2

Economic History

Sue Headlee
American University

Economic history is the series of social arrangements and physical processes by which human societies produced the material conditions of human life since the emergence of the human species. The discipline of economic history is the study of this series of arrangements and processes, although much of the discipline is devoted to the study of the development of modern economic growth. The reason for this is that modern economic growth brought with it sustained and accumulating increases in the per capita wealth of human societies. Before modern economic growth, any improvement in productivity led to an increase in the population, not an increase in the standard of living.

In this chapter, human economic history will be examined through the lens of the discipline of economic history. First, theory is analyzed, and then empirical evidence. The theory and evidence sections are followed by policy implications, future directions for research, and a conclusion.

Theory

Neoclassical economic theory was largely developed in the nineteenth and twentieth centuries at the time of industrialization of the West. It is able to explain the increase of total output and the output per capita for societies with market economies experiencing modern economic growth. Simon Kuznets (1968) defined modern economic growth as sustained and faster growth of output per capita than the rate of growth in earlier periods of history. Neoclassical economic theory does not explain long-term growth or growth of societies where the market is not the predominant mechanism to allocate resources.

Economic growth is caused by an increase in the amount or quality of capital or labor used in production, an increase in the ratio of capital to labor, and technological innovation, according to Robert Solow's (1970) theory of economic growth. Douglass North (1981) added a theory of institutions to the theory to make it possible to analyze longer term growth, starting before markets and aiming to understand how societies came to have markets allocate resources. North thus theorized about how humans advanced from hunting and gathering to the discovery of agriculture and the subsequent rise of ancient civilizations such as ancient Greece and Rome, the rise and fall of feudalism in Europe, and finally the era of early modern Europe. With a theory of institutions, North could explain the distribution of the costs and benefits of economic growth.

As a field of economics, the discipline of economic history has focused on the causes and effects of modern economic growth in the West. This is important because in fact modern economic growth arose in the West and then transformed the world, creating the industrial civilization that we live in today. What follows is a survey of the factors most widely thought to cause modern economic growth.

Causes of Modern Economic Growth

Expansion of Markets and Trade

Adam Smith (1776/1976) wrote that the greater the extent of the market and the greater the development of the division of labor and specialization, the greater the wealth of nations. Since Smith, neoclassical economists have focused on markets, the market system, and the price mechanism as the foundations of modern economic growth.

Neoclassical economic theory states that when output and inputs to production are allocated by markets efficiently, this stimulates growth. In addition, relative prices guide economic agents to make production and distribution decisions efficiently. David Ricardo (1819) put forth the comparative advantage theory of why countries trade. This theory held that it was to the advantage of all countries to trade by specializing in the production of a good in which they had a comparative, even if not absolute, advantage. Increasing international trade causes economic growth.

Evolution of Institutions

North won the Nobel Prize in Economics for adding the causal factor of the evolution of institutions to the neoclassical growth model. A key institution is the regime of property rights, which gives economic agents incentive to save and invest in physical, financial, and human capital. Political institutions evolve that specify and enforce these property rights. Institutions, like markets, provide incentives. Economists believe that when there are positive incentives to do so, people will respond with behavior that leads to growth. If property rights are secure, farmers will invest in improving their farms.

Rise of the Modern State

Among the institutions conducive to modern economic growth, of great importance is the modern state. Premodern states are a drag on progress because they favor the elite, aristocrats, and landowners, giving them rent (income from power and owning land) rather than gains from investment in production. Modern states, more representative of the middle classes, can implement economic policy to favor domestic markets. This leads to an increase in the standard of living of the population. Government policies that help economic growth include the investment in infrastructure, such as railroads and ports, and in human capital, such as literacy training for adults and the spread of primary education for children.

Accelerated Technological Change

Thomas Malthus (1798/1993) held that incomes do not rise when there is an increase in productivity. He argued that populations tend to grow beyond the capacity of resources and that societies use an increase in production to support more people, rather than to increase the standard of living. Historically, much of the world has stayed in a static economic condition or has gone through waves of expansion followed by decline because of this Malthusian trap. Malthus lived before the great acceleration of technology that made modern economic growth possible.

Joel Mokyr (1990, 2002) has written that the important characteristic of the Industrial Revolution was its accelerating and unprecedented technological change. Technological innovation increases the productivity of labor, making an increase in income per capita possible. Technological change has developed slowly throughout history, but in the late eighteenth century, there was a dramatic speedup in the pace and the ability to sustain it. The Industrial Revolution was a pivotal event in human history. Technological change revolutionized manufacturing, agriculture, and transportation in the nineteenth and twentieth centuries.

Human Capital and the Stock of Knowledge

Gary Becker (1975) stressed the role of human capital in causing economic growth. Human capital is what economists call the result of investing in education and training, just as investing in productive equipment is called capital formation. Solow's (1970) growth model shows that this investing in education improves the quality of the labor input and thus adds to the productive capacity of the economy. Mokyr (1990, 2002) provides a history of the development of the stock of knowledge in the West that enabled the elites of societies to advance the mastery of nature for the benefits of the masses of the population.

Demographic Changes

Becker (1975) found that under certain circumstances, people reduce the number of children they have. They may do this because they no longer need the labor of children on the farm or for security in old age. They may do it to have a higher standard of living for themselves and/or to have "higher" quality children. This makes it possible for the economy's output to grow faster than the population. There is a feedback loop here in that as income per capita grows, people reduce family size further. In some societies, the demographic transition from women having many children to having fewer children comes before economic growth, and in some it comes after that growth. North (1981) speaks of this process as lining up individual and social costs and benefits of having children.

Evolution of Capitalism and Industrialization

Under capitalism, profit maximization by the capitalist firm induces competition and that induces technical innovation, as firms look for ways to increase productivity and reduce costs. That in turn increases the productivity of labor, further propelling industrialization. The factory system evolved to capture economies of scale by using the steam engine and organizing large groups of hired labor. Factories replaced artisan shops, home production, and the cottage industry. Thus, it was not just the application of science and technology to production that created modern economic growth but also a new way of organizing production: capitalism. Capitalism uses a market economy based on private ownership by individuals or corporations and private investment. The role of the state is to protect property rights and contracts. The first Industrial Revolution consisted of the mechanization of production

and the use of inanimate power. Joseph Schumpeter (1961) stressed waves of technological innovation financed by the extension of credit as characteristic of capitalism. "Industrial capitalism" was the initial path out of the Malthusian trap in the West.

Expansion of Agriculture

W. W. Rostow (1960) wrote that an increase in agricultural output beyond what is required for subsistence is needed to free up agricultural workers for industrial jobs, to supply food, for markets and for capital. Commercialized agriculture tends to produce this increase and thus replaces subsistence farming. One structural change accompanying modern economic growth is the reduction of the percentage of the labor force that is working in agriculture.

External Causes: Shocks and Substitutions

Neoclassical economics has had success in explaining the economic growth of countries such as the United Kingdom and the United States. But not all countries were so fortunate as to evolve by market mechanisms. Some countries were awakened by external shocks, from the commercial or military power of those early industrialized states. When a nation is shocked, it can respond to this challenge by adopting the industrial capitalism of its conquerors as Japan did in the nineteenth century, or it can submit and be dominated, as China did. Alexander Gershenkron (1962) wrote that, in backward countries, the state could make substitutions for one of the missing prerequisites for industrial development, such as taking the place of entrepreneurs if none were available in the private sector. He theorized that the more backward the country, the more the state focused efforts on developing heavy industries and large-scale production. This path to modern economic growth is more than usually uneven and dualistic, with the modern sector developing independently of the traditional sector, and often with no increase in the standard of living of the common people, as can be seen in Germany and Russia in the nineteenth century.

External Causes: International Trade and Investment, Colonialism, Imperialism

Neoclassical economists argue that the colonial powers broke down the barriers to growth in non-European countries, freeing them up for potential modernization. Furthermore, foreign-promoted export expansion—by means such as developing plantations and mines—enabled non-European countries to grow. Some European colonial powers left additional positive legacies, such as the rule of law, secure property rights, modern transportation, and communication systems. On the other hand, Andre Gunder Frank (1966) argued that in the nineteenth and twentieth centuries, foreign capitalist penetration of countries such as Argentina and India led them to be dependent on the European powers, resulting in underdevelopment at home. This is called dependency theory. On this view, at the time of independence, after draining off the surplus production for decades, the colonial powers left their former colonies in the hands of a local elite uninterested in pursuing economic development, and they left a transportation system designed to facilitate export from the colony to the mother country, rather than for internal development within the country or region. The railroads led from the interior of Africa and Latin America to the ports but not between places within each continent. Technological change brought by the colonial powers did lead to an increase in productivity, but it did not lead to an increase in the standard of living of the larger population, which stagnated during the colonial period.

Effects of Modern Economic Growth

The increasing productivity of labor achieved under modern economic growth causes the cost of basic goods to fall and enables the real wage to rise. There is also a huge decrease in the drudgery of labor, and life in general becomes more comfortable. A large middle class develops between the old groups of rich and poor of premodern days. Medical advances and improved sanitation lead to declining mortality and morbidity rates (Riley, 2001). All these signify great increases in material well-being of the bulk of the population. North (1981) and Lindert and Williamson (1983) take this view of the consequences of modern economic growth.

Not all economic historians agree on the positive effect of modern economic growth on the working class and on the poor. Frederick Engels (1845/1974) and Eric Hobsbawm (1968) saw this effect as negative. Cynthia Taft Morris and Irma Adelman (1988) argue that the nature of this effect depends on the timing and pace of industrialization, developments in agriculture, and the growth of population. They theorize that, in the early stages of modern economic development, per capita income and the average wage in agriculture and in industry do fall somewhat, and the proportion of the population in extreme poverty does rise. This happens where change was rapid and new employment was not available to replace the traditional jobs that were lost due to economic change. However, Morris and Adelman maintain that in the long run, poverty was reduced by the continued growth in the productivity of labor.

Due to contemporary concerns over climate change, Angus Maddison (2007) has projected trends in the future relationships between economic growth, energy consumption, carbon emissions, and global warming. This theorizing sheds light on pollution as a major effect of the Industrial Revolution. Starting with the use of coal, the first fossil fuel, and later petroleum, the second fossil fuel, the energy sources for industrialization produced the negative externality of pollution. On the other hand, Indur

Goklany (2007) presents arguments and evidence that we are living on a cleaner planet due to technological innovation and economic development.

Modern economic growth gave wealth and power to the West, and that economic power led to political and military power and the ability to dominate much of the world. Some find this course of events to be negative and label it *Western imperialism.* Others interpret it as merely a matter of increased trade and investment of the West in the rest of the world with positive effects for all.

The Historical Record

Europe

The economic history of Europe is studied because Europe was the first region of the world to develop modern economic growth and because of its successful offspring: the United States, Canada, Australia, and New Zealand.

To discuss the economic history of Europe as far back as the Roman Empire, we must leave the realm of modern economic growth and enter the realm of long-term economic development. North (1981) stressed the importance to continental Europe of inheriting Roman law, the codification of property rights. The Roman Empire lasted for a thousand years, with a high point in 200 CE. The Roman Empire conquered what today are the European nation-states of Italy, France, Spain, the United Kingdom, and Romania. The Roman Empire collapsed in the fifth century CE. In the Dark Ages that followed, there is little empirical evidence of economic activity in Europe. It is known that the rise of Islam caused the Mediterranean to become a Muslim lake in this period.

Economic historians have analyzed the rise and fall of the European feudal system, with a labor system of serfdom and a political system of decentralized control by lords. Eventually, long-distance trade was revived and cities evolved in previously rural economies. Manufacturing advances such as in the production of woolen yarn and woolen garments took place in northern Italy and Flanders.

Robert Brenner (1987) ignited a debate by arguing that in the fourteenth century, there was a great divide between Western and Eastern Europe. In the West, the feudal system evolved from a labor system of dependent serfs to a labor system of independent peasants, and thus forward economic developments could occur. In the East, the feudal system was confirmed in the form of serfdom and thus doomed to backwardness. This was also the era of the Black Death, in which so many Europeans died that there was a fundamental change in the labor-to-land ratio. In Western Europe, that enabled serfs to become free peasants.

Jan de Vries (1976) wrote a general history of Europe from 1600 to 1750. This is a crucial period because it was a period of crisis in Europe's traditional economy after the great expansion of the sixteenth century and before the great expansion that came with the Industrial Revolution. Countries and regions responded differently as they reached the limits of earlier forms of economic growth. Economic activity and political power shifted from the Mediterranean and the exhausted empire of Spain to the northwestern edge of Europe and its Atlantic coast. Parts of northern Europe achieved highly commercialized agriculture; southern areas struggled to achieve subsistence. Industry moved to the countryside and was restructured as the "putting-out system," also referred to as proto-industrialization. The Dutch added dynamism to trade with ships that could carry great bulk, creating a new high-volume, low-value trade. The British were creating an Atlantic economy with their colonies in North America. Europe was urbanizing with a few cities growing rapidly. In northwestern Europe, governments invested in canals, roads, and coastal shipping. Markets in land, labor, and even some capital markets were developing. All these activities were creating the preconditions for industrialization and huge economic growth to come in northwestern areas of Europe.

Brenner (1987) argued that in the seventeenth century, the United Kingdom pulled ahead as the strongest economy in Europe by developing capitalist farming using commercialized land, capitalist farmers, and wage laborers. This is in contrast to France, which by and large kept a semi-feudal system of peasants and sharecropping—a less progressive form of agriculture.

A large literature has been created on the economic history of the United Kingdom, the Netherlands, France, Germany, and Russia. I present the main outlines of these stories.

The United Kingdom

In the hundred years from 1760 to 1860, the economy of the United Kingdom was transformed by the Industrial Revolution. This spread to the European continent a generation later. Under the hegemony of the United Kingdom between 1850 and 1914, there was a dramatic spread of modern economic growth throughout much of the world, in individual countries, in some colonies, and in an international economy with global capital markets, railroad construction, and a global cotton textile market. The discipline of economic history has sought to explain why the Industrial Revolution took place in Western Europe and why it began on the small islands of the United Kingdom.

David Landes (1969) documented the leading sectors of the Industrial Revolution in the United Kingdom: cotton textiles and the coal-steam-iron complex. In the cotton sector, technological innovations included the mechanization of cotton spinning and weaving and the use of machine tools to produce textile machinery. In the coal-steam-iron sector, there was the use of coal, the first fossil fuel, which replaced wood (a renewable energy source). New ways of making iron with coke enlarged the capacity to produce iron. The newly invented steam engine replaced watermills, animal and human power, and sailing ships.

Economic historians have advanced many theories of why the United Kingdom was the home of the first Industrial Revolution. First, it had a modern state dating from the seventeenth-century Civil War, which established a constitutional monarchy. Second, the United Kingdom had an agricultural revolution that freed up labor and capital for the industrial sector. Third, it expanded overseas, created an empire, and dominated international trade and finance. The crown jewel of the Empire was India. At first, the United Kingdom imported Indian textiles and tea, but in time, the United Kingdom forced India to import cheap cotton textiles from the United Kingdom, as well as iron. The British used their superior military power to get the Chinese to import opium in exchange for tea. The United Kingdom established an informal empire in Latin America after these nations gained independence from Spain and Portugal. The United Kingdom was a winner in the "Scramble for Africa," thereby gaining a market for its cotton textiles, iron, and railroad building.

There was a highly charged debate in British economic history between the pessimists and optimists on the standard of living of English workers during the Industrial Revolution. The pessimists argue that the impact was negative and that the workers were impoverished. E. P. Thompson (1963) analyzed the making of the English working class, a process that took more than a generation. Engels (1845/1974) described the hard conditions of the working class in England during its second generation. Riley (2001) documented a decline in life expectancy in some industrial cities. Hobsbawm (1968) stressed the terrible insecurity due to cyclical and severe unemployment experienced by three generations of workers. C. T. Morris and Adelman (1988) added the focus on the course of poverty during the Industrial Revolution and demonstrated that in the United Kingdom, poverty increased painfully in early stages, though in time it decreased. The impoverishment of the handloom weavers caused by the introduction of the mechanical loom is an example of how economic development can worsen the condition of parts of the working class, at least temporarily.

The optimists such as T. S. Ashton (1948) argued that the impact was positive and that the standard of living of British workers increased. Lindert and Williamson (1983), mining new sources of accumulating data, demonstrated that from 1820 to 1850, the level of real wages doubled. Gregory Clark's (2007) study led him to conclude that the real wages of urban unskilled workers began to rise by 1815.

Looking back on the debate now, it appears that both sides were right. The first generation of English factory workers was impoverished, but their grandsons reaped the rewards of their sacrifices, achieving a much higher standard of living. Above all, the debate appears to have been about value judgments. The pessimists took the harm to the first and second generations of workers to be important enough to count the effect of industrialization as negative. The optimists took the long-term improvement of living conditions for the majority of workers to count the effect of industrialization as positive, despite the suffering endured by the early generations.

Niall Ferguson (2002) argued that the British Empire was a dynamic force for the good in spreading private enterprise around the world. In addition, he claims that the export of British capital and institutions, such as the common law, a secure land tenure system, and other forms of property rights, was of benefit to the world. The United Kingdom led a world boom of trade and investment from 1899 to 1913, the first era of globalization.

The British Empire had been the largest and most powerful empire in the West since the ancient Roman Empire. However, the world economy eventually found more efficient ways to trade, invest, and grow than by colonizing the non-European world. After World War II, decolonization was accelerated as the peoples of the colonies demanded independence and took action.

The Dutch Republic

In the seventeenth century, before the Industrial Revolution in the United Kingdom, the Dutch Republic was the global power. The Dutch were competitive in international trade because of the sailing vessels they designed that were able to carry large volumes of cargo on transoceanic voyages. They were especially active in the spice trade in the East Indies. In addition, the Dutch Republic was the site of a powerful financial revolution with the founding of a central bank, a national public debt, permanent joint-stock companies, and the Amsterdam Stock Exchange. After 4 years of war between England and the Dutch, the governments of the two great powers divided the East Indies between them, with the Dutch East Indies Company controlling the spice trade in what is today Indonesia and the English East Indies Company controlling the Indian textile trade.

France

The French Revolution got rid of the rent-seeking, landowning feudal class and began the development of democracy in Europe. Yet, the movement of labor from agriculture to industry was much slower in France than in England. French farmers had lower literacy rates and paid a higher percentage of output to direct taxes to the French state. The Industrial Revolution in the United Kingdom was an external shock to the French economy. French industry could not compete with British industry in continental European markets. Challenged by the United Kingdom's development of industrial capitalism, the French took the political route to modernity. In the Second Empire, Louis Napoleon Bonaparte oversaw state-led industrialization, as did the leaders of the Third Republic, established in 1870. The French developed a banking system in Paris to finance the building of railroads in France and Russia. By the late nineteenth century, France was a major industrialized power. The French participated in international trade and

investment in the world economy in the nineteenth century and colonized North and West Africa and Indochina.

Germany

Economic history of modern Germany began with Napoleon's defeat of Prussian forces at Jena and the capture of Berlin in 1806. This external shock led to the beginning of the process of unifying the German state. In 1834, a Customs Union, the *Zollverein,* was formed under the leadership of Prussia with most of the other German states. In 1862, Prime Minister Bismarck used the state to industrialize Prussia. The German states were united in 1870 to form Germany. From 1870 to 1914, Germany (along with the United States) created the Second Industrial Revolution based on new technology in heavy industry: chemical, electricity, petroleum, and steel. The Second Industrial Revolution used science-based technological innovation and required the financing and building of fixed capital in the form of plants, machinery, and infrastructure. Large German banks financed the creation of large-scale enterprises with the latest technology. By 1914, Germany was a major industrial power and exporter of capital. Its national output, output per person, and share of world manufacturing were greater than the United Kingdom's. German modern economic growth began later than British and French and was more uneven than is usual in industrial capitalism. The agricultural east of Germany was backward, whereas in the west there had been manufacturing continuously from the Middle Ages, and there was much coal and iron for modern industry. Some economic historians claim that it was the Second Industrial Revolution that created the unparalleled prosperity of the West.

Russia

The economic history of modern Russia also began with an external shock, Napoleon's invasion of Russia in 1812. It was not until 1861 that serfdom was abolished in Russia. The freed serfs had to pay for the land they worked, thus keeping them in poverty. Consequently, agriculture was a drag on economic growth, not a handmaiden to it. Russia is a strong case of Gershenkron's (1962) theory that the state can substitute for private entrepreneurs, when they are lacking, and lead an industrialization effort. In 1905, Prime Minister Witte oversaw state-led industrialization. From 1906 to 1914, Prime Minister Stolypin led reform in the agricultural sector, creating private property rights and consolidating small plots into large capitalist farms. More economic progress might have prevented the Russian Revolution in 1917. Central planning with 5-year plans was the strategy of the Soviet communists. In the 1930s, Stalin forced the fastest industrialization of an economy in history, taking 10 years compared to the hundred years it took to industrialize the United Kingdom. This increased the standard of living of industrial workers, but the agrarian workers whose farms were collectivized to feed the industrial workers suffered greatly. The Soviet Union was a case of brutally uneven economic development of late, state-led industrialization.

Asia, Africa, and Latin America

In Asia, ancient civilizations arose in the river valleys of Mesopotamia, Egypt, India, and China. Human capital development was limited to the spread of literacy in written language among the elites. Physical capital development took the form of irrigation for these agrarian societies. In the medieval era, the rise of Islam from the Arabian Peninsula led to the development of another civilization that spread west along North Africa and east to India and Indonesia. It was spread by Arab warriors and traders. It was a flourishing civilization during the long epoch of the Dark Ages in Europe. The Arabs kept alive the knowledge of the ancient world, which they translated into Arabic. In addition, they translated knowledge from China and India into Arabic. The Islamic Empire covered an area greater than the Roman Empire. Later, Turkish Ottoman invaders from central Asia shocked and then reorganized much of the Middle East. The Ottomans took control from the Arabs but adopted their religion of Islam.

Civilizations also developed beyond the Eurasian land mass: in the New World, the Aztecs and Mayans in Mexico and the Incas in Peru. In sub-Saharan Africa, there arose empires on the plains of Ghana, kingdoms of central Africa, and the states of southern Africa, such as the Great Zimbabwe.

During the "Age of Discovery," from the early fifteenth century to the early seventeenth century, Europeans explored the non-European world, crossing the seas in search of gold, silver, and spices. The Europeans were blocked in the East by Islamic empires and thus could not use the ancient overland "silk road," or the sea route through the Red Sea or the Persian Gulf, to obtain the luxury goods of the East. Facing this challenge, the Portuguese invented the carrack and the caravel, ships that could sail on the open Atlantic. Portuguese explorers rounded the cape of Africa and sailed to India. The Spanish sent Columbus to find Asia by sailing west. In time, the Spanish conquered the ancient empires of the Aztecs in Mexico and the Incas in Peru, stealing their gold and silver. In 1493, the pope divided the world in half along meridians of longitude in the Atlantic and the Pacific, giving Portugal Brazil and all non-European lands to the east of the Atlantic meridian and Spain all the land to the west, including Central and South America and the Philippines. The Spanish sent Portuguese explorer Magellan to sail west to find the Spice Islands (today Indonesia). His ship was the first to circumnavigate the earth. His sailors found the Strait of Malacca, which connects the China Sea with the Indian Ocean. The Portuguese were the first Westerners to reach and trade with Japan. In time, the Spanish and

Portuguese were overtaken by the Dutch, French, and English who ignored the pope's division of the world. Here, then, world economic history begins.

The "Age of Imperialism" saw great rivalry among the industrial nations of Europe, much of which played out in conquering or dominating non-European lands with guns, trade, and investment. The Ottoman Empire (1299–1922 CE) controlled the Middle East, blocking European penetration there until World War I.

Economic historians have tried to explain why Europe pulled ahead of the rest of the world in the modern era. Mokyr (2002) argued that the Industrial Revolution occurred in Europe because of the scientific revolution in the seventeenth century and the Enlightenment in the eighteenth century. He contends that it was the resulting superior technological creativity and knowledge of the British, Germans, and French that enabled them to industrialize first (Mokyr, 1990). Eric Jones (2003) argues that Europe in the early modern era (1400–1800) was developing technology and markets, discovering new lands, and developing a system of nation-states that propelled it to worldwide power and prosperity. He writes that China was a huge empire and controlled from above, and thus it lacked the system of nation-state competition which propelled the great breakthroughs of the Industrial Revolution in Europe. Another disadvantage that China had, according to Jones, was that in the fifteenth century, it closed itself off from maritime exploration and trade, great engines of growth for Europe. Jones also contends that Europe had the advantage of being far from the nomadic raiders from Central Asia that interrupted the trajectory of development in the Islamic Middle East (the Ottomans), India (the Mughals), and China (the Manchus). Recently, Kenneth Pomeranz (2000) has argued that the two causes of Europe escaping the Malthusian trap, led by the United Kingdom, were the colonization of land in the New World and the lucky geographical accident of having coal.

Centuries of commercial capitalism in Europe prior to the Industrial Revolution were part of the advance of Europe over Asia. Thus, the dating of the diverging paths of Europe and Asia becomes an issue. Pomeranz (2000) has claimed and presented some evidence that Europe did not pull ahead of China economically until 1800. This is highly debated. Many economic historians stand by Landes (1969), who demonstrated that from 1500 to 1700, Europe was pulling ahead of Asia in economic growth, and by Maddison (2007), the great constructor of premodern economic statistics of the world, whose statistics showed Western Europe growing twice as fast as the rest of the world from 1000 to 1500 and that Western hegemony was established between 1820 and 1870.

Brief sketches of five major non-European countries and regions are presented below, plus what economic historians had achieved so far in the explaining the economic growth in the non-European world.

Japan

Japan was the first non-Western nation to achieve modern economic growth. Like the British Isles, the Japanese archipelago lies off the Eurasian land mass. This was a time of the crucial importance of water transportation. The external shock that woke up Japan was the gunboat diplomacy of Admiral Perry, who with four U.S. warships demanded that Japan open up to trade. Prior to this shock, Tokugawa Japan (1603–1868) was an isolated, preindustrial feudal society. However, it was not stagnant. The city of Edo (modern-day Tokyo), the seat of the Shogun (secular rulers), in the eighteenth century, was perhaps the largest city in the world. Financing and marketing rice production and coastal shipping developed slowly. To cope with the Western challenge from Perry, the rulers of Japan led a campaign to industrialize and modernize Japan. Feudalism was abolished and a Western-style legal system put into place. These were called the Meiji Reforms. The Meiji Restoration (1860s) gave Japan an emperor but a constitutional monarchy. With a favorable international economic environment, modern businesses arose in the 1880s, and there was a take-off in the 1890s to sustained modern economic growth. Japanese leadership was open to and borrowed methods and ideas from abroad. C. T. Morris and Adelman (1988) describe the growth of productivity in Japanese agriculture from the sixteenth century, leading to market-oriented farmers who emerged from the disintegration of medieval farming in the nineteenth century. They contend that the slow commercialization during the Tokugawa period produced less extreme poverty in Japan than in Russia, India, or China. In the later nineteenth century, the Japanese government had a policy of locating industry in rural areas to absorb underemployed labor, thus reducing poverty. After World War II, Japan rose to become the second largest economy in the world, after the United States.

China

China had a large population on the east end of the Eurasian landmass, just as Europe had on the west end. China manufactured much, invented new technologies, had high levels of literacy, administered exams for civil servants, and had a national market. China had a single government controlling a huge territory for two thousand years. The Chinese invented many important tools but did not apply them economically, such as gun powder. Mokyr (1990) argues that in 1300, China was the site of dramatic technological creativity and yet lost that creativity after this.

In the nineteenth century, European traders forced the Quin Dynasty (Manchu China, 1644–1911) to open to trade, forcing them to take European imports, especially opium. European merchants forced their way into ports such as Shanghai, which became an international city. The British took control of Hong Kong. Chinese economic growth

stagnated in the nineteenth century. The Chinese did not react to the European challenge as the Japanese did; they did not adopt European technology. They exported tea and silk and imported British cotton goods, providing a market second in size only to British India.

The Republic of China, formed in 1912, ended two thousand years of imperial rule and started the early stages of industrialization. This was interrupted by the Japanese invasion in the 1930s and the Chinese Communist takeover in 1949. Communist central planning with 5-year plans led to disasters in agriculture and to forced attempts at industrialization. However, through public investment in health and education, there was an impressive increase in the life expectancy of the Chinese people, a rise in literacy rates, and a decline of the proportion of the population in absolute poverty.

Since 1978, China has been taking off into sustained modern economic growth by opening up to global economic forces and allowing economic competition internally. The world has seen unprecedented economic growth rates in China, raising standards of living and lifting hundreds of millions of people out of poverty.

R. Bin Wong (1997) challenged Western economic historians by documenting "Smithian" economic growth (from trade, not technology) in China up to the nineteenth century. He argues that the West did not overtake China until the Industrial Revolution and its use of inanimate energy. The causes were more political than economic—while China was a huge empire, Europe was a system of competing nation-states propelling modern economic growth.

India

K. N. Chaudhuri (1990) presented the Indian subcontinent as lying at the center of a huge sea trade system with Western Asia, across the Arabian Sea and along the Persian Gulf and the Red Sea, and with Eastern Asia via the Bay of Bengal and through the Straits of Malacca to the China Sea. Indian and other Asian merchants such as the Arabs were the leading economic agents in Asian development for a thousand years before the arrival of the Europeans.

Jones (2003) argues that the economic development of India was interrupted by the invasion of the Mughals from Central Asia in the sixteenth century. In the nineteenth century, India faced a second shock with the invasion of European merchants and in time European governments. British India (1857–1947) has been analyzed by British economic historians. Morris D. Morris (1960) argued that economic growth in India in the nineteenth century was constrained by lack of productive capacity, not by the politics of colonialism. Under the 90 years of British colonialism, India was open to trade and investment from the world economy, connected to it by the Suez Canal, railroads, and telegraph. The British developed land markets and established secure property rights. They commercialized agriculture and developed export crops of cotton and tea. Much of this was accomplished by coercion and violence. Tirthankar Roy (2002) argued that, in the first 60 years of British colonialism, there was economic growth in India and an increase in the standard of living. But after World War I, conditions worsened for the whole world economy and thus for India, which was connected to that world economy.

For the postcolonial period, Indian scholars tended to focus on the negative consequences of a century of British rule in India. The British certainly did leave India with low life expectancy, low literacy, stalled industrialization, and trouble feeding itself. It is not known whether this was worse than they found it in terms of the masses of the Indian population. From 1947 to 1990, the leaders of independent and democratic India closed the economy off from the West. Progress was made domestically using central planning with 5-year plans focused on agriculture. With the help of Western science and philanthropy, the Green Revolution of using high-yielding hybrids of rice and wheat after 1965 enabled India to feed its growing population. Indian central planners practiced import-substitution (protecting infant industries and producing at home what was previously imported) and used subsidies to support industrialization as well as maintain the cottage industry. Their goal was equity as much as efficiency.

Since the 1990s, the Indian government has been liberalizing the economy and opening it to the world. Currently, India is experiencing modern economic growth due to the expansion of the information technology sector and other business services and, to a lesser extent, labor-intensive manufacturing. Economists are studying the transformation from the lower "Hindu" rate of growth under central planning to the accelerated rate under economic reforms. India still lags behind China in educating its people and in investment in infrastructure.

Latin America

While there are many histories of the Aztec, Mayan, and Incan civilizations, there have been few studies of their economic histories. In English, there are some economic histories of colonial Latin America. Most of the countries in Latin America gained their independence from European powers by the early nineteenth century: Brazil from Portugal and Argentina and the rest of Latin America from Spain. The empirical research of C. T. Morris and Adelman (1988) on the role of foreign economic dependence in the nineteenth century found that while Argentina was politically independent, an alliance of indigenous landlords and the British investors favored exports (beef and wheat) over domestic development. Argentina became heavily dependent: Domestic growth was dominated by their exports at the expense of developing a domestic market, foreigners dominated trade and banking, and investment was financed by foreigners, mainly the British. Morris and Adelman found Brazil to be moderately dependent on foreigners, first for the exportation of sugar and later coffee. Also, slavery was practiced in Brazil until

1888, which was not favorable to modern economic growth. Slavery generates no incentives for technological innovation because the cheap labor of slaves is available. Slavery did produce wealth for the slave owners, but it did not create households that had effective demand for consumer goods because slaves were kept at a low standard of living. Perhaps even more important for economic development, slave owners did not have demand for producer goods because they could not trust their slaves with more than rudimentary tools.

Enrique Cardenas and his colleagues published three volumes on the economic history of Latin America (Cardenas, Ocampo, & Thorp, 2002), in which they challenged the views of dependency theorists (Cardoso & Faletto, 1979; Frank, 1966) on the negative effects of European colonization and imperialism. They present evidence that, from 1870 to 1930, in addition to the expansion of foreign-promoted exports from Latin America, there was also development of domestic markets and manufacturing capacity. They cite the technological advance of the steel-hulled steamship, which reduced international transportation costs and thereby enabled Latin American countries to export their mineral and agricultural raw materials. It is true that foreigners invested in these sectors, as well as financed and built the railroad system needed for export, but in this view, that dependence was not negative but helpful. There is evidence of a domestic market made up of wage workers from the ranches, plantations, mines, railroads, and ports who wanted locally produced cotton clothing, beer, and cigarettes. During the Great Depression, industries in Latin America were able to grow domestically as world trade collapsed. Unlike the Washington consensus view that export-led growth is the best strategy for development, Cardenas et al. (2002) argue that import-substitution industrialization made sense in the 1940s to the 1960s for the development of national economies. In this strategy, a nation imported capital goods and then produced consumer goods for the domestic market that otherwise would have had to have been imported.

Africa

There were many complex African empires and civilizations before the Europeans came to Africa. There are some histories of European colonization of Africa. But the development of the economic history of Africa as a discipline is just beginning.

From the sixteenth to the nineteenth centuries, about 9 to 12 million enslaved Africans were brought to the New World, mostly to Brazil. Seventy percent of all slaves were used on sugar plantations. European competition drove the process, starting with the Portuguese, the Spanish, and, later, the slave and sugar merchants of France, England, and Holland. By the eighteenth century, the British were the leading slave traders. The triangular trade consisted of Europeans taking copper, cloth, guns, ammunition, and alcoholic beverages to West Africa, exchanging them for African slaves, who were taken via the Middle Passage to the West Indies, where the slaves were traded for sugar, rum, molasses, and tobacco, which were then sent to European markets.

Eric Williams (1966) set off a debate that has continued for over a half century on the role of profits on the slave trade, as well as on slave production in the New World, for the economic development of Europe. He argued that Europe could not have taken off into modern economic growth without those ill-gained profits. Pomeranz (2000) presented empirical evidence showing that the amount exploited from this brutal activity was not as large as the profits made in the United Kingdom and Europe from their own domestic production of farms, workshops, and factories. The implication is that Europe could have advanced without the profits of the slave trade and slave production. In 1807, the United Kingdom abolished the slave trade, and in the 1880s, Brazil abolished slavery, the last country in the Western Hemisphere to do so. Thomas Pakenham (1991) has documented the "Scramble for Africa," when, from 1876 to 1912, the European nations divided sub-Saharan Africa among themselves for needed raw materials and for markets for their manufactured goods.

Policy Implications

Economic history of the developed world can be used by development economists searching for the path to modern economic growth for those nations not yet on their way. Development economists are interested in poverty alleviation in addition to the goal of modern economic growth. One lesson for poverty reduction seems to be that agriculture and the rural sector need to be developed. Another implication is that the role of the state is complex in promoting modern economic growth. There is a role—to provide public infrastructure and human capital—but there is the danger of too much government intervention blocking market forces for change. National leadership and political will are needed to lead the drive for modern economic growth. The historical record is mixed on whether a nation should use an export-led growth strategy or an import-substitution industrialization. The case of Japan shows how policy can prevent an aggravation of poverty during industrialization. The cases of China and India suggest that nations need to be open to the world economy.

Future Directions

Each generation has to write its own history, its own interpretation of past events, because it is faced with new problems that need different lessons from history. The twentieth century is now history. One possible agenda for finding out how to promote modern economic growth in the poor nations of the world would be to compare the Industrial Revolutions of the United Kingdom and continental Europe with that of the Soviet Union in the 1930s and with

China in the last quarter of the twentieth century. The continuing power of European and American banks and industrial firms in Africa needs to be analyzed and compared with the internal constraints on modern economic growth of the intrusive governments of many of the nations of Africa. Globalization now under the United States should be compared to globalization in the nineteenth century under the United Kingdom. Just as economic historians have tried to explain the rise of the West, now the rise of the East should be analyzed. In addition, economic historians should benefit from researching the economic history of the Middle East.

Conclusion

The neoclassical model of growth explains the rise of the United Kingdom, France, and the United States in the nineteenth century, but heterodox models are needed to explain the underdevelopment of nations such as Argentina and India in the nineteenth and twentieth centuries. Dependency theory is still relevant but must be balanced with the neoclassical economic historians' view that imperialism (international trade and investment) was the pioneer of capitalism in the non-European world. The benefits of capitalism and imperialism are an increase in the material standard of living and an increase in life expectancy for many people. The costs seem to be a widening divergence in the fate of rich and poor countries and the pollution of the planet.

References and Further Readings

Ashton, T. S. (1948). *The Industrial Revolution, 1760–1830.* Oxford, UK: Oxford University Press.

Becker, G. S. (1975). *Human capital.* New York: Columbia University Press.

Brenner, R. (1987). Agrarian class structure and economic development in pre-industrial Europe., In T. H. Ashton & C. H. E. Philpin (Eds.), *The Brenner debate* (pp. 10–63). Cambridge, UK: University of Cambridge Press.

Cardenas, E., Ocampo, J. A., & Thorp, R. (2002). *An economic history of twentieth century Latin America.* New York: Palgrave.

Cardoso, F. H., & Faletto, E. (1979). *Dependency and development in Latin America* (M. M. Urqudi, Trans.). Berkeley: University of California Press.

Chaudhuri, K. N. (1990). *Trade and civilization in the Indian Ocean: An economic history from the rise of Islam to 1750.* Cambridge, UK: Cambridge University Press.

Clark, G. (2007). *A farewell to arms: A brief economic history of the world.* Princeton, NJ: Princeton University Press.

de Vries, J. (1976). *The economy of Europe in an age of crisis.* Cambridge, UK: University of Cambridge Press.

Engels, F. (1974). *The condition of the working class in England in 1844* (F. K. Wischenwetzky, Trans.). St. Albans, UK: Panther. (Original work published 1845)

Ferguson, N. (2002). *Empire: The rise and demise of the British world order and the lessons for global power.* New York: Basic Books.

Frank, A. G. (1966). *The development of underdevelopment.* New York: Monthly Review Press.

Gershenkron, A. (1962). *Economic backwardness in historical perspective.* Cambridge, MA: Belknap.

Goklany, I. M. (2007). *The improving state of the world.* Washington, DC: Cato Institute.

Hobsbawm, E. J. (1968). *Industry and empire: An economic history of Britain since 1750.* London: Weidenfeld & Nicolson.

Jones, E. (2003). *The European miracle: Environments, economies and geopolitics in the history of Europe and Asia.* Cambridge, UK: Cambridge University Press.

Kuznets, S. (1968). *Toward a theory of economic growth.* New York: W.W. Norton.

Landes, D. S. (1969). *The unbound Prometheus: Technological change and industrial development in Western Europe from 1750 to the present.* Cambridge, UK: Cambridge University Press.

Lindert, P. H., & Williamson, J. G. (1983). English workers' living standards during the Industrial Revolution: A new look. *The Economic History Review, New Series, 36,* 1–25.

Maddison, A. (2007). *Contours of the world economy 1–2030 A.D.: Essays in macro-economic history.* Oxford, UK: Oxford University Press.

Malthus, T. (1993). *An essay on the principle of population.* Oxford, UK: Oxford University Press. (Original work published 1798)

Mokyr, J. (1990). *The lever of riches: Technological creativity and economic progress.* Oxford, UK: Oxford University Press.

Mokyr, J. (2002). *The gifts of Athena: Historical origins of the knowledge economy.* Princeton, NJ: Princeton University Press.

Morris, C. T., & Adelman, I. (1988). *Comparative patterns of economic development, 1850–1914.* Baltimore: John Hopkins University Press.

Morris, M. D. (1960). Report on the Conference on Asian Economic History. *Journal of Economic History, 20,* 435–440.

North, D. C. (1981). *Structure and change in economic history.* New York: W. W. Norton.

Pakenham, T. (1991). *The scramble for Africa.* New York: Avon Books.

Pomeranz, K. (2000). *The great divergence: China, Europe, and the making of the modern economic world.* Princeton, NJ: Princeton University Press.

Ricardo, D. (1819). *The principles of political economy.* London: John Murray.

Riley, J. C. (2001). *Rising life expectancy: A global history.* New York: Cambridge University Press.

Rostow, W. W. (1960). *The stages of economic growth.* Cambridge, UK: Cambridge University Press.

Roy, T. (2002). Economic history and modern India: Redefining the link. *Journal of Economic Perspectives, 16*(3), 109–130.

Schumpeter, J. A. (1961). *The theory of economic development* (R. Opie, Trans.). Oxford, UK: Oxford University Press.

Smith, A. (1976). *An inquiry into the nature and causes of the wealth of nations.* Chicago: University of Chicago Press. (Original work published 1776)

Solow, R. (1970). *Growth theory.* New York: Oxford University Press.

Thompson, E. P. (1963). *The making of the English working class.* London: Penguin.

Williams, E. E. (1966). *Capitalism and slavery.* New York: Capricorn Books.

Wong, R. B. (1997). *China transformed: Historical change and the limits of European experience.* Ithaca, NY: Cornell University Press.