IMEP 2014 Lectures 1 and 2

Globalisation in the 19th century

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Outline of today's lectures

Lecture 1

- Why study the economic history of globalisation?
- Key features of globalisation in the 19th century
- The end of the first round of globalisation

Lecture 2

- Commodity market convergence in the 19th century
- Trade policy vs transport costs: which was more important?
- Lessons from the first round of globalisation

Lecture 1 – Globalisation and history: an overview

Key reading: O'Rourke and Williamson, Chapters 1 & 2

Why study the economic history of globalisation?

- *Globalization and History* by O'Rourke and Williamson makes a convincing case for studying 19th century globalisation to inform the current debate on 'Globalization and its discontents':

  1. Contrary to popular belief, globalisation is not a recent phenomenon: it can be traced back to the 19th century Atlantic economy
  2. During this period, globalisation was rapid: capital and labour flowed freely across national frontiers and commodity trade expanded rapidly
  3. There was convergence between poor and rich countries driven by open economy forces and ended by de-globalisation and retreat to autarky

- Studying the first globalisation (G1) allows us to identify factors that drive global integration of markets and useful policy implications

Globalisation in historical context

- The term 'globalisation' is usually used to refer to the post WWII period of booming trade and free movement of capital and labour across national borders
- This expansion was particularly rapid after the dismantling of the Bretton Woods system in the early 1970s
- Kevin O'Rourke and Jeffrey Williamson argue that globalisation in fact began much earlier with trade and mass migration in key "Atlantic" economies (now the OECD area) between 1850 and 1914
- This first round of globalisation was brought to a halt, and eventually reversed, during the Interwar Period from 1914-45
- Globalisation and Atlantic economy convergence were connected

Key features of globalisation in the 19th century

O&W's findings are split into 3 periods: 1830-50, 1850-70, 1870-1914

Early industrial revolution in Europe (1830-1850)

- Industrial revolution in the UK spread to other European economies
- A period of resource discovery in the Americas was triggered by a sharp decline in transport costs
- Until the mid-19th century, real wage levels were diverging in the Atlantic economy
- Migration was not mass, global capital markets did not really exist, and commodity trade was limited

Key features of globalisation in the 19th century

Free trade expands and convergence starts (1850-70)

- Free trade expanded rapidly (eg Corn Laws were repealed in 1846), and so did migration and capital flows
- Convergence amongst the core group of economies began, but some countries converged more rapidly and more fully than others
- From country to country the pattern was mixed – eg between 1850 and 1870 Swedish real wages caught up with UK real wages, but no other European economies did
- In France, Norway and Spain real wages actually fell compared to the UK, so these countries diverged rather than converged

Key features of globalisation in the 19th century

Free trade, industrial catch-up & the Gold Standard (1870-1914)

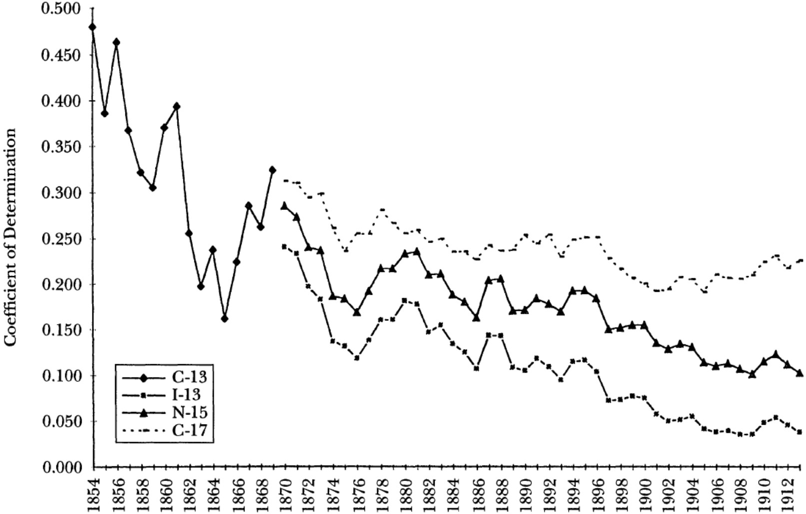
- O&W (p. 14) summarize this period as follows:

  [It]...involved the most extensive real wage and living standard convergence the Atlantic economy has ever seen, including the better known convergence of the post-World War II era.

- Aggregate data hide some important differences, however:

  1. Average wage gap between Europe and the New World accounts for about 60% of the real wage variance. The remaining 40% was due to real wage dispersion in Europe.
  2. About 60% of real wage convergence 1870-1900 was due to the collapse in the wage gap between Europe and the New World

Real wage dispersion 1854-1914 (Fig 2.2 & Williamson, 1998)



Key features of globalisation in the 19th century

- Real wage convergence was the result of labour-abundant Europe catching up with labour-scarce New World economies
- This conclusion is consistent with the Hecksher-Ohlin model: export goods whose production is relatively intensive in abundant factors
- There was some intra-European convergence, with the Scandinavian countries, especially Sweden, experiencing rapid real wage and per-capita GDP growth (see O&W tables 2.1 & 2.2)
- Wage-rental ratios in the New World fell, and those in Europe rose, as grain flooded in from the US, the Argentine and Australia
- Some countries showed little tendency to catch up over this period, in particular Spain and Portugal who were reluctant to trade

Key features of globalisation in the 19th century

Four countries illustrate clearly the average wage gap that explains much of the convergence between Europe and the New World:

- Sweden and Ireland both saw heavy emigration from around 1840
- US experienced heavy immigration from 1840
- UK progressively lost its grip as the world's industrial leader

Here are some supporting statistics (O&W, p. 21):

- In 1856 unskilled real wages in Sweden were half that of the UK, but by 1913 they were equal
- Over the same period Swedish real wages rose from 24% of US real wages to 58%

Key features of globalisation in the 19th century

- Ireland also converged but slower than Sweden (O&W, pp. 20-22)
- In 1852, shortly after the Great Famine, unskilled wages were only 61% of UK wages. By 1913 this figure had risen to 92%.
- Ireland also converged relative to the US: Irish wages were 43% of US wages in 1855, compared to 53% in 1913
- Real wage changes in Ireland over this period are indicative of the periphery as a whole
- In fact, although Irish real wages grew twice as fast as in the industrial core, this growth rate was similar to the periphery average (see O&W, Table 2.2)
- There were some exceptions though, notably Portugal and Spain

The end of the first round of globalisation: 1914-50

- Between 1914 and 1934, real wage dispersion did not fall at all. And after 1934 real wage gaps widened, with some measures of dispersion rising to levels not seen since 1870!
- In fact, as O'Rourke and Williamson note (pp. 26-27):

  "The divergence during the dismal decade 1935-1945 was so spectacular that all of the convergence gains up to the start of World War I were lost by the end of World War II."

- These changes were the result of a 'retreat to autarky': anti-trade and anti-immigration policies were implemented, such as tariff barriers and the US Quota Acts of the 1920s
- In the US, the foreign-born population share fell from 15 per cent before 1913 to only 7 per cent in the Interwar Period (see Williamson's 2002 WIDER Annual Lecture, p. 7)

THE END

Lecture 2

The first era of globalisation (1850-1914): Transport and trade

Key reading: O'Rourke and Williamson, Chapter 3

Commodity market convergence in the 19th century

- There was a dramatic increase in commodity trade amongst the Atlantic economies in the second half of the 19th century:

Trade Shares, 1870-1913[a]
(merchandise exports, % of GDP)

Country	1870	1913
UK	10.3	14.7
US	2.8	4.1
Japan	0.2	2.1

(a) Source: O&W Table 3.1, p. 30. Table based on 1985 prices.

- There are two possible reasons for this increase in trade:
  1. Transport costs fell dramatically
  2. Trade policy in Atlantic economies

The 19th century decline in transport costs

- The 19th century witnessed many inventions and innovations in transport – eg the steamship, canals and railroads. These developments reduced transport costs dramatically.
- Prior to the railways, there were two options for freight transport: water or road. Water was cheaper than road, perhaps by 50-75%.
- British navigable waterways quadrupled between 1750 and 1820. The Erie canal in the US reduced transport costs between Buffalo and New York City by 85%, and cut the journey time from 21 to 8 days.
- In 1817 it took 52 days to ship freight from Cincinnati to New York City by wagon and riverboat. By 1852, it took only 6 days.
- Now that's what you call a positive productivity shock!

The 19th century decline in transport costs...continued

- With the collapse in transport time and costs, regional price differentials fell substantially, from perhaps 100% to 10%
- Railroad expansion was crucial:

Railway Mileage 1850-1910 (O&W Table 3.2, p .34)

Country	1850	1870	1890	1910
UK	6,621	15,537	20,073	23,387
US	9,021	52,922	116,703	249,902

- We can construct an index for the UK with base 1850 = 100:

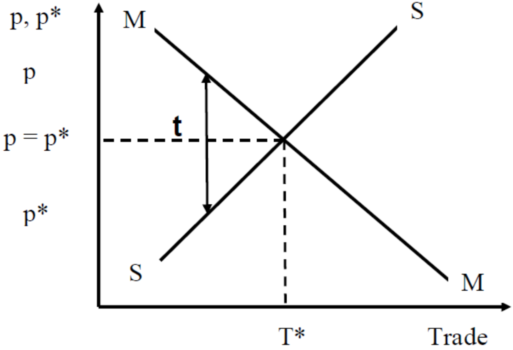
$$\text{Index number in year } X = (\text{Year } X \text{ mileage}/6{,}621) \times 100$$

- The UK index is 353.2 in 1910, so railway mileage increased 253% between 1850 and 1910. What does the US index look like?

The 19th century decline in transport costs...continued

- New inventions also helped a lot. Between 1834 and 1861 mechanical refrigeration was developed and perfected. In 1876, the first refrigerated ship took beef from Argentina to France.
- By the 1880s European agriculture was faced with significant overseas competition as South American and Australian meat was imported in large quantities, as was New Zealand butter
- **So, just how large was the decline in transport costs?**
- Fig 3.2, O&W (p. 36) – according to two freight rate indexes, the British index and the North index, Atlantic economy transport costs declined by around 1.5% a year from 1870 to 1913, or 45% in total

The economics of transport costs & trade (O&W, p. 31)



- MM = home import demand (home demand − home supply);
  SS = foreign export supply (foreign supply − foreign demand)

- Transport costs t drive a wedge between the home price p and foreign price $p*$. Lower transport costs increase trade towards $T*$.

Trade policy in the 19th century

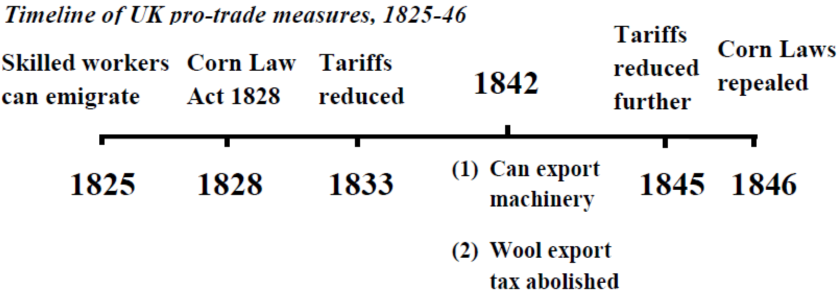
- Let's now consider the 2nd possible explanation for the increase in commodity trade: more liberal trade policy. I will focus on Europe.

European trade policy in the 19th century

- The European wars between 1792 and 1815 had resulted in protection for import-substituting domestic industries
- After 1815, European trade barriers started to come down
- For instance, the UK started to dismantle many of its trade barriers, funding the initial loss in revenue via the first income tax
- But progress was slow. P Bairoch described post-Waterloo Europe as *"an ocean of protectionism surrounding a few liberal islands"* (p. 37)

European trade policy in the 19th century...continued

- After Waterloo the UK still had the 1815 Corn Law. Consequently, the domestic market was effectively closed to grain from 1816-23.
- Gradually the demand for trade liberalisation in the UK gained political support, and anti-trade regulations were reduced:



European trade policy in the 19th century...continued

- The rest of Europe moved slowly to free trade, with progress being faster in small countries like the Netherlands, Denmark and Sweden
- However, a major advance was secured in 1860 with the Cobden-Chevalier Treaty between France and the UK
- This treaty abolished all French import prohibitions, reduced British wine tariffs by 80%, and removed the British export duty on coal
- More importantly, it introduced the Most-Favoured Nation clause (MFN) whereby each country extends to the other any trade concessions granted to 3rd parties
- Other treaties soon followed between other European nations – eg France and Belgium in 1861. By 1877, Germany "had virtually become a free trade country" (Bairoch, cited in O&W, p. 39).

The retreat from globalisation

- The beginning of the end can be traced back to the US in the 1860s: after the Civil War it raised tariffs to pay for the war debt
- Then, starting in the late 1870s, countries in Europe raised tariffs on agricultural and manufacuting products, due to the influx of cheap US and Russian grain
- For more detail, see O&W Ch. 6, in particular the data on tariffs in Table 6.1 (pp. 98-99)
- But commodity price convergence continued despite this rise in tariffs
- Eg Liverpool wheat prices were 57.6% higher than Chicago in 1870; 17.8% higher in 1895; and 15.6% higher in 1913. (O&W, p. 43)

The big picture: transport costs vs trade policy

- The decline in transport costs gave a massive and sustained boost to international trade in commodities
- Trade policy first contributed to an expansion in commodity trade before becoming more protectionist in the late 19th century. This protectionism started the retreat from globalisation (1914-45).
- However, despite the increase in protectionism, commodity prices continued to converge until 1913 and trade continued to expand. Hence, transport costs were more important than trade policy for 19th century commodity market integration.
- The fall in transport costs reduced the gap between p and p^* and increased trade towards T^*. The effects of higher tariffs pushing in the opposite direction were outweighed by the fall in transportation costs.

Lessons from 19th century globalisation

Lesson 1: Discontent breeds protectionism

- G1 was ended by a wave of protectionism which began in the late 19th century with domestic producers in Europe complaining about the influx of cheap grain from the US and Russia
- This protectionism came despite rising GDP per head, so distributional effects of globalisation cannot just be ignored
- Likewise, the second round of globalisation (1950-present) could be threatened by distributional effects: there are ongoing debates about whether globalisation increases inequality within and across nations

Policy implications:

- IMF and World Bank are unlikely to convert Developing World to free trade without measures to deal with distributional consequences

Lessons from 19th century globalisation

Lesson 2: Free trade leads to specialisation

- During the Industrial Revolution, British trade with the advanced economies of Europe reflected comparative advantage
- UK specialised in spinning processes and early stages of production
- Europe became an important source of manufactured goods for Britain and the three biggest imports were cotton, sugar and tea (see Prof Nolan's globalisation notes on Moodle)

Policy implications:

- Free trade plus specialisation is efficient but brings its own risks: dependence on imports and the threat to infant industries
- Consequently, trade is neither fully specialised nor entirely free. The key is to manage these risks effectively.

Lesson 3: It's not all about trade policy

- Trade policy became more protectionist towards the end of G1 but tariff increases were dominated by the decline in transport costs
- As a result, trade expanded and commodity prices converged until the start of the Interwar Period
- This shows us that factors other than trade policy also matter for globalisation and integration of markets

Policy implications:

- We may see future declines in transport costs driven by technological progress leading to trade creation and price convergence
- More generally, free trade should not be abandoned if its benefits are not immediately apparent, as other factors are NOT always equal

Next time...

- In the next lecture we will compare the predictions of the Hecksher-Ohlin model of international trade with Atlantic economy outcomes during the late 19th century
- We will also consider the effects of mass migration during this period
- These issues are of clear practical importance given current debates about ‘winners’ and ‘losers’ from globalisation and immigration policy
- We will also discuss how G1 and G2 compare
- **Advance reading:** O’Rourke and Williamson, Chapters 4 and 8

Appendix: Measuring convergence

- Convergence is often gauged by looking at dispersion in real wages or GDP per capita
- A common measure of dispersion is the coefficient of variation:

$$CV = \frac{\text{standard deviation}}{\text{mean}}$$

- **Example:** 3 countries with real wages of 1, 2 and 3. The mean wage is 2 and the standard deviation is 1, so the CV is equal to $\frac{1}{2}$.
- In Fig 2.2 of O'Rourke and Williamson they use the coefficient of determination (ie CV^2) as their measure of dispersion (Ch. 2, endnote 4, p. 295)
- The standard deviation and the variance are alternative measures of dispersion, but they are less suitable for variables that grow over time (eg wages and GDP) because they ignore the mean

References

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2. Williamson, J.G. 1998. Globalization, labor markets and policy backlash in the past. *Journal of Economic Perspectives* 12(4), pp. 51–72.

3. Williamson, J.G. 2002. Winners and losers over two centuries of globalization. WIDER annual lecture 6.

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4. Nolan, C. Notes on Globalization (available on Moodle).