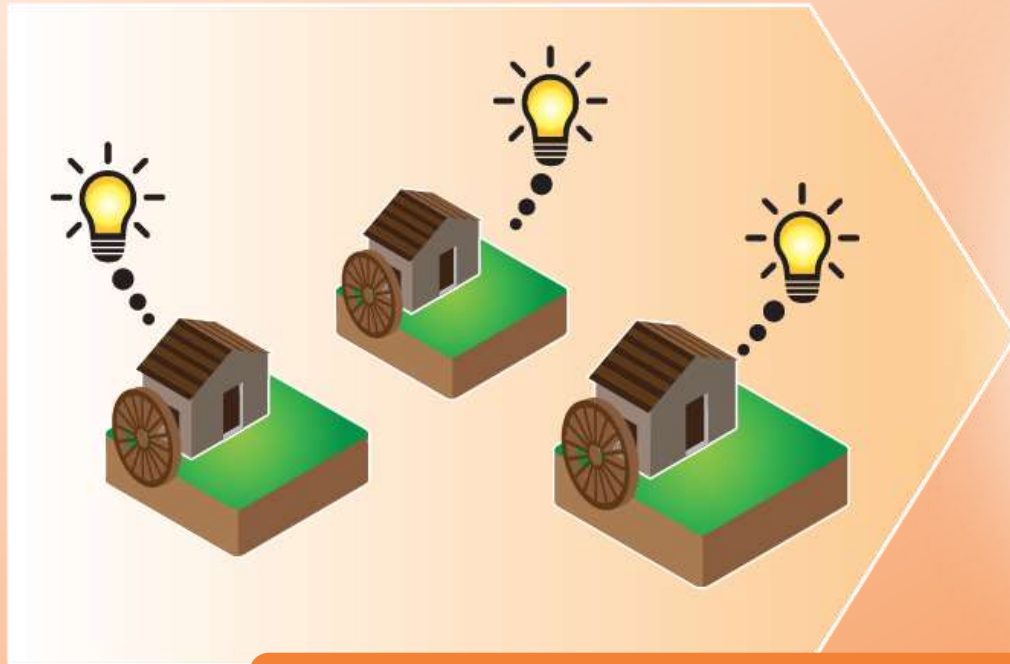
North industrialises while South de-industrialises



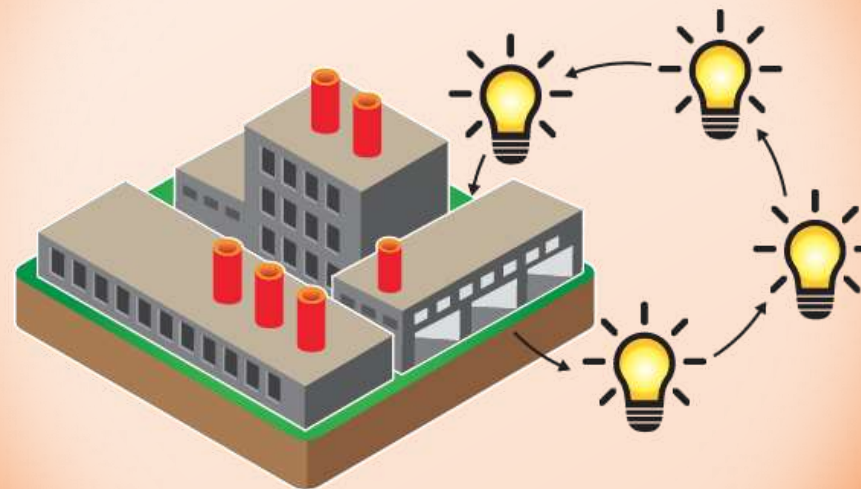


Why
didn't I
think of
that?

Micro-clustering fostered innovation & ignited the bonfire of modern growth



DISPERSED INNOVATION



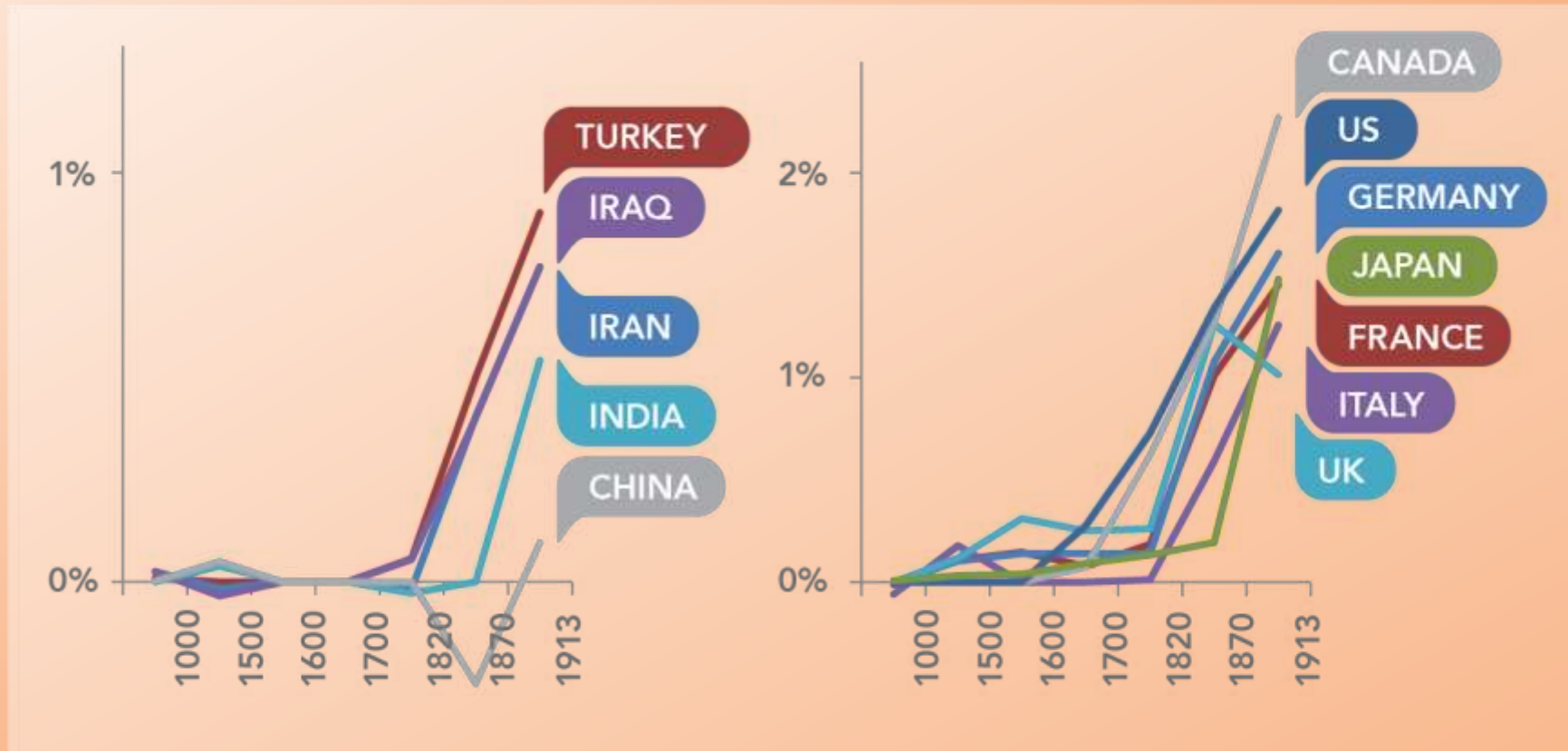
CLUSTERED INNOVATION

This creates know-how imbalances (due high communication costs)

Northern innovations
stay in North due to high
communication costs



Growth takes off sooner & faster in North than South



Great Divergence (1820-1990)

Ricardo



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Shares of
world
income

100%

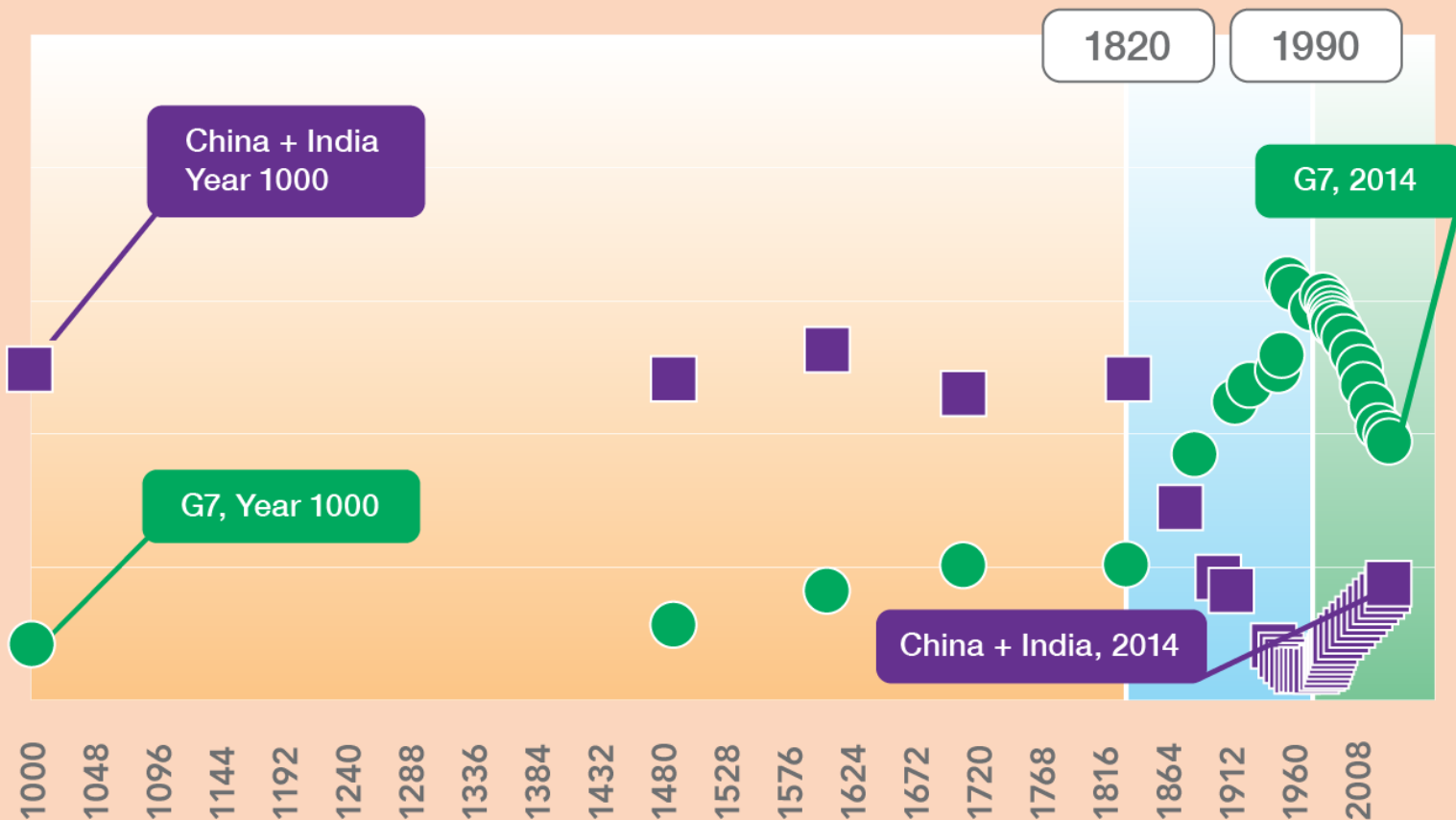
80%

60%

40%

20%

0%



Happy, but
not in a nice
way

Segment 4

**Post-1990
globalisation changes
radically**

2nd unbundling; Phase IV

Ricardo



Astounded

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New Globalisation:

Triggered by
revolution in
Information &
Communications
Technology (ICT)



Information & Communication Technology lowered communication costs; Knowledge arbitrage began



Lower



Lower



High face-to-face
costs

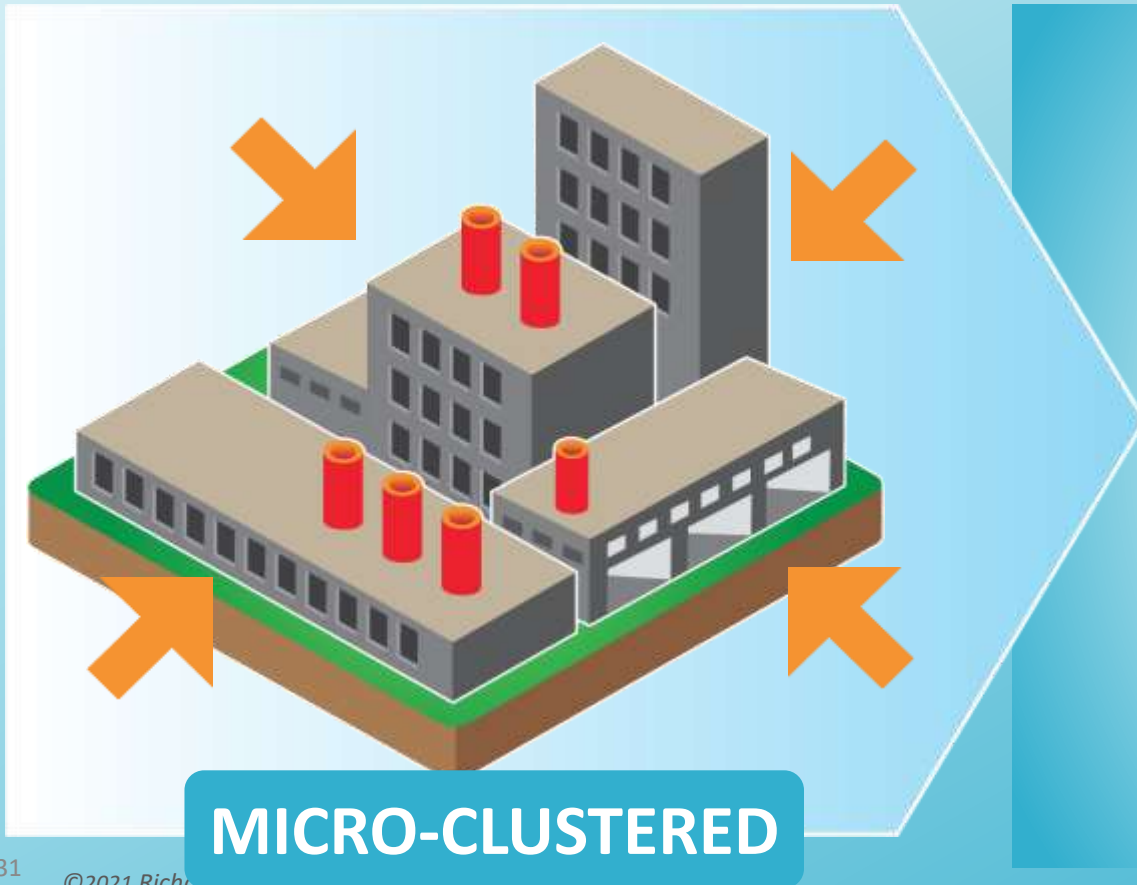
ICT Revolution made offshoring feasible Vast wage differences made it profitable

Ricardo

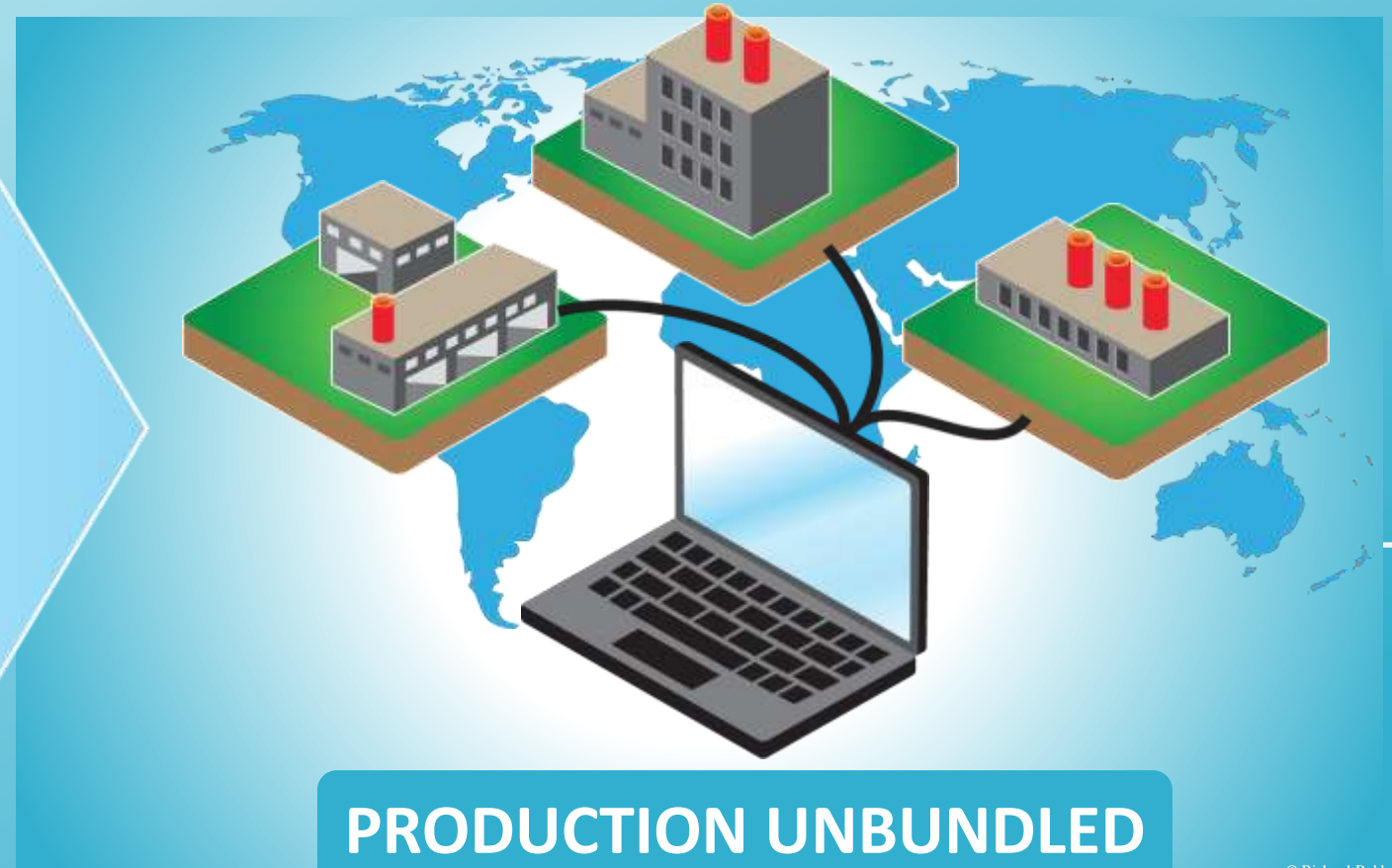


Amazed & a little nervous

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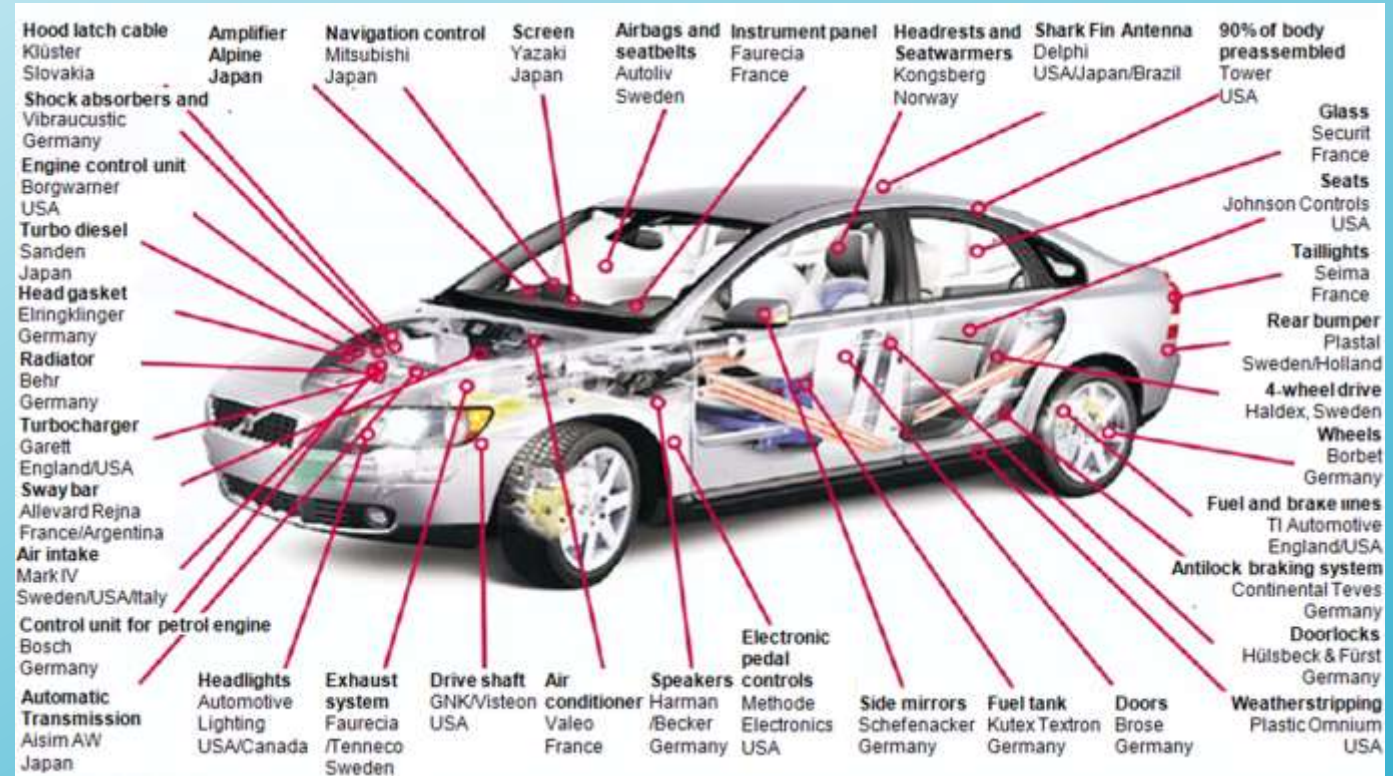
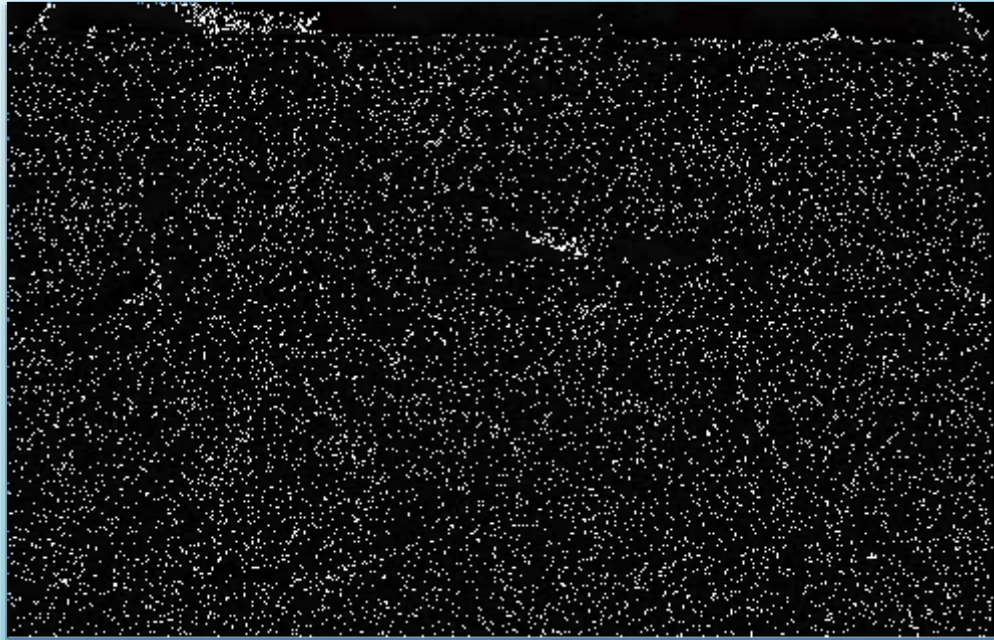


MICRO-CLUSTERED



PRODUCTION UNBUNDLED

2UB's fractionalisation of production process



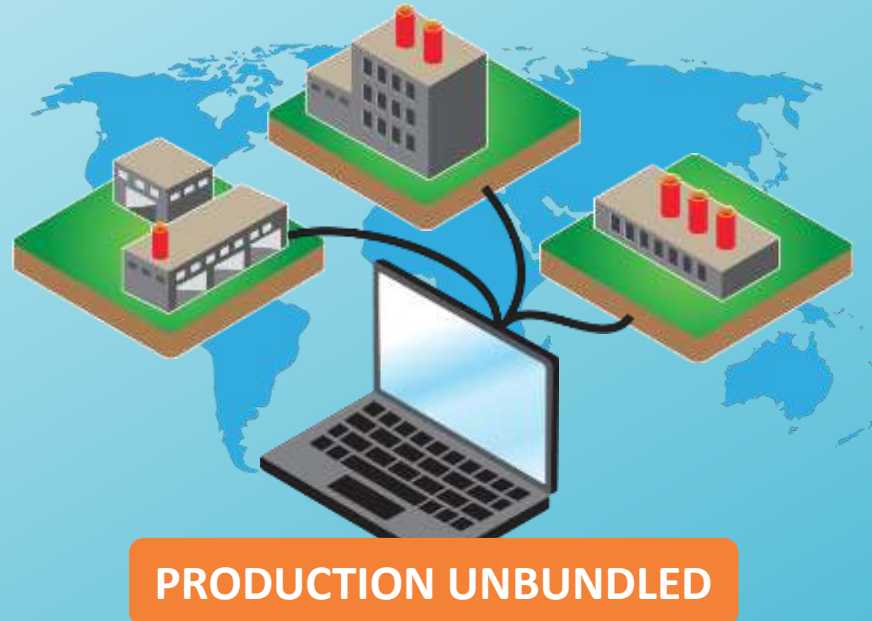
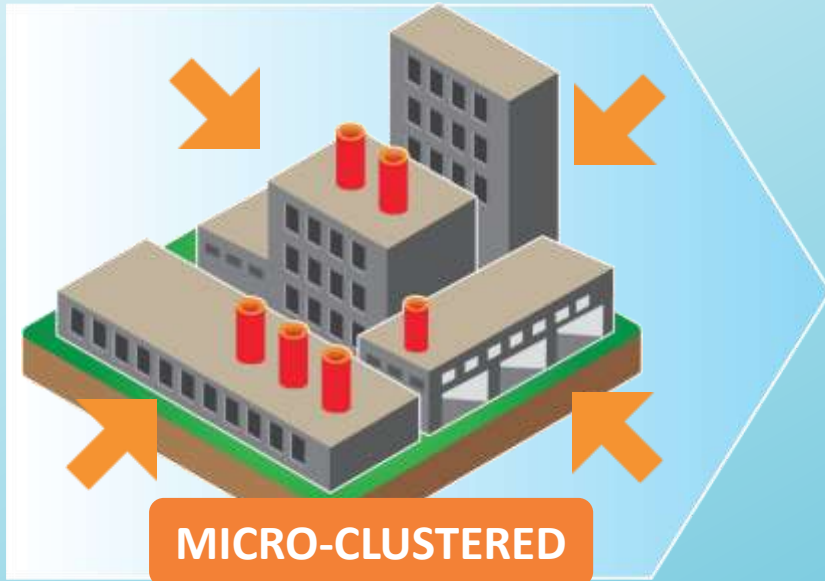
ICT Revolution makes offshoring organisationally feasible; Vast wage differences make it profitable

Ricardo

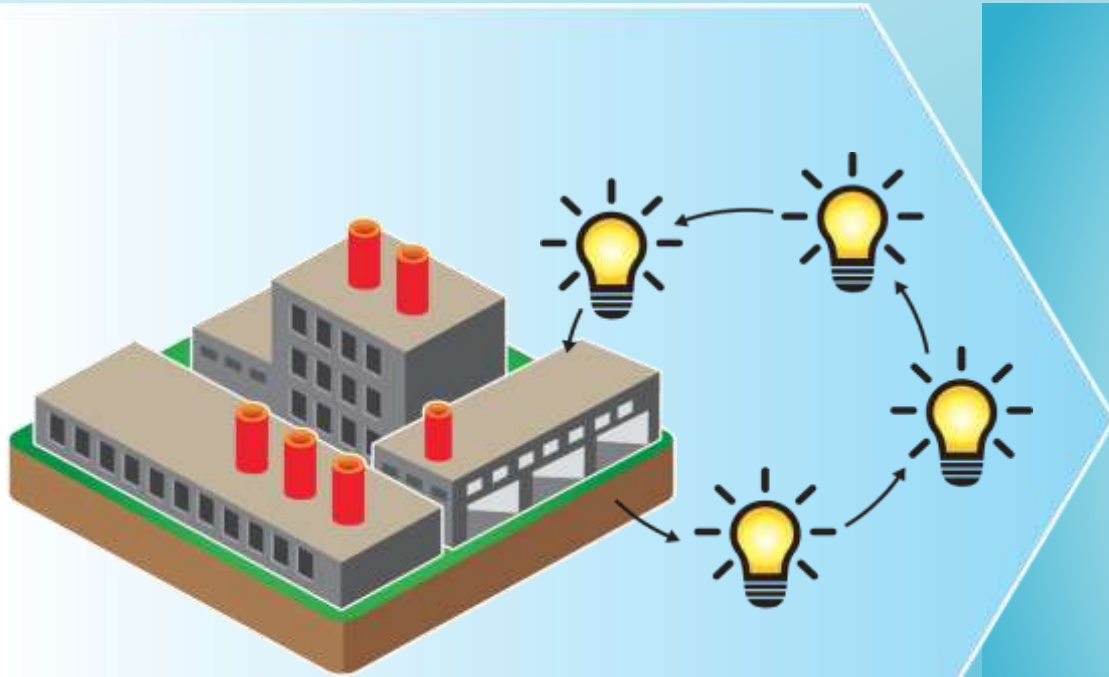


A bit sad

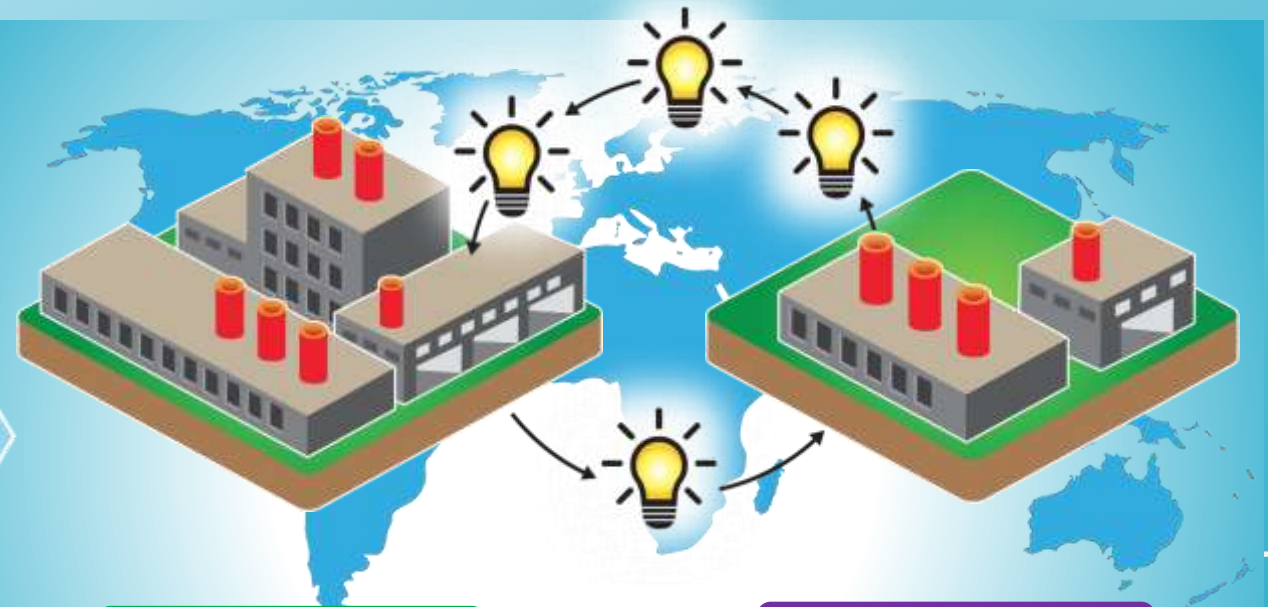
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Arbitrage of knowhow began; G7 firms offshored knowhow with the factories and jobs



KNOWLEDGE STAYS AT HOME

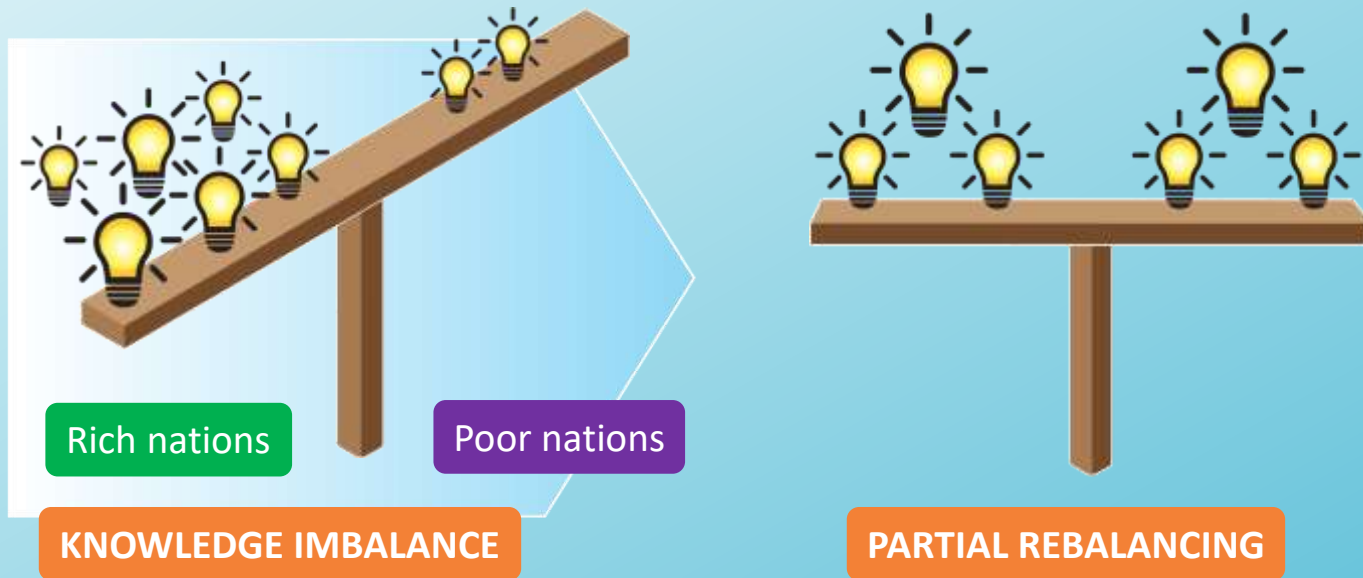


High tech nations

Low wage nations

KNOWLEDGE OFFSHORING

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



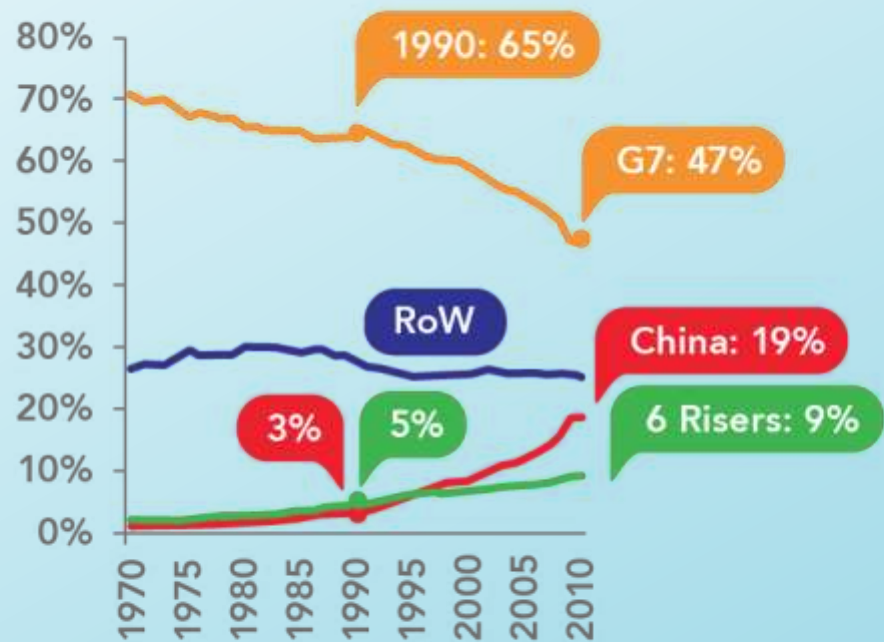


A bit sad

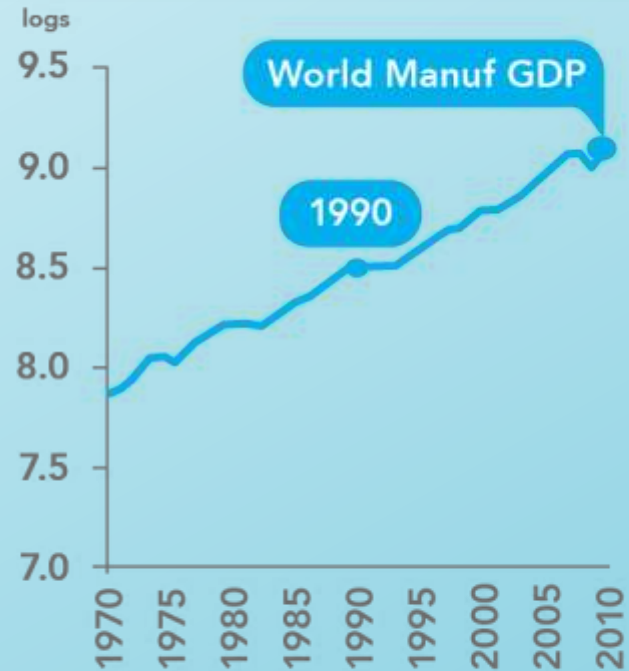
New globalisation

GVC Revolution transforms manufacturing worldwide

World manufacturing shares



World manufacturing GDP



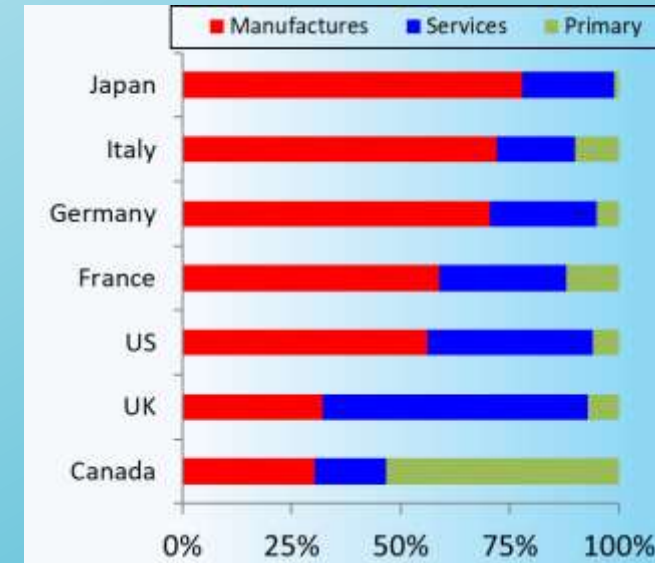
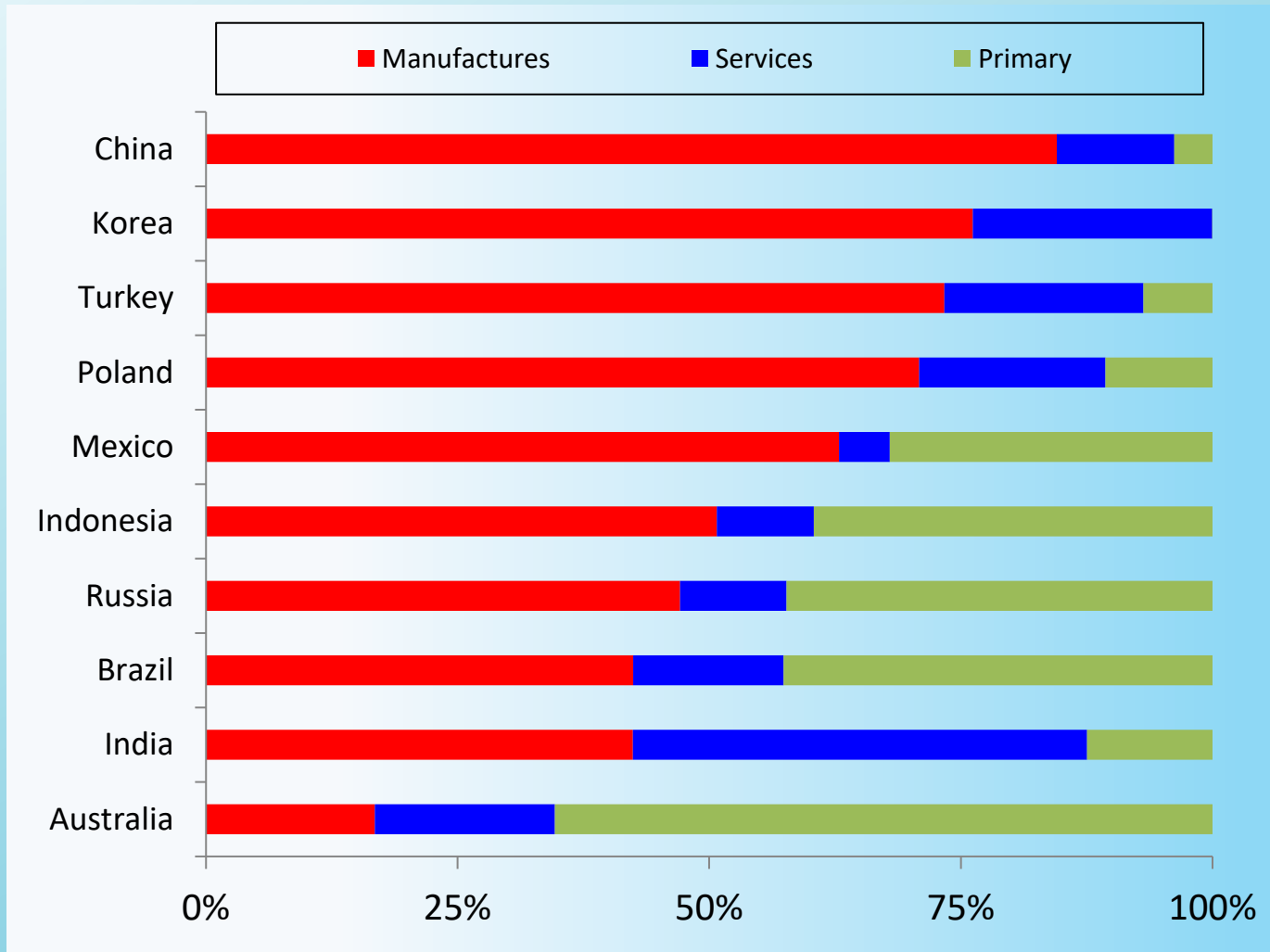
Source: unstats.un.org; 6 rapid industrialisers = Korea, India, Indonesia, Thailand, Turkey, Poland

New globalisation & “Commodity Super Cycle”

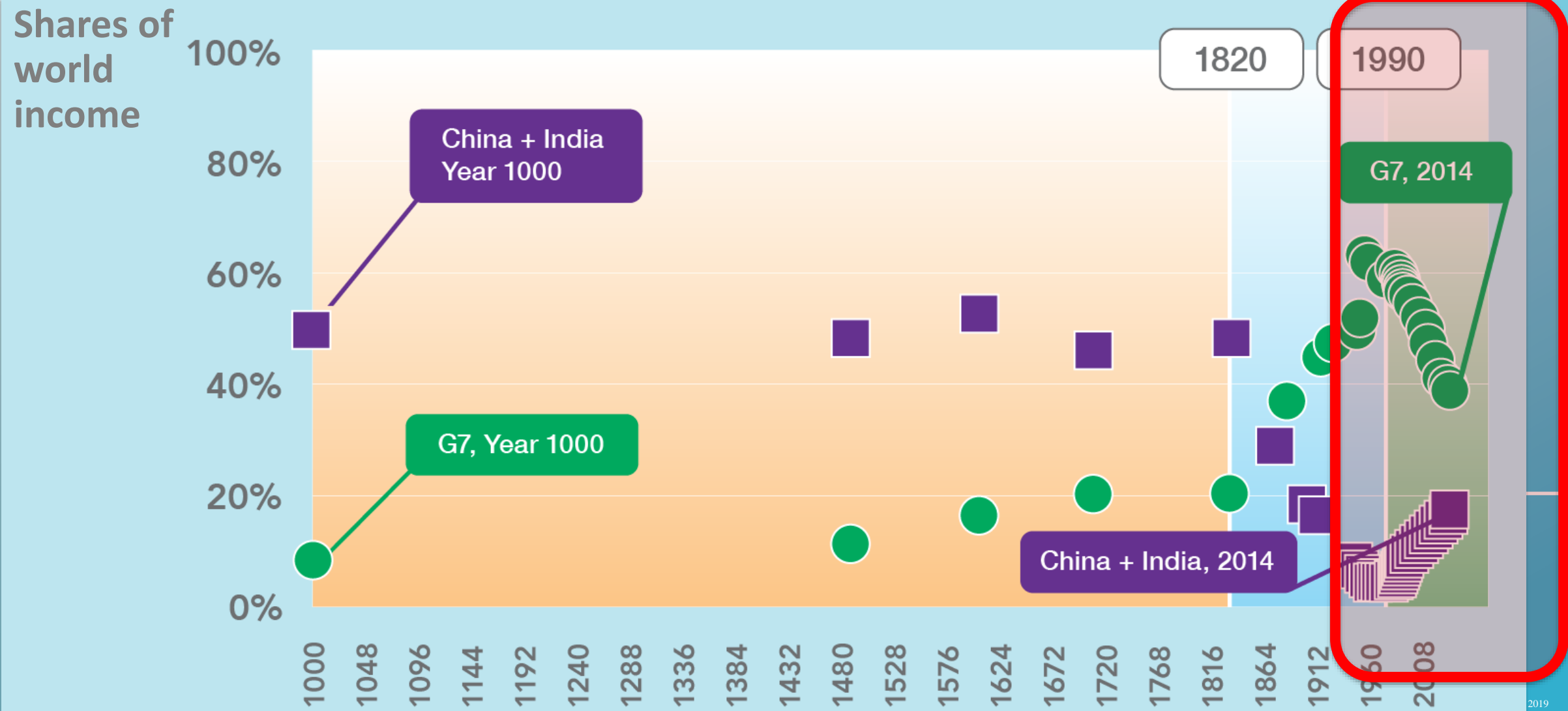
- Rapid growth in the rapidly industrialising Emerging Economies drive commodity export-led growth in a wider range of developing nations



Origin of value added in export growth: Two types of emerging economies (G7 for contrast)



Great Convergence (1990-)

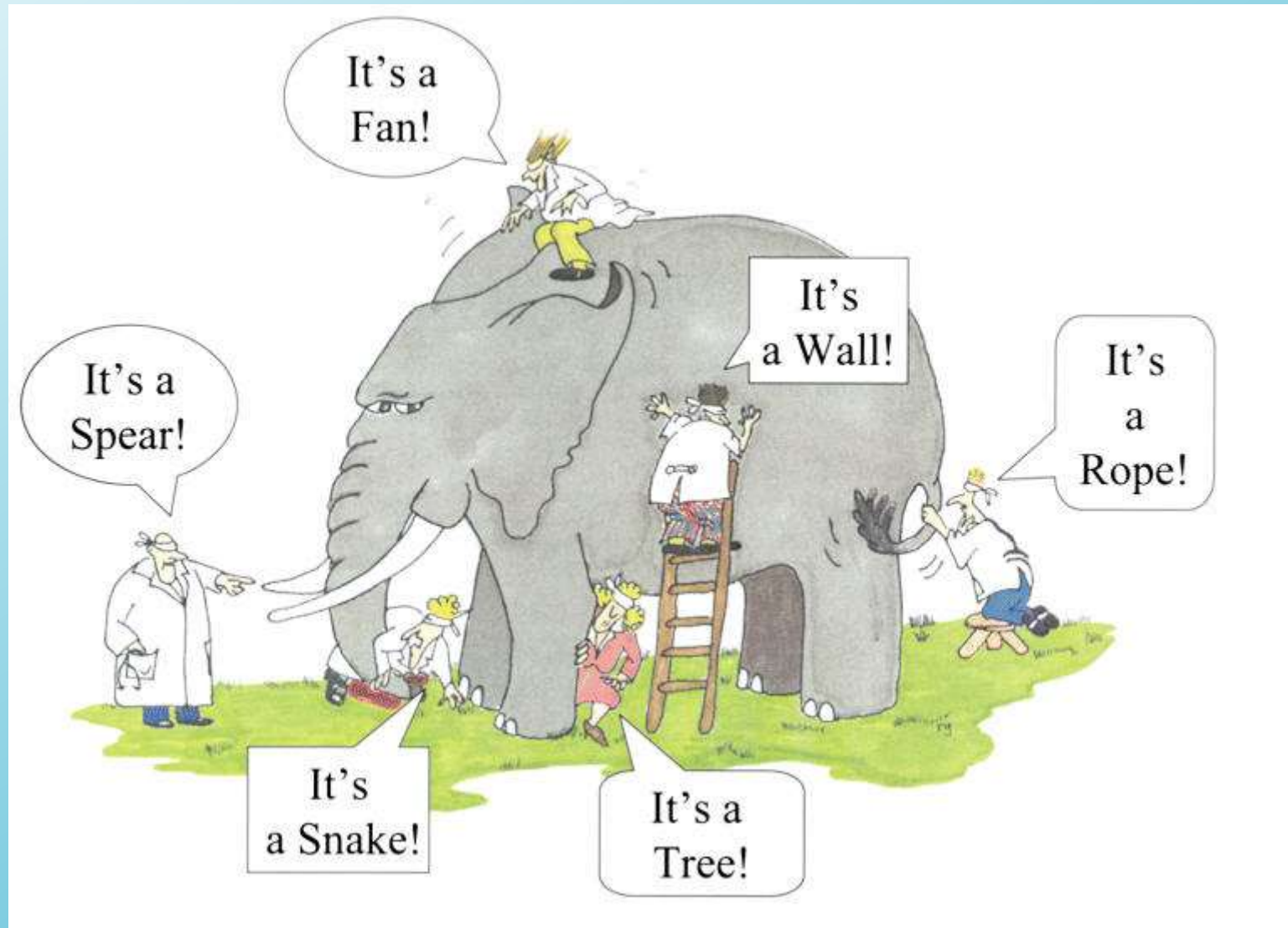


Segment 5

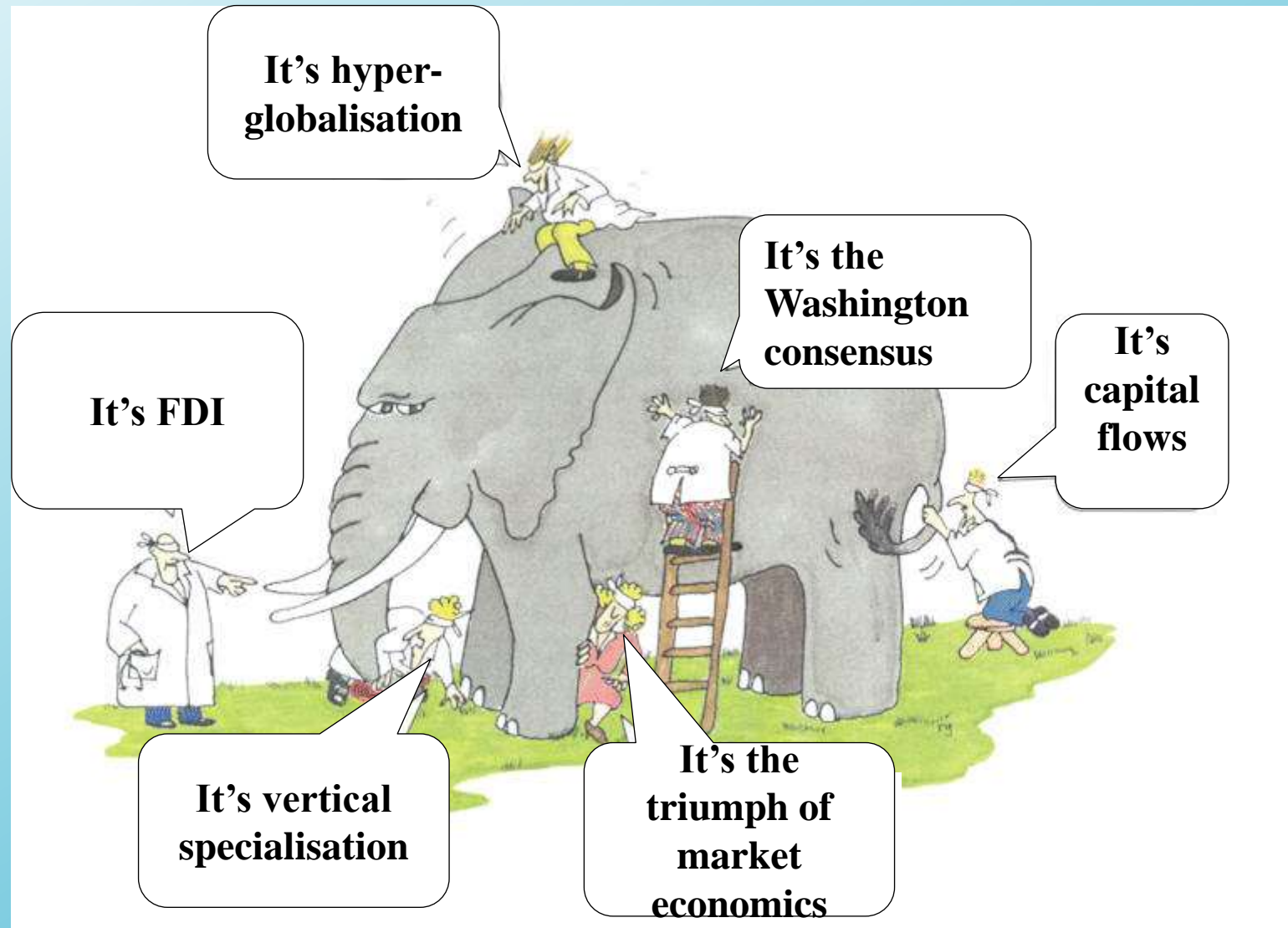
What really changed?

Globalisation now about
knowhow crossing borders,
not just goods crossing
borders

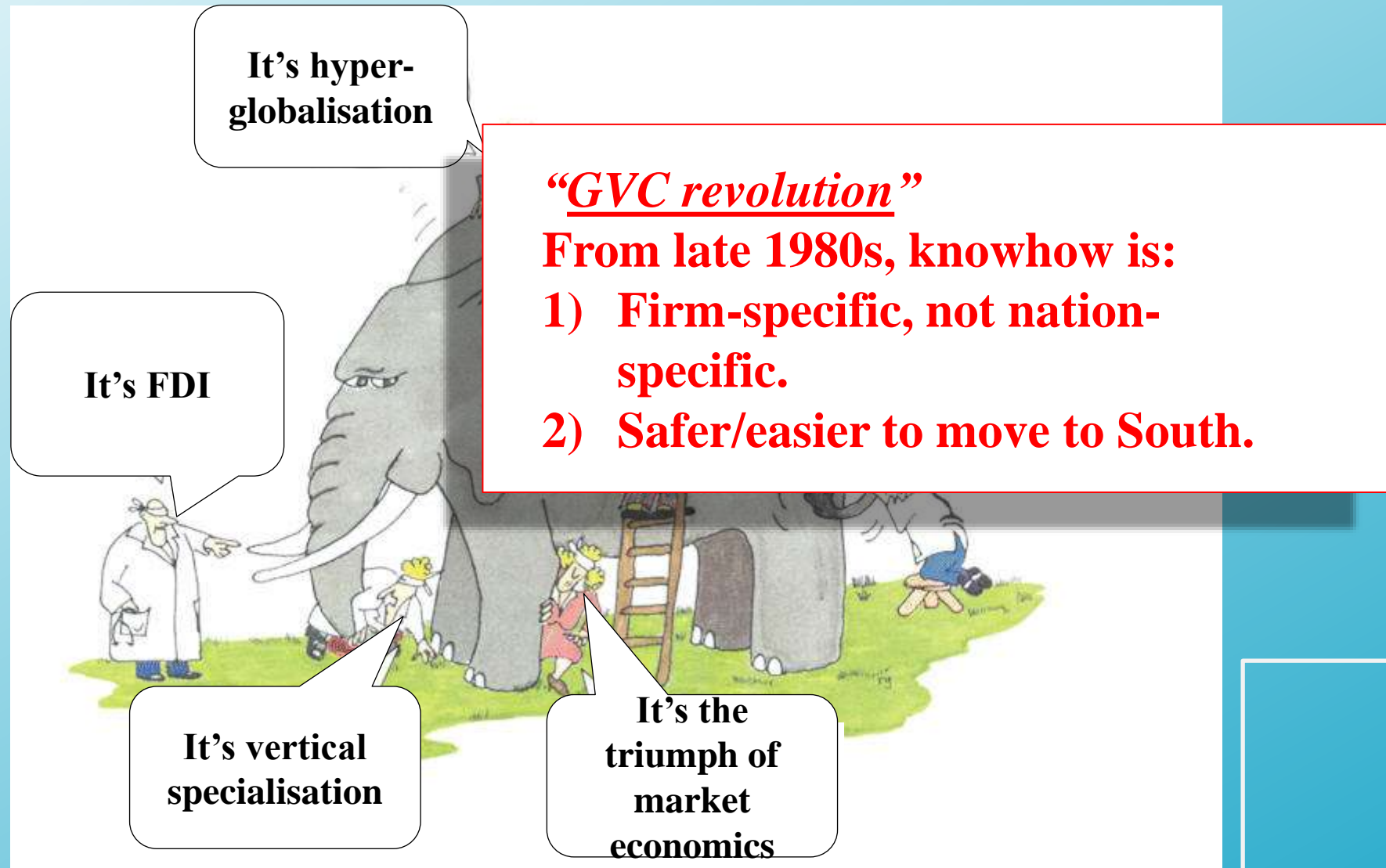
Other explanations of globalisation's change



Why the changes?



Elephant = North knowhow + South labour



Shocked

Pre-ICT revolution, knowledge is 'stuck' in G7

Headquarter Economies (G7)

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

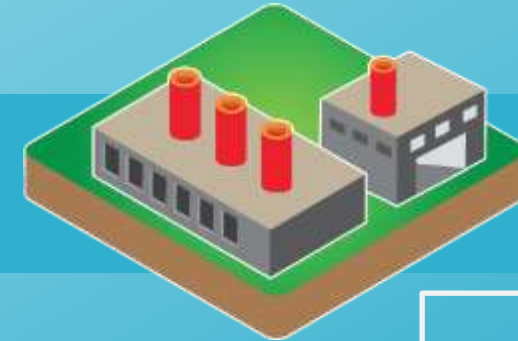
High wages



Factory Economies

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

Low wages



Global value chains open a 'pipeline' for globalisation as knowledge arbitrage

Headquarter Economies (G7)

High Knowhow
Labour

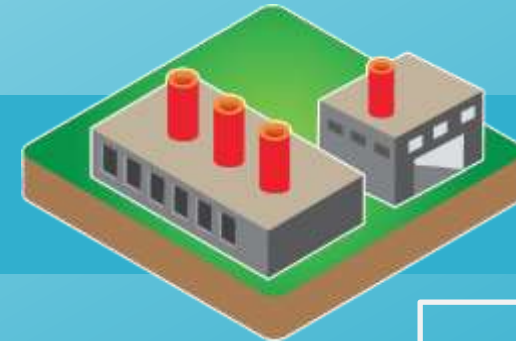
High wages



Factory Economies

Low Knowhow
Labour

Low wages



*High Tech + Low Wages Revolutionises
World Manufacturing*

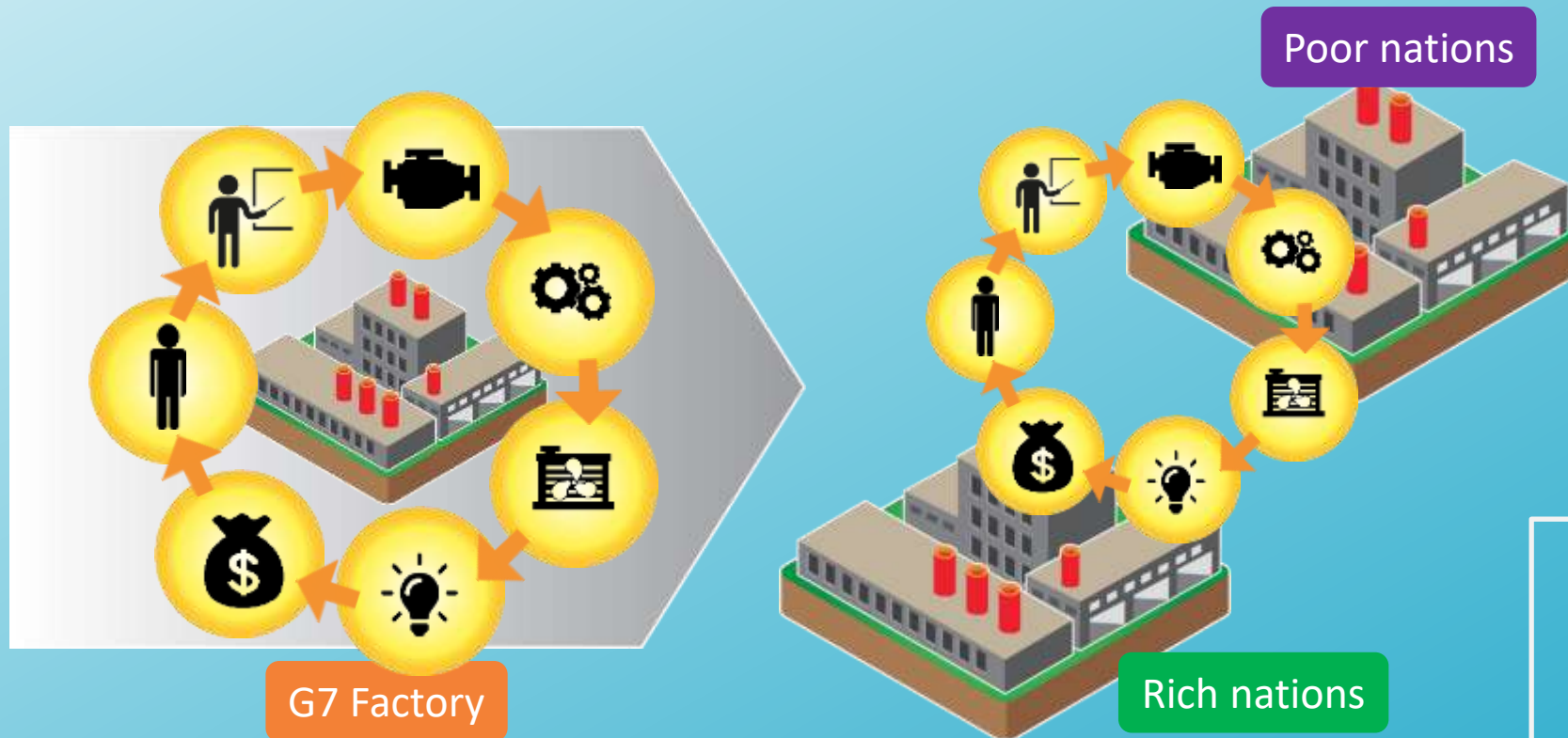


Segment 6

Explaining how 2UB lead to the fundamental changes

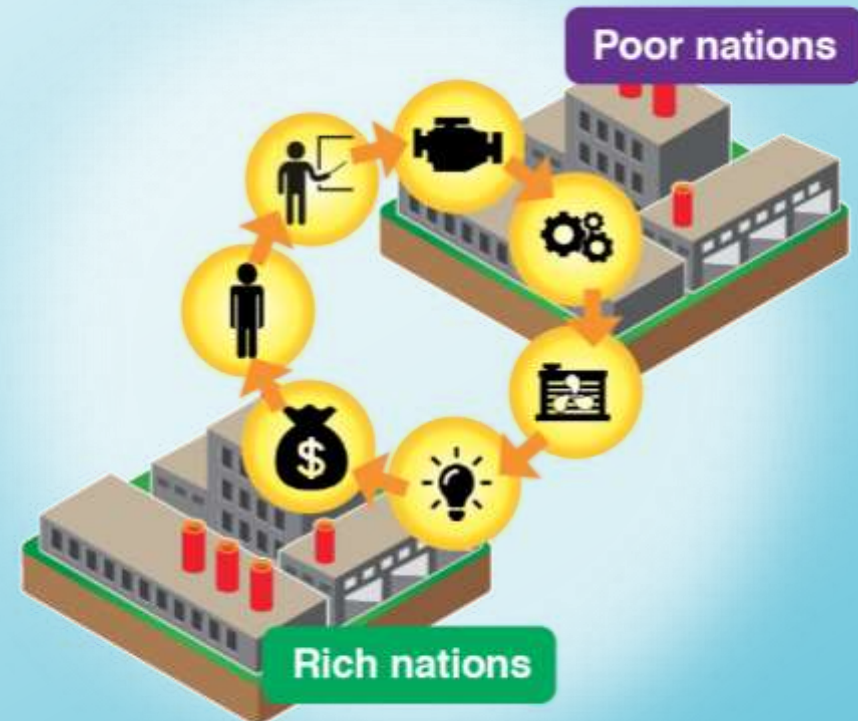
Trade, trade policy, and trade politics

#Trade changed: Within-factory flows became international commerce (Trade due to factories crossing borders = 21st century trade)

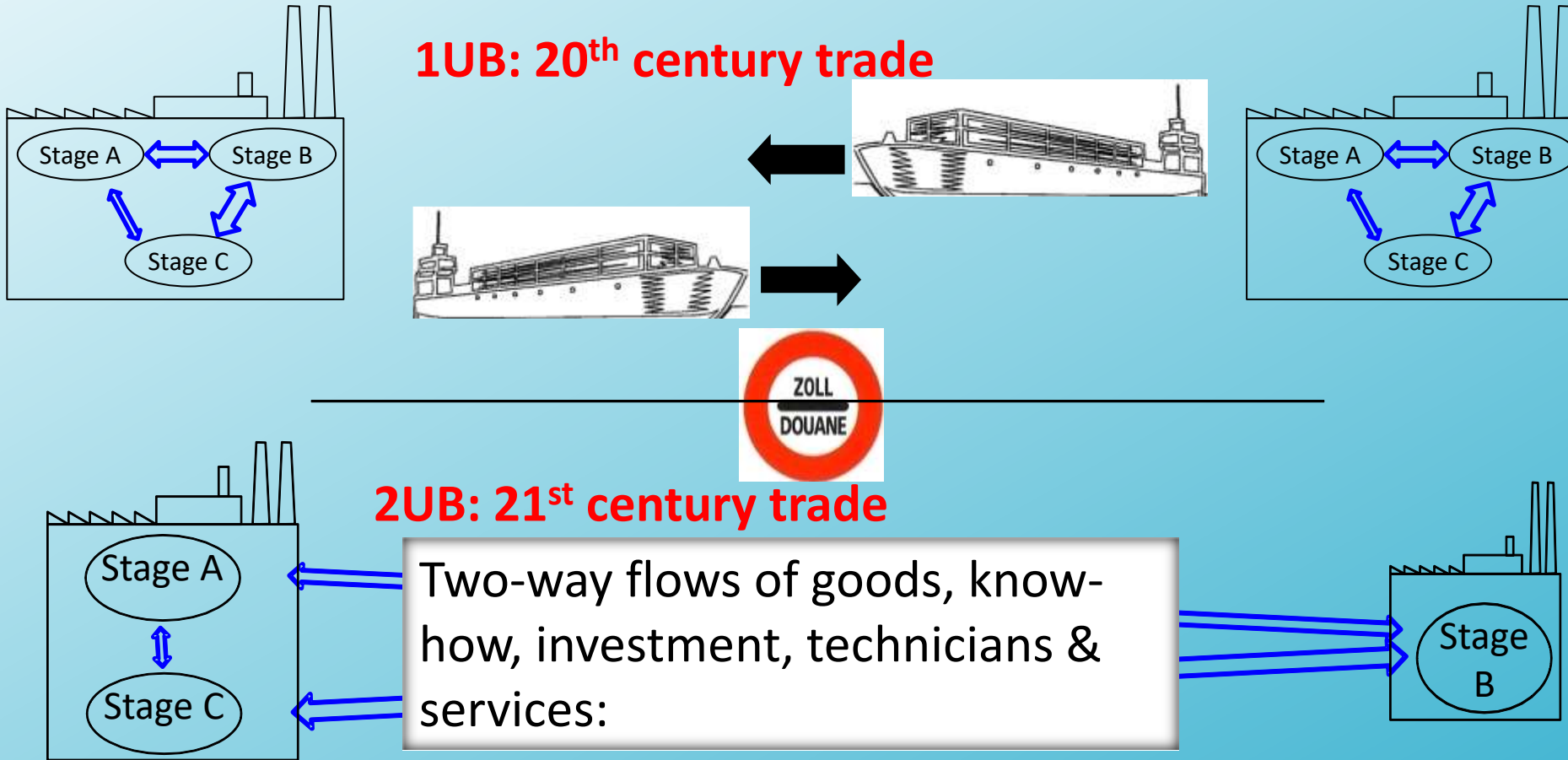


21st century trade: Trade-services-capital-intellectual property “nexus” emerges

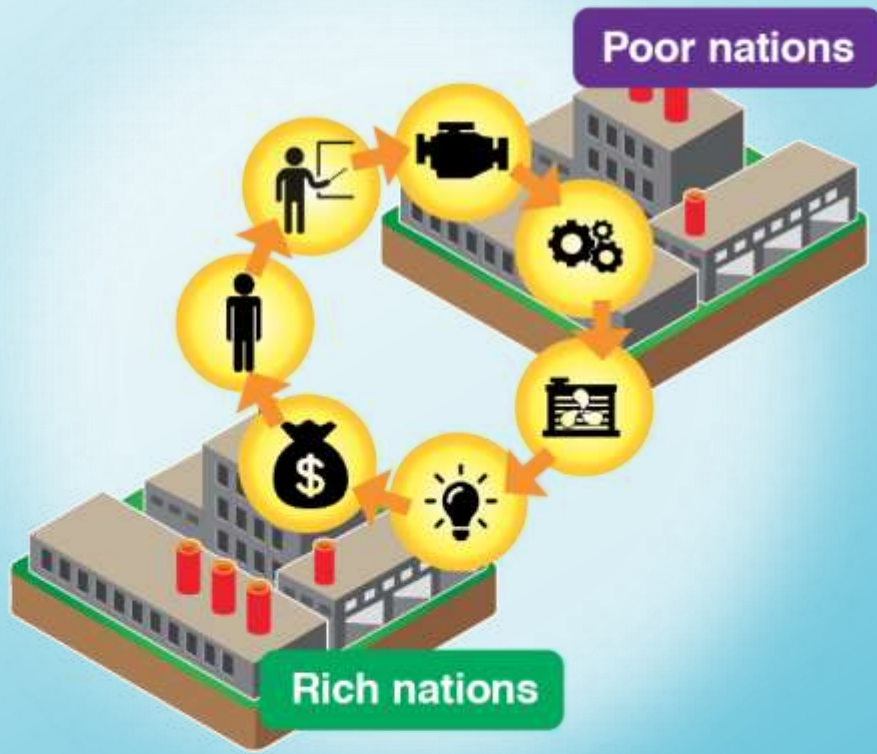
- With North-South GVCs:
 - International commerce becomes more complex; Various flows are ‘entangled’ (the ‘nexus’)
- North-South flows within GVCs involve two-way flows of similar goods (as North-North were before), but one-way flows of knowhow
 - NB: GVCs, i.e. international supply chains worked North-North back as far as the 1970s.



i.e. International commerce was transformed

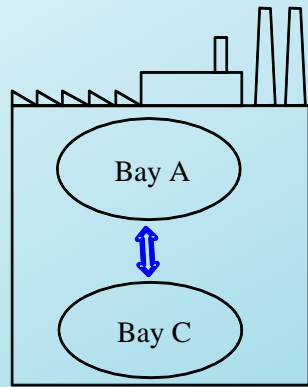


#Trade policy changes: 21st century trade agreements arise



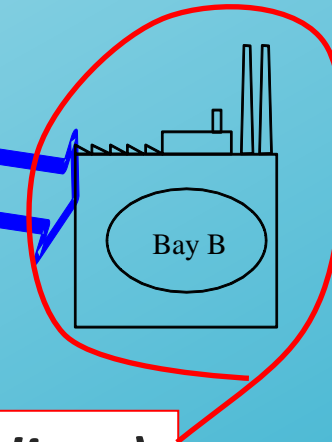
- The “nexus” required new package of disciplines
 - “Deep” regional trade agreements arose to foster regional GVCs
 - North-South for first time
 - Mostly hub & spoke around US, Japan, Germany
 - Eventually “mega-regionals” arose to knit together deep bilaterals

i.e. New governance demands



1) Seamless supply chains (supply chain disciplines):

Intermediates tariffs, NTBs,
transportation & ICT
infrastructure, service barriers,
business mobility, etc.



2) Doing business abroad (offshoring disciplines)

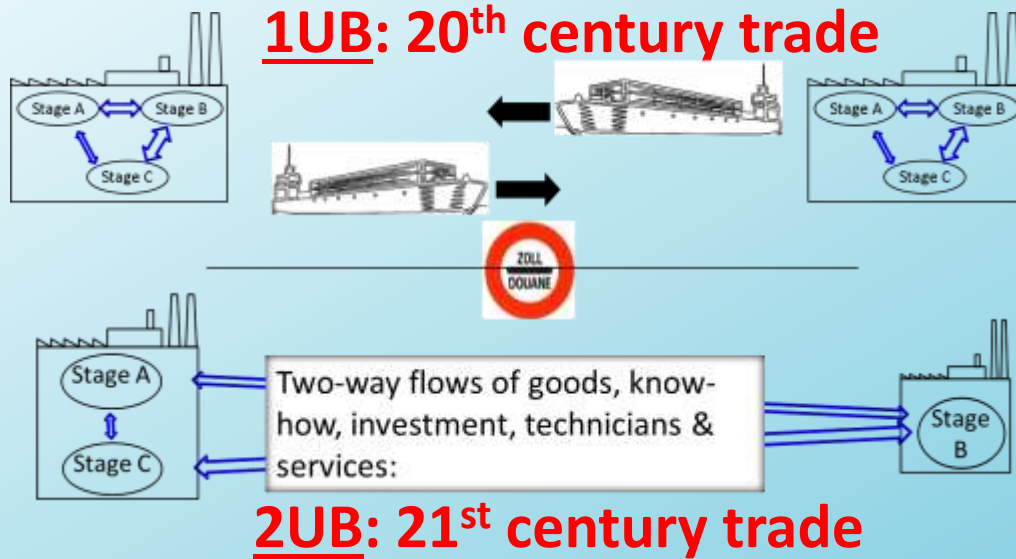
“Behind the border barriers” (BBB) reform,
property rights, local business climate, capital
mobility, competition policy, SOEs, etc.

#Political economy of trade deals changes

- Trade deals now are exchange of “northern factories” for “southern reform”
- Trade deals are radically asymmetric from the 1UB perspective leading to misthinking (‘hyperglobalisation’, ‘globalisation’s paradox’, etc)



#Regionalism rises; WTO weakens



- 20th century trade naturally leads to multilateralism
 - Avoid trade discrimination (trade diversion) since imports from any nation affect imports from all other nations
 - Avoid renegotiations with third nations
- GVC trade leads naturally to bilateralism
 - Most GVCs had HQs in US, Germany, or Japan with factories in nearby Emerging Economy
 - The flows were directed by G7 firms to particular nations

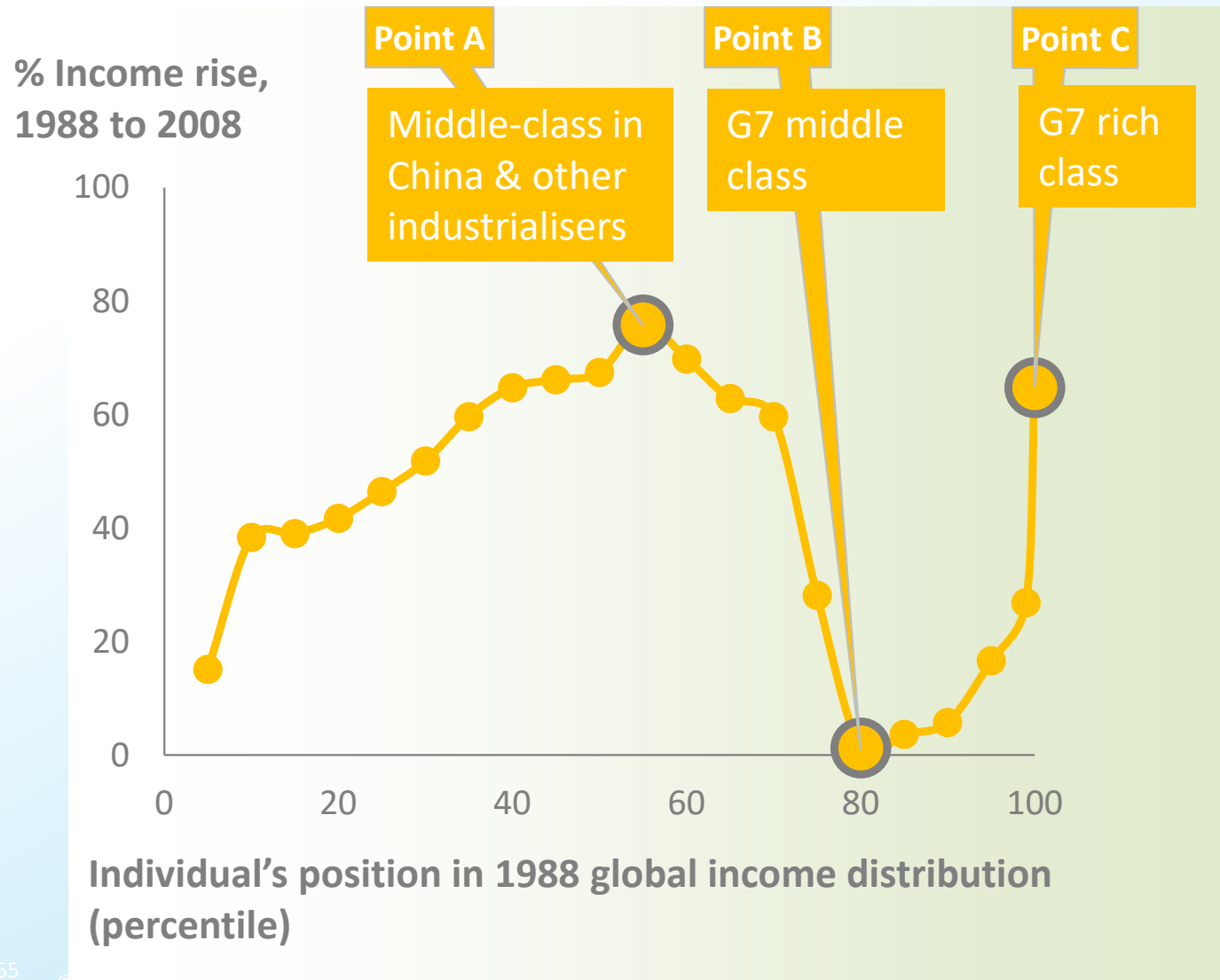
i.e. WTO focused on 20th century policy; 21st century policy went elsewhere

Since only minority of WTO members are fully engaged in GVC revolution, it is difficult to update WTO agenda to include GVC disciplines.

21st 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.

#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?

Segment 7

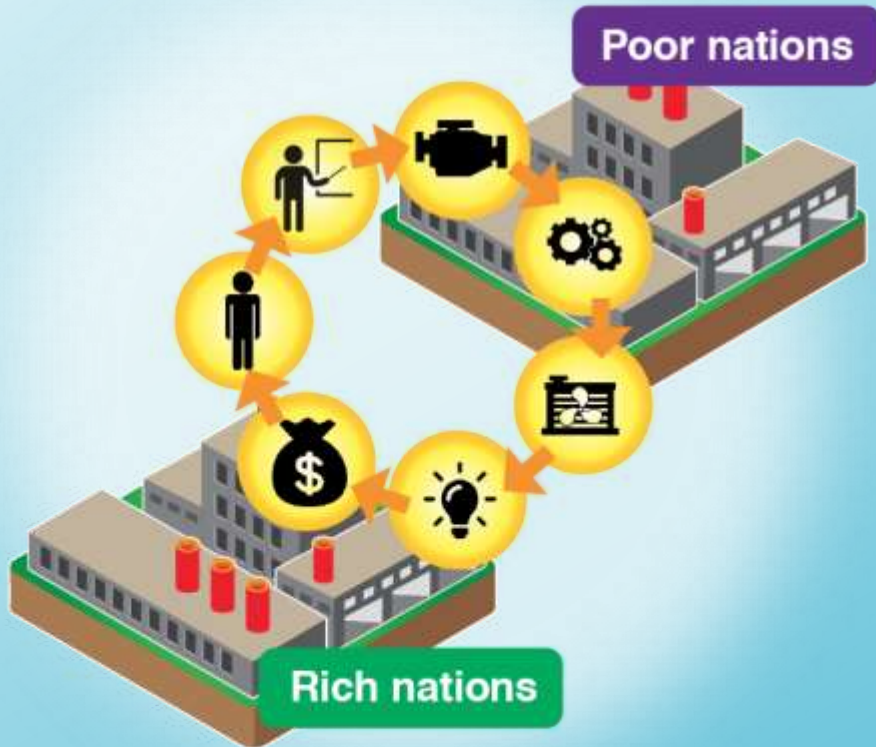
Comparative advantage is denationalised

Ricardo's conceptualisation
loses relevance in
manufacturing



#Competitive advantage is denationalised

- Relative efficiency across nations is based on a mix of hi-tech and lo-wages
- Boundaries of competitiveness are within firms, but across borders
 - Within GVCs, not within nations
- Ricardo's conceptualisation of comparative advantage as a national thing breaks down in manufacturing



Why does the de-nationalisation of comparative advantage matter?

- Changes the distribution of “gains and pains”
- Changes how comparative advantage determines the pattern of trade
- Changes implications for competitiveness of emerging economies left behind by the GVC revolution
- Changed the trade and growth relationship

Who gains from trade under 1UB logic

- Ricardo's all-nations-win result based on ironclad logic.
- Trade allows each nation to use its resources more efficiently.
- Sports analogy:
 - 2 soccer clubs discuss an exchange of players.
 - If a trade occurs, both gain.
 - Each team exchanges players of a type they had too many of for players of a type they had too few of.
- This is like trade under 1UB globalisation.



Who gains from trade under 2UB logic

- Now consider a different type of exchange.
- On the weekends, coach of better team goes and trains players of worse team.
- The outcome:
 - Improves worse team.
 - Raises competition in the league.
 - But not clear if better team wins, even though coach wins from selling his know-how to two teams instead of one.



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



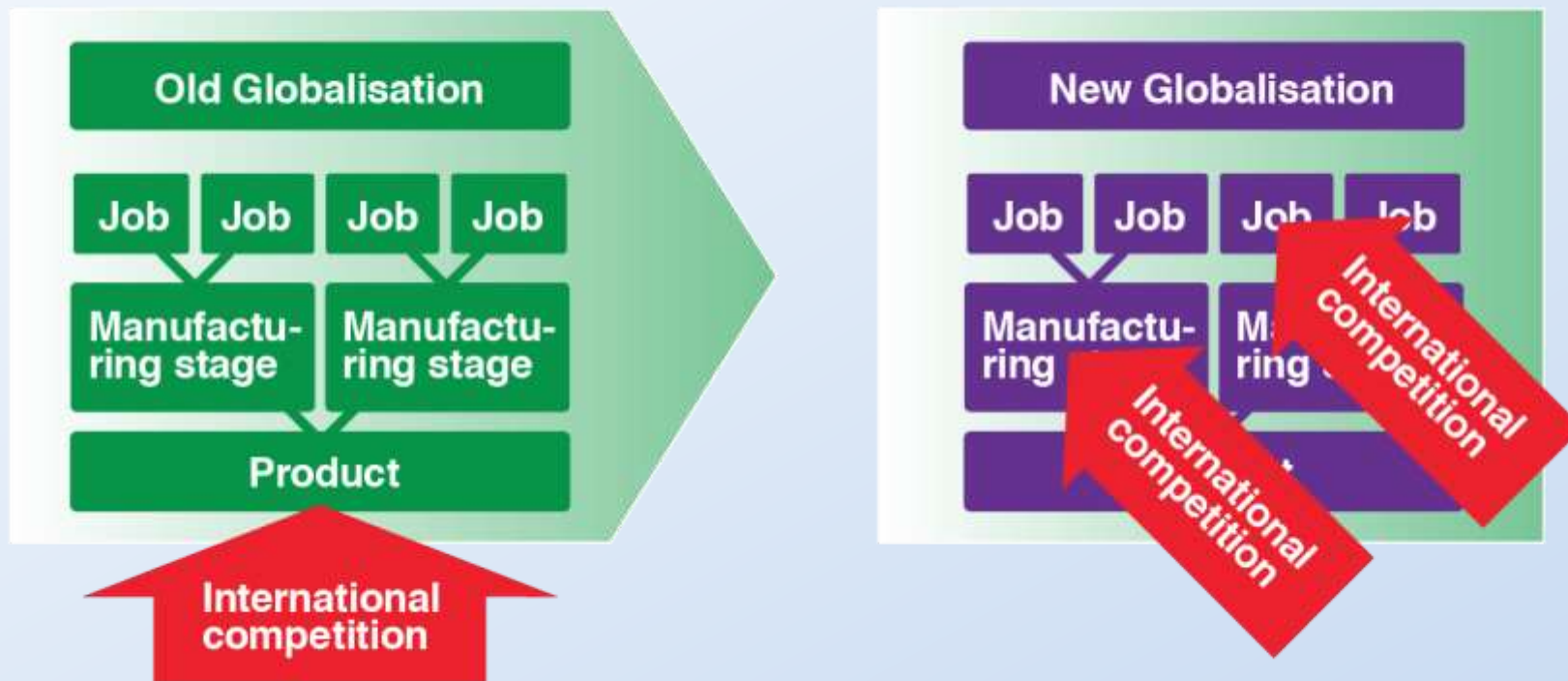
KEY CHANGES

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**



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



SUMMARY

Phase I & II – pre globalisation world

- First unbundling (1st constraints relaxed - trade costs fall, communication and F2F costs don't)

=> Phase III: The Great Divergence (trade triggers innovation/growth but the knowhow stays in G7 due to high communication costs.

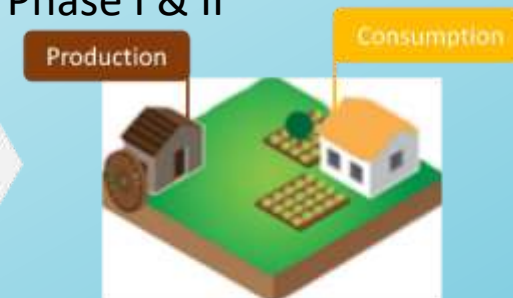
- Second unbundling (2nd constraint relaxed - ICT lowers communication costs radically)

=> Phase IV: The Great Convergence (knowhow flows but only to handful of EM's due to high F2F costs, and agglomeration; this triggers rapid industrialisation & growth, which then triggers the commodity boom).

Future globalisation – the Face2face constraint is relaxed



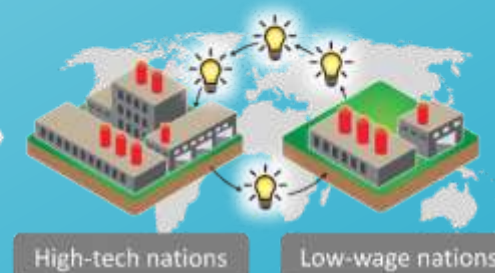
Phase I & II



Phase III



Phase IV



END