A BRIEF HISTORY OF GLOBAL TRADE EVOLUTION AND ECONOMIC GROWTH

Technology, spatial distribution of resources and paradigm shift of economics have been driving economic integration since 1800s.

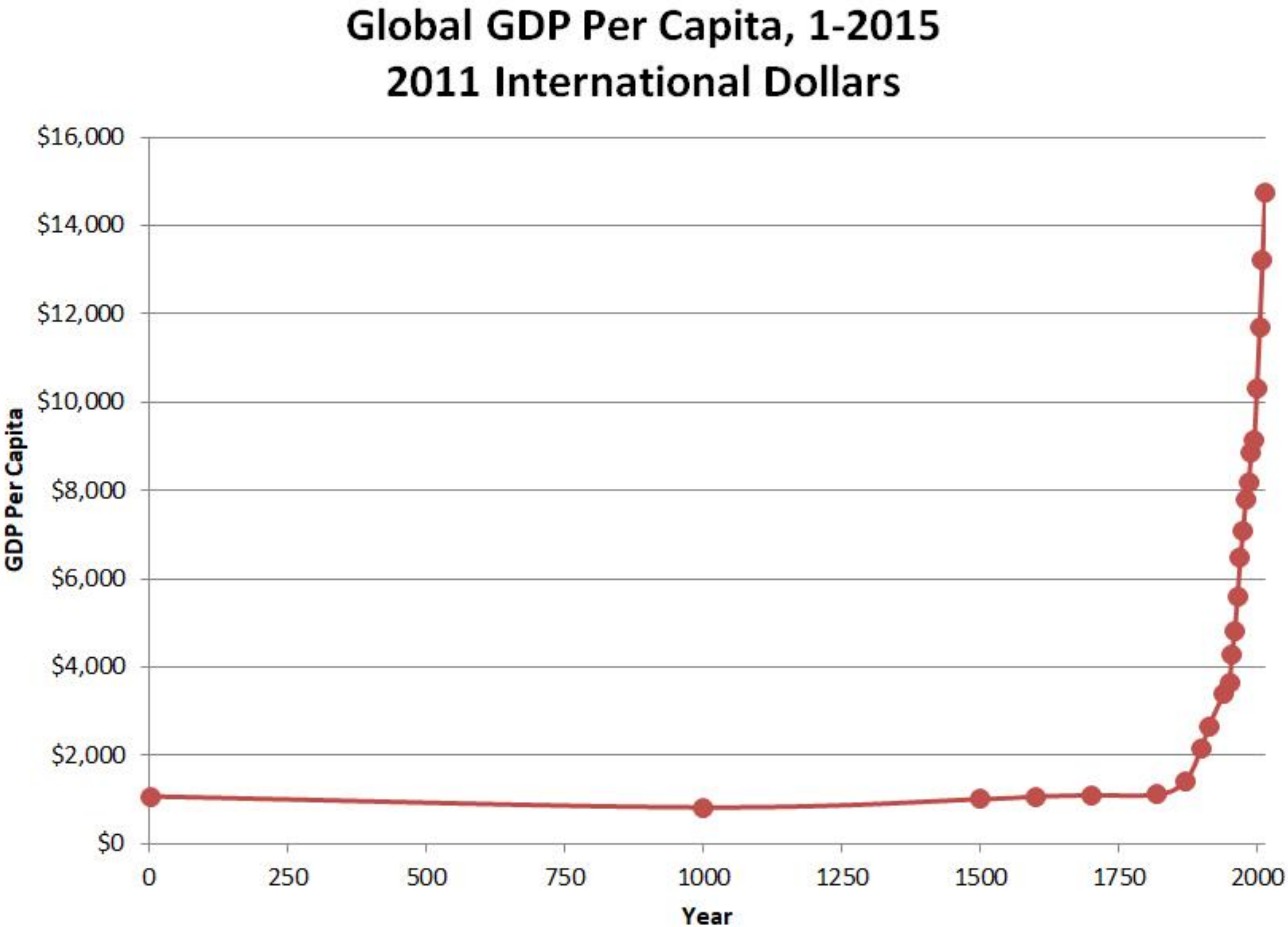
EE464: Urban Economics
EE562: Selected Topics in Development Economics 2
Semester 1 / 2020
Faculty of Economics, Thammasat University

Main contents

Part 1: First Unbundling Revolution

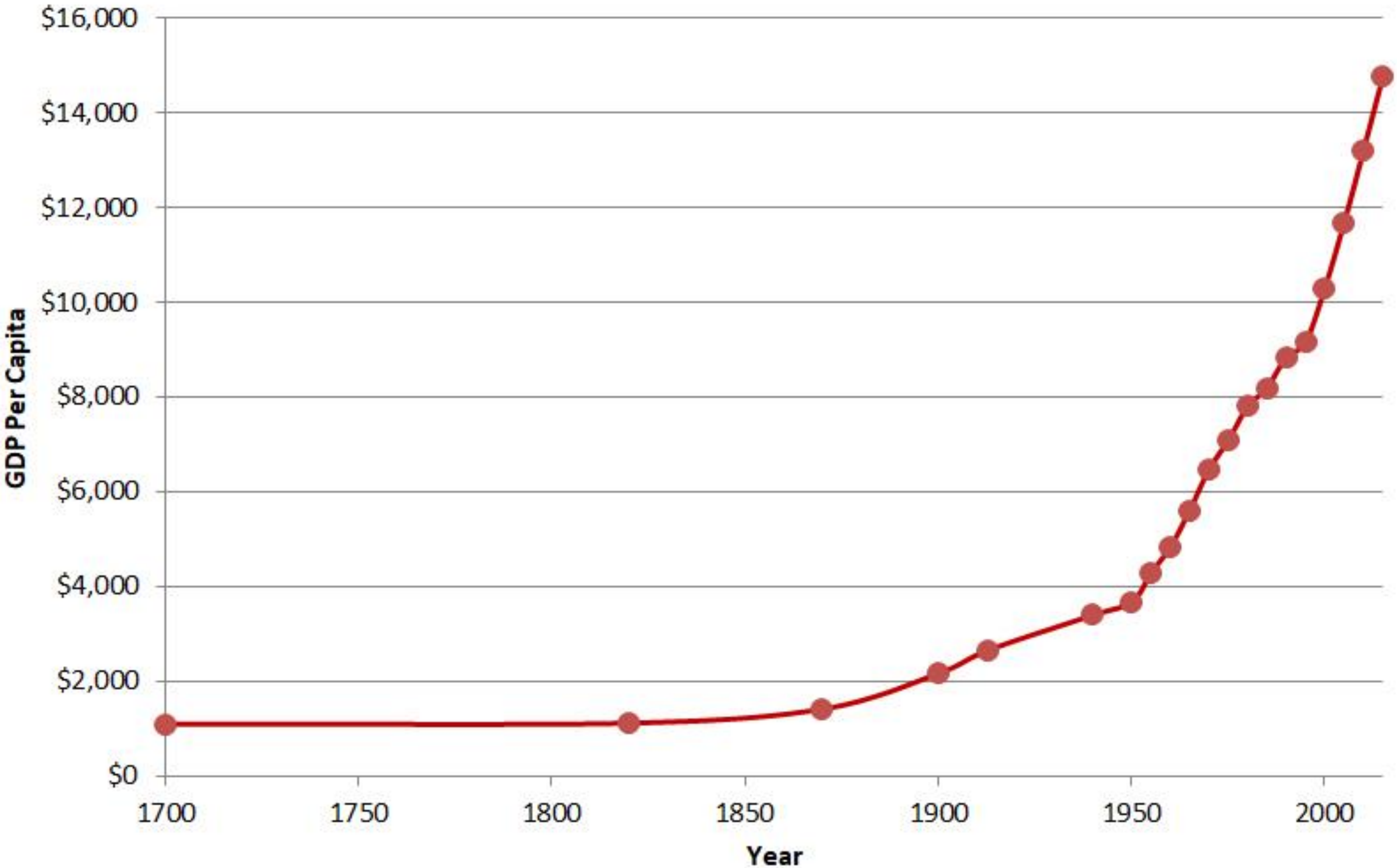
Part 2: Second Unbundling Revolution

Part 1: First Unbundling Revolution (i.e. The Industrial Revolution)

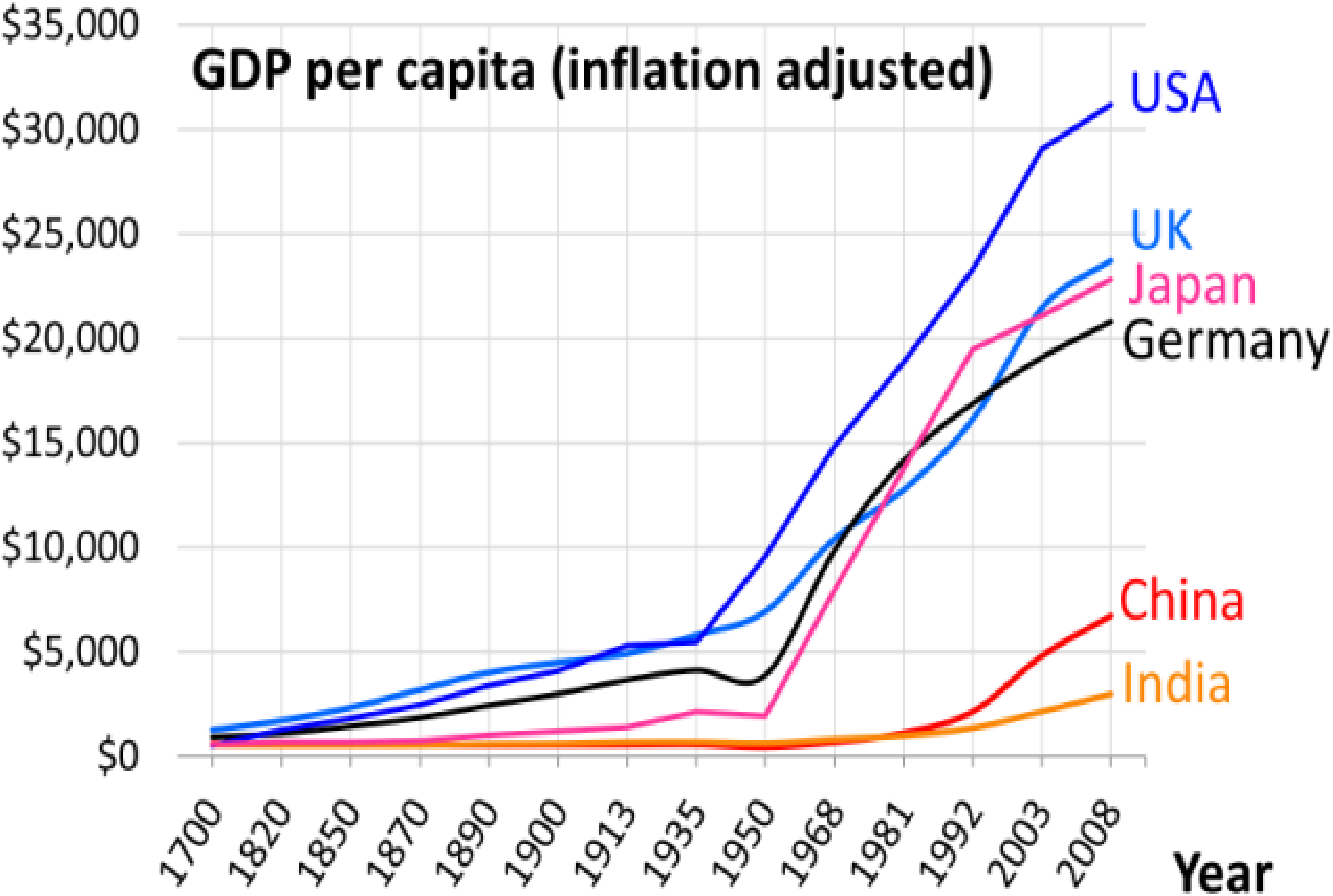


Source: GDP data from ourworldindata.org. Population data from worldpopulationhistory.org

Global GDP Per Capita, 1700-2015
2011 International Dollars

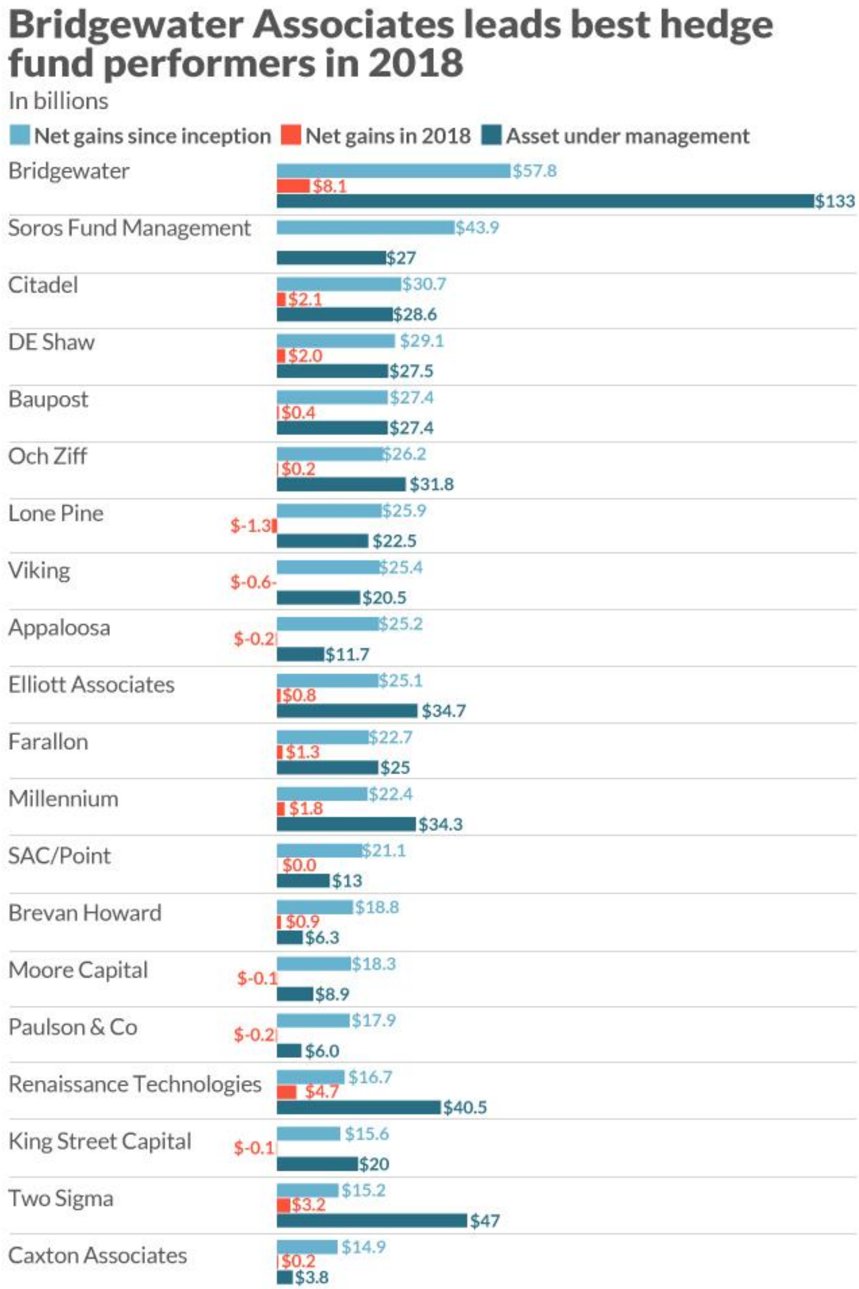


Source: GDP data from ourworldindata.org. Population data from worldpopulationhistory.org

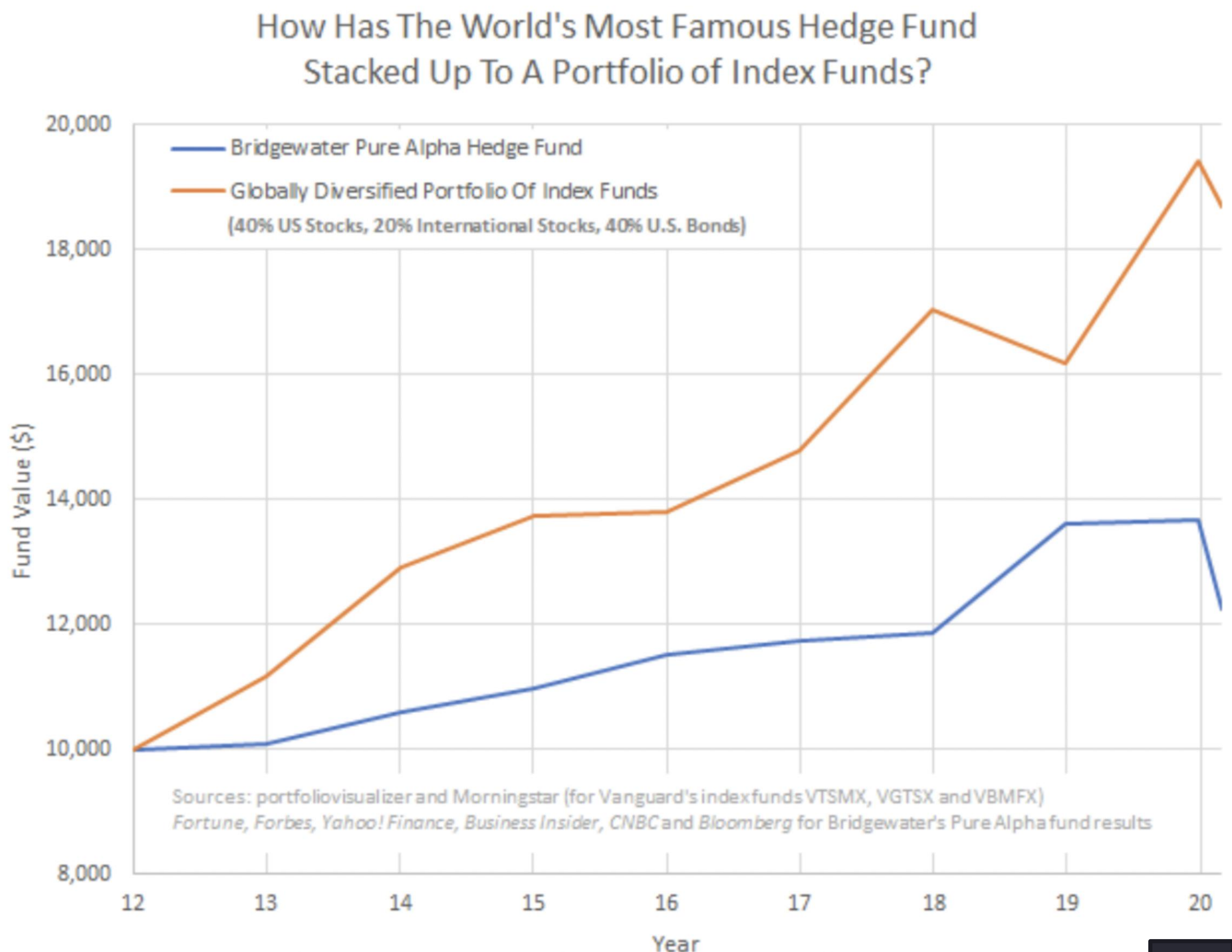


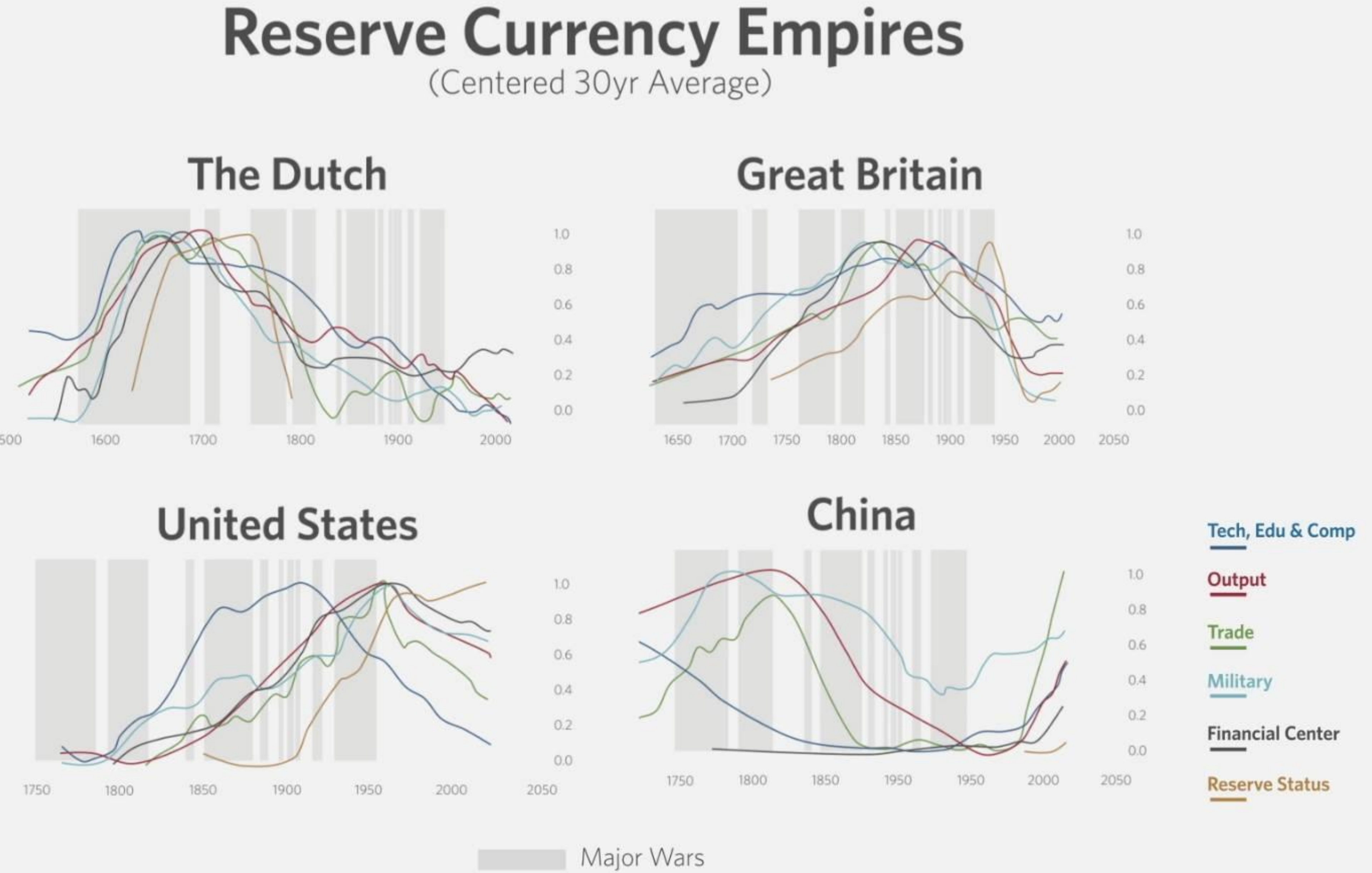
Source : https://www.forbes.com/sites/goncalodevasconcelos/2015/03/04/the-third-industrial-revolution-internet-energy-and-a-new-financial-system/2/#7ec16dd7167e

Source: https://www.youtube.com/watch?v=Mh0vEaac78U

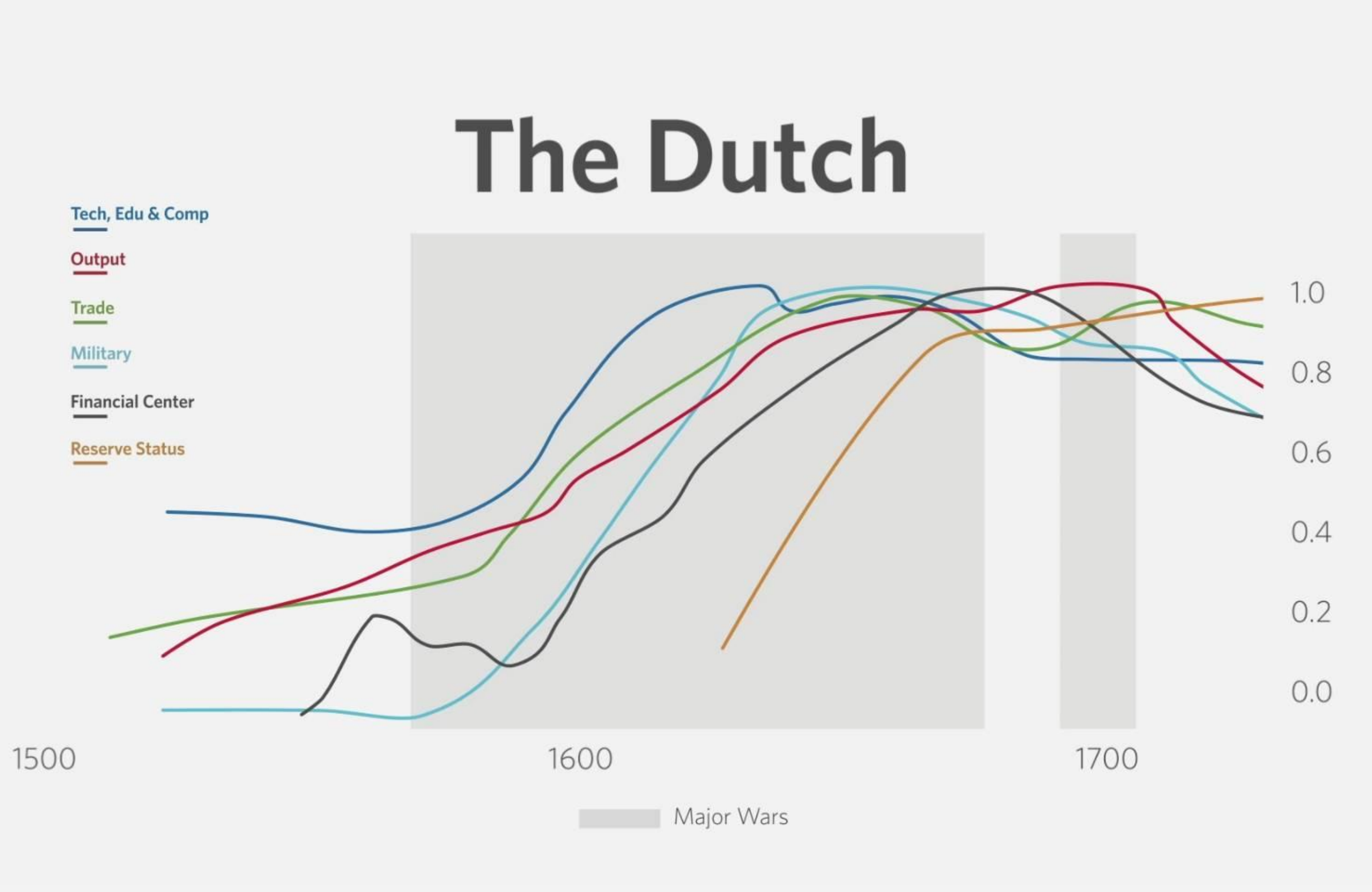


Source: https://www.youtube.com/watch?v=Mh0vEaac78U

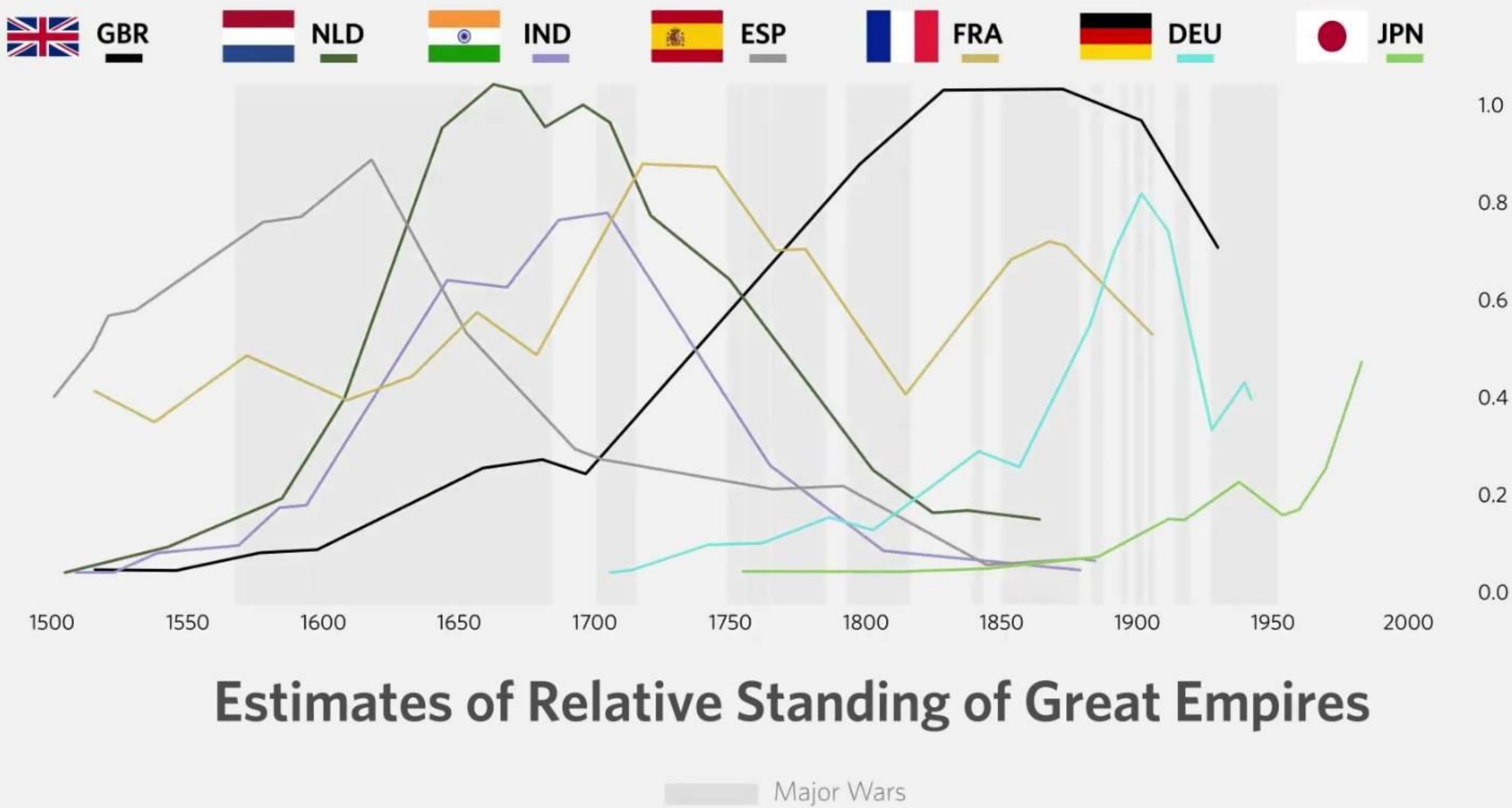

How Has The World's Most Famous Hedge Fund
Stacked Up To A Portfolio of Index Funds?
Bridgewater Pure Alpha Hedge Fund
Globally Diversified Portfolio Of Index Funds
(40% US Stocks, 20% International Stocks, 40% U.S. Bonds)
Fund Value ($)
20,000
18,000
16,000
14,000
12,000
10,000
8,000
12
13
14
15
16
17
18
19
20
Year
Sources: portfoliovisualizer and Morningstar (for Vanguard's index funds VTSMX, VGTSX and VBMFX)
Fortune, Forbes, Yahoo! Finance, Business Insider, CNBC and Bloomberg for Bridgewater's Pure Alpha fund results



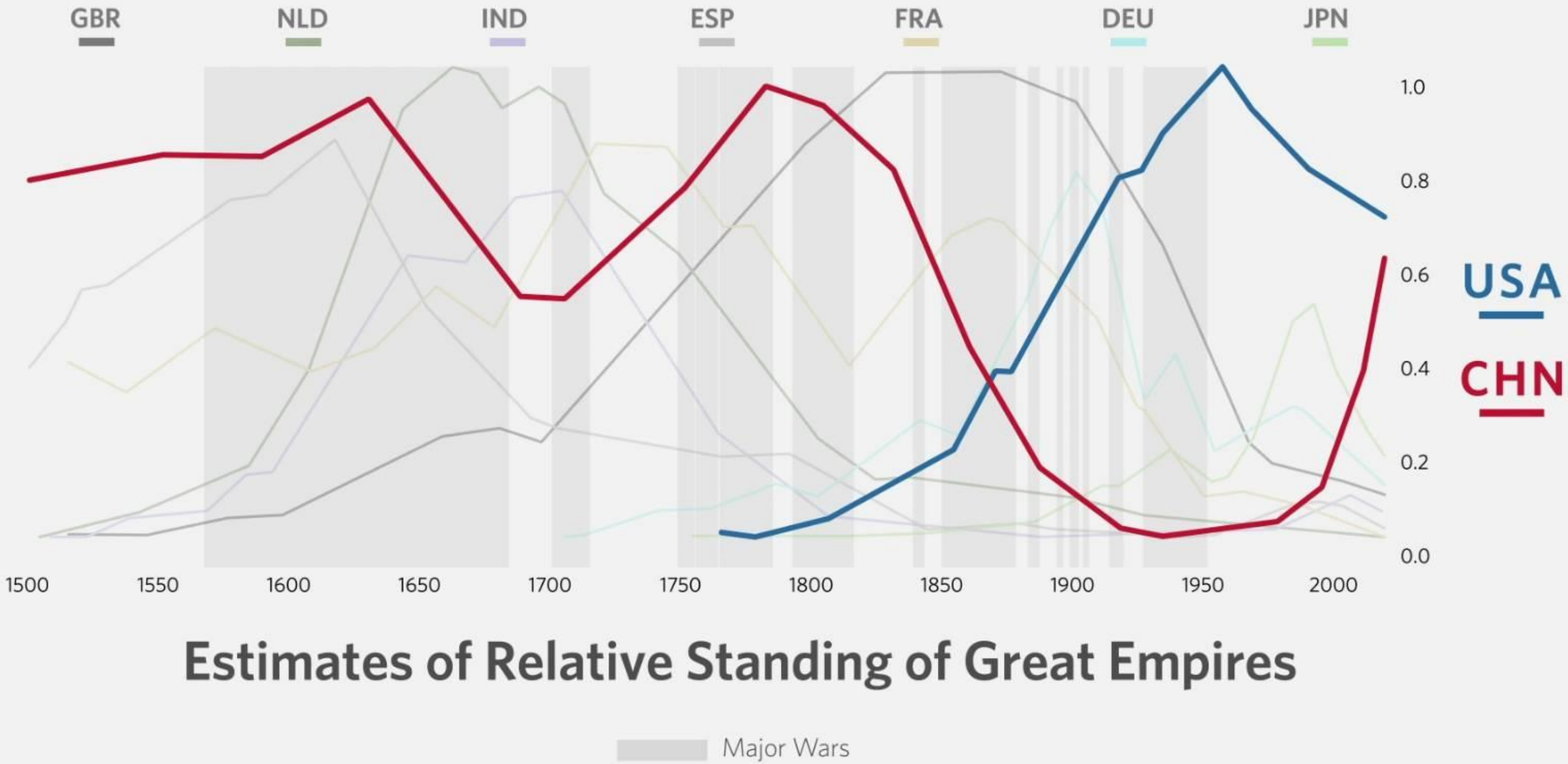
Source: https://www.youtube.com/watch?v=Mh0vEaac78U



Source: https://www.youtube.com/watch?v=Mh0vEaac78U



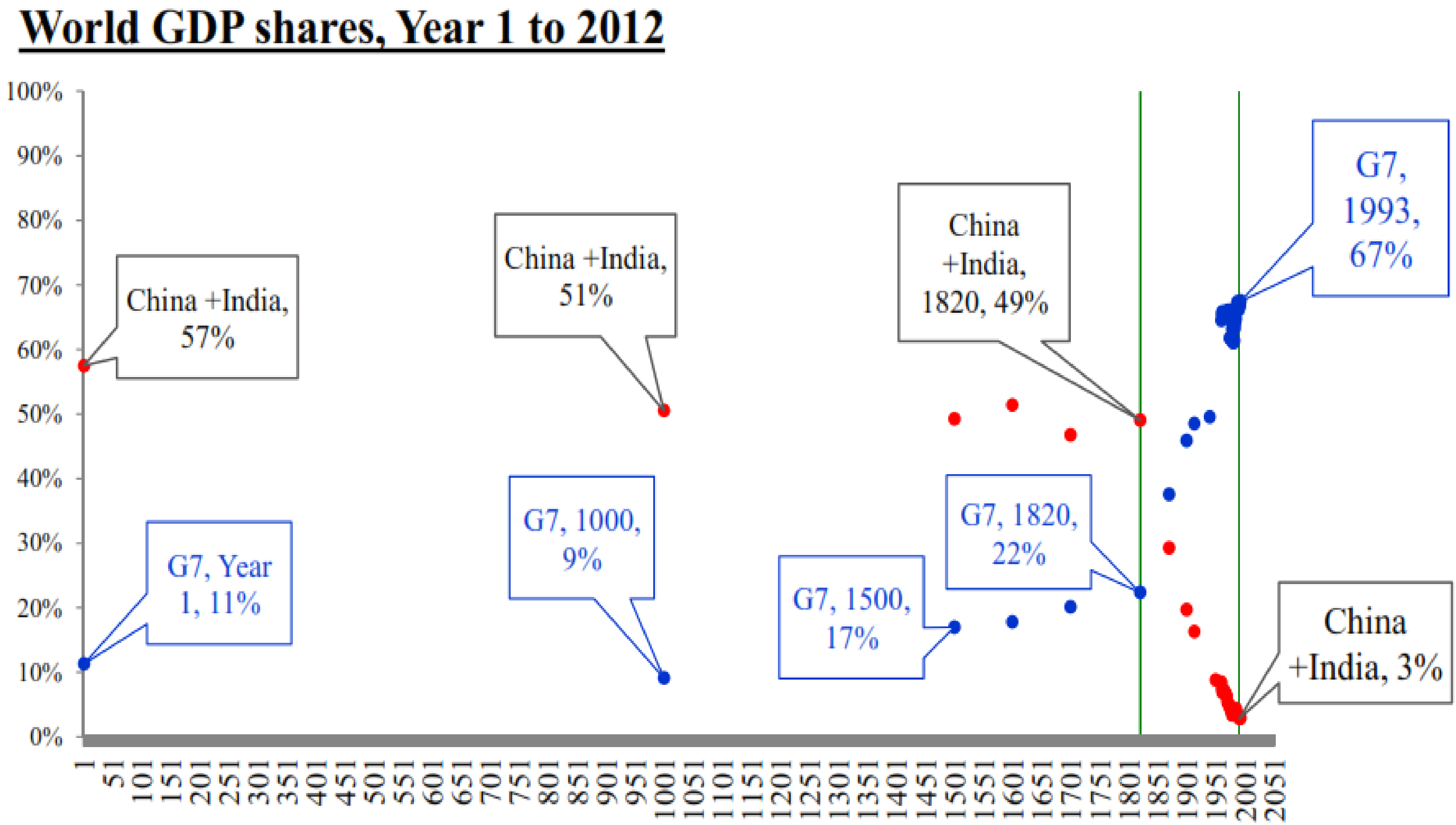
Source: https://www.youtube.com/watch?v=Mh0vEaac78U



Estimates of Relative Standing of Great Empires

Source: https://www.youtube.com/watch?v=Mh0vEaac78U

Part 1: First Unbundling Revolution



Source: Baldwin (2011)

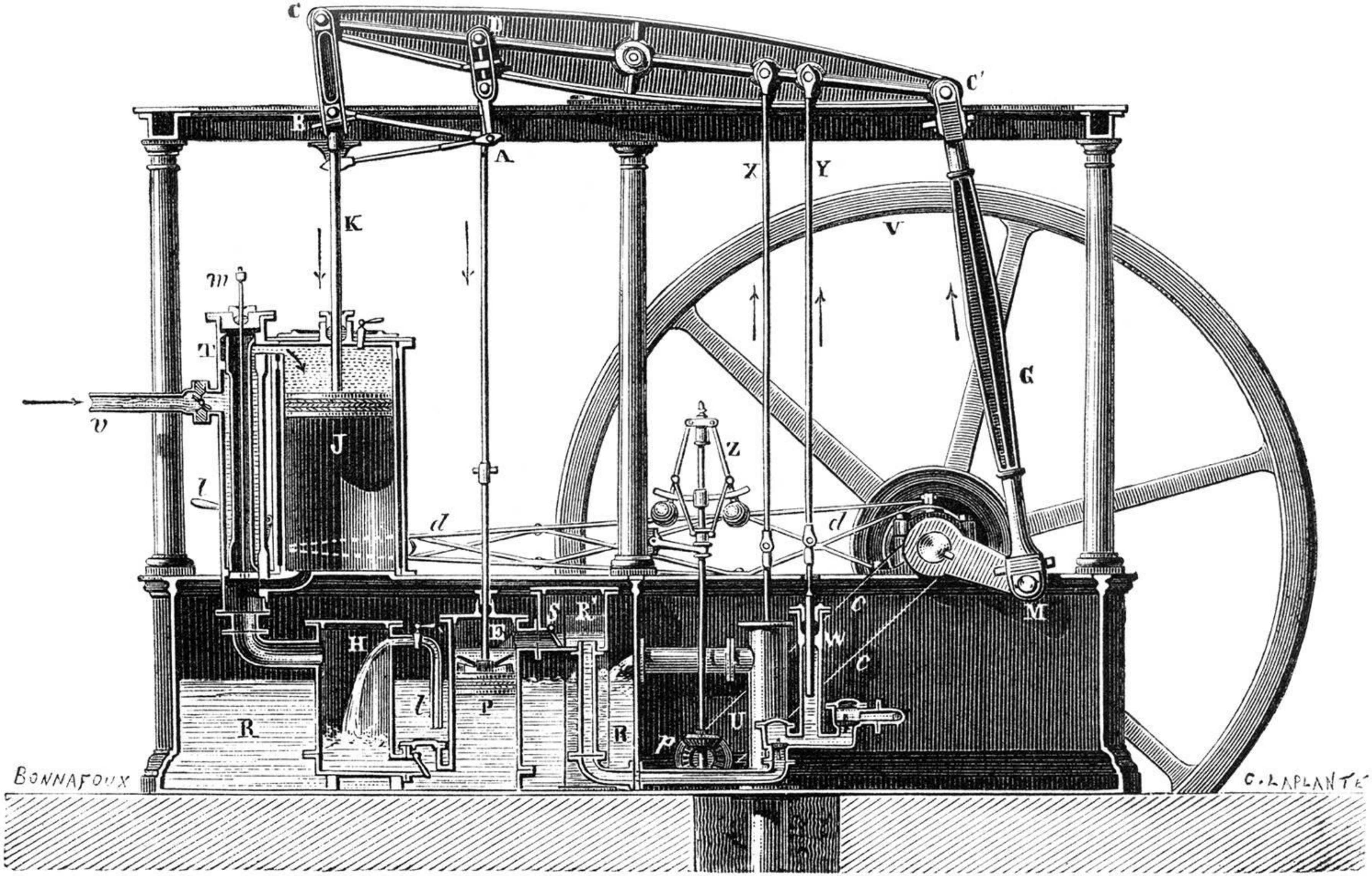
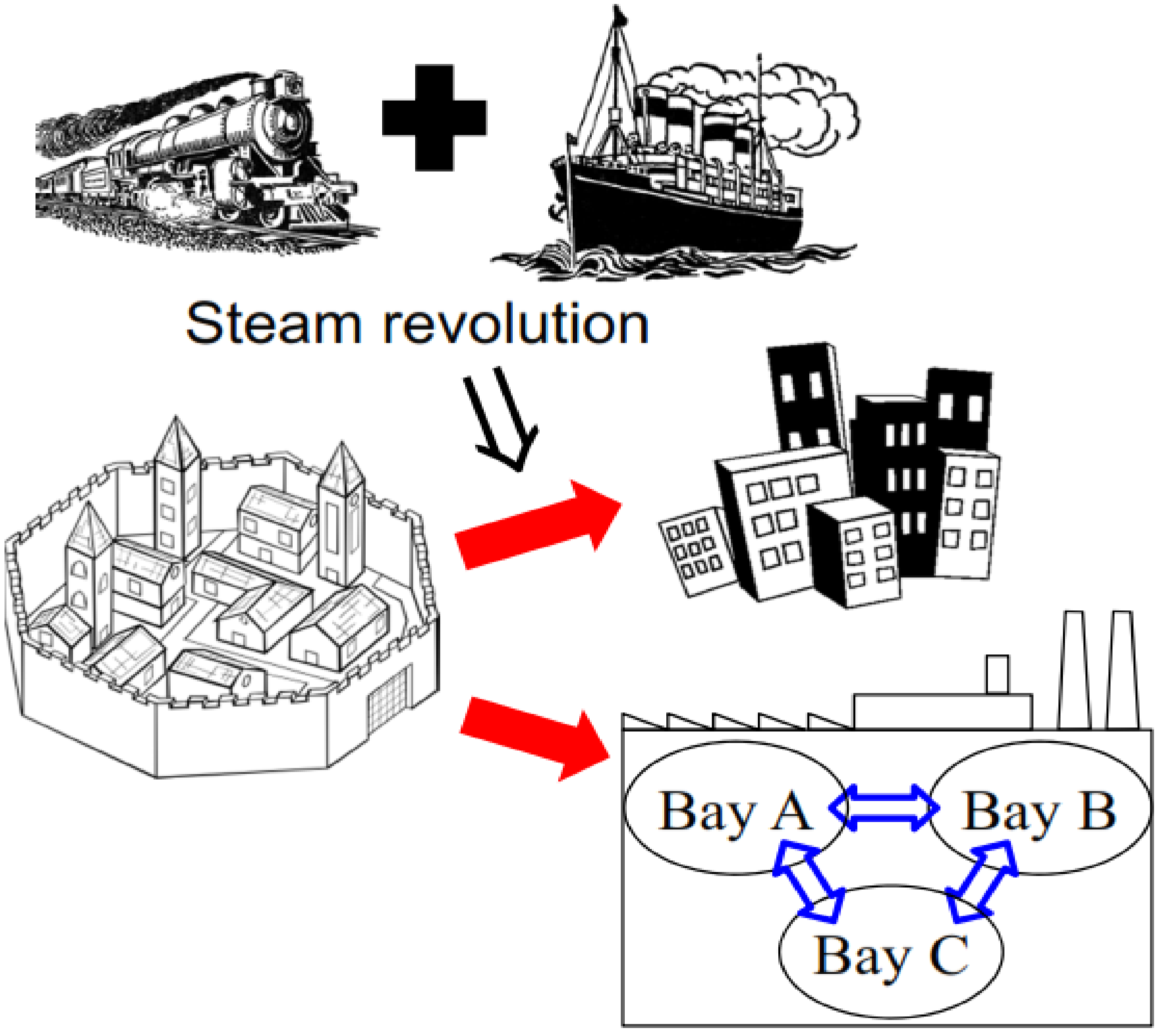


Fig. 59. — Machine à balancier de Watt.

v. Tuyau de prise de vapeur ; T, tiroir ; J, cylindre ; H, condenseur ; PE pompe d'épuisement ; WY pompe alimentaire de la chaudière UX pompe d'alimentation de la bâche R ; *p* Z régulateur ; *dd* excentrique ; ABCD parallélogramme ; GM bielle et manivelle ; V volant.

1st unbundling

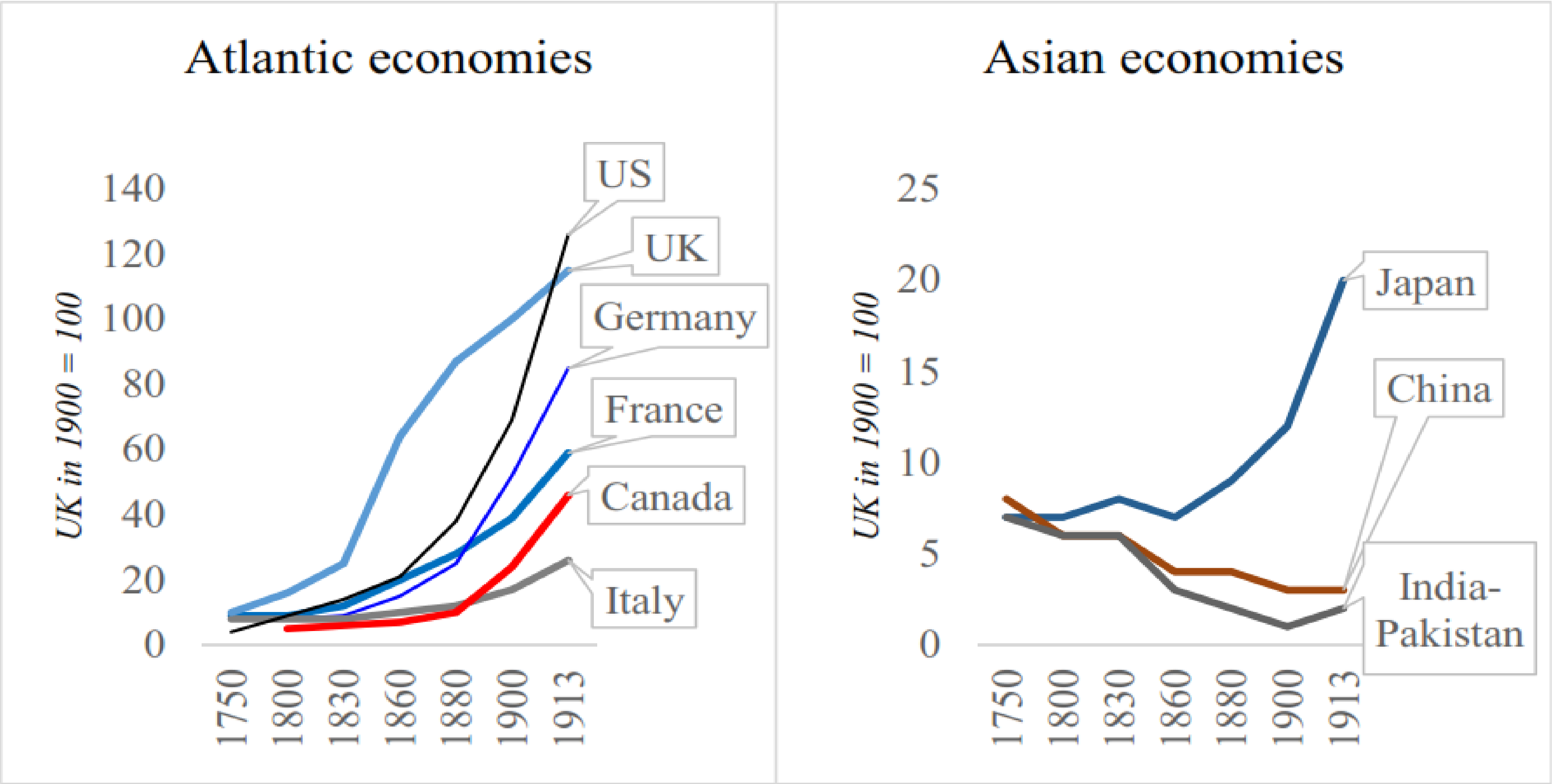


Source: Baldwin (2011)

Carcassonne, France

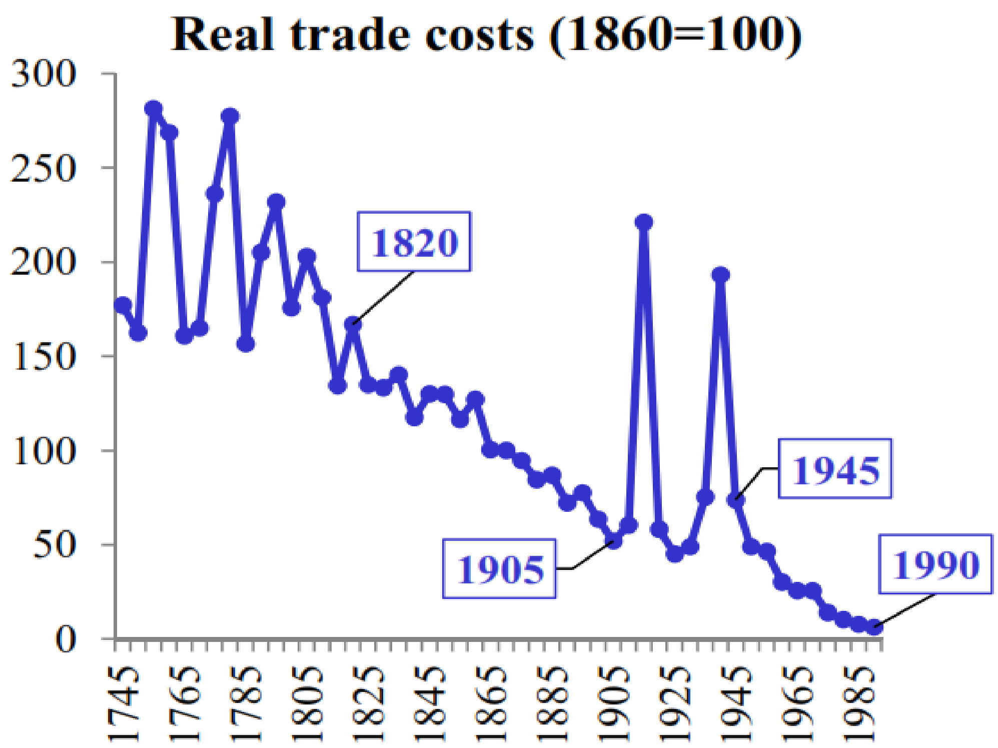
Source: https://en.wikipedia.org/wiki/Carcassonne#/media/File:1_carcassonne_aerial_2016.jpg

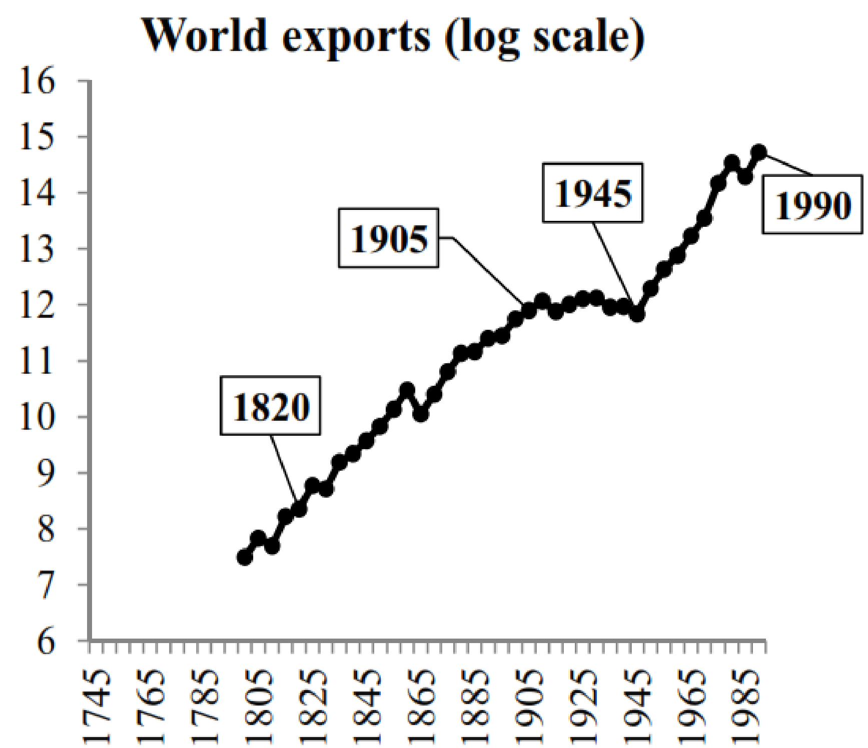
Part 1: First Unbundling Revolution



Source: Baldwin (2011)

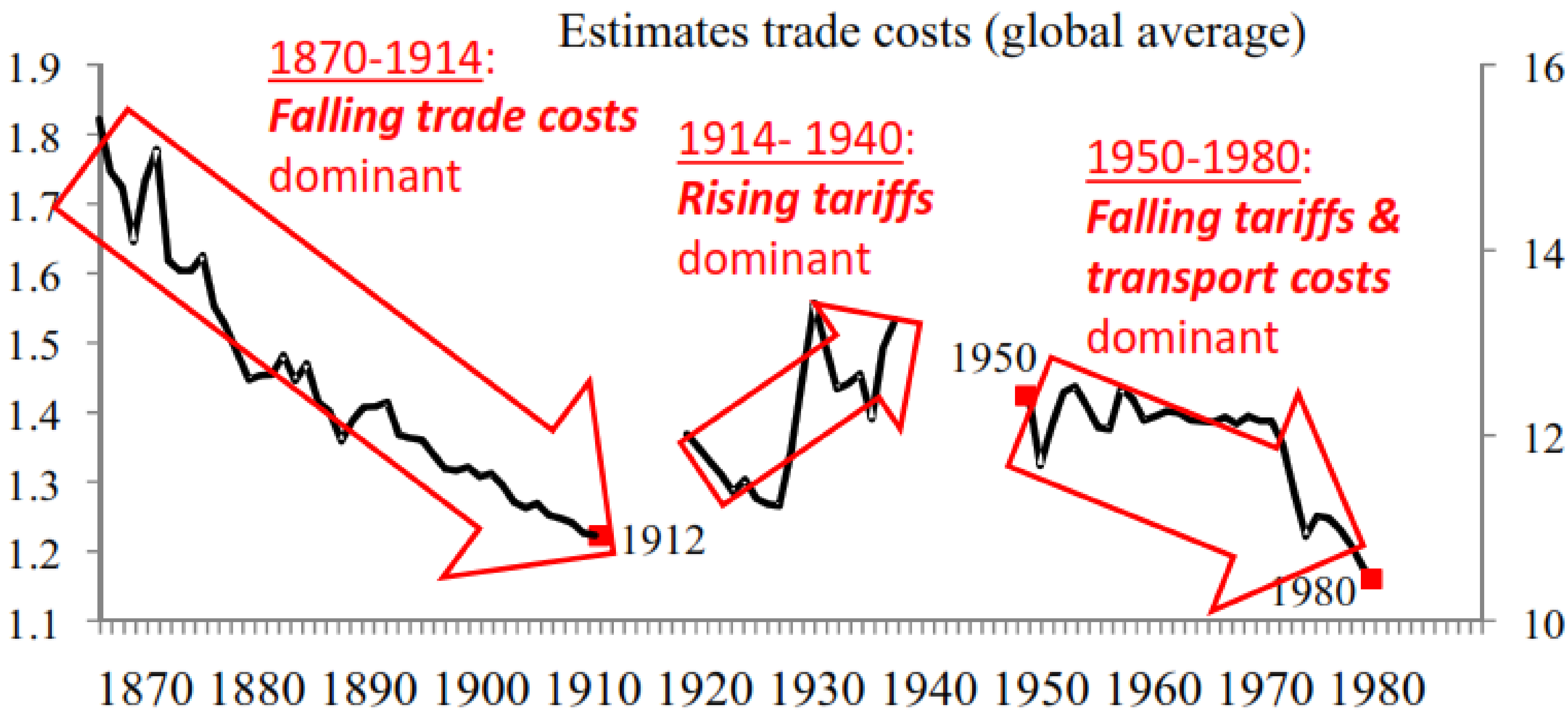
Part 1: First Unbundling Revolution





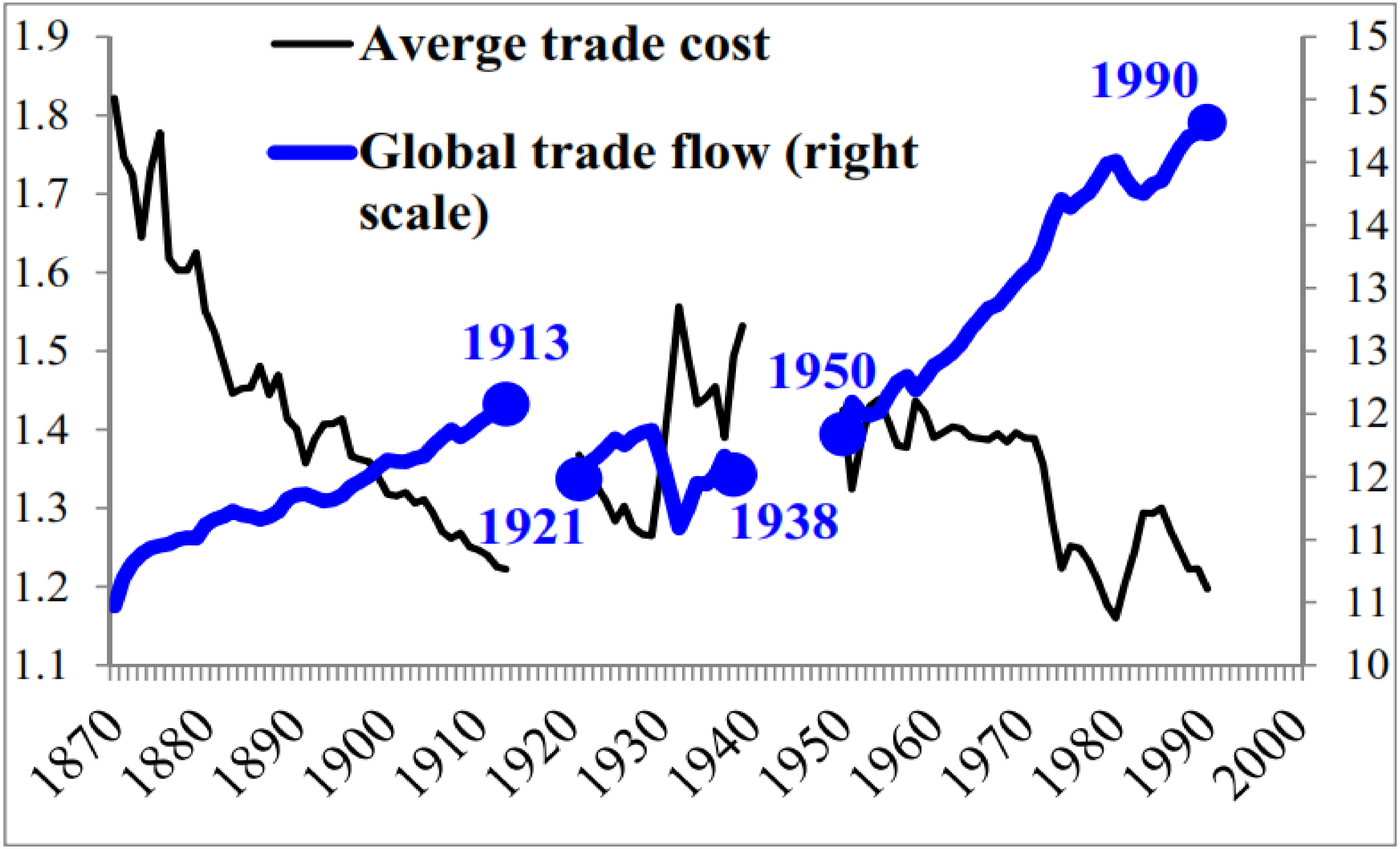
Source: Baldwin (2011)

Part 1: First Unbundling Revolution



Source: Gravity model based estimates of trade costs (Jacks, Meissner, Novy 2011).

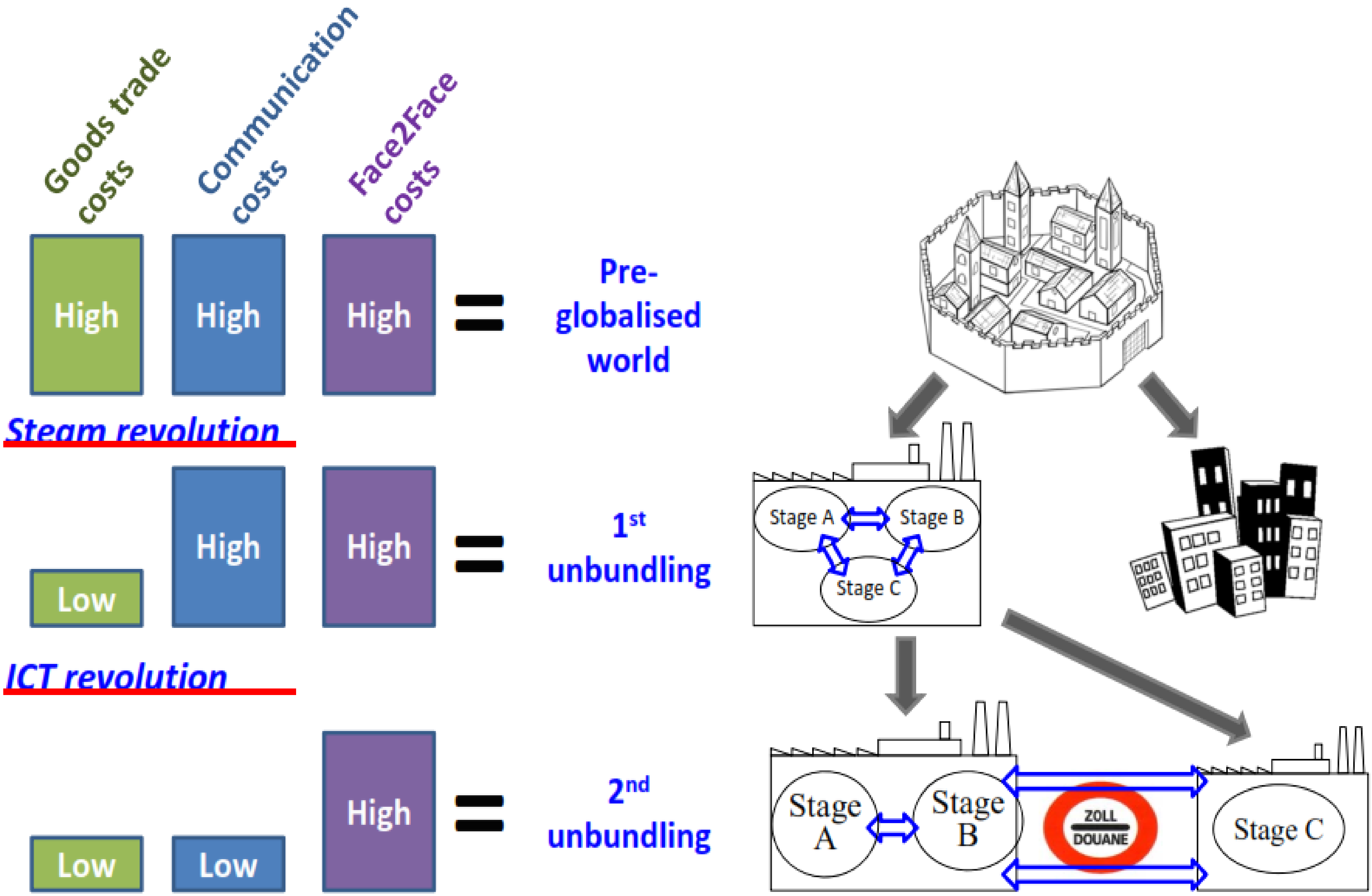
Part 1: First Unbundling Revolution



Source: Gravity model based estimates of trade costs (Jacks, Meissner, Novy 2011).

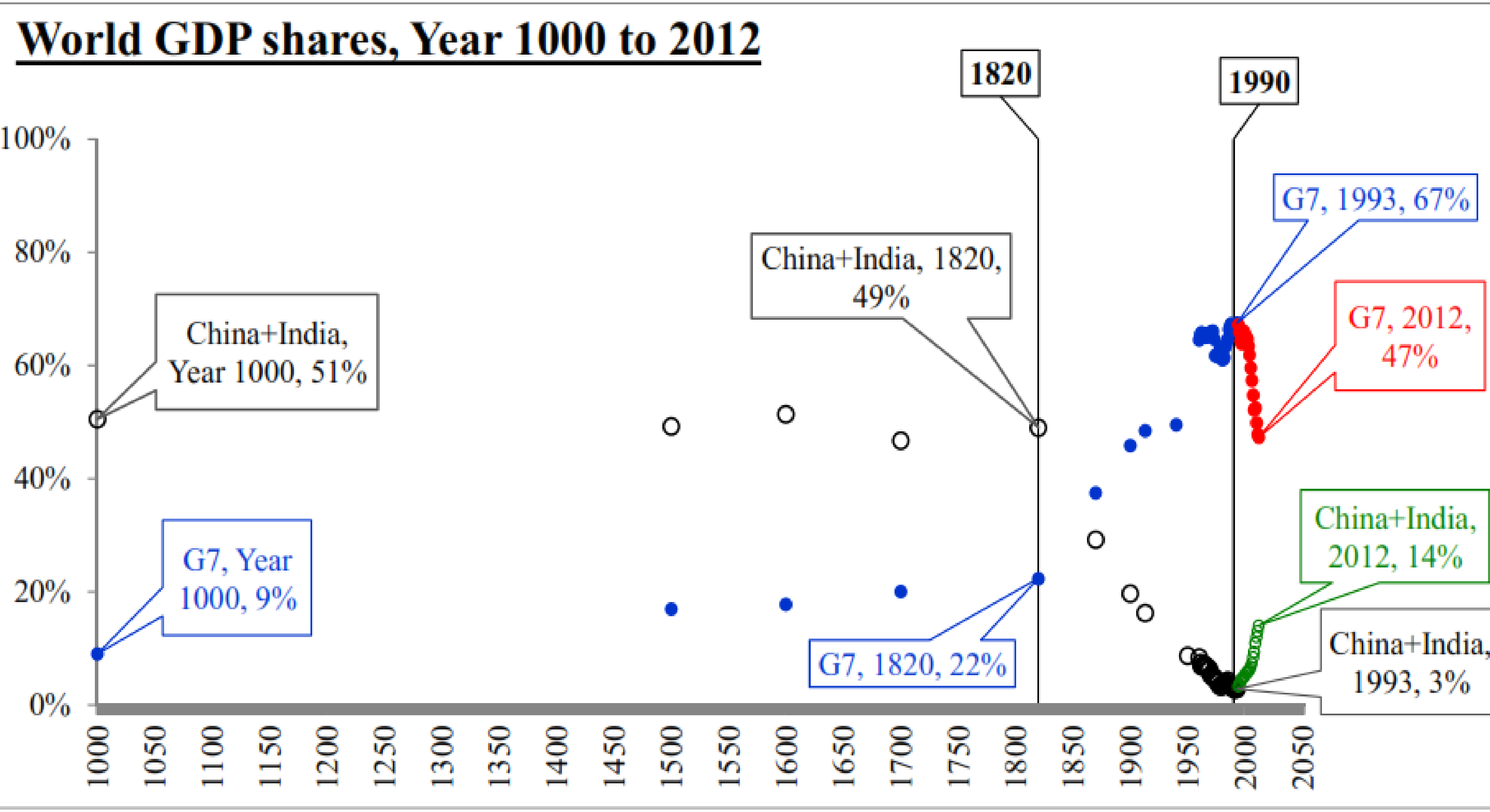
Part 2: Second Unbundling Revolution

Part 2: Second Unbundling Revolution



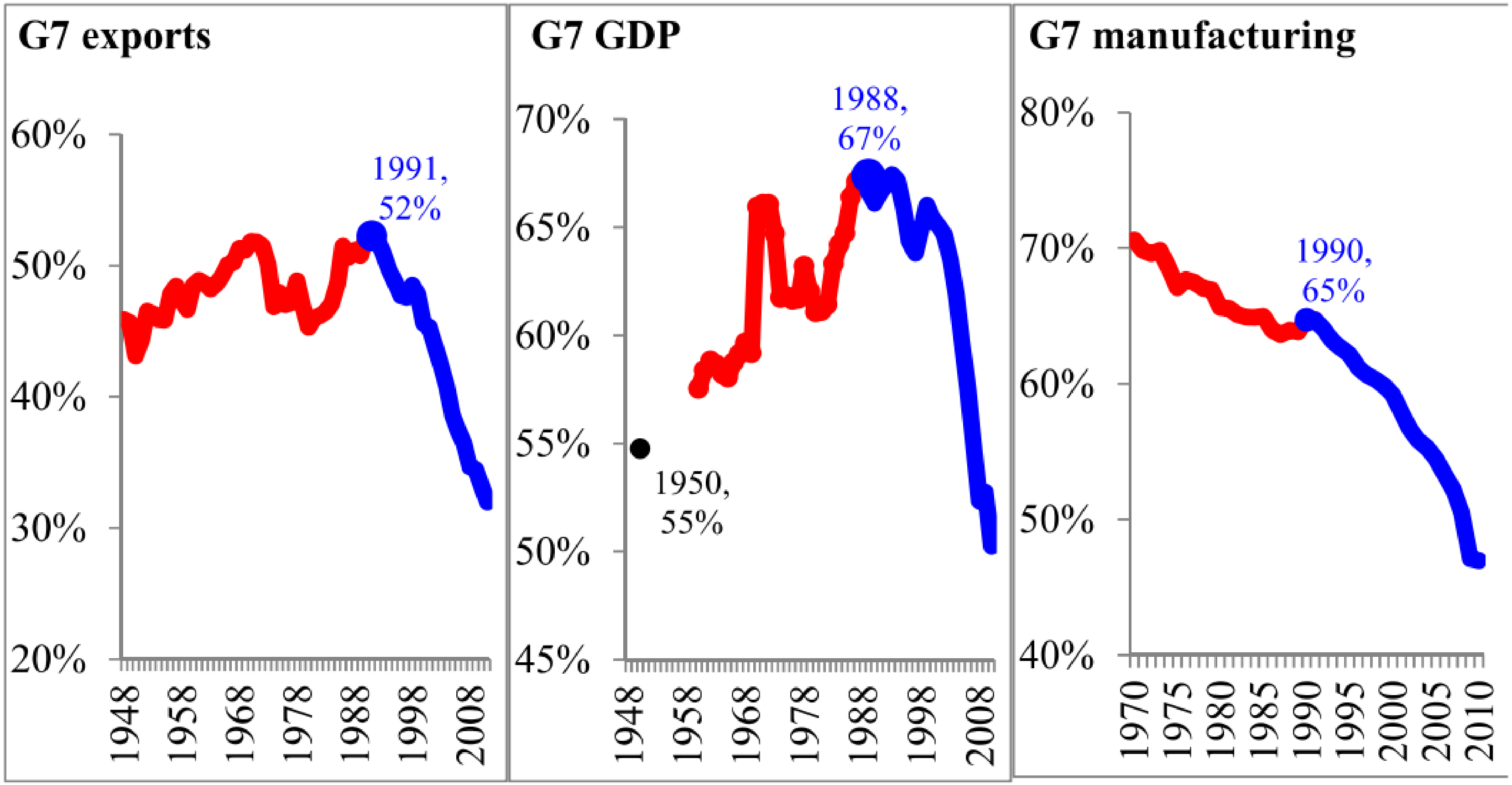
Source: Baldwin (2011)

Part 2: Second Unbundling Revolution



Source: Baldwin (2011)

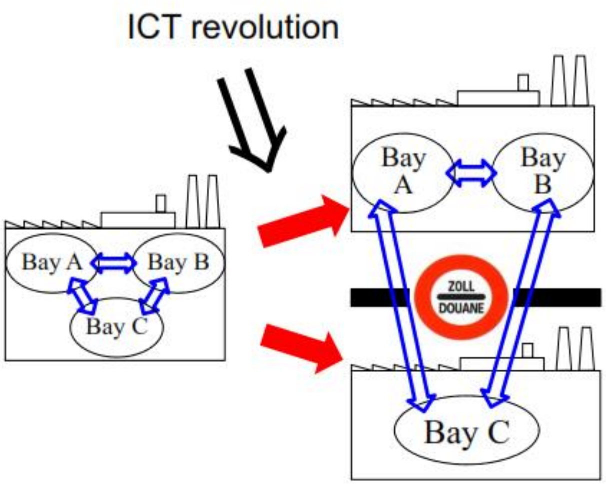
Part 2: Second Unbundling Revolution



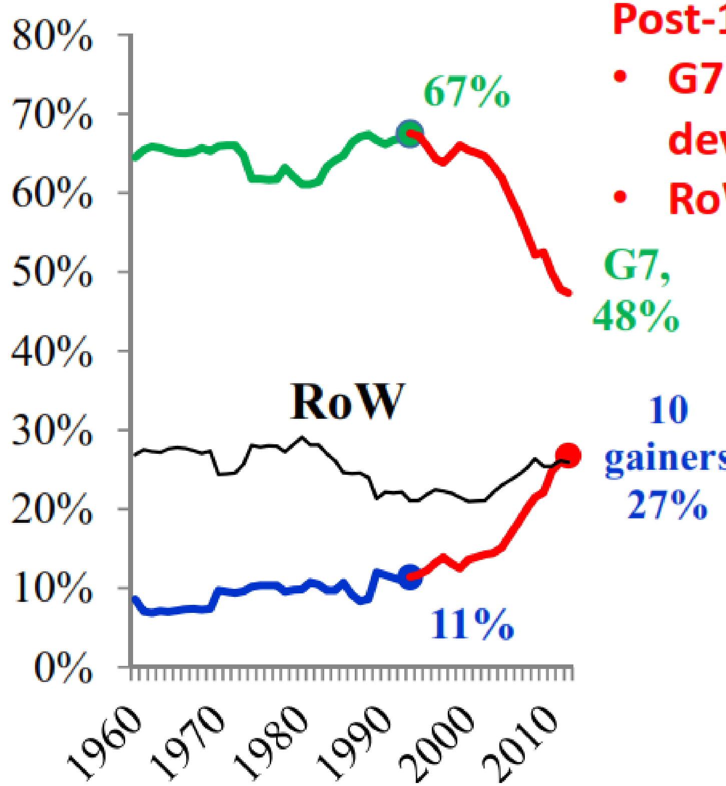
Source: Baldwin and Gonzalez (2013)

Part 2: Second Unbundling Revolution

2nd unbundling



Dispersion of production stages, but regional clustering ('factory Asia', 'factory EU', etc.)



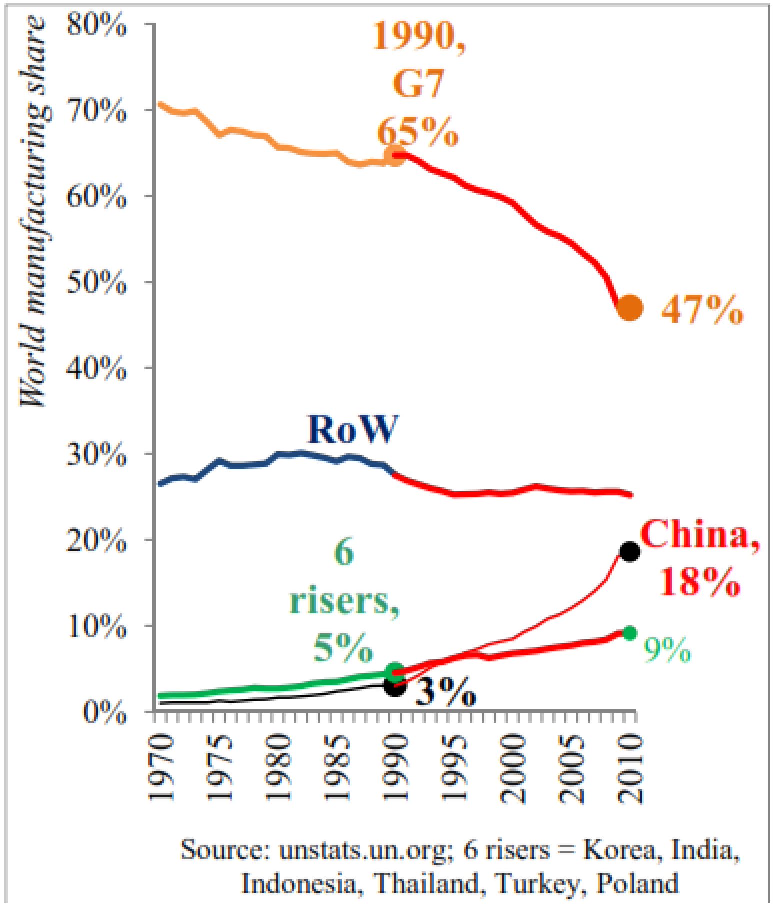
China, Brazil, Mexico, Poland, India, Turkey, Russia, Korea, Indonesia, Venezuela

Post-1990:

- G7 share loss goes to 10 developing nations.
- RoW see little change.

Source: Baldwin (2011)

Part 2: Second Unbundling Revolution

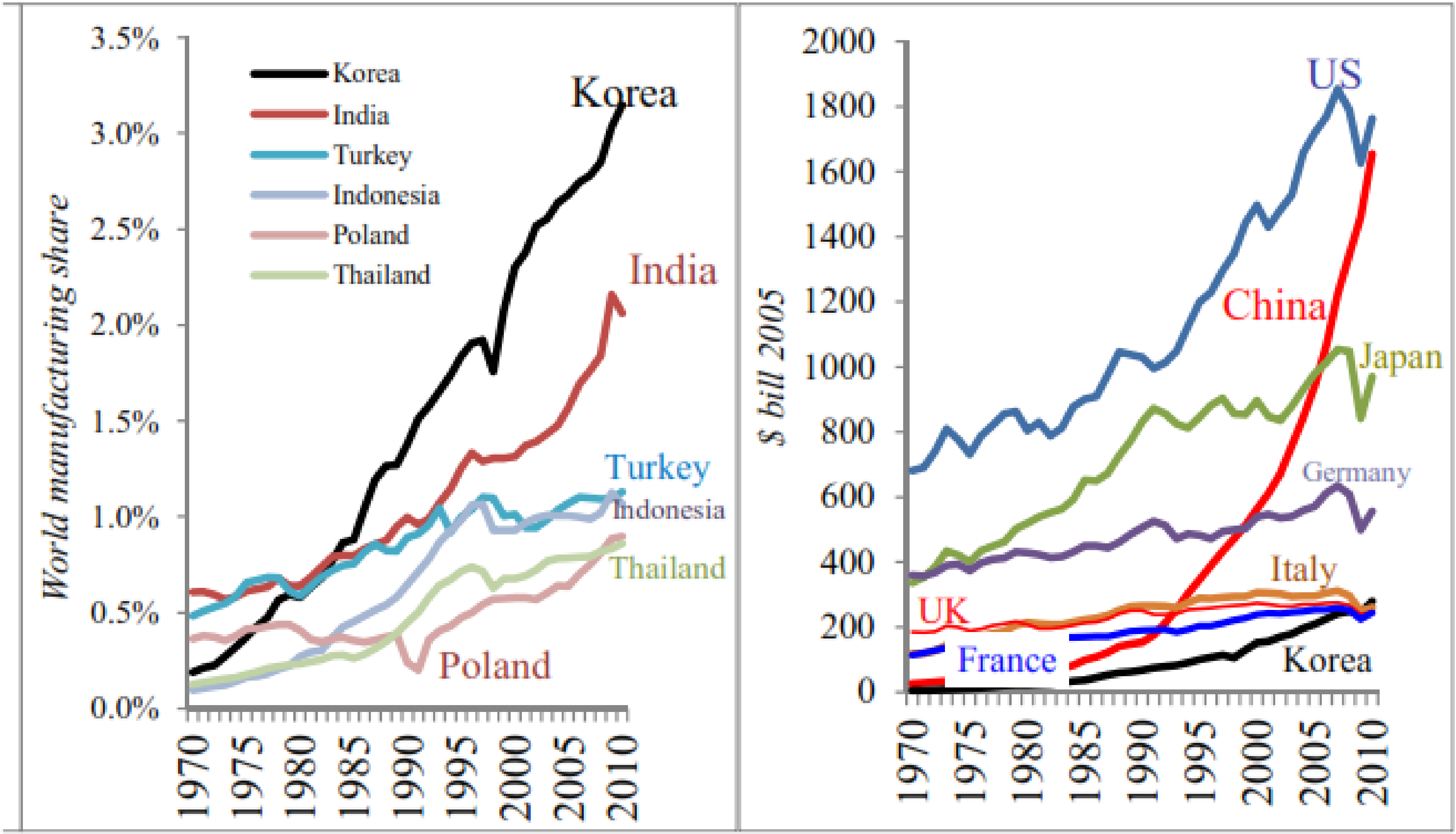


From 1990:

- G7 share loss plummets.
- RoW see little change.
- '7 risers' gain all of G7's loss.

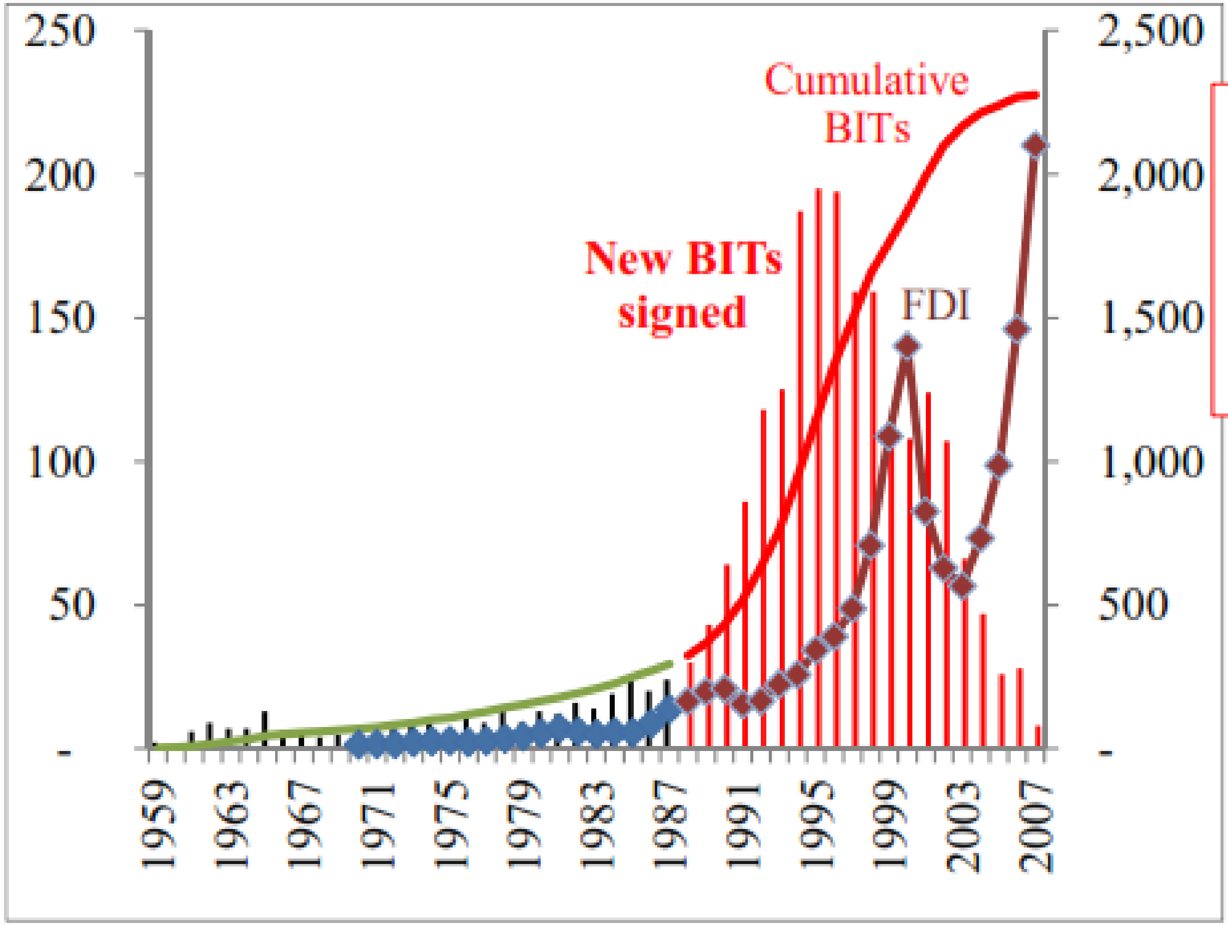
Source: Baldwin (2011)

Part 2: Second Unbundling Revolution



Source: Baldwin (2011)

Part 2: Second Unbundling Revolution

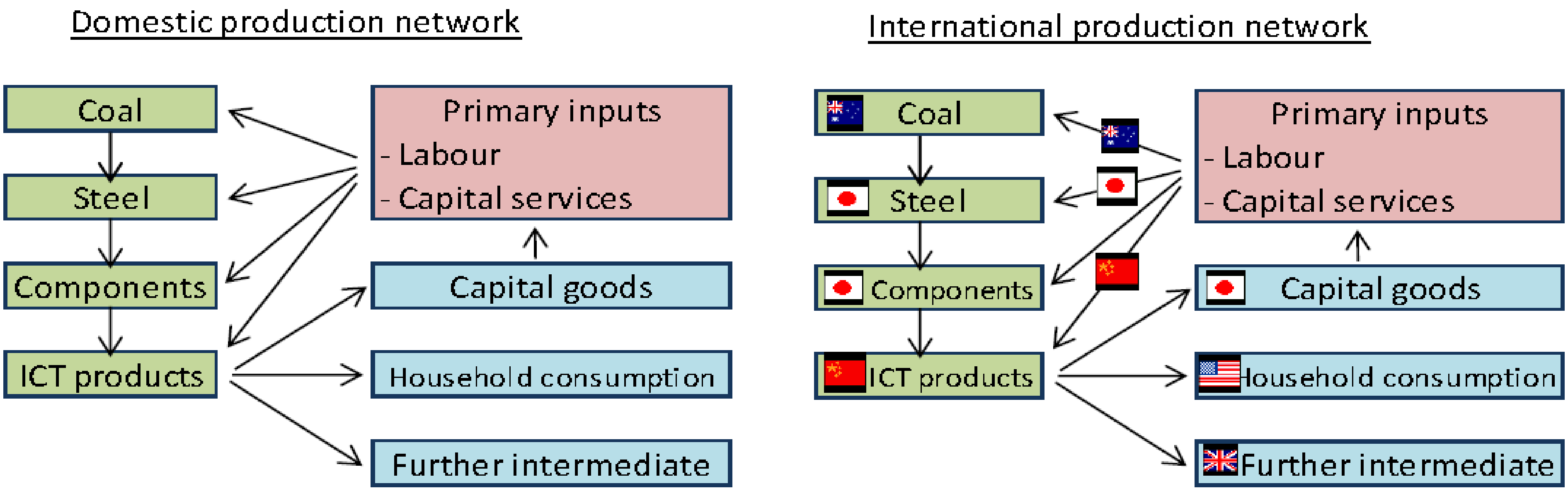


1987 – 2007:

- Number of BITs signed booms;
- FDI booms

Source: Baldwin (2011)

Global Value Chain (GVC)



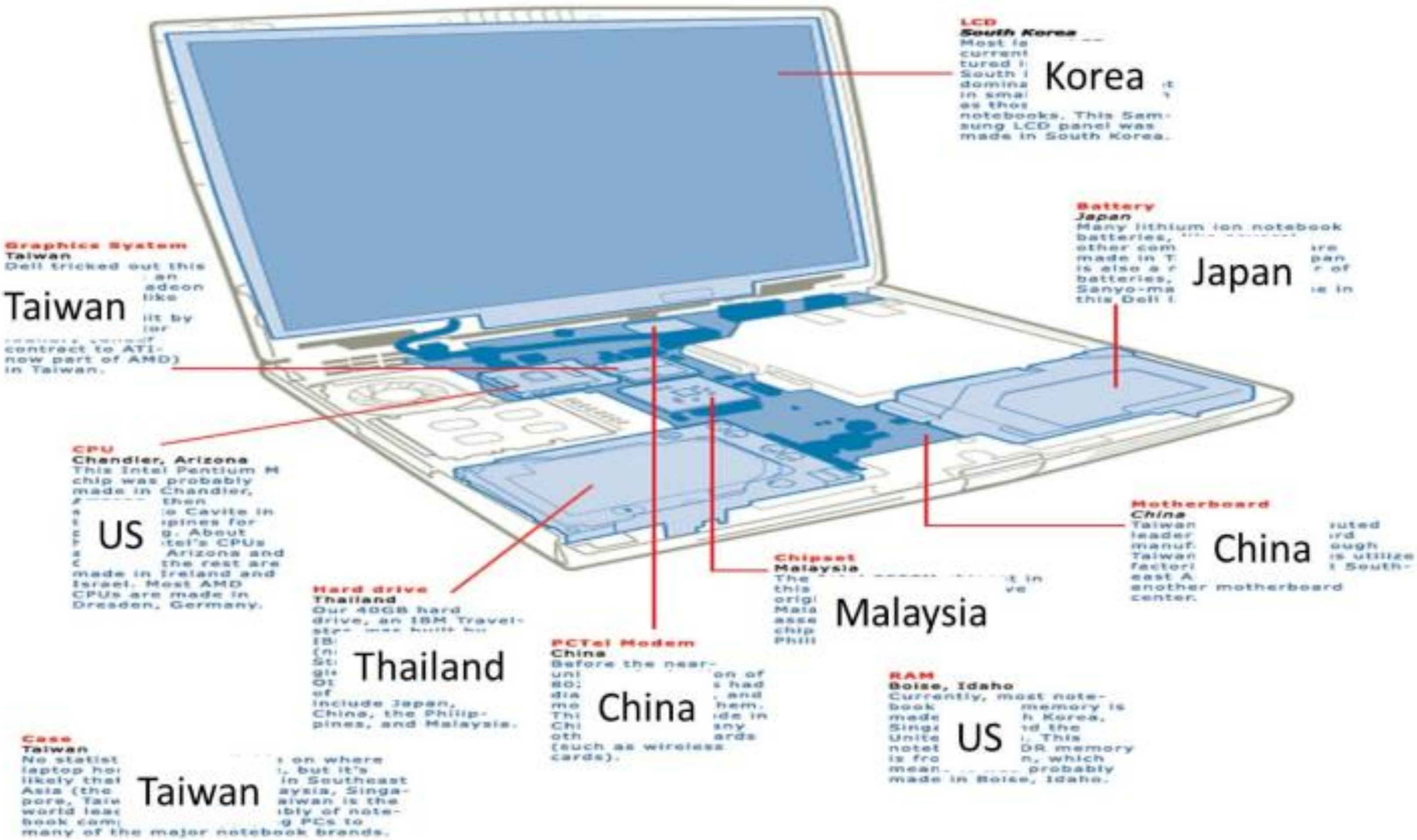
Source: Baldwin (2011)

Apple IIc made in Dallas area,1980s

Apple’s know-how + Chinese labour

Source: Baldwin (2011)

Fractionalisation of manufacturing



Source: Baldwin (2011)

Global Value Chain (GVC)

- Linden (2009), Xing and Detert (2010) , Dedrick (2010), Linden (2011) have analyzed the value chain of producing iPod and iPhone :

Country	Components	Manufacturers	Costs
Chinese Taipei	Touch screen, camera	Largan Precision, Wintek	$ 20.75
Germany	Baseband, power management, transceiver	Dialog, Infineon	$ 16.08
Korea	Applications processor, display, DRAM memory	LG, Samsung	$ 80.05
United States	Audio codec, connectivity, GPS, memory, touchscreen controller	Broadcom, Cirrus Logic, Intel, Skyworks, Texas Instruments, TriQuint	$ 22.88
Other	Other	Misc.	$ 47.75
		Total	**$ 187.51**

Source: Xing and Detert (2010)

Global Value Chain (GVC)

Betting on Displays

Apple supplier Foxconn is in talks to make smartphone screens, the most expensive parts in iPhones.

Apple iPhone 6

COST OF SELECTED PARTS	
Display	$45
Memory	15
Communications	37.50
Cameras	11
Processor	20
Mechanical	30
Other	37.60
TOTAL PARTS	**$196.10**
Labor	4
TOTAL	**$200.10**
U.S. RETAIL PRICE	**$649**

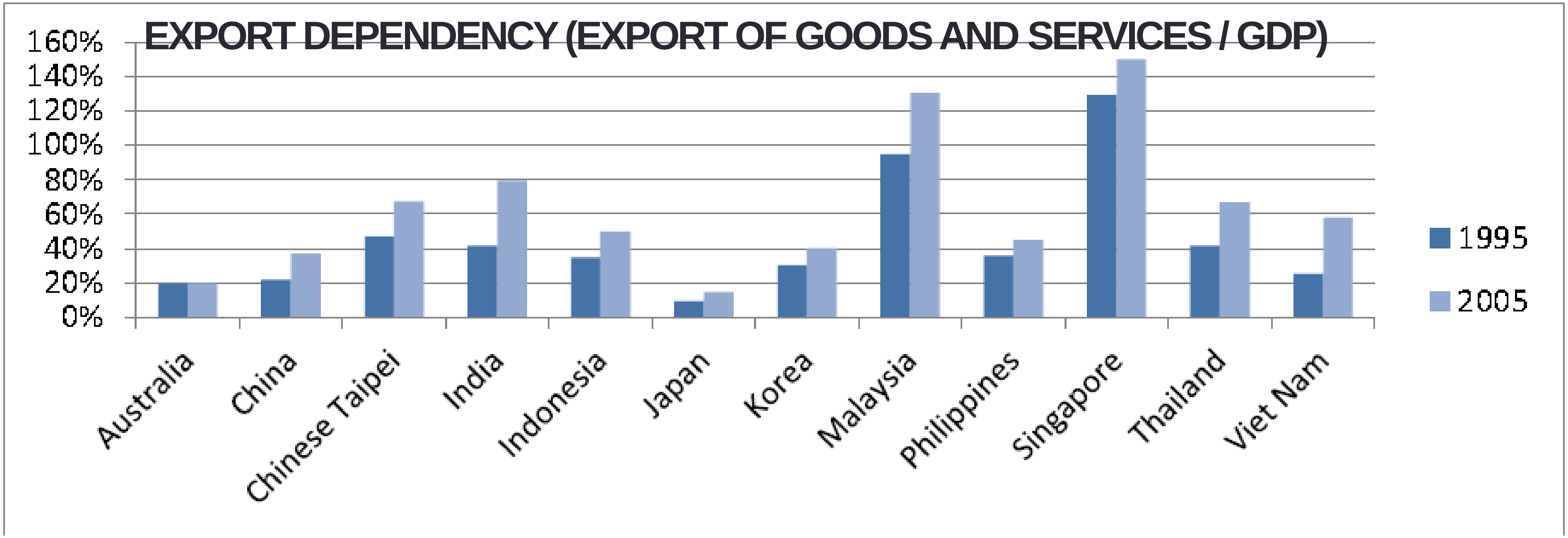
Sources: IHS iSuppli (price), Apple (photo)

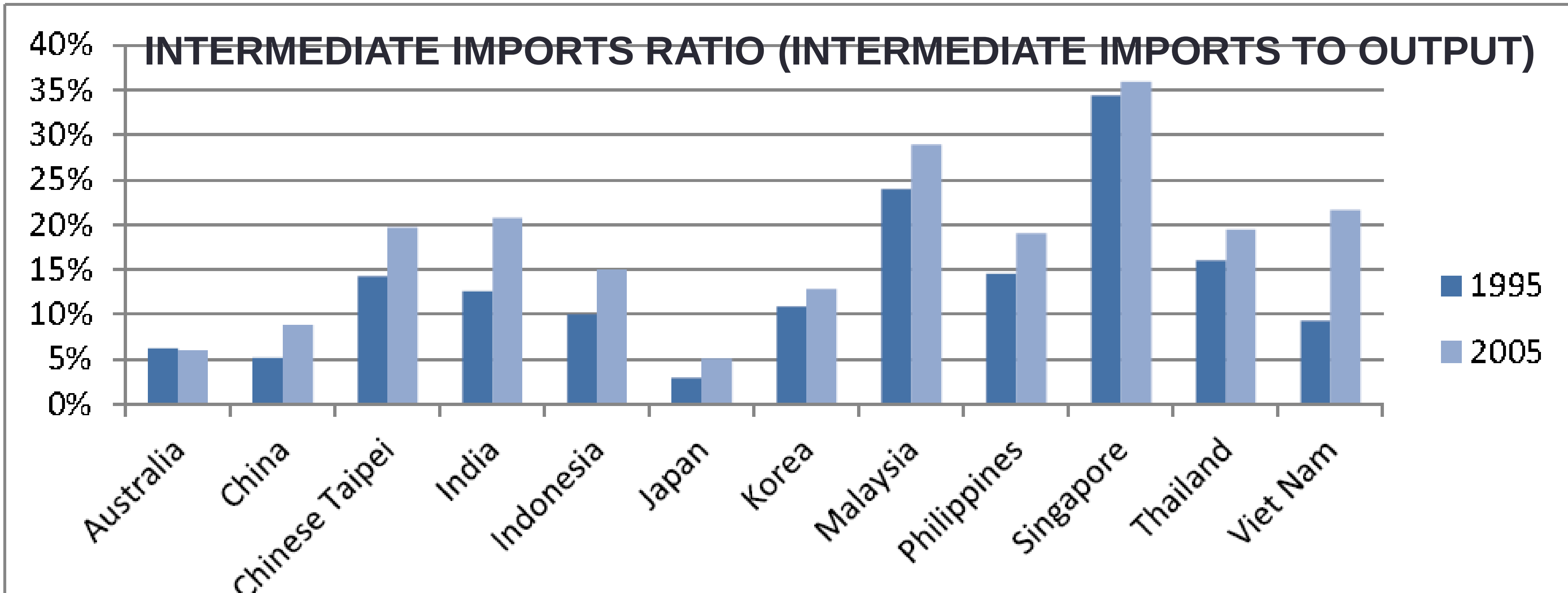
The Wall Street Journal

Apple iPhone 6 Plus

COST OF SELECTED PARTS	
Display	$52.50
Memory	15
Communications	37.50
Cameras	12.50
Processor	20
Mechanical	35
Other	38.60
TOTAL PARTS	**$211.10**
Labor	4.50
TOTAL	**$215.60**
U.S. RETAIL PRICE	**$749**

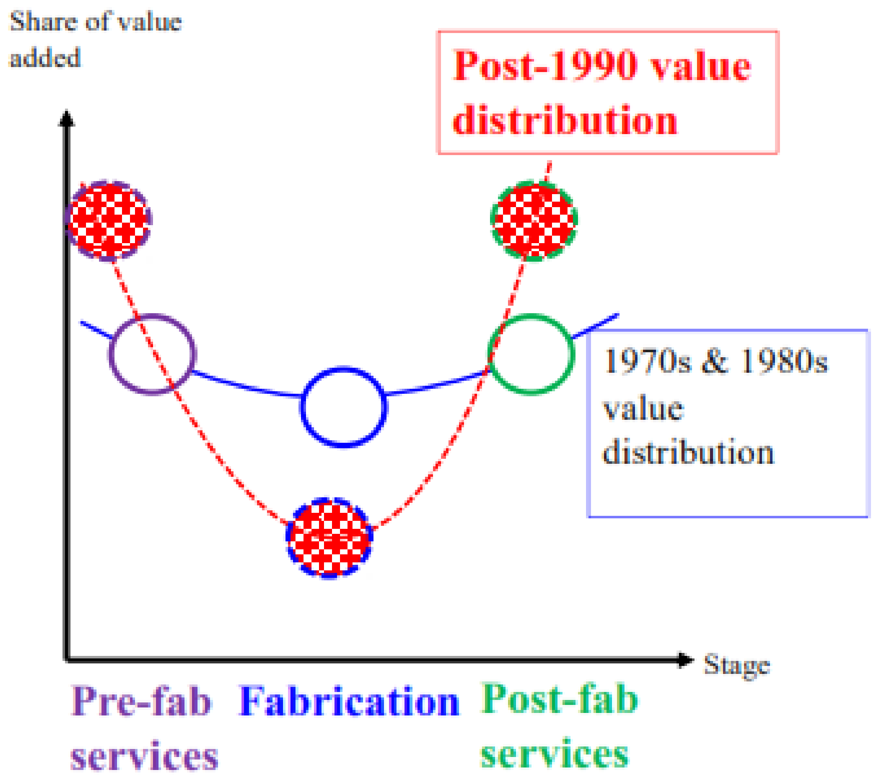
Note: Both price breakdowns are based on the 16 GB Sprint model without contract

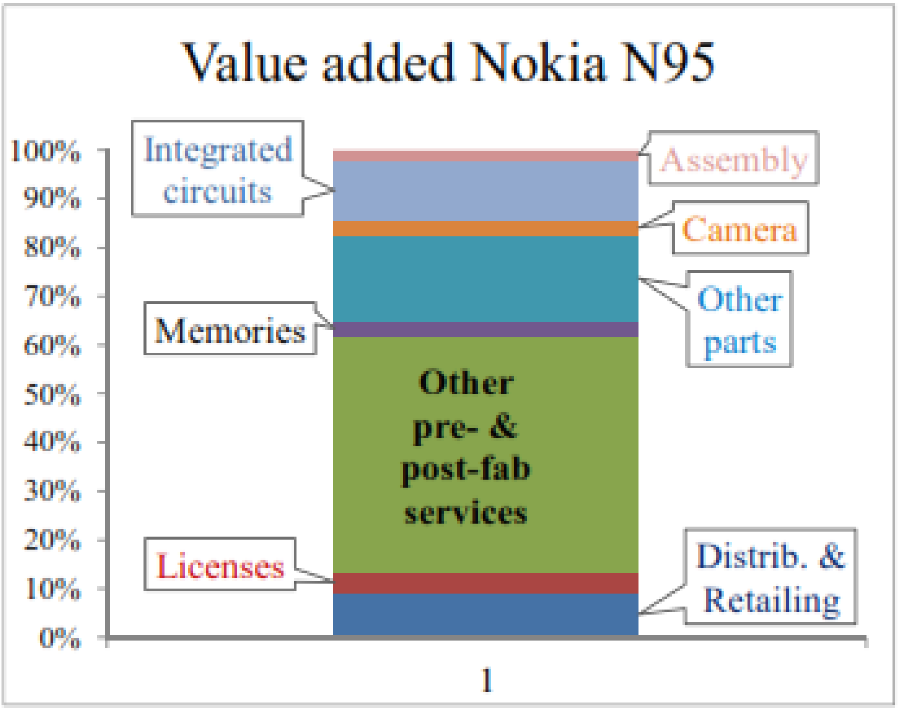




Source: Baldwin (2011)

Smiling Curve and Value Added

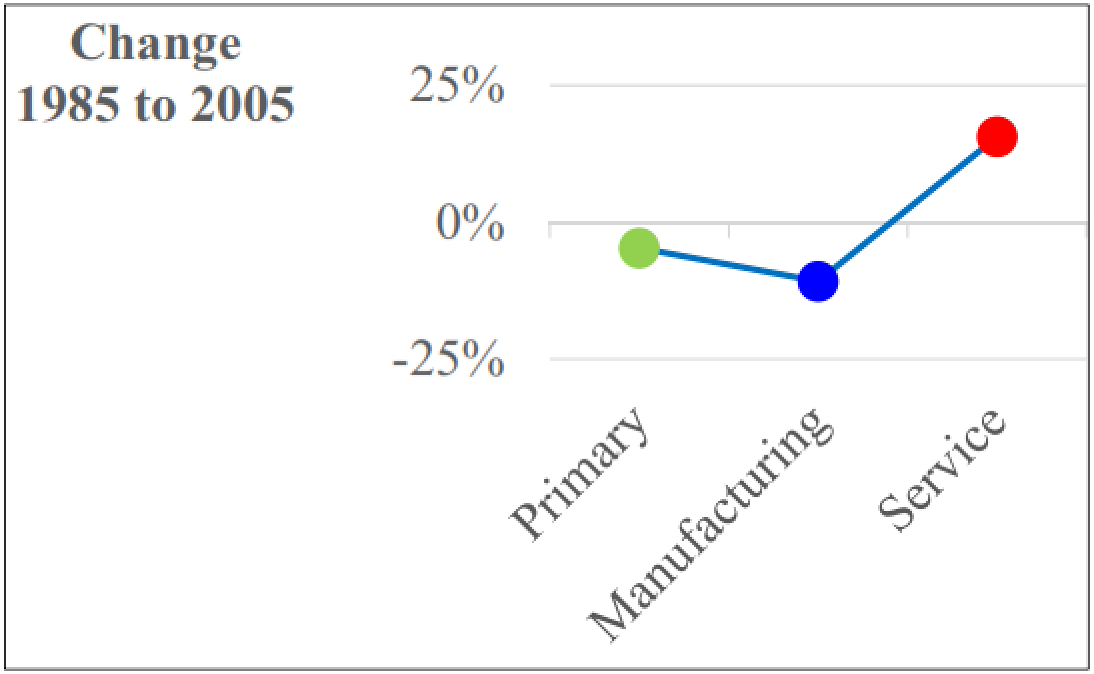




Source: Baldwin (2011)

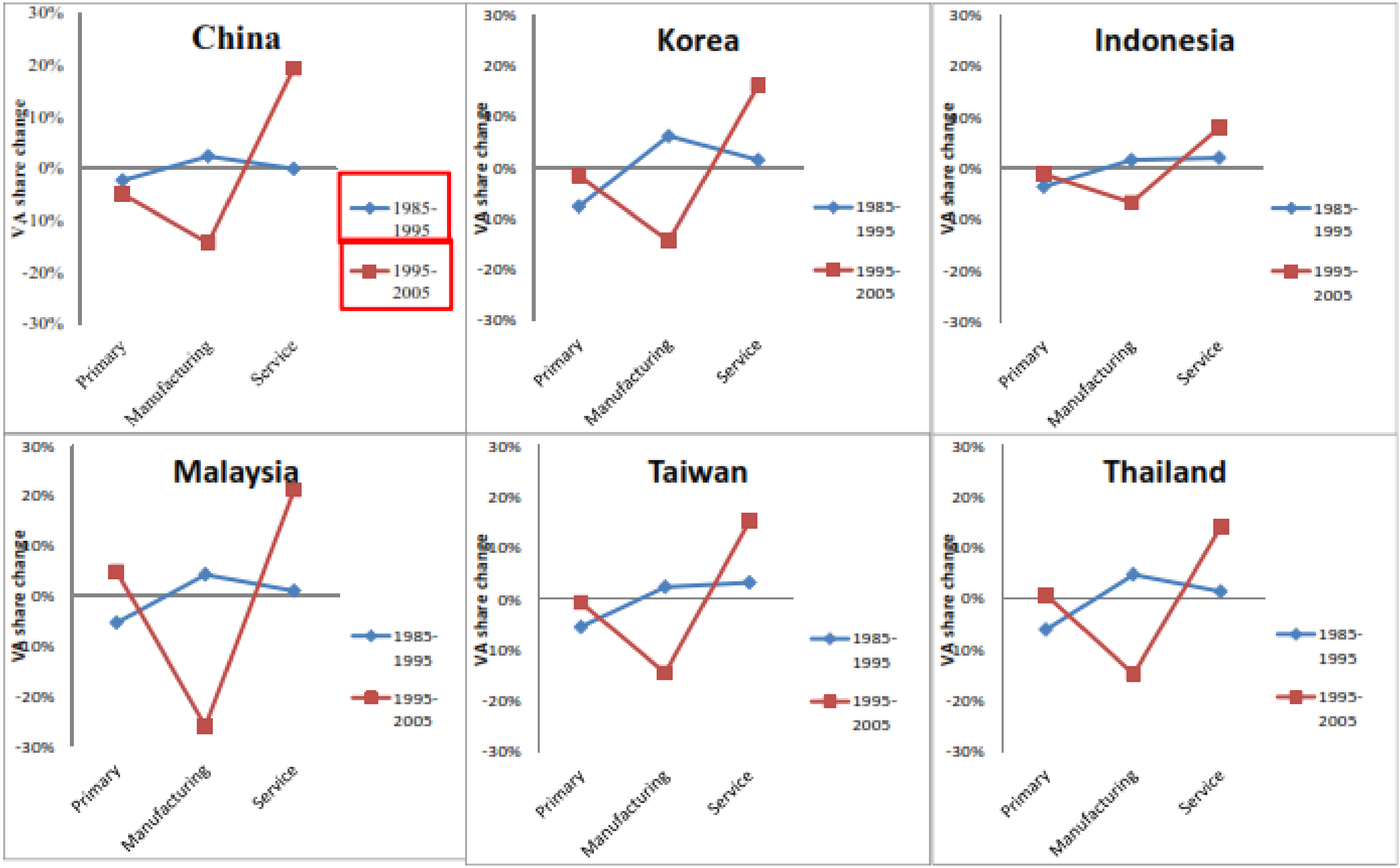
Smiling Curve and Value Added

Smile curve: Look at the change in source sector value added



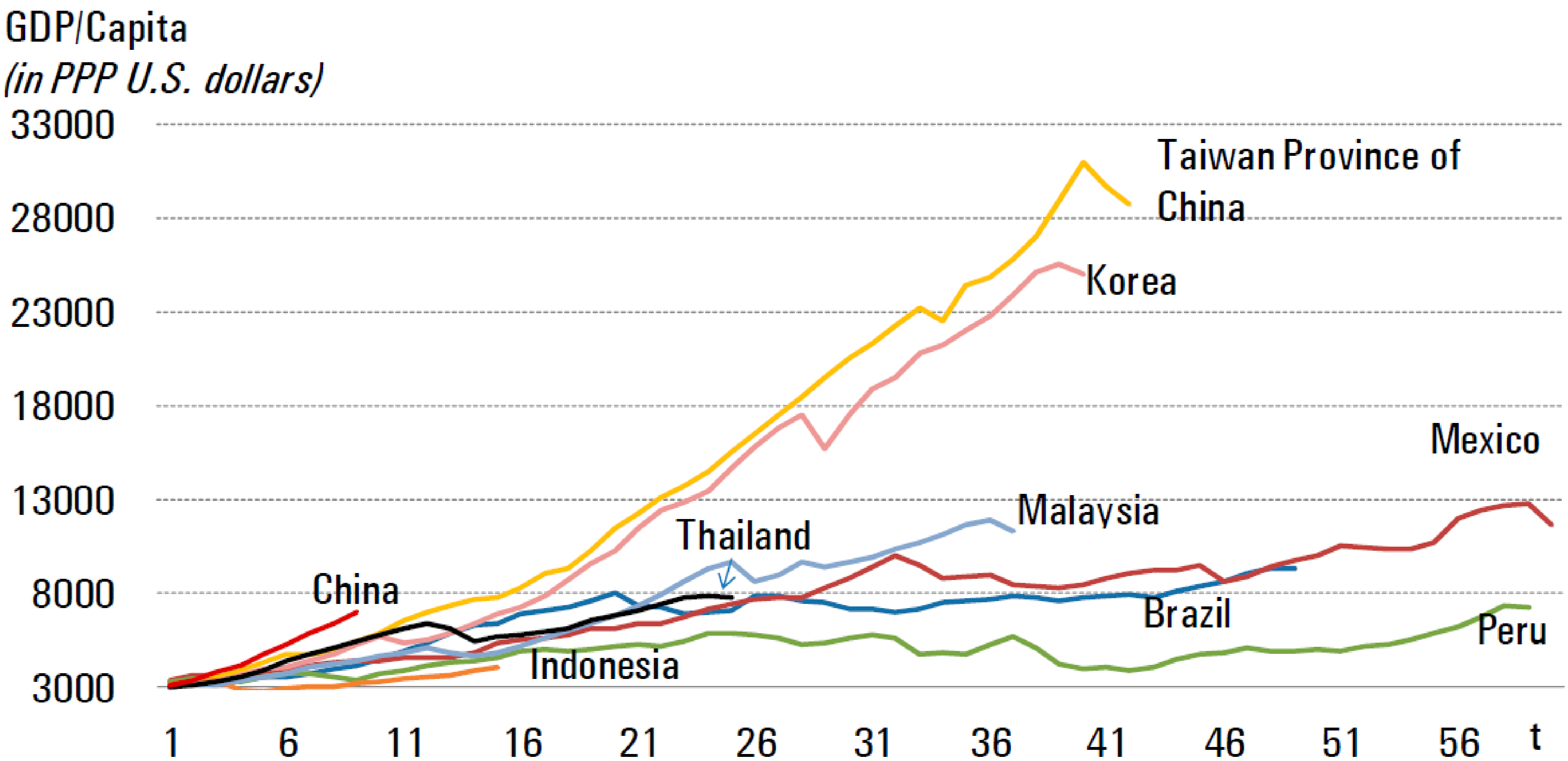
Source: Baldwin (2011)

Smiling Curve and Value Added



Source: Baldwin (2011)

Cross-Country Comparison



Source: IMF staff calculations.
* t=0 is defined as the year when the GDP per capita for a particular country reached 3000 U.S. dollars in PPP terms.

WE2-1 Years of Asian Economies Shifting to High-Income or Upper Middle-Income Countries

Item / Country	Grouping	Per Capita Nominal GNI (2012)	Per Capita Nominal GNI (1995)	The year of entering into a group		
				High-Income	Upper Middle-Income	Lower Middle-Income
Japan	High-Income	47,870	41,350	1967	Before 1962	...
Singapore	High-Income	47,210	22,420	1981	Before 1962	...
Hong Kong	High-Income	36,560	22,619	1978	Before 1962	...
Taiwan	High-Income	20,083	12,648	1988	1973	Before 1962
Korea, Republic	High-Income	22,670	10,770	1993	1978	Before 1962
Malaysia	Upper Middle	9,820	4,010	—	1979-86、1991	Before 1962、1987-90
China	Upper Middle	5,720	530	—	2010	1998
Thailand	**Upper Middle**	**5,210**	**2,720**	**—**	**2010**	**1966**
Indonesia	Lower Middle	3,420	980	—	—	1979
Philippines	Lower Middle	2,500	1,030	—	—	Before 1962
India	Lower Middle	1,550	370	—	—	2007
Vietnam	Lower Middle	1,550	288	—	—	2008
Laos	Lower Middle	1,270	360	—	—	2010

Source: Suehiro (2014), Studies on Emerging Asian Economies: Beyond the Catch-up Industrialization, Iwanami Publisher, p.128 (in Japanese). Up-dating the figure of per capita GNI in 2012.