

**SUMMARIES OF LECTURES in ECO 303Y1:
the Economic History of Modern Europe, to 1914
for the Academic Year: 2012 - 2013**

Updated: Thursday, 22 November 2012

XIa. Week no. 11: Lecture Topic No. 11: on 21 November 2012

Prices, Economic Trends, and Business Cycles in the British Economy, 1815 - 1873

This lecture was not given in class, but is available online (but not as a summary)

XIb. Week no. 11: Lecture Topic No. 12: on 21 November 2012

British Banking, Finance, and Business Organization: 1815 - 1873:

1. Problems of English Banking to the 1820s:

a) small size and thus small capitalizations:

i) **The Bank of England's monopoly on joint-stock banking, reinforced by the 1720 Bubble Act (ban on joint-stock companies without charters):** meant that all other English banks were restricted in size to either family firms or six-member partnerships

ii) **Problem not severe for London banks:** which had a full century to grow and amalgamate - from the 1660s to the 1760s.

iii) **But severe for the Country Banks – those outside London:** for, in having sprung up like mushrooms during the Industrial Revolution era, they all had small capitals, on average only 20% of those of London banks.

iv) **Small capitalizations** meant dangerously small reserves to back deposit and note issues

v) **Gresham's Law of banking:** the failure of one 'bad' bank – in discounting bad commercial papers and/or in making bad loans – could cause a panic and thus a 'run on the banks': ruining all the good banks as well, none of whom had reserves to cover all deposits and notes (nature of fractional reserve lending).

vi) **Contrary Example of Scotland:** which, not bound by English law, had five chartered joint-stock banks and many large partnerships banks

(1) large size and capitals permitted branch banking: so that the mother bank could bail out any of its branches encountering difficulties by replenishing its cash reserves

(2) In this era, only one Scottish bank failed (Ayr bank of 1772): with no branches

vii) **Overseas Commercial crisis produced a financial crisis in England:** so that 93 of England's 715 small

banks (13%) failed, while none failed in Scotland

b) the problem of uncontrolled note issues:

i) **Crisis of 1797, as seen before, led to the era of the 'Paper Pound':** when the gov't allowed the Bank of England and indeed all other banks to suspend convertibility of notes into gold (and vice versa).

ii) **Bank of England and other banks:** also lowered their bank-note denominations from the £5 minimum to £1 (or even less, in Scotland).

iii) **That led to a horrendous proliferation of bank notes**, especially pound notes, which was blamed for the severe inflation that lasted until the end of the Napoleonic Wars.

iv) **David Ricardo's Bullion Report of 1820:** that the gov't must restore full convertibility and raise the note issues

2. The Bank Act of 1826: to resolve both of these problems and the financial crisis of 1824

a) Repeal of the Bubble Act in 1825:

i) **was actually the first step, in permitting the free formation of new joint-stock companies**, without the requirement of incorporation charters

ii) **but that had no effect on banking**, because of the Bank of England's ongoing monopoly

b) Bank Act of 1826:

i) **thus abolished the Bank of England's monopoly on joint-stock banking:** to allow the same free formation of joint-stock banks, though initially only outside of London

ii) **also required the Bank of England to establish branches** outside of London - in major English cities

iii) **restricted the issue of bank notes to a minimum denomination of £5** (as before 1797) - except in Scotland

c) **Bank Act of 1833:** permitted London banks also to organize as joint-stock company banks

d) Results:

i) **sharp rise in the number of English joint-stock banks**, and a relative decline in partnerships banks (many of whom were taken over by joint-stock banks): number of joint-stock banks rose to 99 by 1850, with a peak of 122 by 1875 (thereafter dwindling to 41, by 1913)

ii) **number of branches rose to 576 by 1850**, with a continuous rise thereafter to 6426 in 1913 (thus from a ratio of 3.67 per joint-stock company in 1850 to 97.84 in 1913)

iii) **sharp drop in number of bank failures**, though bank failures were not eliminated.

3. The Bank Charter Act of 1844: most important banking legislation of the 19th century

a) **philosophical and theoretical background:** the Quantity Theory of Money, though then called the Currency School

i) **basic assumptions that governed Classical Economics** in the 19th century:

- (1) that the quantity of money directly and immediately determined the price level and interest rates, which in turn determined, or was determined in turn, by relationship of exports and imports in foreign trade
- (2) that money was to be in the form only coin and gold-backed bank notes – and thus that the only bank notes to be permitted to circulate were Bank of England notes fully backed by its gold reserves

ii) **the trade-money supply price - trade model:**

- (1) If England experience a trade surplus, if export revenues exceeded import expenditures, gold would flow into the country, and be exchanged for Bank of England notes
- (2) If the money supply therefore rose by 10%, prices would soon rise correspondingly by 10%
- (3) Export prices would rise, thus curbing exports, while imports became relatively cheaper: so that, as imports exceeded exports in value, gold would flow out, the money supply would contract, prices would fall, thus restoring exports and equilibrium

b) **Provisions of the Bank Charter Act:** based on these assumptions

i) **to split the Bank of England into two separate and autonomous units:** the Issue Department and the Banking Department

ii) **The Issue Department:** with one sole responsibility

- (1) to control the note issue: so that at any given time the total note issue of Bank of England notes in circulation was to equal and never exceed the gold bullion reserves + the Bank's capital stock of £14 million
- (2) the note issue and foreign trade: if England experienced a trade surplus and influx of gold, that gold, sold to the Bank of England, would be exchanged for new Bank of England notes, thus expanding the money supply
 - if England experienced a trade deficit, and gold outflow, merchants who purchased gold would surrender to the Bank the B of E notes, which would be burned, thus contracting the money supply
 - Then Bank of England was to take over the note issue of all other banks, and no new banks would be allowed to issue any bank notes

iii) **The Banking Department:**

- (1) was instructed to act as a normal competitive commercial bank, in lending and discounting, and to follow, not lead the market
- (2) In essence, the Bank was now forbidden ever to act as Lender of Last Resort
- (3) The Bank quickly did so and reduced the discount rate to attract business

c) **Faults of the Monetary Provisions of the Bank Charter Act:**

i) **Fallacious nature of the 19th century Quantity Theory of Money**

- (1) The modernized version is more useful: $M.V = P.y$ – in which M is the stock of money, V is the income Velocity of Money, P is the Consumer Price Index and 'y' is Net National Income (real, or deflated)
- (2) Thus an increase in M could be offset by a reduction in V and a rise in 'y' (especially if $\Delta M \implies$ a fall in interest rates and expanded demand)

(3) But also ignores factor-price stickiness, so that such price do not fall with a decline in M

ii) **that gold and Bank of England notes were by no means the only forms of money:** in fact, one consequence was a marked increase in the use of cheques and deposit-transfers and the use of other forms of near money

iii) **gold supplies were not static:** the 1840s in fact marked major gold mining booms in both California and Australia, producing gold flows that ended up, partly, in London

d) **Major Faults of the legislation:** the Bank Charter Act exacerbated instead of relieving economic crises

i) **The crisis of 1846-47:** the catastrophe of the Irish Potato Famine and grain harvest failures

(1) large amounts of gold flowed out to purchase foreign grains at high prices

(2) the gold outflow was not matched by any fall in prices, as predicted by erroneous theory

(3) If the act had been followed, the ensuing monetary and thus credit contraction would had led to economic catastrophe

(4) Instead, the gov't suspended the act and directed the B of E to lend freely, to shore up cash reserves of financial institutions: the exact opposite of the act

ii) **the same scenario ensued in the financial crises** of 1857, 1866, and 1873

iii) **Walter Bagehot:** in 1873, the year of that latest crisis, he published his classic *Lombard Street*, in which he contended that the major duty of the Bank of England was (again) to act as a Lender of Last Resort in times of economic crisis, and thus contrary to the Bank Charter Act

iv) **1878: the Bank of England officially sets its own discount rate,** instead of following market rates

v) **1890: Bank of England successfully intervenes** in the severe financial crisis to bail out the Baring Brothers Bank (which was not bailed out again, when it failed a few years ago).

vi) **Still the record is mixed,** because many directors still insisted that the Bank of England's chief duty was to its shareholders, as a private joint-stock bank

vii) **the Bank of England's full evolution into a modern central bank had to wait** until after World War II (when it was nationalized).

4. The Origins of the Modern Limited Liability Corporation:

a) **The Repeal of the Bubble Act in 1720:** as seen earlier

i) **permitted the formation of joint-stock companies,** without parliamentary approval, and without a charter of incorporation

ii) **charters of incorporation, with provisions for limited liability** (limited the investor's liability to the amount of capital subscribed, in buying shares – usually on margin, so that full amount was due), were still difficult and costly to obtain

iii) **just as canal companies had been the only exception, in receiving limited-liability charters of**

incorporation before the repeal of Bubble, so railway companies (next topic) were the major exception before the Limited Liability legislation of the 1850s.

iv) **So most joint stock companies lacked such charters of incorporation and limited liability:**

(1) and therefore their shareholders were treated as partners under Partnership Law, bearing full and unlimited liability for debts and legal obligations of the company

(2) only those with connections and knowledge of the firm, and with wealth, were likely to buy shares

b) **Why the opposition to allowing limited liability?:**

i) **moral hazard (according to the modern concept):** the belief that if shareholders were protected by limited liability then those running the business firm would be far more likely to undertake dangerous risks, engage in dangerous speculation, or even fraud: the heritage of the Bubble Crisis

ii) **adverse selection:** that if share-holders were protected by limited liability, then risk would be transferred to lenders and bondholders, who would likely demand higher interest rates. Note that risks always have to be shared between different types of investors

c) **The continental Société en Commandite (began in French law, later 17th century):** offered an ideal compromise that would have dealt with both moral hazard and adverse-selection problems

i) **limited liability offered to all silent partners** or investors who took no active role in the firm

ii) **unlimited liability therefore for directors** and those investors managing the firm

iii) **but the British never, ever considered this continental model.** Why?

d) **Why Parliament finally accepted limited liability in the 1850s:**

i) **major changes in technologies that required vastly greater sums of capital:** to make enterprise viable

ii) **international competition encouraged increases in scale economies** to be competitive

iii) **realization that firms with large-scale capital requirements could not raise such capitals** by attracting savings of the risk-averse majority of the middle classes

e) **Limited Liability of Legislation of 1856 - 1862:**

i) **1856:** Joint Stock Companies Act: any seven persons registering a joint-stock company, with a list of directors (names and addresses) and supplying an annual balance sheet, was given a charter of incorporation, offering limited liability to shareholders, without private acts of Parliament or any other costs

ii) **1857:** These provisions applied to joint-stock banks, initially excluded

iii) **1862:** provisions were extended to cover liability for bank notes (but only Bank of England issued bank notes in England, though two Scottish banks continued to do so).

iv) **Subsequently, some 5,000 joint stock companies** received such charters – and some failed.

v) **By no means all British firms wanted to be incorporated:** many family firms and partnerships refused for losing control and identity to shareholders.

XIc. Week no. 11: Lecture Topic No. 13, Part A: on 21 November 2012

The 19th-century Transportation Revolutions: in steam-powered railroads and steam shipping:

1. The Revolution in Steam-Powered Railroads: the second transport revolution:

a) importance for Great Britain:

i) **completed first phase and introduced second phase of modern industrialization:** with far larger scale forms of industrial capital investments

ii) **completed Britain's national market integration:** only partially achieved by canals

iii) **but did NOT alter the industrial urban map of England:** previously established by the combination of coal-fields and canals

iv) **made the iron (later steel) industry a major export industry:** in the export of railway iron, locomotives, rolling stock (railway cars), etc.

v) **major factor in transmitting modern industrialization to the continent** and the rest of the world

b) importance for continental Europe, the Americas, and Asia:

i) **relatively much more important than for Britain:** since

(1) continental transport facilities were far more primitive – with fewer canals

(2) distances between industrial resources, cities, and ports were much greater

ii) **created not only integrated national but also continental market economies**

iii) **In essence railways for the first time made possible and feasible modern industrialization** elsewhere

c) Origins of the Railroad in Great Britain:

i) **canals:** first stage of the modern transportation revolution provided key problem: as natural monopolies they had become slow, inefficient, and costly (in exacting market rents)

ii) **George Stephenson:** completed others' experiments to achieve first cost-effective steam powered locomotive:

(1) 1825: the Stockton-Darlington Railway: competition proved that locomotive was superior to a stationary steam-engine pulling cars by a cable- but both with iron cars with wheels on flanged wrought-iron rails

(2) 1829-30: the success of the 'Rocket': the Liverpool-Manchester railway

iii) **railway building booms followed** in 1830-36, 1842-52, and 1860-72

d) initial problems with British railways:

i) **no standard gauge:** Stephenson used the traditional coal-mine gauge of 4 ft 8 in, while Brunel used the wider and far more efficient 7 ft gauge, to carry larger cars at faster speeds

ii) **Parliament in 1846:** made the Stephenson gauge the national standard (but other gauges lasted to 1890s)

iii) lack of state control and state planning or direction

iv) **result:** over 1100 railway companies were formed

v) **market forces, with amalgamations, and bankruptcies** reduced this number to 128 by 1900 (when four large companies dominated the national railway system)

e) economic importance of railways in Great Britain:

i) capital formation:

(1) major aspect and form of large-scale capital formation from the 1830s: £630 million invested by 1870

(2) In 1840s: railways accounted for 2/3 of all capital investments (7.5% NNI)

(3) debate between Phyllis Deane and Charles Feinstein on levels of capital formation: read lecture notes

ii) **financial institutions:** shares of railway corporations, with limited liability provisions, opened up the London Stock Exchange and also the new provincial exchanges of Manchester and Birmingham to trading in industrial shares

iii) Market Expansion and Industrial Scale:

(1) by lowering both transportation and communications costs and time-periods (1838: the electric telegraph)

(2) by eliminating local monopolies that had been protected by high transport costs from long-distance competition ('tariff of bad roads'): so that far larger scale national firms could service the entire national market, eliminating such local, small-scale competitors

(3) by reducing the need for larger inventories of supplies, and hence saving on working capitals (to be used to enhance fixed capital formation)

iv) major impact of the coal and iron (later steel) industries:

(1) railway surveys: led to discovery of vast new coal and iron mines

(2) vast increases in coal consumption:

- coal, purified as coke, to produce iron
- coal-fired steam power in producing iron, operating locomotives
- coal for domestic consumption, as it became a much cheaper fuel to produce and transport

(3) vast increase in iron consumption:

- for railway tracks, locomotives, rolling stock, bridges and building
- export of railway iron for construction abroad

v) impact on agriculture:

(1) immensely beneficial for marketing perishable fruits and vegetables

(2) cost saving (and weight-saving) in transporting livestock

(3) vast increase in labour mobility, promoting urban industrialization, created labour scarcity in rural areas

vi) **Note: not until the 1870s did railways profit more from commercial cargoes than passengers:**

- (1) from 1830s, canals responded by becoming far more efficient and competitive in transporting bulk cargoes
- (2) narrow railway gauge and imperfections in technologies did not make cargo transports economically viable until improvements in and from the 1870s
- (3) railway milage more than doubled, as did capital investments, from 1870 to 1914