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Economics 303Y1: Economic History of Modern Europe to 1914

Topic No. 5: The Causes of the British Industrial Revolution

A. Essays on the Causes of the British Industrial Revolution

- ** 1. R.M. Hartwell, The Causes of the Industrial Revolution in England (Debates in Economic History series, London, 1967)
- * (a) R.M. Hartwell, 'Editor's Introduction,' pp. 1-30.
- (b) Herbert Heaton, 'Industrial Revolution,' pp. 31-52.
- ** (c) R.M. Hartwell, 'The Causes of the Industrial Revolution: An Essay in Methodology,' pp. 53-80. [See below, no. 2].
- (d) Phyllis Deane, 'The Industrial Revolution and Economic Growth: The Evidence of Early British National Income Estimates,' pp. 81-96.
- (e) E.A. Wrigley, 'The Supply of Raw Materials in the Industrial Revolution,' pp. 97-120.
- * (f) E.W. Gilboy, 'Demand as a Factor in the Industrial Revolution,' pp. 121-38.
- * (g) Francois Crouzet, 'England and France in the Eighteenth Century: A Comparative Analysis of Two Economic Growths,' 139-75.
- * 2. R.M. Hartwell, The Industrial Revolution and Economic Growth (London, 1971). A collection of 17 of his essays on this theme.
- (a) 'The Great Discontinuity,' [no. 3], pp. 42-59.
- (b) 'Interpretations of the Industrial Revolution in England,' [no. 5], pp. 81-108.
- (c) 'The Industrial Revolution: a General Essay,' [no. 6], pp. 109-30.
- ** (d) 'The Causes of the Industrial Revolution, I: An Essay in Methodology,' [no. 7], pp. 131-57. [See above, no. 1,c].
- ** (e) 'The Causes of the Industrial Revolution, II: An Essay on Process,' pp. 158-87. [essay no. 8].
- (f) 'The Industrial Revolution as an Example of Balanced Growth,' [no. 9], pp. 185-200.
- (g) 'The Heavy Variables: Capital, Population, Technology, and Organization,' [no. 12], pp. 262-312.
- ** 3. N.F.R. Crafts, 'Industrial Revolution in England and France: Some Thoughts on the Question, 'Why was England First?',' Economic History Review, 2nd ser. XXX (1977), 429-41. Then read: W.W. Rostow, 'No Random Walk: A Comment on 'Why was England First?',' and N.F.R. Crafts, 'Entrepreneurship and a Probabilistic View of the British Industrial Revolution,' both in: Economic History Review, 2nd ser. XXXI (1978), 610-14.
- * 4. David S. Landes, The Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750 to the Present (Cambridge, 1969). Chapter 1 especially, pp. 1-40 [Introduction]; Chapter 2, 'Industrial Revolution in Britain,' 41-123.
5. Joel Mokyr, 'Growing Up and the Industrial Revolution in Europe,' Explorations in Economic History, XIII (Oct. 1976), 371-96.
6. Michael Flinn, The Origins of the Industrial Revolution (London, 1966) Chapters on the

Demographic, Financial, Commercial, and the Social & Intellectual Origins, preceded by Chapter I on 'The Industrial Revolution,' pp. 1-18 [Total pages: 104].

- * 7. Barry Supple, ed. The Experience of Economic Growth: Case Studies in Economic History (New York, 1963).
- * (a) Walt W. Rostow, 'The Take-Off into Self-Sustained Growth,' 81-110.
 (b) H.J. Habbakuk, 'The Historical Experience on the Basic Conditions of Economic Progress,' pp. 111-27.
 (c) T.S. Ashton, 'The Industrial Revolution in Great Britain,' 146-58.
 (d) Charles Wilson, 'The Entrepreneur in the Industrial Revolution in Britain,' pp. 171-88.
8. Sima Lieberman, ed. Europe and the Industrial Revolution (Cambridge, Mass. 1972)
- * (a) Alexander Gerschenkron, 'Reflections on the Concept of 'Prerequisites' of Modern Industrialization,' pp. 9-28.
 (b) A.K. Cairncross, 'The Stages of Economic Growth,' pp. 29-42.
 (c) Phyllis Deane, 'The Cotton Industry,' pp. 85-98.
 (d) Paul Mantoux, 'Coal and Iron,' pp. 99-140.
 (e) A.H. John, 'War and the English Economy, 1700-1763,' pp. 243-62.
 (f) E.W. Gilboy, 'Demand as a Factor in the Industrial Revolution,' pp. 263-76. [See above, no. 1(f)].
 (g) Charles Wilson, 'The Entrepreneur in the Industrial Revolution in Britain,' pp. 291-304. [See above no. 6(d)].
 (h) Herbert Heaton, 'Financing the Industrial Revolution,' pp. 413-24.
- * 9. A.H. John, 'Aspects of English Economic Growth in the First Half of the Eighteenth Century,' Economica, XXVIII (1961), reprinted in E.M. Carus-Wilson, ed. Essays in Economic History, II (London, 1962), 360-73.
10. E.M. Carus-Wilson, ed. Essays in Economic History, III (1962):
- (a) T.S. Ashton, 'Some Statistics of the Industrial Revolution,' 237-51.
 (b) A.K. Cairncross and B. Weber, 'Fluctuations in Building in Great Britain, 1785-1849,' pp. 328-33.
 (c) Donald C. Coleman, 'Industrial Growth and Industrial Revolutions,' pp. 334-52.
 (d) N. McKendrick, 'Josiah Wedgwood: an Eighteenth-Century Entrepreneur,' pp. 353-79.
11. Earl J. Hamilton, 'Profit Inflation and the Industrial Revolution, 1751-1800,' Quarterly Journal of Economics, 1942, reprinted in F.C. Lane and J.C. Riemersma, eds. Enterprise and Secular Change: Readings in Economic History (London, 1953), pp. 322-49.
- * 12. A.E. Musson, ed. Science, Technology and Economic Growth in the Eighteenth Century (London, 1972)
- (a) A.E. Musson, 'Editor's Introduction,' pp. 1-68.
 (b) Peter Mathias, 'Who Unbound Prometheus? Science and Technical Change,' 1600-1800, pp. 69-96.
 (c) A.E. Musson, 'The Diffusion of Technology in Great Britain during the Industrial Revolution,' pp. 97-114.
 (d) T.S. Ashton, 'Some Statistics of the Industrial Revolution in Britain,' pp. 115-20. [See 9(a) above.]

13. Phyllis Deane and H.J. Habbakuk, 'The Take-off in Britain,' in The Economics of Take-off into Sustained Growth (1963).
14. W.A. Cole and Phyllis Deane, 'The Growth of National Incomes,' in H.J. Habbakuk and M.M. Postan, eds. The Cambridge Economic History of Europe, vol vi: The Industrial Revolutions and After (Cambridge, 1965), pp. 1-59 (especially pp. 1-9, 'The Origins of Sustained Growth').
15. Philip A.M. Taylor, ed. The Industrial Revolution in Britain: Triumph or Disaster? (Problems in European Civilization, Boston, 1958). Excerpts of often important essays by Arnold Toynbee, John Nef, John Clapham, Karl Marx, the Hammonds, T.S. Ashton, and G.N. Clark.
16. Sidney Pollard, The Genesis of Modern Management: A Study of the Industrial Revolution in Great Britain (London, 1965).
17. Walt W. Rostow, The Stages of Economic Growth: A Non-Communist Manifesto.

B. General Studies on the Industrial Revolution

- * 1. Phyllis Deane, The First Industrial Revolution (Cambridge, 1965), especially chapters 1 ('The Starting Point'), 8, 14, 16.
2. Phyllis Dean and W.A. Cole, British Economic Growth, 1688-1959 (Cambridge, 1964), especially chapter 2: 'The Eighteenth Century Origins of Economic Growth,' pp. 41-98; and chapter 9: 'British Economic Growth in Retrospect,' pp. 278-314.
3. Peter Mathias, The First Industrial Nation: An Economic History of Britain, 1700-1914 (London, 1969), chapters 1, 5, 7.
4. Paul Mantoux, The Industrial Revolution in the Eighteenth Century: An Outline of the Beginnings of the Modern Factory System in England (1928; reissued New York, 1961). A classic study.
- * 5. Thomas S. Ashton, The Industrial Revolution, 1760-1830 (London, 1948). Also a great classic. Chapters 1, 3, 6.
6. T.S. Ashton, An Economic History of England: the 18th Century (London, 1955), chapter IV.
7. T.S. Ashton, Economic Fluctuations in England, 1700-1800 (Oxford, 1959), chapters 1, 4, 6.
8. Arthur Redford, The Economic History of England, 1760-1860, 2nd edn. (London, 1960), chapters 1-4.
- * 9. E.J. Hobsbawm, Industry and Empire (Pelican Economic History of Britain, Vol. 3: From 1750 to the Present Day), (London, 1968). From a Marxist point of view. Especially chapter 2, 'Origin of the Industrial Revolution,' pp. 34-55; and chapter 3, 'The Industrial Revolution, 1780-1840,' pp. 56-78.
10. Karl Polyani, The Great Transformation: The Political and Economic Origins of Our Time (1944); reissued 1957).
11. E.L. Jones, Agriculture and Economic Growth in England, 1650-1815 (London, 1967).

12. J.D. Chambers and G.E. Mingay, The Agricultural Revolution, 1750-1880 (London, 1966).
13. Charles Wilson, England's Apprenticeship, 1603-1763 (London, 1965), Part III: 'The Wealth and Poverty of England, 1700-1763,' pp. 243-378.
14. L.C.A. Knowles, Industrial and Commercial Revolutions in Great Britain during the Nineteenth Century (1921: reissued 1961). Still useful in places.
15. J.P.P. Higgins and Sidney Pollard, eds. Aspects of Capital Investment in Great Britain, 1750-1850 (London, 1971), especially S.D. Chapman, 'Fixed capital formation in the British cotton manufacturing industry,' pp. 57-107.
16. L.S. Presnell, ed. Studies in the Industrial Revolution (London, 1960).
17. B.R. Mitchell and Phyllis Deane, Abstract of British Historical Statistics (Cambridge, 1962).
18. J.L. and Barbara Hammond, The Rise of Modern Industry, 8th edn. (London, 1951), Part II.

C. Science and Industrial Technology

- * 1. A.E. Musson, ed. Science, Technology, and Economic Growth in the Eighteenth Century (London, 1972). [See above, A. 11.]
2. A.E. Musson and E. Robinson, Science and Technology in the Industrial Revolution (London, 1969).
3. Peter Mathias, ed. Science and Society, 1600-1900 (1972).
4. A.R. Hall, The Scientific Revolution, 1500-1800 (London, 1954).
5. Robert K. Merton, Science, Technology, and Society in Seventeenth Century England (1938; reissued with new introduction 1970).
6. C.B. Singer, et al., eds. A History of Technology, Vol. IV: The Industrial Revolution, 1750-1850 (London, 1958).
7. M. Kranzberg and L.W. Pursell, eds. Technology and Western Civilization, 2 vols. (New York, 1967).
8. C.W.H. Chaloner and A.E. Musson, Industry and Technology (1963).
9. J.G. Crowther, Scientists of the Industrial Revolution (1962).
10. N.A. Hans, New Trends in Education in the 18th Century (1951).
11. A. Robinson and A.E. Musson, James Watt and the Steam Engine (1960).
12. A.E. Musson and E. Robinson, 'Science and Industry in the Late Eighteenth Century,' Economic History Review, 2nd ser. XIII (1960).
13. H.J. Habbakuk, American and British Technology in the Nineteenth Century: the Search for Labour-Saving Inventions (1962).

14. S.B. Saul, ed. Technological Change: The United States and Britain in the 19th Century (London, 1970).
15. G.N. von Tunselman, Steam Power and British Industrialization to 1860 (London, 1979).
16. S.D. Chapman, The Cotton Industry in the Industrial Revolution (1972).
17. T.S. Ashton, Iron and Steel in the Industrial Revolution, 3rd edn. (Manchester, 1963).
18. Charles K. Hyde, Technological Change and the British Iron Industry, 1700-1870 (Princeton, 1977).
19. J. Lord, Capital and Steampower, 1750-1800, 2nd ed. (London, 1966).
20. A. Birch, The Economic History of the British iron and Steel Industry, 1784-1879 (1967).
21. A. and N.L. Clow, The Chemical Revolution (London, 1952).
22. Julia deLacey Mann, The Cloth Industry in the West of England from 1640 to 1880 (Oxford, 1971).
23. Herbert Heaton, The Yorkshire Woollen and Worsted Industries from the Earliest Times up to the Industrial Revolution, 3rd edn. (Oxford, 1965).
24. William Lazonick, 'Production Relations, Labor Productivity, and Choice of Technique: British and U.S Cotton Spinning,' Journal of Economic History, XLI (1981), 491-516.
- * 25. P.L. Payne, British Entrepreneurship in the Nineteenth Century (Studies in Economic History series, London, 1974), especially pp. 24-33.

QUESTIONS

1. Is the term 'Industrial Revolution' justifiable in describing the economic and social changes that Great Britain underwent from ca. 1750 to ca. 1830 (or 1850)?
2. What were the basic causes of the 18th century Industrial Revolution? Discuss in terms of market growth, supply factors, capital formation, entrepreneurship, social and cultural attitudes, education, the role of the state--and of course technological innovation. Was technological innovation in the Industrial Revolution 'induced'--brought about as the necessary consequence of other changes; or was that technological change essentially autonomous?
3. Was the Industrial Revolution in Great Britain really more evolutionary than revolutionary? Was that Industrial Revolution the result of prior developments, some over a century or more, in agriculture, trade, banking and finance, and in industry itself? Was it the natural and inevitable result, the culmination of long-term evolutionary changes; or were there fortuitous and stochastic elements that produced the Industrial Revolution?
4. Why did the Industrial Revolution commence in the later 18th century--not earlier or later; and why did it commence first in Great Britain (England, Wales, and Scotland) and not somewhere else? Why not in the Netherlands or France?
5. Keep in mind your prior discussion of Population and the Industrial Revolution; but do not let demographic factors intrude too strongly again in this current discussion. The role of warfare and the state is also a separate discussion topic.