The Cambridge Economic History of Modern Europe

Unlike most existing textbooks on the economic history of modern Europe, which offer a country-by-country approach, *The Cambridge Economic History of Modern Europe* rethinks Europe's economic history since 1700 as unified and pan-European, with the material organised by topic rather than by country. This first volume is centred on the transition to modern economic growth, which first occurred in Britain before spreading to other parts of western Europe by 1870. Each chapter is written by an international team of authors who cover the three major regions of northern Europe, southern Europe, and central and eastern Europe. The volume covers the major themes of modern economic history, including trade; urbanization; aggregate economic growth; the major sectors of agriculture, industry and services; and the development of living standards, including the distribution of income. The quantitative approach makes use of modern economic analysis in a way that is easy for students to understand.

Stephen Broadberry is Professor of Economic History at the University of Warwick and a Co-ordinator of the Economic History Initiative at the Centre for Economic Policy Research. His recent publications include *The Economics of World War I* (2005, as co-editor) and *Market Services and the Productivity Race, 1850–2000: Britain in International Perspective* (2006).

Kevin H. O'Rourke is Professor of Economics at Trinity College Dublin and a Co-ordinator of the Economic History Initiative at the Centre for Economic Policy Research. His recent publications include *The New Comparative Economic History: Essays in Honor of Jeffrey G. Williamson* (2007, as co-editor), and *Power and Plenty: Trade, War, and the World Economy in the Second Millennium* (2007, with Ronald Findlay).
This book is dedicated to the memory of Larry Epstein.
Contents

List of figures page viii
List of tables ix
List of contributors xi
Preface xiii

Introduction to Volume I 1
Stephen Broadberry and Kevin H. O’Rourke

Part I: Aggregate growth and cycles
1 Understanding growth in Europe, 1700–1870: theory and evidence 7
   Joel Mokyr and Hans-Joachim Voth
2 The demographic transition and human capital 43
   George Alter and Gregory Clark
3 State and private institutions 70
   Dan Bogart, Mauricio Drelichman, Oscar Gelderblom, and Jean-Laurent Rosenthal
4 Trade and empire 96
   Kevin H. O’Rourke, Leandro Prados de la Escosura, and Guillaume Daudin
5 Business cycles 122
   Lee Craig and Concepción García-Iglesias

Part II: Sectoral analysis
6 Agriculture 147
   Tracy Dennison and James Simpson
7 Industry 164
   Stephen Broadberry, Rainer Fremdling, and Peter Solar
8 The services sector 187
   Regina Grafe, Larry Neal, and Richard W. Unger

Part III: Living standards
9 Standards of living 217
   Şevket Pamuk and Jan-Luiten van Zanden
10 Urbanization 235
   Paolo Malanima
11 Europe in an Asian mirror: the Great Divergence 264
   Bishnu Priya Gupta and Debin Ma

Bibliography 286
Index 325
Figures

1.1 The Malthusian model page 14
2.1 The fertility history of England, 1540–2000 45
2.2 The Malthusian regime 46
2.3 Wealth and surviving children, England, 1585–1640 50
2.4 Rate of natural increase (1850–1900) by GDP per capita in 1850 54
2.5 Vital rates and population in Sweden 54
2.6 Crude birth and death rates for France, Russia, and Sweden for selected dates 55
2.7 Earliest date of a 10 percent decrease in fertility, by province 61
2.8 Index of marital fertility by gross domestic product per capita, 1870 and 1930 63
2.9 Effects of demand and supply changes for education 67
2.10 Marital fertility for 1870 and 1930 by school enrollment in 1870 68
3.1 Tax pressure in various European countries, expressed as the number of (silver) day wages per capita, 1740–1790 79
4.1 Number of ships sailing to Asia, per decade 98
4.2 Spice markups, 1580–1890 105
4.3 Anglo-American wheat trade, 1800–2000 107
4.4 Spanish terms of trade vis-à-vis Britain, 1714–1882 117
4.5 Demand versus supply during the Industrial Revolution 119
7.1 Primary wrought-iron industry 182
7.2 Share of coke pig iron 185
8.1 The European network of merchant exchanges in the eighteenth century 191
8.2 Government bond interest rates, 1789–1870 196
8.3 Railways in Europe, 1840, 1850, and 1880 202
9.1 Real wages of European unskilled construction workers, 1700–1870 224
10.1 European urbanization in 1800 239
10.2 Urbanization in 1750 240
10.3 Rank–size distribution England (Wales) and Italy 1800 243
10.4 European urbanization, 1300–1870 244
10.5 European urbanization in 1870 246
10.6 The urban transition 251
10.7 Three views on urbanization 1300–1870 258
11.1 Real wages in Europe and China 272
11.2 Real wages in Europe and Asia 273
## Tables

1.1 GDP per capita in European countries, 1500–1870: growth rates and comparative levels   page 2
2.1 Births per woman per year, married women, northwest Europe before 1790  48
2.2 Total fertility rates before 1790 and in 1870  49
2.3 Total fertility rates in different pre-industrial societies  49
2.4 Growth rates and rate of natural increase, selected countries, 1750–1900  53
2.5 Index of proportion married (Im) for European countries, 1850–1900  59
2.6 Primary school students per thousand children aged 5–14, 1870–1930  66
3.1 Annual public revenue of European states around 1765, in pounds sterling, and estimated share of direct taxes in total fiscal revenue in 1770  78
3.2 Business law reform in Europe  85
3.3 Road policies, 1700–1840  89
3.4 Waterway policies, 1700–1870  91
3.5 Railroad policies, 1825–1870  93
4.1 European trade c.1790  103
4.2 European merchant fleet, c.1790  104
4.3 European real trade, 1820–1870  104
4.4 Entrepôt and special trade  105
4.5 Exports plus imports as share of GDP  106
4.6 Composition of European overseas imports, 1513–1780  108
5.1 Economic downturns in Great Britain, 1700–1750  133
5.2 Economic downturns in seven European countries, 1750–1816  134
5.3 Candidates for continent-wide recessions, 1750–1816  134
5.4 Summary of European central banking before 1914  140
5.5 Economic downturns in eight European countries, 1816–1870  142
5.6 Candidates for continent-wide recessions, 1816–1870  143
6.1 The percentage of the European workforce employed in agriculture  149
6.2 European agricultural labor productivity  150
6.3 European agricultural labor productivity in 1890  151
7.1 Industry in Europe, c.1870: overall distribution  170
7.2 Industry in Europe, c.1870: major branches and countries  171
### List of tables

7.3 Per capita levels of industrialization, 1750–1860 172
7.4 Output of coal in 1860 173
7.5 British labor productivity growth and the contribution of steam technology 175
7.6 National shares of iron production in Europe, 1725–50 and 1860–61 181
8.1 Tonnage of merchant marines in Europe, 1675–1870 199
8.2 Manning ratios in Europe: tons served per man 201
8.3 Comparison of services sector and industrialization, c.1870 212
9.1 Estimates of GDP per capita in European countries, 1700–1913 221
9.2 Estimates of economic growth and real wages in Great Britain, 1780–1870 223
9.3 Life expectancy at birth across Europe, 1820–1870 227
9.4 Literacy across Europe, 1820–1870 229
9.5 Human Development Index, 1820–1870 231
10.1 Urbanization rate in 1800 238
10.2 European urbanization, 1700–1870 245
10.3 Number of European cities and their population, 1700–1870 246
10.4 Number of European centers with 10,000 inhabitants or more and urban percentage of a sample of 147 cities, all exceeding the threshold of 10,000 inhabitants in the period between 1700 and 1870 248
10.5 European urbanization rate in 1700–1870, per area 248
10.6 Percentage of the European urban population by area in 1700–1870 248
10.7 Levels of urbanization in the continents and the world in 1800–1980 255
10.8 Inequality in urbanization in Europe, 1300–1870 255
11.1 Indian silver and grain wages, 1595–1874 267
11.2 A comparison of the daily wages of English and Indian unskilled laborers, 1550–1849 268
11.3 A comparison of the daily wages of English and Chinese unskilled laborers, 1550–1849 269
11.4 Comparison of consumption basket costs, c.1750 271
11.5 Wheat and rice prices: coefficients of variation 277
11.6 Insurance rates on interregional trade 280
Contributors

George Alter, Department of History, University of Michigan.
Dan Bogart, Department of Economics, University of California, Irvine.
Stephen Broadberry, Department of Economics, University of Warwick.
Gregory Clark, Department of Economics, University of California, Davis.
Lee Craig, Department of Economics, North Carolina State University.
Guillaume Daudin, Université Lille-I (Equippe) and OFCE, Sciences Po.
Tracy Dennison, Division of Humanities and Social Sciences, California Institute of Technology.
Mauricio Drelichman, Department of Economics, University of British Columbia and CIFAR.
Rainer Fremdling, Faculty of Economics, University of Groningen.
Concepción García-Iglesias, Department of Social Science History, University of Helsinki.
Oscar Gelderblom, Department of History, Utrecht University.
Regina Grafe, Department of History, Northwestern University.
Bishnupriya Gupta, Department of Economics, University of Warwick.
Debin Ma, Department of Economic History, London School of Economics.
Paolo Malanima, Institute of Mediterranean Societies, IISM-CNR, Naples.
Joel Mokyr, Departments of Economics and History, Northwestern University, and Eitan Berglas School of Economics, Tel Aviv University.
Larry Neal, Department of Economics, University of Illinois, Urbana-Champaign.
Kevin H. O’Rourke, Department of Economics, Trinity College Dublin.
Şevket Pamuk, Ataturk Institute for Modern Turkish History, Bogaziçi University, Istanbul, and European Institute, London School of Economics.
Leandro Prados de la Escosura, Department of Economic History and Institutions and Instituto Figuerola, Universidad Carlos III de Madrid.
Jean-Laurent Rosenthal, Division of Humanities and Social Sciences, California Institute of Technology.
James Simpson, Department of Economic History and Institutions, Universidad Carlos III de Madrid.
Richard W. Unger, Department of History, University of British Columbia.
Hans-Joachim Voth, Department of Economics, Universitat Pompeu Fabra, Barcelona.
Jan-Luiten van Zanden, Department of History, Utrecht University.
Preface

It would be unthinkable for American undergraduates to be offered courses in the economic history of their own state, rather than the United States as a whole. In sharp contrast, most existing textbooks on European economic history are country-specific, implying the risk that students will misinterpret continent-wide phenomena as having been purely national in scope, and as having had purely national causes. The time has come for a textbook on European economic history that takes an explicitly pan-European approach, with the material organized by topic rather than by country.

This project thus aims to provide a unified economic history of modern Europe, explicitly modelled on the pathbreaking Cambridge Economic History of Britain (Floud and McCloskey, 1981). Each chapter has been written by two or three leading experts in the field, who between them were able to cover each of the three major European regions (northern Europe, southern Europe, and central and eastern Europe). Following the pattern established by Floud and McCloskey, we have broken down the project into two volumes, covering the periods 1700–1870 and 1870–2000 respectively. Each volume contains chapters based on the dominant themes of modern economic history: aggregate growth and cycles, sectoral analysis, and living standards. The approach is quantitative and makes explicit use of economic analysis, but in a manner that is accessible to undergraduates.

This is a project that would have been simply unthinkable two decades ago. That there has always been a tradition of pan-European economic history is evident from a glance at the earlier volumes of the Cambridge Economic History of Europe, and many of the giants in the discipline represented there have provided us with sweeping accounts of the economic development of the continent as a whole. It is striking, however, that the later volumes in that series, from the Industrial Revolution onwards, tend to comprise a series of national histories, with a highly selective coverage of both countries and topics. Meanwhile, the quantitative economic history that was beginning to be written in European economics departments from the 1970s onwards was more often than not purely national in scope – which was perhaps inevitable, as economic historians started using their own country’s national statistics to quantify economic growth over the long run. Furthermore, the number of cliometricians working outside the British Isles remained comparatively small. The result was a European economic history profession that was both small and fragmented, especially when compared with our colleagues in North America.
How things have changed. A crucially important turning point came with the founding of the European Historical Economics Society in 1991, which aimed to bring together quantitative economic historians from across Europe working in both economics and history departments. In 1997, the society launched the *European Economic History Review*, which has provided a common forum for economic historians across the continent. Another major breakthrough was the launching in 2003 of an Economic History Initiative at the Centre for Economic Policy Research in London, Europe’s largest economics research network. In combination with European Union funding for pan-European research initiatives, the result has been the development of a vibrant economic history profession in Europe which can genuinely describe itself as “European.”

We put our contributors through two gruelling conferences at which we discussed chapter drafts, in Lund in 2006, and at the CEPR in 2007. We are naturally extremely grateful to the local organizers of both events. We would also like to thank all the contributors for the enthusiasm and stamina which they displayed on both occasions, and also for delivering their chapters in a timely fashion.

This project is an outgrowth of the EU-funded Marie Curie Research Training Network “Unifying the European Experience: Historical Lessons of pan-European Development,” Contract no. MRTN-CT-2004–512439. It goes without saying that we are extremely grateful to the European Commission for their very generous financial support, without which this project could never have gotten off the ground. We are also grateful to the CEPR staff who provided such expert assistance in applying for the grant and administering this project. Much of the work on this book took place while O’Rourke was a Government of Ireland Senior Research Fellow, and he thanks the Irish Research Council for the Humanities and Social Sciences for their generous support.

Our training network was struck by tragedy in 2007, when one of our most respected and well-liked members, Stephan (Larry) Epstein died suddenly, at the age of just 46. Larry is an enormous loss to our profession, and we shall miss him greatly. These volumes are dedicated to him.

Stephen N. Broadberry
Kevin H. O’Rourke