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Development, transition and divergence

The consequences for human welfare involved in questions like these are simply staggering: once one starts to think about them, it is hard to think about anything else.

Robert E. Lucas, Jr (1988)

When I was a student at the University of Chicago in the early 1980s I had the opportunity of observing Professor Robert Lucas prepare his 1985 Marshall Lectures. It is a great honour for me to follow Professor Lucas's steps to give the distinguished lectures twenty-two years later. I returned to China in 1987 after graduating from the University of Chicago and doing one year of postdoctoral research at Yale University's Growth Center. As the first person to return to China from abroad with a PhD degree in economics after the economic reform programme started in 1979, I have had the privilege of experiencing in person the miraculous changes in China's social and economic life and carrying out in situ research into China's development and transition over the past twenty years. Therefore, I would like to use this occasion to share with you my observations of developing countries' economic development and transition, based primarily on my experiences in China.

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It is a well-known fact that, before the modern era, most countries were effectively in the development stage of a relatively backward agricultural economy – disturbed from time to time by war and natural calamities, and afflicted by the Malthusian trap. Except for the ruling classes, craftsmen and merchants – who represented a minority of the population – most people worked in agriculture. The allocation of resources in such agrarian economies was close to optimal through generations of practice; therefore, the gains from improvement in the allocation of resources were small (Schultz, 1964). Further economic development was feasible only with some exogenous technological shocks to the system. The accidental discovery of better technology during the daily work of peasants and craftsmen is one example of such a shock.¹ Another is the Great Geographic Discovery of America in the fifteenth century, which brought back gold and silver to Europe as well as new crops – such as maize and potatoes – with better adaptability to various soil and climatic conditions. In this pre-modern era economic development was manifested mainly in the form of population increase and the aggregate size of the economy. There was extensive growth, but per capita income did not change much (Clark, 2007; Kuznets, 1966; Perkins, 1969). The income gap between areas that today would be considered developed and those that would be considered developing was relatively small from today's viewpoint – estimated to be at most 50 per cent (Bairoch, 1993; Maddison, 2006). Some of today's developing countries – such as China and part of India – were believed to be richer than Europe at that time (Cipolla, 1980; Pomeranz, 2000; Smith, 1776 [1976]). Until the late eighteenth century the overall performance of markets – in terms of

¹ The adoption of certain technologies – for example, the replacement of the three-field cropping system with the more intensive two-field system in Europe – might be endogenous to the increase in population pressure, as argued by Boserup (1965). The invention of new technologies at that time came about mostly through accidental discoveries by peasants and artisans rather, however, than through purposeful research efforts (Needham, 1969).

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integration – in China and western Europe was comparable (Shiue and Keller, 2007).

After the Industrial Revolution began in England in the mid-eighteenth century, experiments conducted in laboratories became the major source of technological invention and innovation (Landes, 1998; Lin, 1995; Needham, 1969; Rosenberg and Birdzell, 1986). This was especially true for those macro-inventions that consisted of radical new ideas and involved large, discrete, novel changes, as defined by Mokyr (1990). For developed countries at the technological frontier, such a transformation of the method of technological invention enabled them to accelerate technological advances through investment in research and development, and technological invention and innovation became endogenous (Lucas, 1988; Romer, 1986). With increasing investment in research and development, technology change accelerated, industrial structures upgraded continuously and productivity increased. As a result, developed countries began to take off and the divergence between the North and the South appeared (Bairoch, 1993; Baumol, 1994; Braudel, 1984; Clark, 2007; Clark and Feenstra, 2001; Jones, 1981; Kuznets, 1966; Maddison, 2006; Rostow, 1960).

Figure 1.1 shows the per capita income in various regions of the world from 1–2001 AD, based on the estimation of Maddison (2006: 642). It shows that, from an insignificant difference at the beginning of the eighteenth century, per capita income in the developed countries of western Europe and its offshoots had increased to more than twenty times that of the developing countries by the end of the twentieth century. As Lucas (1988) reflected in his 1985 Marshall Lectures, '[S]uch diversity across countries in measured per capita income levels is literally too great to be believed.'

It is natural for governments and people in poor countries to aspire to achieve the success of rich countries in Europe and North America. Except for a few newly industrialised economies (NIEs) in east Asia – as shown in figure 1.2 – most developing countries have

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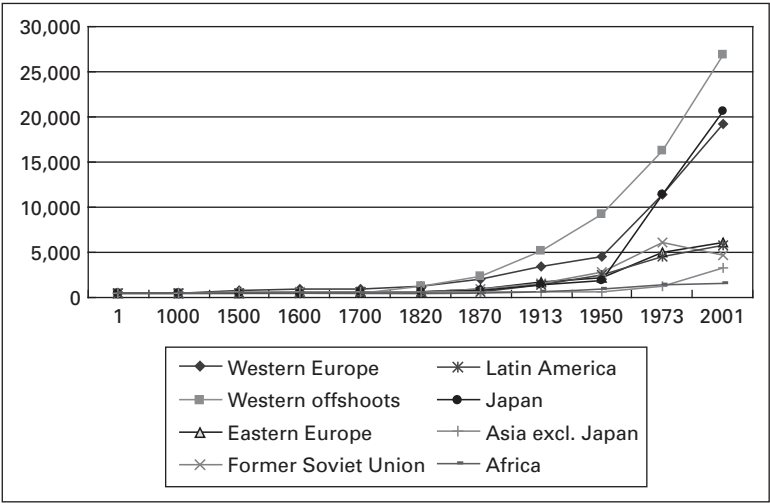


Figure 1.1 Per capita GDP of various regions, 1–2001 AD

Note: Gross domestic product (GDP) is calculated with 1990 international Geary–Khamis dollars. The Geary–Khamis dollar – also known as the international dollar – is a sophisticated aggregation method of calculating purchasing power parity (PPP), which facilitates the comparison of countries with one another. The statistical definition can be found at http://unstats.un.org/unsd/methods/icp/ipc7_hm.htm.

Source: Maddison (2006: 642).

failed to achieve their economic development goals since the Second World War. In fact, many have encountered frequent crises, despite the efforts of their governments and assistance from international development agencies such as the World Bank and the United Nations Development Programme.

In most developing countries, after the Second World War, governments adopted various policy measures to promote industrialisation (Chenery, 1958, 1960, 1961; Krueger, 1992; Lal, 1983). At that time most economists were expecting to see rapid growth in the resource-rich countries of Africa and Latin America, but the real success stories appeared in east Asia, where the endowment of natural resources was extremely poor. Japan was the first success, followed by South Korea, Taiwan, Hong Kong and Singapore – the four

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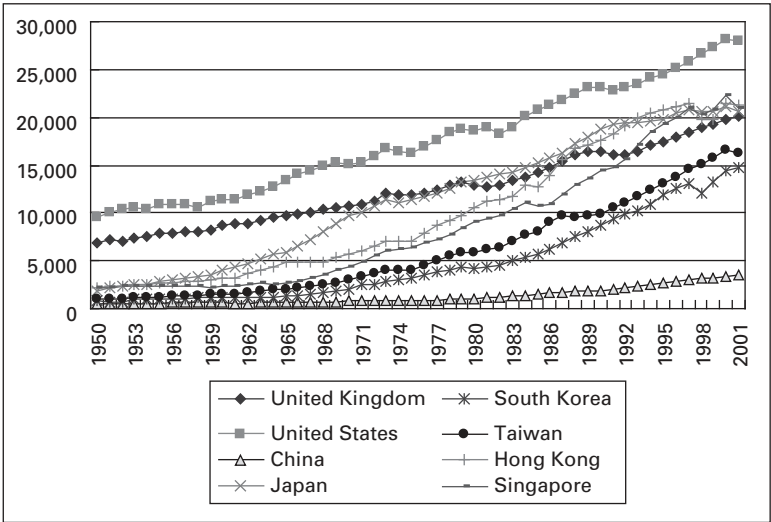


Figure 1.2 Per capita GDP of the United States, the United Kingdom and the east Asian NIEs, 1950–2001
Note: GDP is calculated with 1990 international Geary–Khamis dollars.
Source: Maddison (2006).

east Asian NIEs – and, recently, by Malaysia, Thailand and Indonesia. In these economies, in the early 1950s, their per capita GDP of less than 2,000 international Geary–Khamis dollars – as measured by the 1990 purchasing power parity – was the same as China and less than that in eastern Europe and Latin America at that time. The economies of the four east Asian NIEs maintained an annual growth rate of some 10 per cent for two to three decades from the 1960s. Such growth completely changed the poor and backward state of their economies. Figure 1.2 shows that – as measured by PPP – income levels in Japan in the 1970s and in Singapore and Hong Kong in the 1990s surpassed that of the United Kingdom. More importantly, wealth distribution in these economies became more equitable during their economic growth (Fei, Ranis and Kuo, 1979). To some extent, these east Asian economies have realised their long-pursued goal of catching up developed countries and building equitable societies – a dream championed by many

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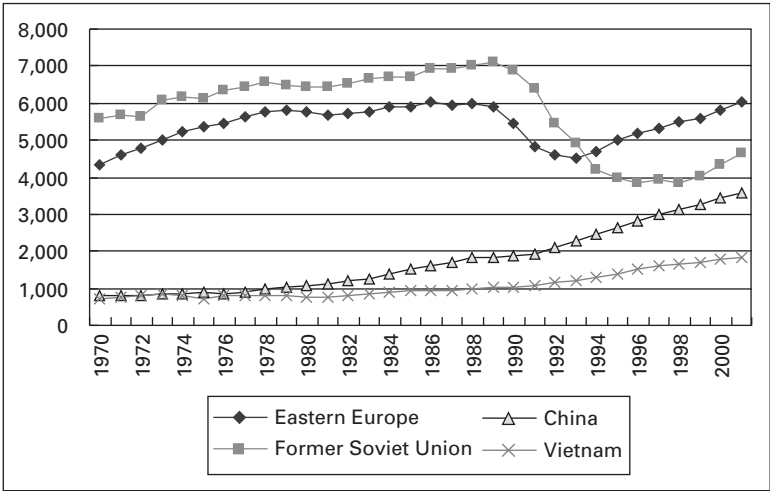


Figure 1.3 Per capita GDP of China, Vietnam, eastern European countries and the former Soviet Union, 1970–2001
 Note: GDP is calculated with 1990 international Geary–Khamis dollars.
 Source: Maddison (2006).

revolutionary leaders and social elites in developing countries, such as Vladimir Lenin, Sun Yat-sen, Mao Zedong, Jawaharlal Nehru and Gamal Abdel Nasser.

Since the late 1970s China and other socialist countries that had previously implemented a planned economic system began the transition to a market economy in order to improve their economic performance. Figure 1.3 shows that such a transition brought about rapid economic growth in China and Vietnam for more than two decades. The transitions that began in the early 1990s in the former Soviet Union and eastern European countries, however, led to dramatic declines in their economies and deterioration in most aspects of social development (World Bank, 2002a). A survey conducted in 2006 by the European Bank for Reconstruction and Development (EBRD, 2007) and the World Bank of 29,000 people in twenty-nine countries – including eastern and south-eastern Europe, the Baltic states, the Commonwealth of Independent States and Mongolia – found that only 30 per cent believed their lives were better than in

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1989. During the same period most developing countries in other parts of the world followed the advice of the International Monetary Fund (IMF) and the World Bank to implement reforms to reduce government intervention and enhance the role of the market. The result was disappointing, however. The economic performance of most developing countries deteriorated during this period (Barro, 1998; Easterly, 2001a).

Continuous technological innovation and upgrading of industrial structures – as well as corresponding institutional changes – are the driving forces of long-term economic growth in modern times (Hayami and Godo, 2005; Kuznets, 1966; Landes, 1969; Marx, 1867–94 [1977–81]; Rosenberg and Birdzell, 1986). By borrowing technology and institutions, a developing country has the advantage of backwardness (Gerschenkron, 1962; Landes, 1969; Veblen, 1915). Like Germany, France and other countries in western Europe in the nineteenth century and Japan and the NIEs in east Asia after the Second World War, a developing country can learn from the experiences of developed countries in technology and institutions. Similarly, transitional countries, such as China and Vietnam, can also emulate the well-functioning market institutions of developed countries. This advantage enables them to undertake rapid technological improvements, upgrade their industry and adapt institutions at a relatively low cost and with less risk. Such an advantage can enable developing and transitional countries to maintain rapid economic growth for several decades, narrow the gap with developed countries and even overtake some of them.

While western European countries in the late nineteenth century and Japan and the NIEs in east Asia after the Second World War developed successfully and China and Vietnam succeeded in achieving rapid growth during their transition periods, why have most other developing and transitional countries failed to exploit such potential fully? This is the question that I explore in the following chapters.

TWO

The search for a fundamental and changeable cause of prosperity

But, soon or late, it is ideas, not vested interests, which are dangerous
for good or evil.

John Maynard Keynes (1935)

The dominant social thought shapes the institutionalized order of
society . . . and the malfunctioning of established institutions in turn
alters social thought.

Theodore W. Schultz (1977)

How to develop a country is a subject that Adam Smith analysed in
The Wealth of Nations, the publication of which in 1776 marked the
birth of modern economics. The very diverse performances in eco-
nomic development among various developing countries and in
the transition of various socialist countries have recently revived
economists' interest in economic development.

Recent studies have tried many ways to identify the determinants
of economic growth in a country and have proposed various theories
to explain why a country becomes wealthy and what actions a gov-
ernment in a poor country can take to improve its economic perfor-
mance. Looking at the issue from an accounting perspective, the
differences in per capita income between countries can be explained

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by the differences in their physical capital, human capital and productivity. From this point of view, the way for a country to become rich is to invest in physical and human capital and to adopt new and better technologies. Such differences are just the proximate causes of the income differences between countries, however, as the accumulation of physical and human capital and productivity growth are themselves endogenous (Acemoglu, Johnson and Robinson, 2005; Lewis, 1955; Rodrik, 2003). It is necessary, therefore, to look for other fundamental factors that underpin the proximate causes of income differences between countries.

Economists have proposed many fundamental determinants for the economic performance of a country. Acemoglu (2007a) classifies these into four main causes. The first is luck: uncertainty, heterogeneity in coordination, credit markets and government policies can enable one country experiencing otherwise identical conditions to another to escape poor equilibrium (Blanchard and Summers, 1987; Howitt and McAfee, 1988; Krugman, 1981, 1987, 1991; Leibenstein, 1957; Matsuyama, 1991; Murphy, Shleifer and Vishny, 1989; Myrdal, 1968; Nelson, 1956; Rosenstein-Rodan, 1943). The second is geography, which affects the proximate causes of growth through soil fertility, the availability of certain key resources, the disease environment, transportation costs and so on (Diamond, 1997; Myrdal, 1968; Pomeranz, 2000; Sachs and Warner, 1997, 2001). The third factor is institutions, which shape the incentives to work and to invest in technology and physical and human capital (Acemoglu, Johnson and Robinson, 2001, 2002, 2005; Dollar and Kraay, 2003; Easterly, 2001b; Easterly and Levine, 2003; Needham, 1969; North, 1981, 1990; North and Thomas, 1973; Olson, 1982; Rodrik, 2003; Roland, 2007; Rosenberg and Birdzell, 1986). The fourth factor is culture and social capital, including beliefs, values, preferences and trust, which affect people's attitudes towards wealth, occupations, creativity and cooperation with others (Abramovitz, 1995; Bockstette, Chanda and Putterman, 2002; Chanda and Putterman,

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2007; Greif, 1994, 2004; Lal, 1998, 2005; Landes, 1998; Mokyr, 1990; North, 1994; Putnam, 1993; Weber, 1930).

Rodrik (2003) classifies the fundamental determinants of the economic performance of a country into three categories. In addition to geography and institutions in Acemoglu's list, he adds integration or trade, which is supported by empirical evidence from studies by Dollar (1992), Edwards (1998), Frankel and Romer (1999) and Sachs and Warner (1995) and which is advocated strongly by international organisations, including the World Bank, the IMF, the World Trade Organization (WTO) and the Organisation for Economic Co-operation and Development (OECD).

Luck as a fundamental determinant of income divergence in the long run is theoretically sound in models with multiple equilibria. The more relevant question, however, is why the government and people of a country trapped in poor equilibrium would not change their behaviour or improve their coordination to shift from a bad equilibrium to a good equilibrium. In fact, we have seen that some countries that have been trapped in poverty for centuries suddenly embark on dynamic growth, such as the east Asian NIEs in the 1960s and China after the reforms begun in 1979. What, then, is the factor that triggers the sudden change?

Although geography is the only exogenous variable in the list of fundamental determinants, it is not destiny (Rodrik, 2003). Most of Australia is arid, desert or tropical land; Singapore and Mauritius are tropical countries; Switzerland and Botswana are landlocked. All these conditions are considered disadvantages for long-term economic growth in the geography hypothesis; Switzerland, Australia and Singapore are among the world's richest countries, however, and Mauritius and Botswana have enjoyed dynamic growth in recent decades. European countries in the eighteenth century and earlier were plagued with many diseases (Clark, 2007): it was economic development that enabled them to eradicate these diseases and improve their environment. The impoverished environment in poor