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Information Technology, Global Value Chains, and the New Globalisation

Richard Baldwin

Invited Paper prepared for presentation at the International Agricultural Trade Research Consortium's (IATRC's) 2018 Annual Meeting: Interlinkages among Global Value Chains, Trade, and Transformation of the AgriFood Industry, July 25-27, 2018, Whistler, BC, Canada.

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Information technology, global value chains, and the New Globalisation

based on my book

*THE GREAT CONVERGENCE: Information Technology and the New
Globalisation, Harvard University Press*

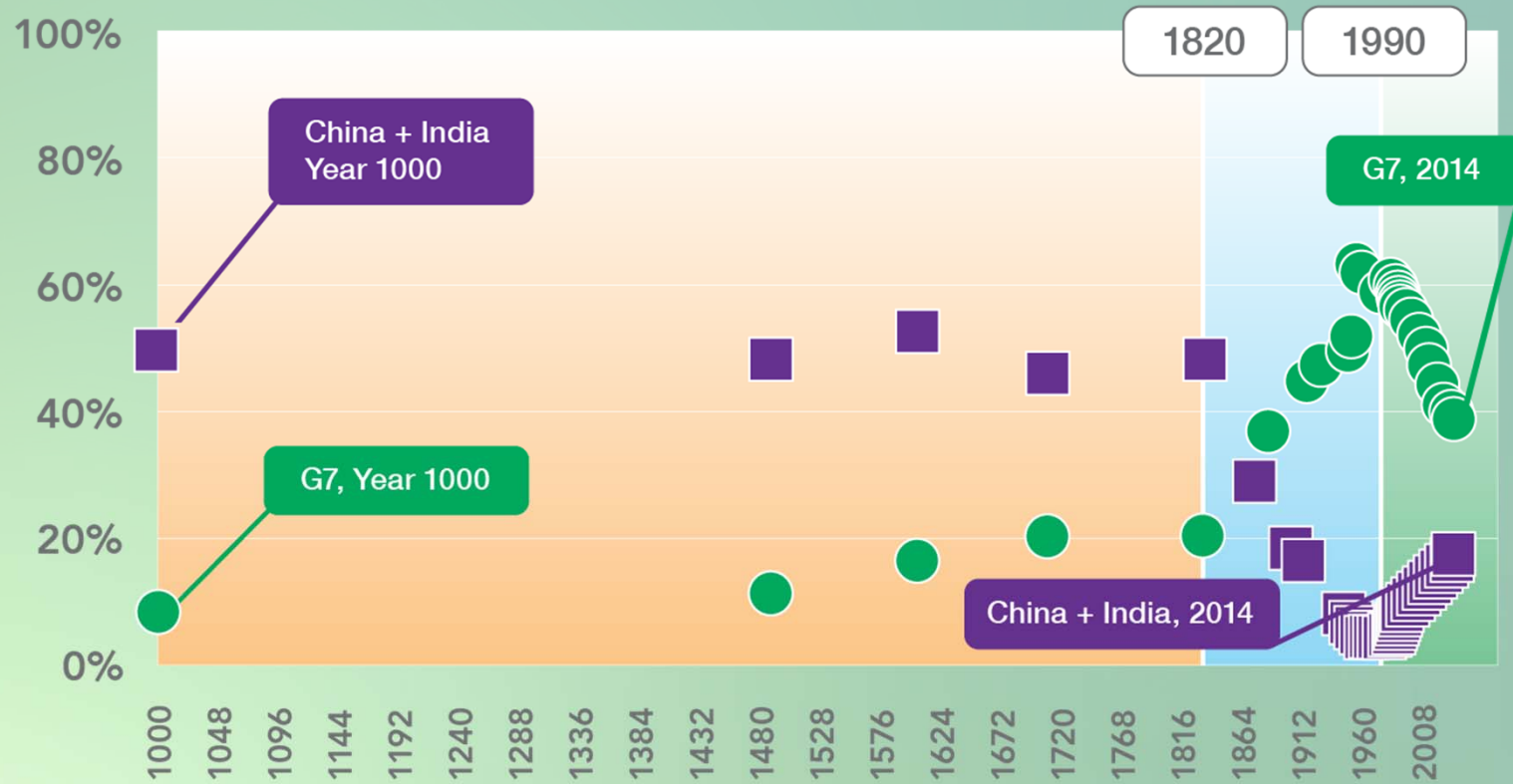
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THE GRADUATE INSTITUTE | GENEVA

25 July 2018, IATRC Vancouver

Globalisation changed radically (twice)

Shares of world income



Simplify to clarify



Globalisation as arbitrage

- Goods
- Knowhow
- Labour



Globalisation as arbitrage is constrained by three costs

Trade costs

(cost of moving goods)



Communication costs

(cost of moving ideas)



Face-to-face costs

(costs of moving people)



Globalisation: Past, Present, Future

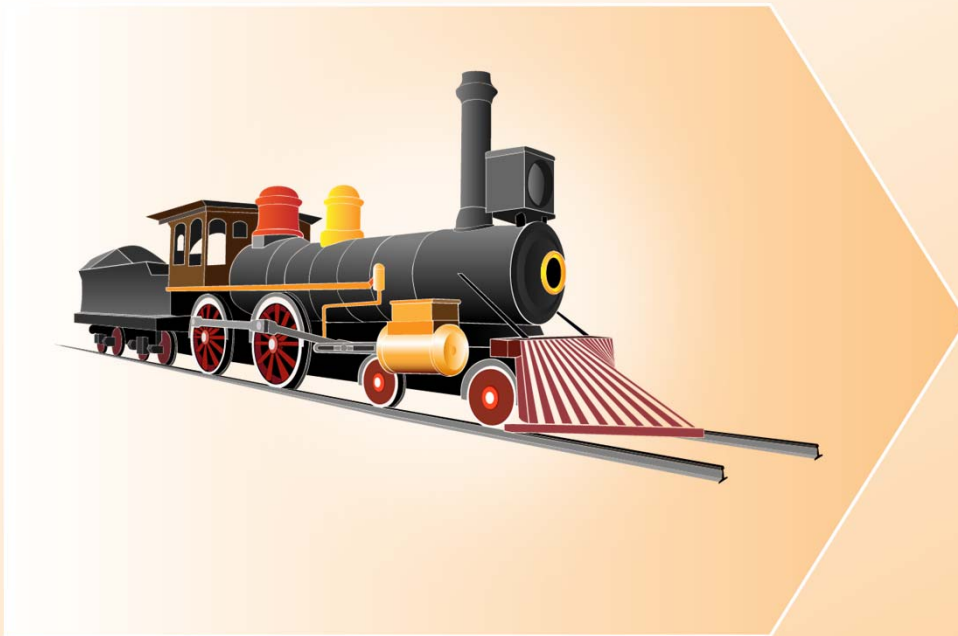


GOODS – « Old Globalisation »

KNOWHOW - « New Globalisation »

LABOUR - « Future Globalisation »

The cost of moving goods falls radically,
cost of moving ideas & people falls much less



LOWER

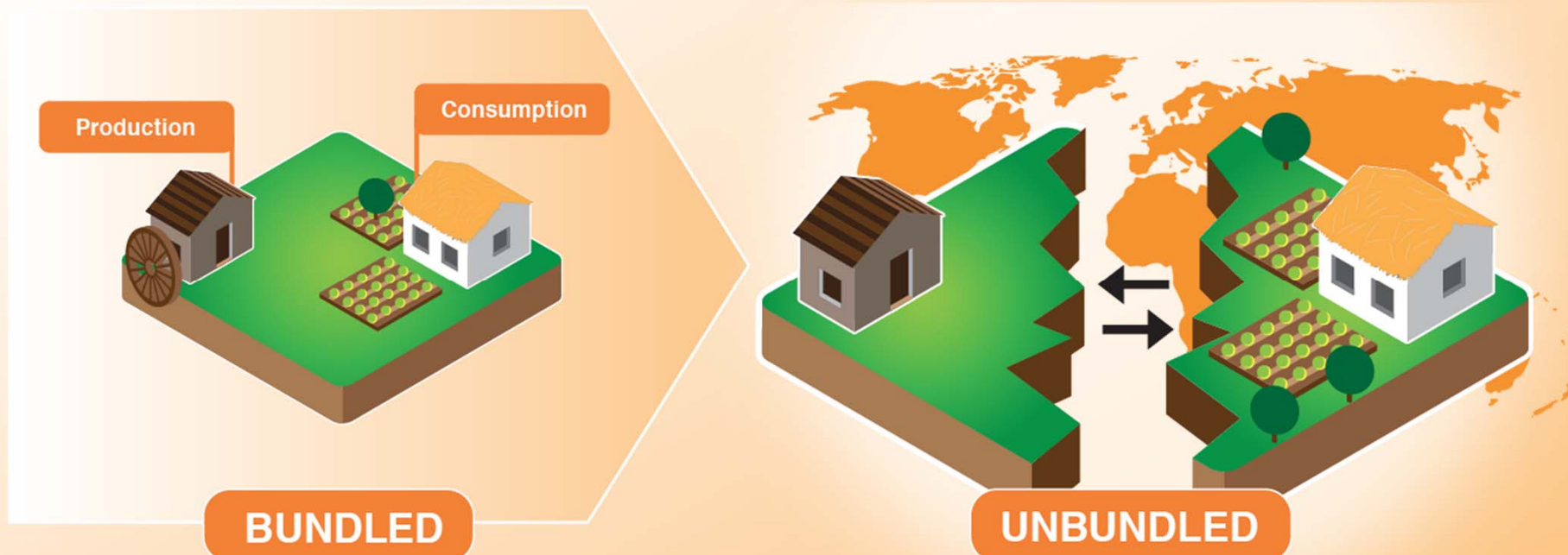


High
Communication costs

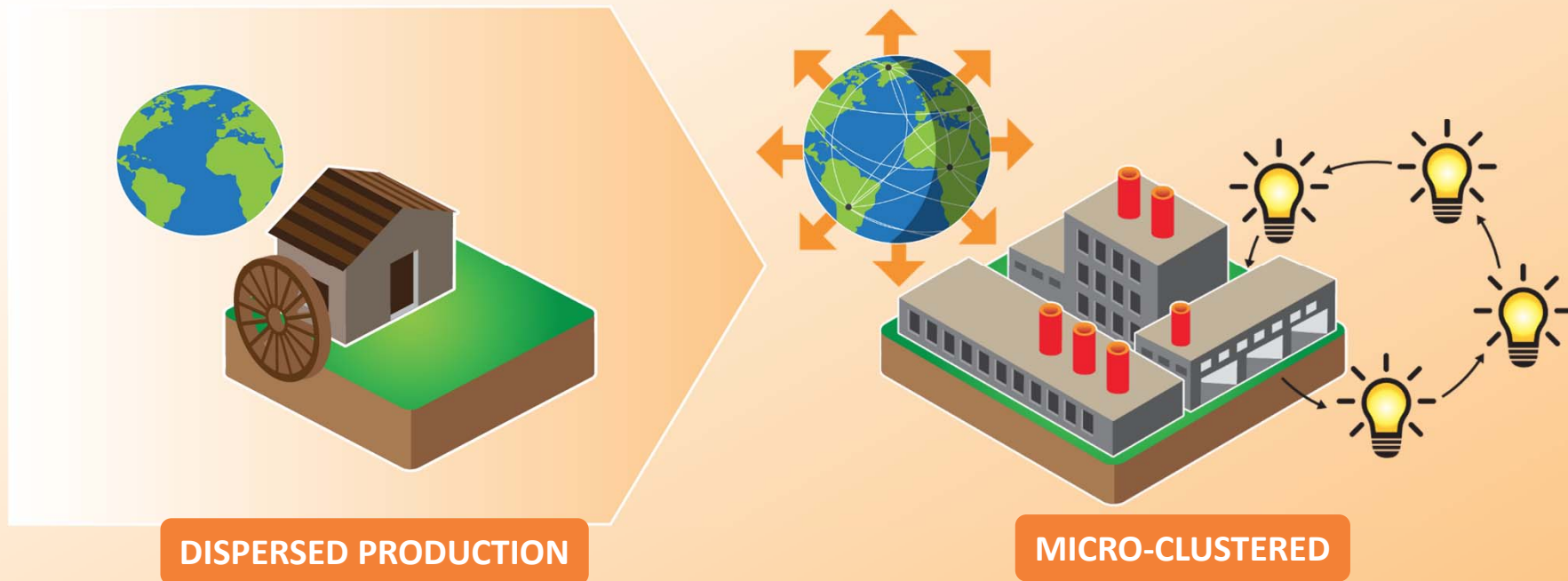


High
Face 2 face costs

Low trade costs makes high-volume trade feasible; National 'competitive advantage' makes it profitable

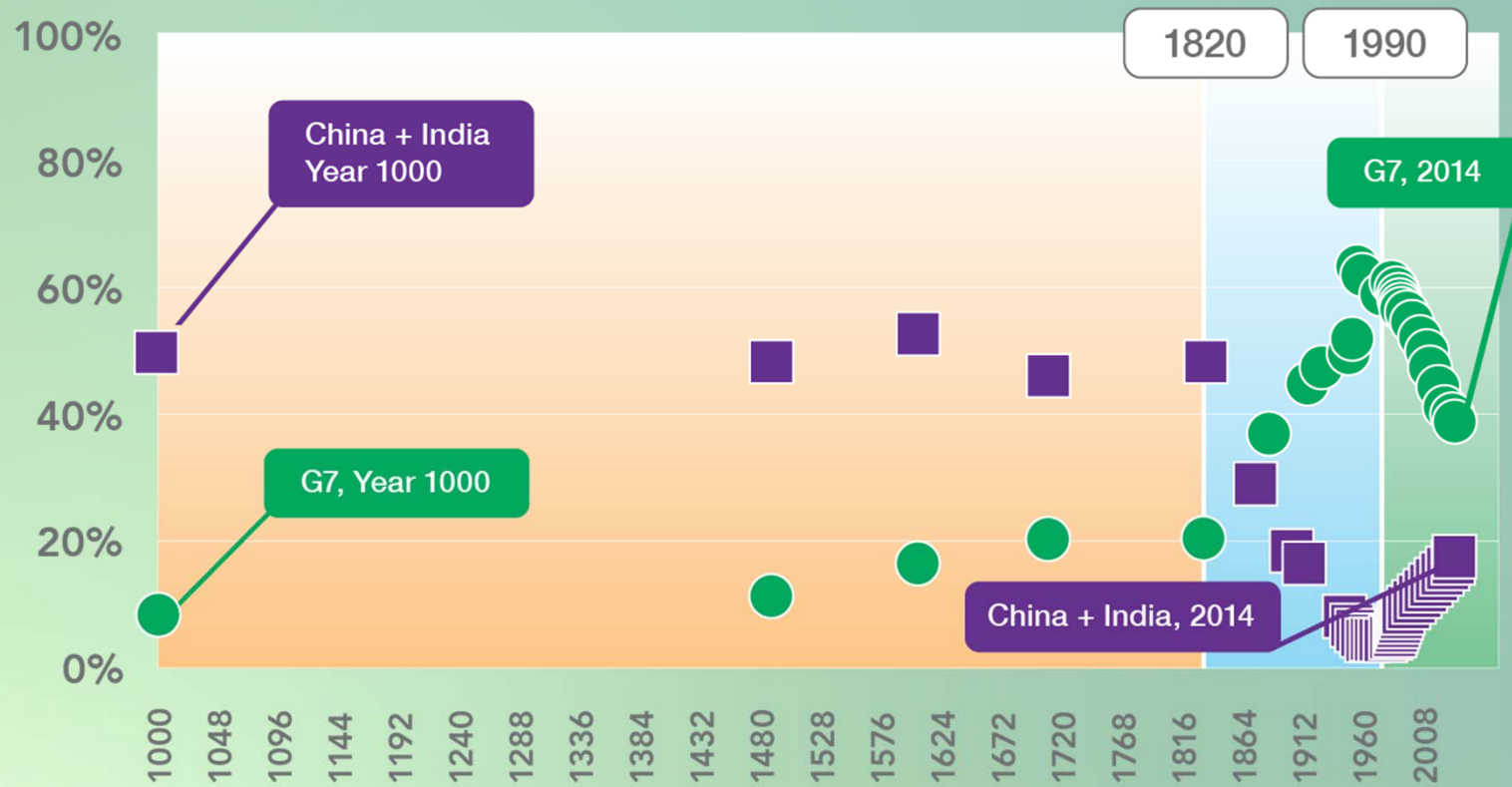


Production micro-clusters (due to communication costs, not trade costs) → Innovation & modern growth, but innovations stay in G7



Result: « The Great Divergence » (1820 to 1990)

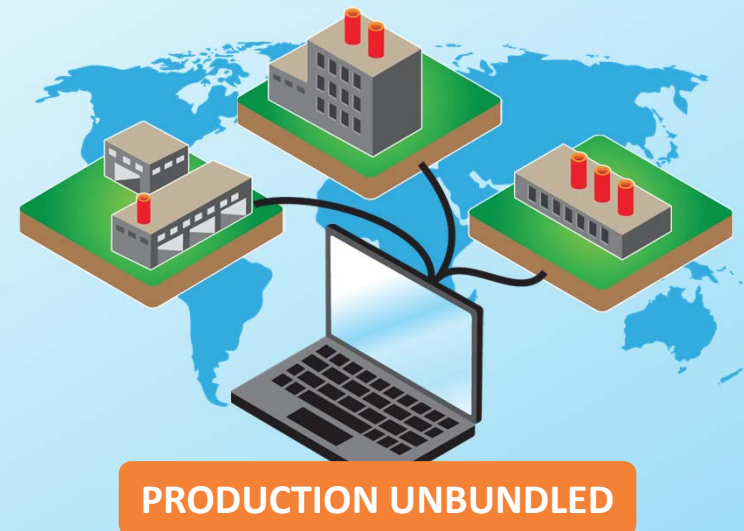
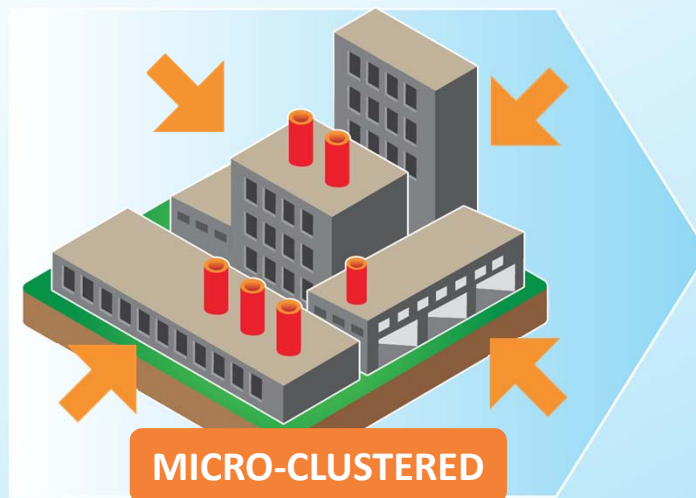
Shares of world income



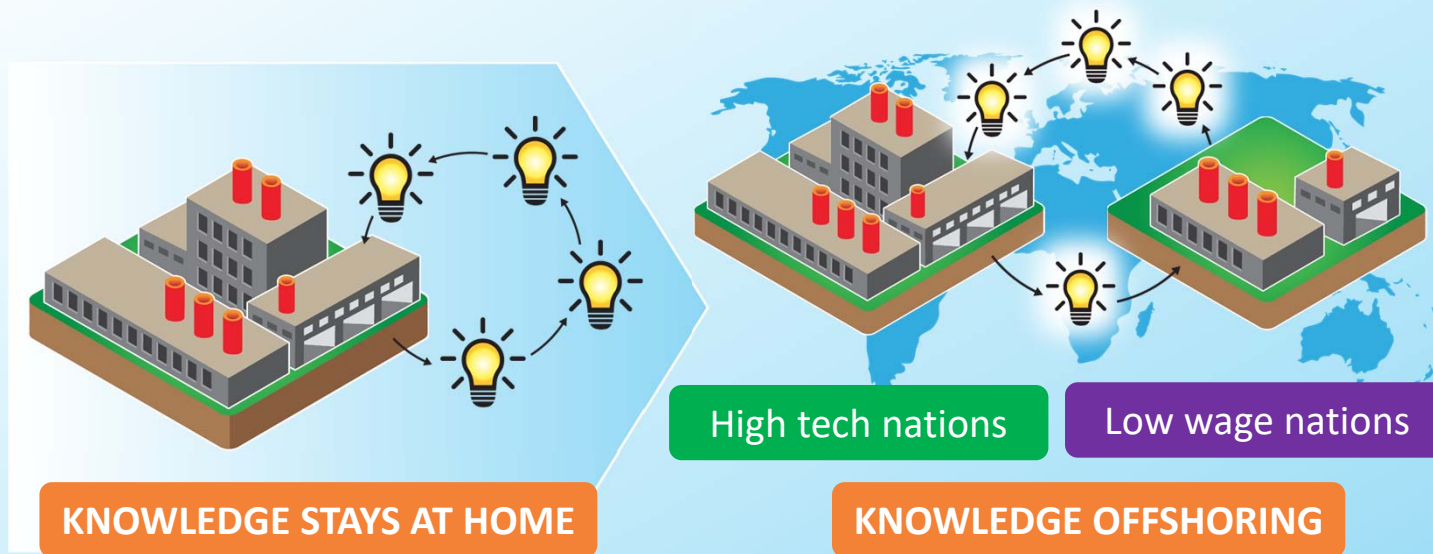
Information & Communication Technology (ICT) lowers the cost of moving ideas



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



Globalisation as knowledge arbitrage begins: To ensure offshored production fits, G7 firms offshore knowhow with the jobs



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

Headquarter Economies (G7)

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

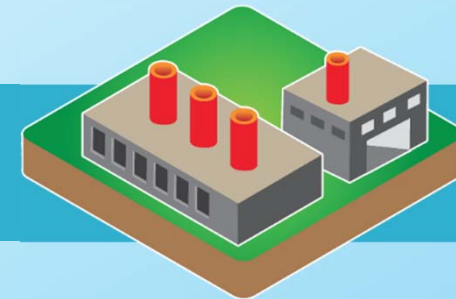
High wages



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

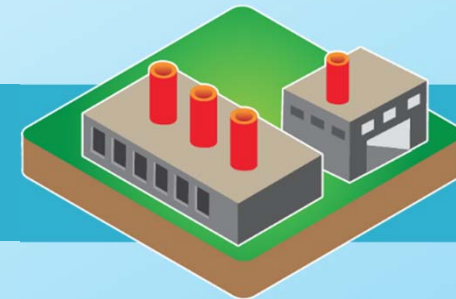
High wages



Factory Economies

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

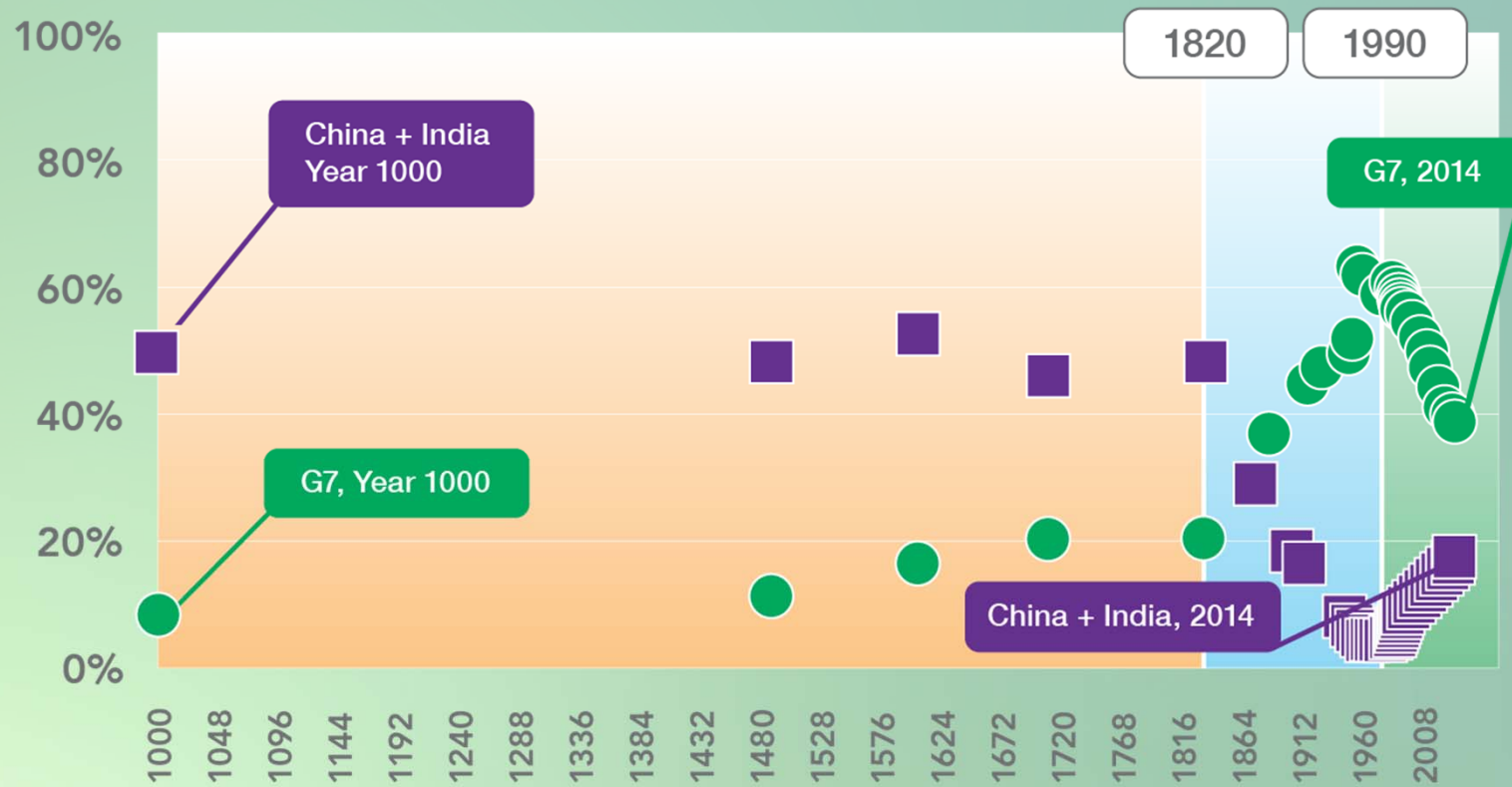
Low wages



High Tech + Low Wages Revolutionises World Manufacturing

Result: « The Great Convergence » (1990 to 2014)

Shares of world income



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



Globalisation's inevitable challenge



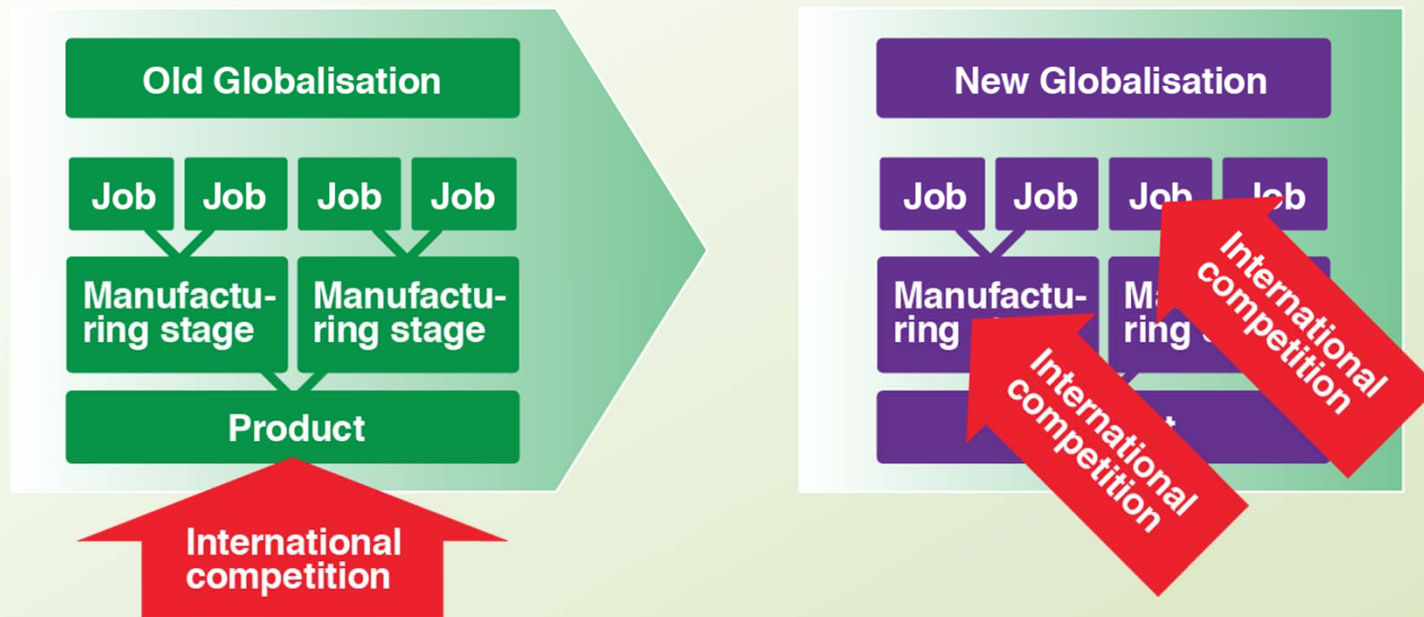
More opportunities

More competition

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



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





RESULT: 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

The future is unknowable, but also inevitable



Recall the 3 constraints on globalisation as arbitrage

Trade costs

(cost of moving goods)



Communication costs

(cost of moving ideas)



Face-to-face costs

(costs of moving labour)



What happens when digital technology relaxes third constraint on globalisation?



LOWER



LOWER



LOWER

Telepresence technology today



What brain jobs could telepresence offshore?

Average monthly salaries in USD

	US	Philippines
University Professor	6,100	400
School Teacher	4,100	300
Engineer	6,200	570



Telerobotics today

Tomorrow's Lives | Hospital | Human body

The surgeon who operates from 400km away

(St Joseph's Healthcare) (Credit: St Joseph's Healthcare)

Doctors are controlling scalpel-wielding robots in real operations from afar, finds Rose Eveleth. Is this the future of surgery?



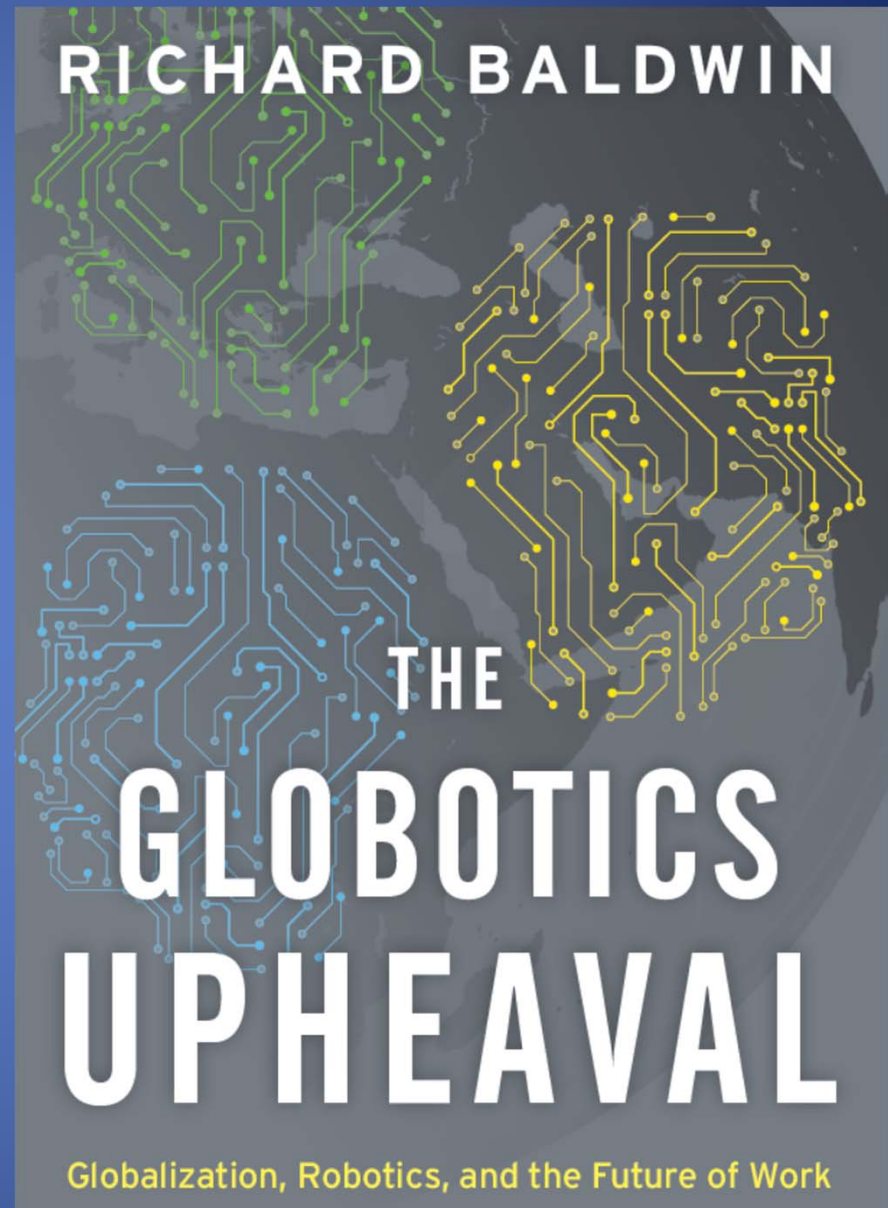
What manual service jobs could telerobotics offshore?



Think “Remote Intelligence”, not just “Artificial Intelligence”

- More rich nation disruption.
- More developing nation opportunities.

My new book –
January 2019
The Globotics
Upheaval:
Globalisation,
Robotics, and the
Future of Work



END - Thanks for listening



Table of Contents

Introduction	·	1
Part I: The Long History of Globalization in Short	·	17
1 Humanizing the Globe and the First Bundling	·	21
2 Steam and Globalization's First Unbundling	·	47
3 ICT and Globalization's Second Unbundling	·	79
Part II: Extending the Globalization Narrative	·	111
4 A Three-Cascading-Constraints View of Globalization	·	113
5 What's <u>Really New</u> ?	·	142
Part III: Understanding Globalization's Changes	·	177
6 Quintessential Globalization Economics	·	179
7 Accounting for Globalization's Changed Impact	·	207
Part IV: Why It Matters	·	221
8 Rethinking G7 Globalization Policies	·	225
9 Rethinking Development Policy	·	242
Part V: Looking Ahead	·	281
10 Future Globalization	·	283