

Introduction to Volume II

STEPHEN BROADBERRY AND KYOJI FUKAO

This book seeks to provide an overview of the modern world economy since 1870, dealing with the material in such a way as to give due weight to chronology, regional balance, and coverage of the main topics. It forms part of a two-volume publication, with the first volume taking the story from 1700 to 1870. Volume II begins in 1870 because by then modern economic growth had emerged in Britain and already spread to much of the rest of western Europe and the British offshoots in the New World (the United States, Canada, Australia, and New Zealand), and was poised to begin in Asia, following the institutional reforms in Japan associated with the Meiji Restoration of 1868. There was thus a great potential during the period after 1870 for closing the gap in living standards that had opened up between the West and the rest of the world. Although many more countries embarked on the process of sustained modern economic growth between 1870 and 2001, the gap nevertheless continued to grow during the long twentieth century, as catching up proved elusive (Maddison 2005: 11). By 2001, the world was nearly seven times richer than it had been in 1870, but the gains were unevenly distributed, with the West growing by a factor of nearly 12, while the rest of the world grew by a factor of less than 6. As a result, the spread between the West and the rest of the world increased from roughly 3:1 in 1870 to nearly 7:1 in 2001, while the spread between the richest and poorest regions increased from roughly 5:1 to 18:1 over the same period (Maddison 2005: 11).

The volume is divided into two parts, with Part I covering regional developments and Part II focusing on the key factors governing differential outcomes in different parts of the global economy. It draws on the upsurge of literature on the economic history of most regions of the world that has been produced in recent years, much of it available in the English language, but also firmly grounded in national literatures written in other languages. Much of this literature has also been based on quantitative data and makes explicit

STEPHEN BROADBERRY AND KYOJI FUKAO

use of economic analysis in an accessible way. The book is aimed at a wide audience of historians and social scientists.

The central story of this book is of a dramatic increase in living standards between 1870 and 2010 in most parts of the world, but unequally distributed. The biggest gains were in western Europe and the New World, which increased their lead over other regions until after World War II, since when there has been some closing of the gap. The standard summary indicator of these trends is gross domestic product per head of the population (or GDP per capita), which will feature heavily in our story. However, it will also be supplemented by other indicators, such as the Human Development Index (HDI), which attempt to take a broader view of living standards.

Part I: Regional Developments

Volume I charts the beginning of modern economic growth in Britain during the eighteenth century and its spread to other parts of western Europe and the British offshoots in the New World. However, it also draws on recent research to capture the considerable variation in outcomes within regions as well as between the main regions of the world. This included reversals of fortune between north-west Europe and the Mediterranean economies of southern Europe, between China and Japan in Asia, and between the British offshoots and Latin America in the New World, as well as a range of outcomes within Africa.

Volume II encompasses a wide range of outcomes within regions as well as between the main regions, with Table i.1 providing a convenient overview. As in Volume I, the data are taken largely from the Maddison Project Database, version 2013. Following Maddison (2001), GDP per capita estimates for each country are presented in terms of a common currency unit, 1990 international \$, so that they can be compared across both space and time. Although this clearly creates index number problems, it is likely that these are dwarfed by measurement errors, and the exercise should be treated as indicating broad trends rather than being correct to the second decimal point. To fix orders of magnitude, it is worth bearing in mind that in 1990 the World Bank regarded anyone existing on less than \$1 per day as living in poverty. This means that the minimum GDP per capita consistent with a society being able to support itself and reproduce should be around \$400, with most people living on \$1 per day and a small elite who may have been much richer, but had only a small impact on the average income.

The transition to modern economic growth in north-west Europe, documented in Volume I, opened up the possibility of catch-up growth in other

Introduction to Volume II

Table i.1 GDP per capita by region, 1870–2010 (1990 international \$)

	1870	1913	1929	1950	1973	2010
France	1,876	3,485	4,710	5,186	12,824	21,477
Germany	1,839	3,648	4,051	3,881	11,966	20,661
Italy	1,542	2,305	2,778	3,172	10,414	18,520
Spain	1,207	2,056	2,739	2,189	7,661	16,797
Sweden	1,345	2,874	4,063	6,739	13,494	25,306
United Kingdom	3,190	4,921	5,503	6,939	12,025	23,777
WESTERN EUROPE	2,006	3,488	4,167	4,517	11,346	20,889
Czechoslovakia	1,164	2,096	3,042	3,501	7,041	13,020
Poland	946	1,739	2,117	2,447	5,340	10,762
USSR	–	1,414	1,386	2,841	6,059	7,733
Yugoslavia	551	973	1,256	1,428	4,533	6,693
EASTERN EUROPE	953	1,726	1,982	2,088	5,020	8,678
United States	2,445	5,301	6,899	9,561	16,689	30,491
Australia	3,273	5,157	5,263	7,412	12,878	25,824
BRITISH OFFSHOOTS	2,419	5,233	6,673	9,268	16,179	29,564
Argentina	1,468	3,797	4,367	4,987	7,962	10,256
Brazil	713	811	1,137	1,672	3,880	6,879
Chile	1,290	2,988	3,455	3,670	5,034	13,881
LATIN AMERICA	794	1,586	2,053	2,696	4,874	7,770
China	530	552	562	448	838	8,032
Japan	1,011	1,567	2,302	1,921	11,434	21,935
India	533	673	728	619	853	3,372
Indonesia	517	869	1,087	667	1,566	4,722
ASIA	540	673	–	667	1,566	6,375
Israel	–	–	–	2,817	9,645	19,171
Saudi Arabia	–	–	–	2,231	11,040	10,201
Turkey	825	1,213	1,213	1,623	3,477	8,225
MIDDLE EAST	781	1,133	–	1,776	4,855	7,231
Ghana	439	781	–	1,122	1,397	1,922
Kenya	–	–	–	651	970	1,141
South Africa	807	1,151	1,497	2,535	4,175	5,080
AFRICA	613	758	779	887	1,387	2,034
WORLD	884	1,543	–	2,104	4,081	7,814

Sources: Adapted from Maddison 2001: 264; Maddison Project Database, version 2013; Maddison 2010, incorporating new long-run series as follows: Japan: Fukao et al. 2015; Africa: Prados de la Escosura 2012.

parts of the world, and the extent to which that possibility was realized is most conveniently summarized in Tables i.1 and i.2. Although in 1870 GDP per capita was still higher in the United Kingdom than in the United States, by 1913 the United States had not only caught up, but had gone on to forge ahead

STEPHEN BROADBERRY AND KYOJI FUKAO

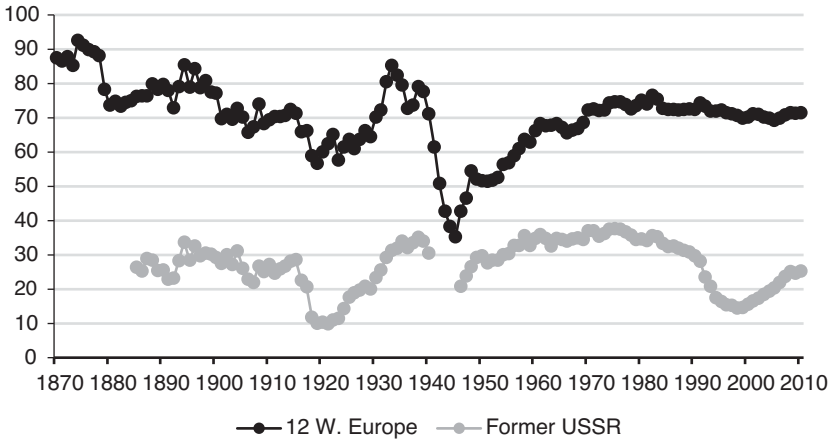


Figure i.1 Regional GDP per capita: western Europe and former USSR

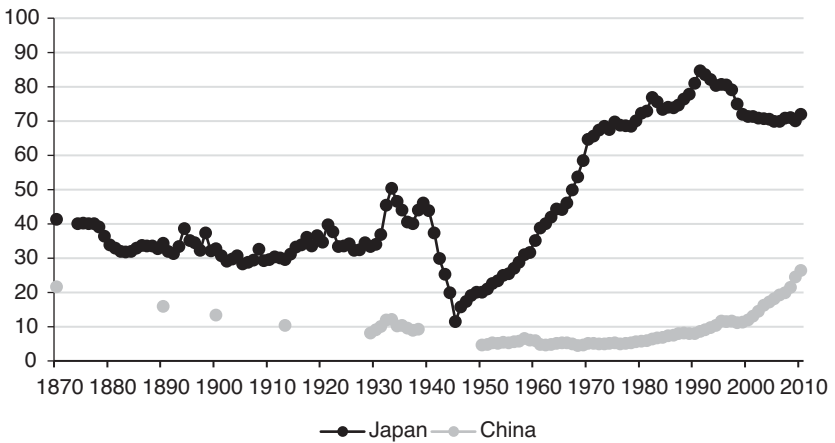


Figure i.2 Regional GDP per capita: East Asia

decisively, remaining the world’s most productive large economy throughout the twentieth century.¹ It is therefore instructive to plot regional GDP per capita as a percentage of the US level in Figures i.1 to i.5, to identify episodes of catching up and falling behind.

¹ Some small economies have achieved higher per capita incomes for short periods as a result of favourable movements in the terms of trade, particularly associated with the price of natural resources.

Introduction to Volume II

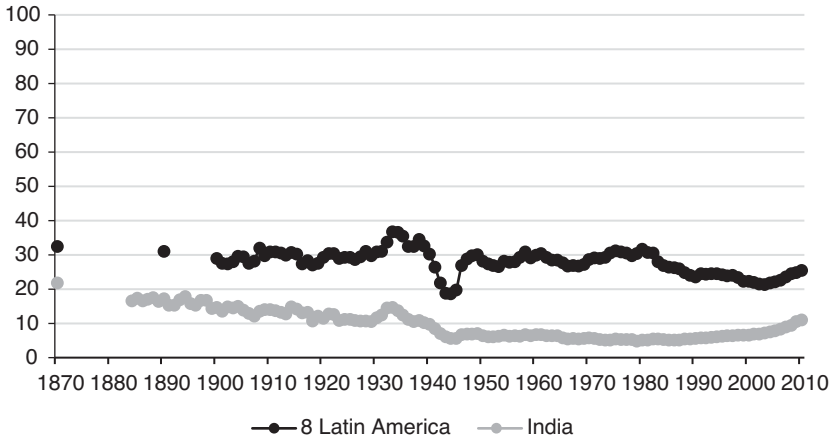


Figure i.3 Regional GDP per capita: Latin America and South Asia

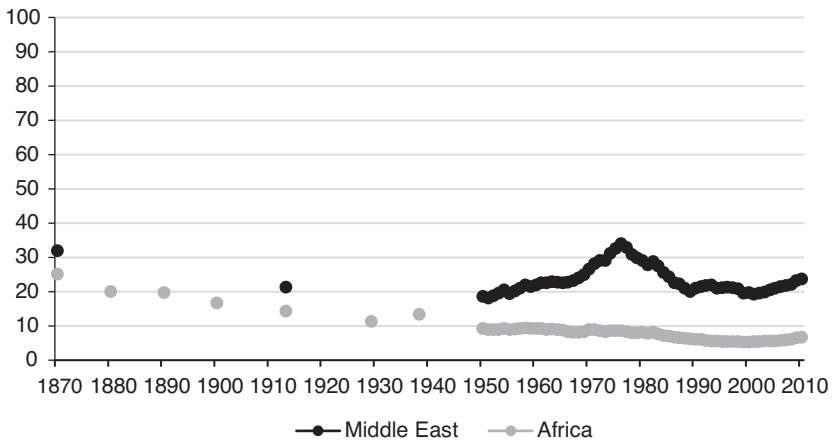


Figure i.4 Regional GDP per capita: Middle East and Africa

The idea that a lagging economy may be expected to grow faster than a leading economy has had a major influence on economic history since the work of Abramovitz (1979; 1986), who saw the period since 1945 as an important phase of catch-up growth. In fact, the idea that economic backwardness may lead to a spurt of catch-up growth was not new in economic history, going back at least to Veblen’s (1915) study of Imperial Germany and Gerschenkron’s (1962) analysis of European and especially Russian

STEPHEN BROADBERRY AND KYOJI FUKAO

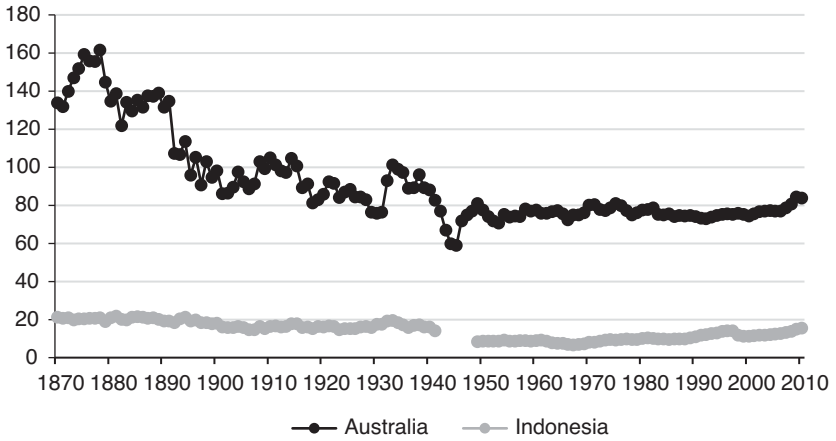


Figure i.5 Regional GDP per capita: Australia and Indonesia

industrialization. However, Abramovitz's (1986) paper appeared in the same year as Baumol's (1986) influential paper which highlighted the negative relationship between the productivity growth rate and the initial level of productivity in a sample of sixteen economies covering the period 1870–1979. The negative relationship, which indicates convergence of living standards between countries, could be expected from a simple neoclassical growth model, either because of diminishing returns to capital or the assumption of exogenous technology. With diminishing returns to capital, an economy that falls behind because of insufficient capital may be expected to have a high rate of return to capital and therefore greater incentive to invest and catch up. Alternatively, a country which falls behind technologically may be expected to catch up by simply adopting the more advanced technology from abroad. In practice, of course, the potential for catching up has not always been realized, and economic historians have often stressed the barriers to catching up. Indeed, Abramovitz (1986) himself noted that only economies with the right 'social capabilities' could be expected to take advantage of the possibilities of catching up. This is borne out by Figures i.1 to i.5, which are characterized as much by falling behind as by catching up, or by divergence as much as by convergence of living standards.

The rise to economic leadership by the United States is the focus of Chapter 1. The United States surpassed the United Kingdom in terms of GDP per capita between 1870 and 1913, then forged further ahead between 1913 and 1950 (Table i.1). Although many countries narrowed the gap after

Introduction to Volume II

1950, the United States has remained the richest large economy. It is tempting to link the rise of US economic leadership to modern business enterprise and technological innovation from the time of the Second Industrial Revolution, focused on the electrical, chemical, and automotive industries (Chandler 1990). However, the situation was more complex, since the United States already had higher labour productivity than the United Kingdom in manufacturing by the mid-nineteenth century, and benefited from a later structural shift of labour from low-productivity agriculture, while comparative labour productivity in the whole economy most closely mirrored comparative labour productivity in services (Broadberry 1998).

Turning to the performance of other countries and regions, we begin in Figure i.1 with the situation in western Europe and the former USSR. The series for western Europe is derived from twelve economies for which high quality data are available: Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Sweden, Switzerland, and the United Kingdom. Chapter 2 examines convergence and divergence within western Europe, finding that the region as a whole fell behind the United States between 1870 and 1913, before recovering some ground between the wars. However, World War II saw western Europe falling further behind, with the US continuing to forge ahead technologically, and Europe suffering extensive physical destruction and economic disruption as the main theatre of war. Between 1950 and 1980, western Europe experienced a ‘Golden Age’ of rapid catch-up growth, but this tailed off at around 70 per cent of the US GDP per capita level rather than closing the gap completely.

Figure i.1 also includes data on the territory of the former USSR, which dominates the path of GDP per capita in eastern Europe. The pattern of catching up and falling behind in the former USSR largely reflects the socialist experiment arising from the Bolshevik revolution of 1917, which forms the focus of Chapter 3. Although imperial Russia did not experience any trend decline relative to the United States before World War I, it was a long way behind, at around 30 per cent of the US level of GDP per capita. War and revolution dealt a devastating blow, but this was followed by rapid Soviet catch-up growth during the 1920s and 1930s, which has sometimes been seen as casting a favourable light on the socialist experiment. After another setback across World War II, Soviet catching up resumed, but after a promising start during the late 1940s, catching up proceeded at best very slowly. The contrast with western Europe during its Golden Age of the 1950s and 1960s in Figure i.1 is particularly striking because the Soviet Union was starting from a much

STEPHEN BROADBERRY AND KYOJI FUKAO

lower level and therefore had much greater potential for catching up. As catching up levelled off in western Europe during the 1970s, the Soviet Union and its east European satellites began to fall further behind. The socialist bloc increasingly became associated with economic stagnation and loss of political freedom, leading to a growing loss of appeal and eventual implosion of the system. The collapse at the end of the 1980s was followed by a spectacular decline in per capita GDP, with the former USSR reaching a low point of just 14.5 per cent of the US level in 1998. By 2010, this had still only recovered to 25.4 per cent.

Since World War II, there have been a series of East Asian miracles and Figure i.2 helps to put these in context by charting the contrasting paths of GDP per capita in Japan and China compared with the United States. Chapter 4 sets out the performance of Japan, which was the first Asian economy to achieve modern economic growth following the Meiji Restoration of 1868. During the pre-World War I period Japan grew at about the same pace as the United States, which was in the process of overtaking the United Kingdom to become world productivity leader. It should be noted that the Japanese data constructed by Fukao et al. (2015) substantially revise upwards the level of GDP per capita before World War II compared with earlier estimates, thus painting a picture of a more advanced Japan before World War I and during the interwar period than that suggested by Maddison (2001). The catastrophic collapse across World War II was followed by a dramatic return to GDP per capita growth of around 8 per cent per annum during the 1950s and 1960s, but this was followed by a return to 3 per cent growth during the 1970s and 1980s, and less than 1 per cent growth after 1990. Although Japan eliminated the productivity gap with western Europe, it stalled before catching up with the United States. A second wave of East Asian countries to develop after Japan, consisting of South Korea, Taiwan, Hong Kong, and Singapore, known collectively as the newly industrializing countries (NICs), began to grow rapidly from the 1960s. By the early 1990s, there was talk of an economic miracle, based on 'Asian values' and activist industrial policies, which attracted some sceptical comment from economists (Krugman 1994; Young 1995). Although all four NICs suffered serious setbacks during the East Asian financial crisis of 1997–98, they resumed catching up in the 2000s, and by 2010 South Korea and Taiwan were on a par with Japan, while the city states of Hong Kong and Singapore had caught up with the United States.

Chapter 5 offers an overview of developments in China, which followed a very different path from Japan, falling further behind the United States during the late nineteenth century and the first half of the twentieth. Chinese GDP per

Introduction to Volume II

capita reached a nadir of around 5 per cent of the US level during the first thirty years of communist rule. From the late 1970s, however, following institutional reforms to liberalize the economy whilst maintaining the leading role of the Communist Party, China entered a dramatic catching-up phase. Although China did not manage to match the pace of catching up achieved by Japan between the 1950s and the 1970s, it had raised China's comparative GDP per capita position to more than 25 per cent of the US level by 2010. Together with its huge population, this made China the world's second largest economy measured by GDP at purchasing power parity, challenging the economic dominance of the West.

Turning to South Asia in Figure i.3, India has followed a similar trajectory to China, falling further behind the United States between 1870 and 1950 and remaining at around 5 per cent of the US level for the first three decades of independence from Britain. Liberalizing reforms during the 1980s then unleashed a dramatic period of catching up, again echoing the Chinese trajectory. By 2010, Indian GDP per capita had reached more than 10 per cent of the US level. Developments in India are discussed in Chapter 6.

Figure i.3 also shows the performance of Latin America, which is discussed in Chapter 9. The eight Latin American economies covered here are: Argentina, Brazil, Chile, Colombia, Mexico, Peru, Uruguay, and Venezuela. The overall picture is a lack of catching up with the United States over the long run, although this hides important variation in individual country performance. Argentina and also Uruguay, to a lesser extent, were on a par with many west European countries in 1913, as major exporters of primary produce. However, they failed to fulfil their early promise and began a rapid relative decline from the 1930s. Venezuela, by contrast, was relatively poor until the mid-1920s, but then caught up rapidly on the back of oil resources. The whole region suffered a major setback with the debt crisis of the 1980s, leading to a 'lost decade'.

The Middle East, which is plotted together with Africa in Figure i.4, is discussed in Chapter 8.² Reliable estimates of GDP per capita in the Middle East before 1950 are confined to Turkey for the interwar period and the Ottoman Empire before World War I, and suggest continued falling behind the United States until 1950. There then followed a period of catching up during the 1950s and 1960s, based on oil. The rate of catching up accelerated during the 1970s as the result of a massive swing in the terms of trade brought about by the Organization of Petroleum Exporting Countries (OPEC), led by

² Strictly speaking, Chapter 8 covers the Middle East and North Africa (MENA), while Chapter 10 focuses on sub-Saharan Africa.

STEPHEN BROADBERRY AND KYOJI FUKAO

Saudi Arabia. However, a reversal of the terms of trade during the 1990s brought about an equally dramatic period of falling behind, leaving Middle Eastern GDP per capita at less than 25 per cent of the US level by 2010.

African economic performance is discussed in Chapter 10. GDP per capita grew more slowly in Africa than in the United States between 1870 and 1950 so that Africa fell further behind during this period of colonization by European powers (Figure i.4). African performance during this period is more or less in line with the performance of colonial India, while independent Latin America held its own against the United States. Decolonization did not improve the relative performance of Africa, which continued to fall further behind after World War II, reaching a low point of just 5.3 per cent of the US level at the end of the 1990s. Africa then entered a period of catching-up growth, with GDP per capita recovering to 6.7 per cent of the US level by 2010.

The case of Australia, plotted in Figure i.5 and analysed in Chapter 11, reminds us that the world per capita income leader in the late nineteenth century was neither the United States nor the United Kingdom. The high per capita incomes in Australia were the result of a combination of a small settler population and natural resource abundance in an economy with good institutions. In the late nineteenth century, however, the resource boom faltered and Australian per capita income leadership disappeared. Across World War II, Australian per capita incomes declined further to around 80 per cent of the US level. South East Asia is discussed in Chapter 7, with the GDP per capita of Indonesia, the largest economy in the region, plotted on a comparative basis in Figure i.5. Indonesia fell further behind the United States between 1870 and the mid-1960s, before entering a catch-up phase after the coup to remove President Sukarno, who had presided over a period of slow growth and rapid inflation during the early 1960s. The setback following the East Asian financial crisis of 1998 is also clearly visible in Figure i.5.

The data from Table i.1 can be used to calculate annual growth rates of per capita GDP in Table i.2. The first point to note is that compared with earlier epochs, the period since 1870 has seen a remarkable increase in per capita GDP growth rates. At the world level, GDP per capita grew at just 0.31 per cent between 1800 and 1870, so the increase to 1.3 per cent between 1870 and 1913 was a dramatic improvement. Even with the disruption of the two World Wars and the Great Depression, GDP per capita grew at 0.84 per cent per annum between 1913 and 1950, nearly three times as rapidly as during 1800–1870. Furthermore, the slowdown was dramatically reversed during the period 1950–73, when GDP per capita grew by 2.88 per cent per annum, before falling back to 1.76 per cent between 1973 and 2010. This general pattern of