FACULTY OF ECONOMICS STUDY AIDS 2018

ECT1 Paper 5 British Economic History

The Faculty Board has agreed to release outline solutions to the 2018 examinations as a study aid for exam revision. They are abridged solutions, and not 'definitive', and should therefore not be considered as an exemplar for 'complete' answers.

Also note that the Faculty will not respond to any queries regarding these solutions.

Please note the format of this paper has now been changed. The examination will no longer contain questions on the British Industrial Revolution course and answers will only be required to two of the three questions set on the period the candidate has studied in the Lent term: British Economic History 1850-1914 or British Interwar Economic History.

It should also be noted that the British Economic History 1850-1914 course has this year included lectures by Professor Lamoreaux. These were not given in previous years and so are not reflected in the material here. Additionally candidates now answer two questions in two hours, rather than the previous four questions in three hours, thus a little more material than suggested by these brief answers would be expected from candidates given longer to write their essays. In sum, these solutions have been released for study aid purposes but they should only be taken as an approximate guide to the expectations for this year's examination.

Part I Paper 5 (British Economic History) – examination 2018 + model answers

1. It is often argued that the agricultural sector played an important role in British industrialisation.

(a) How might developments in the agricultural sector influence industrialisation?

(b) Which of these possible influences, if any, are supported by the evidence for Britain?

MODEL ANSWER TO Q1:

(a) Four main ways agriculture should affect industrial sector in theory:

- providing food and raw materials for industry
- releasing investment for industry
- releasing workers for industry
- providing domestic demand for manufactures

(b) Empirical findings:

Food & raw materials:

- Allen (2004) argues that 1750-1800 agricultural output grew more slowly than population, but admits that pre-1750 it performed better
- Overton (1996) argues growth was faster post-1750, so agricultural output supplied Industrial Revolution
- agriculture performed well enough to keep Britain almost independent of imports until c. 1820
- given urbanization, this implied a large indirect release of labour from agriculture

Capital

- Allen (2004) argues little flow of K from agriculture to industry after 1750, though some pre-1750
- in transport, most K came from landowners (Lec. 8)
- in commerce, K moved both from & to agriculture, but net flow probably from agriculture to commerce
- in industry, unclear (Lec. 6):
- initially, some K from landlords developing mines & furnaces, staking younger sons in textiles, mortgages, banks in farming areas
- but after 1790s mostly ploughed-back profits

Labour release

- Allen (2004) admits that agriculture released L but argues that women & boys didn't move to cities but became unemployed
- but agriculture did increase output & productivity while using less L, and that L went away and did other things => 'labour release'

- certainly L release occurred 1500-1750: agricultural share of population fell from 74% to 45% & agricultural L productivity rose 54%

Domestic demand

- Allen (2004) argues that agriculture was not an important source of demand for industry
- but Overton (1996) argues that rural population did demand manufactures
- both would probably agree that pre-1750 agriculture was important for 'Consumer Revolution'
- 1750-1800, big farmers & landlords got richer & did buy new industrial goods (micro-evidence); post-1800 towns overtook rural markets
- i.e., agriculture was probably an important market in the early stages of the Industrial Revolution

2. Did international trade make an important contribution to industrialisation in Britain?

MODEL ANSWER TO Q2:

- theory about how foreign trade might have fuelled industrialization:
  1) Static (gains from trade): a) might have enabled Britain to import commodities it couldn't produce as efficiently (or at all) at home (wheat, cotton); b) might have provided markets for industrial output
  2) Dynamic (long-term): a) might have expanded demand enough to enable industries to exploit economies of scale or learning-by-doing; b) might have generated a lot of profits to fuel re-investment; c) might have drawn idle resources (e.g. unemployed L) into use
- superficially it might seem that without trade, GNP would have been 25-30% lower, wheat consumption 80% lower, cotton processing zero
- but if wheat imports had been reduced, Britain would have grown more wheat & home-grown foods with the resources that had previously produced exports to pay for foreign wheat
- Harley 2004: postulates that trade made imports 10% cheaper; ratio of exports (or imports) to national income rose from 0.08 in 1700 to .30 in 1900, averaging 0.19 1700-1900 => trade caused national income to rise by 10% * 0.19 = 1.9%
- Harley 2004 estimates that in 1860, a prohibition on trade might have reduced P of exportables relative to P of importables by c. 50%; share of imports in national income in 1860 was actually 25%, but with prohibition on trade Harley estimates it at half that (i.e. 12.5%) => self-sufficiency in 1860 would have cost Britain *(50 per cent) * (0.125) = about 6% of national income*
- this is small relative to 19C growth of national income of 2% p.a., which increased income by factor of 7 across 19C
- trade brings many secondary benefits ("handmaiden" rather than "engine" of growth):
- "gains from trade" made people richer – but quantifying them shows they were small relative to growth – refer to Harley 2004
- dynamic effects on learning or scale: did gains from learning and scale in expanding industries exceed losses from failing to learn or achieve scale in industries from which

resources were subtracted? no actual evidence that expansion from trade contributed key learning or economies of scale, no evidence that any effects were large

- dynamic effects on investment: might have enriched E & W Indian merchants, cotton manufacturers & coal owners, but might also have impoverished timber owners, silk manufactures, & taxpyaers via military expenditures; no persuasive evidence that any effects were lare
- dynamic effects on employing idle hands: depends on assumption that markets lacked flexibility to reallocate resources to domestic uses; no evidence of this either in England or in any 18-19C European economy (e.g. 1800 loss of Spanish empire resulted in zero loss of jobs in Spain);
- trade was not the primary cause of industrialization ("engine of growth), did not stimulate growth or industrialization directly
- was not essential – there were substitutes & economy was able to re-allocate resources (refer to Thomas & McCloskey 1981)
- two-way link: industrialization & growth caused trade, reverse causation is less clear

3. How, if at all, does evidence on human heights alter our assessment of the effects of industrialisation on living standards in Britain between 1750 and 1850?

MODEL ANSWER TO Q3:

- wage & income data show only small gains in living standards: < 20% from 1780 to 1850 for average working-class family
- industrialization was accompanied by large-scale urbanization, may have further harmed people's living conditions, with important consequences for welfare
- Floud, Fogel, Harris & Song 2011: nutrition => height & weight => technophysio evolution; virtuous circle: eat more, have more energy, produce more food, eat more => synergistic improvement in health & living standards - growth in height accounts for ½ of growth in GNP since 1790, also accounts for increase in longevity & fall in morbidity
- various studies show general downward trend in heights in late 18 & early 19C (Floud, Wachter, & Gregory 1990), esp. in industrializing cities (Nicholas & Oxley 1993)
- Cinnirella 2008 finds decline 1740-1865, attributes decline in second half of 18th century to high food prices & falling real wages (enclosures, decline in cottage industry, industrialization in cities) => heights intensifies pessimist view of living standards
- but there are problems with heights as welfare indicator (Bodenhorn et al. 2017):
  1) height is a composite measure affected by various causal factors, historical events, and life-cycle periods whose separate influence is hard to distinguish
  2) statistical issues: samples are often truncated by minimum height regulations; selection bias because people "choose" to become soldiers or criminals, influenced by their outside options
  3) heights not strongly correlated with other measures; do people "want" height?
  4) heights declined all over Europe, not just in industrializing Britain

- Crafts 1997 compares 8 indicators of living-standards for Britain during Industrial Revolution (1750-1860); also compares these 8 measures to UN's HDI & GDI; across time, heights (esp. if a more "pessimistic" heights series is adopted) move with some but not all non-income components of living-standards, do not move with the HDI; across 12 European countries c. 1860, heights show low correlation with GDP per head (0.12) & HDI (0.26)
- heights data are one of a number of valuable diagnostics, but are better not used as an index of overall welfare => maybe they don't change our assessment of living standards during Industrial Revolution very much after all

4. Assess the importance of any two of the following influences on technological innovation during the British Industrial Revolution:

(a) factor prices

(b) the Enlightenment

(c) institutions

MODEL ANSWER TO Q4:

(a) factor prices

- consists of 2 factors: 1) coal (& iron); 2) labour
- Allen 2009, Wrigley 2010: argue that Britain had more coal & iron than other potential industrializers, "inorganic" coal & iron more susceptible to technological innovation than "organic" wood
- Objections: little technological progress in coal-mining, next industrializers did so without coal or iron, there was international trade in coal & iron
- Allen 2009: Britain was a high-wage economy, this created incentives for labour-saving inventions
- Objections: a) Mokyr 2009: 1750 technology was most efficient for any realistic range of factor prices; Von Tunzelmann 1996: up to 1830 technical change was neutral between K and L

(b) the Enlightenment

- Mokyr 2009: "the industrial Enlightenment"
- British science "practical" and French science "theoretical"
- "Industrial Enlightenment" = science could be applied to changing material world & improving human condition
- social networks linking scientists & industrialists (e.g. Royal Society)
- However, there are criticisms
- this theory very hard to test empirically (intellectual tradition takes place inside people's heads)
- Enlightenment took place all over 18C Europe, but only Britain had Industrial Revolution in 18C

- only some industrialists had Enlightenment links – Allen 2009 finds c. 50% - is this high enough to support "Enlightenment" theory?
- economy might have affected nature of science and the Enlightenment, not vice versa: Enlightenment and science might have been especially practical & industrial in Britain because of underlying features e.g. commercialization, urbanization, good institutions

(c) institutions

- Three ways institutions can affect technological innovation: i) Allocating returns from innovations; ii) Permitting adoption of innovations; iii) Enabling the existence of returns from innovations
- Allocation of returns from innovation: knowledge is "public good" (non-excludable, non-rival) => hard for inventor to benefit; continent of Europe had government-funded research: good for diffusion, bad for profits; Britain had patent system: bad for diffusion, good for profits (monopoly "rent" to inventor); MacLeod (2007) argues British patent system flexible (some rents, but also some diffusion)
- Adoption of innovations: some institutions hinder adoption: a) guilds – if innovation will compete with businesses of guild members; b) communities – if innovation disrupts their regulation of markets; c) state – may require permits, licenses & fees ("Concessions"). Britain had relatively few of these
- Enabling the existence of returns from innovations: institutions affect implementation of innovations in the real economy: a) markets to obtain inputs (labour and capital); b) markets to sell output; c) light taxes on new sectors; d) may have helped micro-inventions

5. 'Britain invested large amounts of her wealth overseas between 1850 and 1914, but the evidence that this was detrimental to the performance of the economy is weak.' Discuss.

MODEL ANSWER TO Q5:

- £4bn invested abroad by 1914, 1/3 Britain's wealth
- Investors getting best return therefore to benefit of nation. Evidence: Edelstein returns higher and risk no greater abroad; Davis and Huttenback, investors going where returns highest in each phase. Investor broadly rational.
- Difficult to demonstrate bias in capital market, specialisation in type of product investors want – large, safe issues. No demand from industry demonstrated
- But social returns may be less than private returns as Empire investment effectively subsidised therefore a distortion and too much abroad, Davis and Huttenback. But, note, only 2/5 investment in Empire and do get other returns e.g. cheaper food.

Macro level, can demonstrate it has an adverse effect on the trade balance, Rowthorn and Solomou, but not obvious how this adversely affects domestic manufacturing.

6. For the latter part of the nineteenth century, compare British and German provision of (a) formal scientific education and (b) other ways of acquiring human capital. Can deficiencies in human capital provision be causally linked to the relative decline of the UK economy in this period?

MODEL ANSWER TO Q6:

- GB compulsory education from 1870 only, and only till age 11 in 1893. Focus on 3Rs. Secondary for just a few and tends to concentrate on classics. Tiny proportion go to University, few do sciences.
- Germany. Compulsory education 1800, more focus on technical subjects and some secondary schools specialise in these, more students at technical universities
- Pollard, some improvements in state provision of education in GB by 1900, but also much provided outside the formal sector: Technical colleges, City and Guilds, exams in science. Very little difference in overall provision between two countries by 1900.
- Broadberry. Extent of human capital. Formal argued to be quite similar. Apprenticeships/on-the-job training – Germany more vocational training, UK more apprenticeship, but Germany slightly higher quantity. At professional level though UK exceeds Germany. Once weight by skills and sizes of different sectors find very similar human capital UK and Germany by 1910.
- Relative decline occurring over this period, but human capital increasing. Hard to link causally.

7. It has been argued that the long-term relative decline of the British economy had its roots in the late Victorian era. Does Broadberry's work on the relative performance of manufacturing and services support this interpretation?

MODEL ANSWER TO Q7:

- Long-term decline. Other industrial nations catch up and overtake Britain. USA 1880 others mainly post WW2. But very evident by 1960s.
- Manufacturing labour productivity: USA always about 2x UK 1850-1980, does better but no shift in relative performance over the long-term. Germany very similar to UK. Hard to see declining relative performance in manufacturing.
- Whole economy picture a combination of relative performance in manufacturing and sectoral shifts. USA overtaking because manufacturing more efficient (due to economic geography) and shift resources out of agriculture into manufacturing.
- But whole economy picture follows trajectory of services more closely. Competition in manufacturing will remove inefficient firms so end up with lower sector size but similar productivity. Services relatively protected (legislation, local) therefore inefficiencies can persist.
- UK labour productivity in services better than UK and USA in 1870, but starts to fall behind USA in some areas by 1913. USA shifts counting house to modern office, UK fails to mass produce services. But maintains lead in those areas not suitable for mass production. Germany performs better than UK in transport and communication but not in financial services.

- Long-term decline originates from service sector, detectable in late Victorian era (although not undermining the economy at the time). Points up lack of general skills, TU resistance to changed methods and lack of competition as root causes. Crafts too points up these 'institutional' factors in his explanation for Britain's falling behind.

8. Describe British government policies with regard to unemployment benefits in the 1920s. Were these policies the main cause of unemployment in Britain during this period?

MODEL ANSWER TO Q8:

- 1920s Return to Gold. Although exacerbated by reduction in working hours, contractionary policies required to return to gold at $4.86 which reduce price level cause contraction in UK economy. Particularly evident in export industries.
- Same can be observed for other countries that return at pre-war rate, those that devalue do not suffer same degree of difficulty.
- Unemployment benefits. Benjamin and Kochin, greater generosity of system (pay higher, available to more and available for longer) causes people to engage in more search unemployment and thereby increase the unemployment level in the interwar period.
- Much evidence against. Poverty this entails, relationship to structural/ export problems not level of benefits/wage by industry, only find a 'squadron of secondary workers' opting for unemployment in London labour market (Eichengreen). Unrelated to level of long-term unemployment (Crafts).
- Government policy for return to gold did have significant effect on interwar unemployment, benefits did not.

9. Why did Britain devalue the pound in 1931? Evaluate the mechanisms by which devaluation affected economic recovery during the 1930s.

MODEL ANSWER TO Q9:

- Small and specialized **London merchant banks** and **acceptance houses** engaged heavily in trade finance. Those banks were poorly diversified and more vulnerable to liquidity risks. When there was suspension of foreign exchange payment, people feared that small banks might face serious liquidity and solvency risks, so started withdrawing their deposits.
- Because those banks had little capital and reserves to absorb the loss and they were an integrated part of the whole banking system in the UK, the stress was transmitted to other financial institutions and shook the banking system.
- Bank of England's intervention and the 1931 standstill agreements prevented a systemic banking collapse via the network of links between merchant banks and the whole banking system.
- Speculation against sterling continued. Bank of England defends the pound with interest rate increases. The loss of reserves mean that devaluation is the only option in September 1931.

Evaluate the mechanisms by which devaluation affected economic recovery during the 1930s.

1. Expectations Effects- Policy Regime changes
2. Competitiveness and export performance
3. Freed monetary policy: `Cheap Money', low interest rates, Tobin Q effect, wealth effects during the 1930s
4. `Price surprise' in the Labour market, real wage measurement and evaluation of labour market evidence.

10. Evaluate the effects of the policy of Imperial Preference introduced in 1932 on British trade during the 1930s.

MODEL ANSWER TO Q10:

Discussion of Bloc formation in 1930s as a response to global conditions of world trade collapse and protectionism.

British Empire

French Empire

Nazi Trading Bloc

Japanese Trading Bloc

- Be able to describe how these institutions affected the distribution of trade and evaluate trade diversion and trade creation.
- Display some understanding of how the Gravity model can be used to evaluate these institutional changes
- Display an understanding of some of the key results from the existing literature:

Gowa, Joanne, and Raymond Hicks. "Politics, Institutions, and Trade: Lessons of the Interwar Era." *International Organization* (2013)

Eichengreen, B. and Irwin, D., 'Trade Blocs, Currency Blocs and the Disintegration of World Trade in the 1930s', *Journal of International Economics*, February 1995.

de Bromhead, A., Fernihough, A., Lampe, M. and O'Rourke, K.H., 2017. DP11835 When Britain turned inward: Protection and the shift towards Empire in interwar Britain.