

Notes for 129 Devices

Intro to mechanical technical change

- 1) The capital labor trade off.
 - a. Marx and the economists of the 19th century
 - b. The optimists of the 20th century
- 2) Capital-Energy/ labor trade off
 - a. Jevons and the pessimists
 - b. The optimist of the 20th century
- 3) Why after 1800 rather than after 1700?
 - a. Problems of materials
 - b. Problems of tolerance
- 4) Key inventions
 - a. Springs and machines
 - b. Steam engines and Dynamo
- 5) Second debate Technology and organizations
 - a. North : Technical change is imbedded in property rights and in organization\
 - b. Williamson : Technical change and firm specific capital

Why Shipping

- 3) Harley

North has put a lot of emphasis on organizational change in explaining productivity growth, Harley argues that those were not so important. Might it be that the adoption of the mechanical devices Harley emphasizes required organizational changes , why?

- A) The North thesis
 - a. Certainly some of this matters
 - b. But is it the end of the story.

- B) Harley's view

Problems of what kinds of cargo.

Productivity on board

Capital improvement

Labor issues

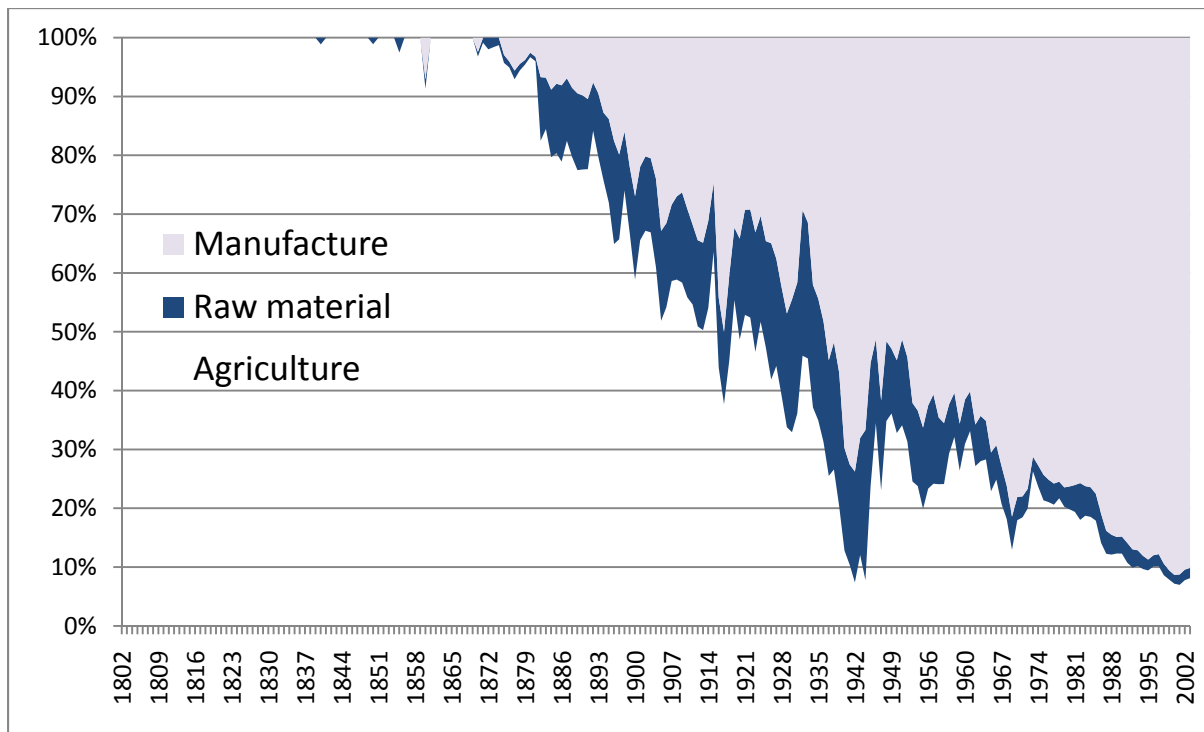
Productivity off board (on shore)

Cotton.

Forward to the 20th century.

Productivity on board

Productivity on shore



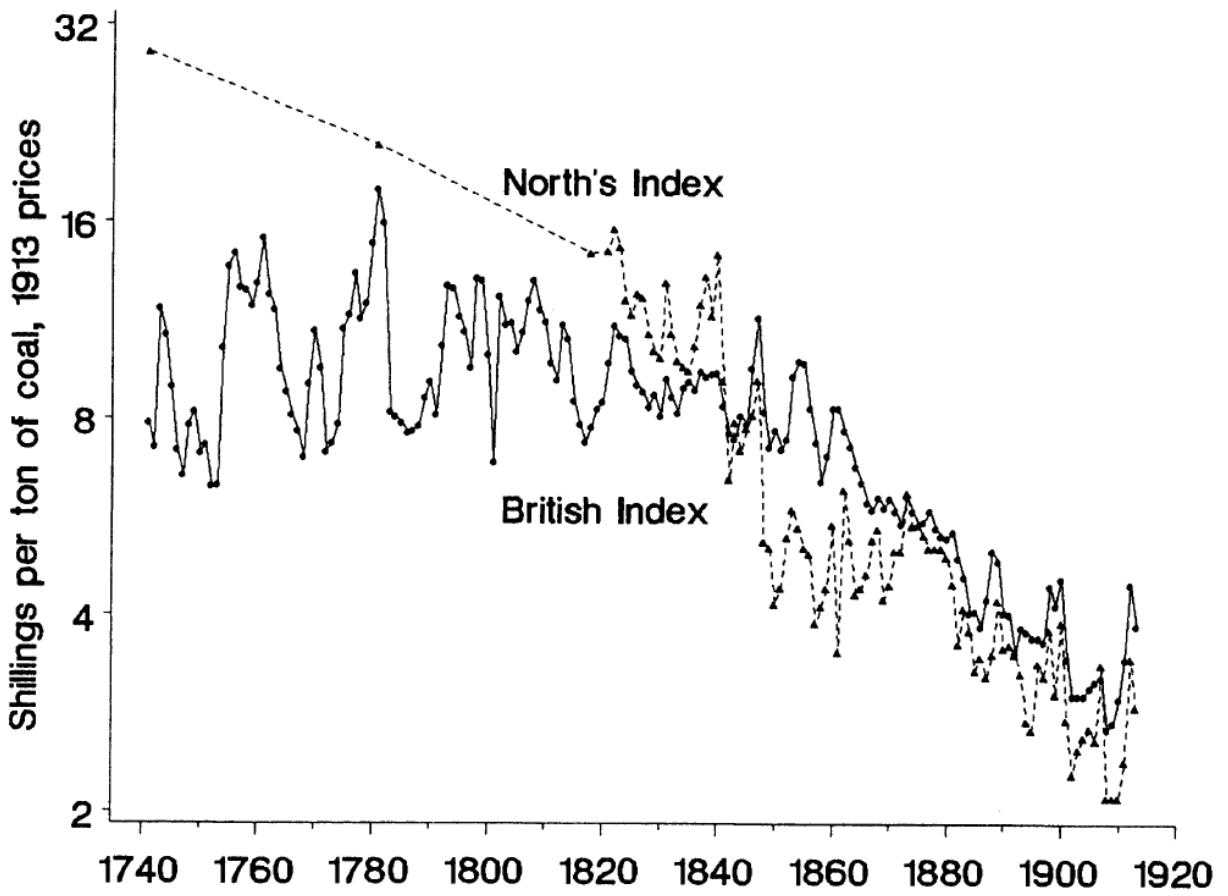
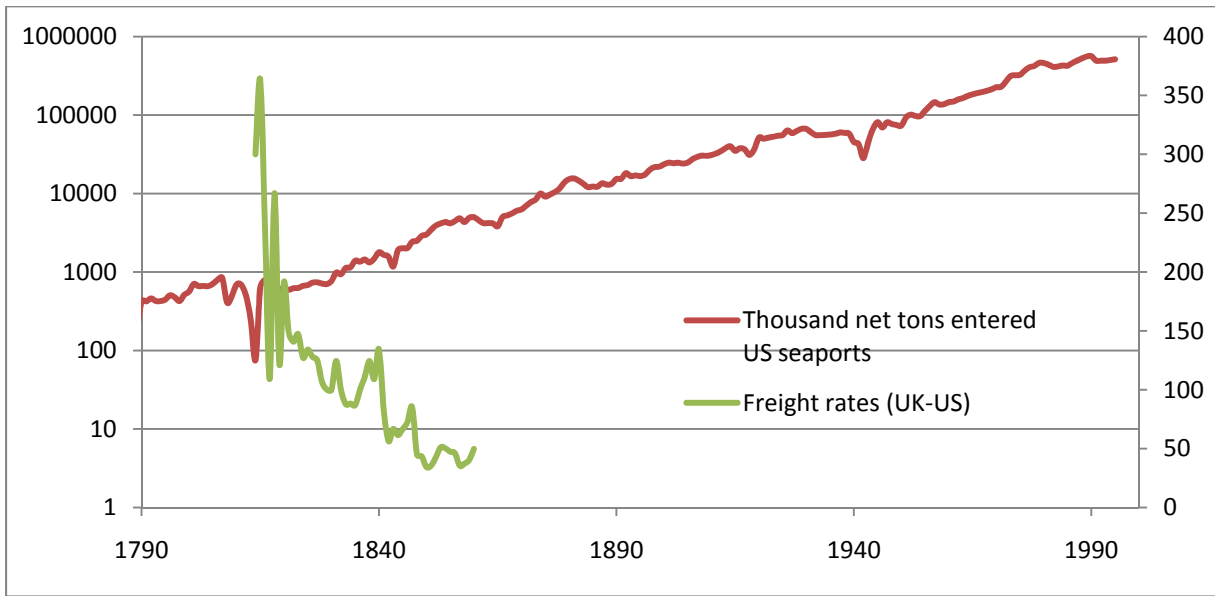


FIGURE 1
FREIGHT RATE INDICES, 1741-1913

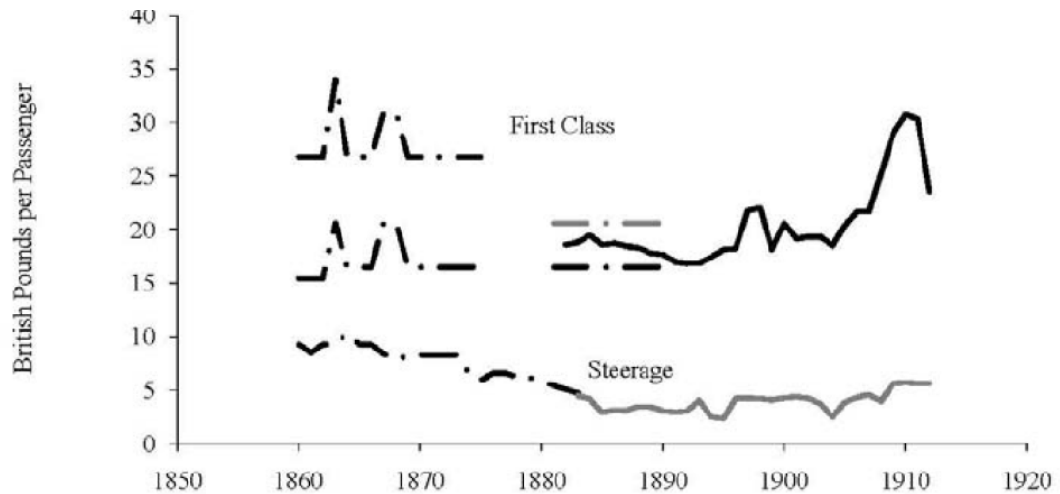


FIGURE 3
PASSENGER FARES, 1860–1913

TABLE 1
BRITISH BEEF IMPORTS FROM NORTH AMERICA, LIVE ANIMALS AND CHILLED
MEAT, 1875–1903

Five-Year Average	U.S. Live Cattle Exports (‘000)	Meat Equivalent U.S. Cattle (‘000 cwt)	Canadian Live Cattle Exports (‘000)	Meat Equivalent Canadian Cattle (‘000 cwt)	U.S. Chilled Beef Exports (‘000 cwt)
1875–1879	41.3	298	32.8	211	619
1880–1884	174.4	1,258	79.5	511	629
1885–1889	226.2	1,632	111.0	714	623
1890–1894	344.7	2,486	98.6	634	2,300
1895–1899	355.3	2,563	105.4	678	2,490
1900–1904	356.7	2,369	124.8	767	3,130
1905–1909	324.7	2,157	134.2	824	2,418
1910–1913	86.1	572	34.6	213	