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East Asian Economies

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East Asian Economies

Over the past 50 years, the economies of East Asia have attracted intense attention because of their rapid growth, which transformed them from relatively poor countries lacking modern technology to economic powerhouses with dynamic export-oriented industries and living standards similar to those in the richest countries of the Western world. Because of their rapid development, they have been referred to as “Asian miracles,” which is justifiable especially if their transition is compared to the experiences of other countries. Initially, many East Asian economies were not very different from underdeveloped African countries in terms of gross domestic product (GDP) per capita, but their phenomenal growth enabled them to surpass the relatively wealthy South American economies and get close to the living standards in Western Europe and North America. Moreover, in only a few decades, East Asian economies experienced a development that took the United States and Western Europe more than 100 years.

Not surprisingly, economists have been analyzing the growth and development in East Asia and looking to identify the factors that might have contributed to this process. This is a very important and worthy exercise for two reasons. First, based on the analysis of the determinants of growth, it is possible to forecast whether current growth patterns of East Asian economies are sustainable in the long run. If the accumulation of physical capital through savings was responsible for their phenomenal growth, then their growth rates will probably slow down in the future. However, if their growth relied on technological innovation, it is likely that they will be able to sustain their rapid growth over the next few decades. Second, a detailed analysis of the East Asian growth experience can provide valuable lessons for other developing countries in terms of policy measures that stimulate growth.

The goal of this chapter is to provide a review of the various determinants of growth and development in East Asia in general and in China, Japan, South Korea, Taiwan, Hong Kong, and Singapore in particular. At first, the role of the two main factors of production, capital and labor, is examined. Next, the debate on the contributions of total factor productivity to growth is presented, followed by a discussion of additional growth components, including historical determinants, trade, and exchange rate policies. The last section deals with the origins and consequences of the East Asian financial crisis in 1997, which put a dent in the image of East Asian economies as “miracles.”

Demographics and Growth

To be able to produce goods and services, firms need to employ workers. Therefore, labor is one of the major determinants of aggregate output. Countries with large numbers of people who are able and willing to work (referred to as the labor force) usually also have a high GDP. China's population of more than 1.3 billion is the largest in the world, followed by India. Japan is also ranked among the top 10 most populous countries. Accordingly, China, with a GDP of more than $7 trillion in comparative terms, had the second largest economy in the world after the United States in 2007. India and Japan were ranked third and fourth, respectively. A high GDP provides countries with a larger pool of financial resources, which can be spent on national defense, allowing them to become regional or even world powers. However, GDP is not a good indicator for the standard of living in cross-country comparisons because it does not control for population size. For this reason, economists prefer to use GDP per capita, which reverses the rankings based on the size of the economy as it rewards countries with a large GDP relative to their population. Accordingly, the tiny island of Singapore with a GDP

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per capita of around $50,000 in 2007 was ranked as one of the richest countries in the world, even richer than the United States. China, on the other hand, with a GDP per capita of around $5,000, was ranked at 100 given its large population.

Governments across East Asia recognized that to achieve prosperity, they would have to slow down the growth rate of the population. Family planning has been promoted as a national policy in several countries, including China, South Korea, and Taiwan. Since the late 1970s, the Chinese government has introduced policies that restrict the number of children to one per couple (hence the name “one-child policy”) in urban areas and to two in rural areas, provide free contraception, and do not allow couples to marry before their early 20s. Those who violate these policies are subject to monetary fines, denied promotion at work, and harassed by government officials. In many cases, women who had given multiple births were forcibly sterilized or forced to undergo abortions. Although many of these measures are very intrusive and controversial, the policies have been largely successful in curtailing the population growth in China. In the medium run, this has proven very beneficial for the growth and development of China as it has eased the pressure to create jobs for the millions of people who join the labor force each year and has reduced the number of dependents that households have to provide for.

At the same time, population control measures have created imbalances that are likely to have an adverse effect on economic growth in the long run. One of the factors responsible for the emergence of dynamic export-oriented industries in the coastal areas of China is the existence of a large surplus of workers who have migrated from the rural areas and are willing to work longer hours for a relatively low wage. As the population growth slows down and the labor surplus is exhausted, the labor force will begin to shrink and the attractiveness of China as a low-cost destination for manufacturers is likely to diminish. Furthermore, the traditional preference for sons in China has created gender imbalances. As a consequence, millions of young men will not be able to find a wife in the future because of increased competition.

Japan, which is a much more mature market economy than China, is already experiencing some of these symptoms. It is one of the few countries in the world with a shrinking population, which is going to lead to shortages in the labor market in the future. Therefore, in contrast to the population control measures in China, the Japanese government has been trying to encourage families to have more children by providing financial incentives, building more day care centers, and offering women more generous maternal leave policies. Another possibility would be to allow more immigrants into the country, but such a policy has been highly unpopular in Japan. Interestingly, Japan has the highest robot density in the world and uses robots extensively in manufacturing, which might help reduce the negative effects of a shrinking labor force to a certain extent.

Savings and Investment

Besides labor, firms need physical capital, including machines, tools, buildings, software and technology, natural resources, and land, to be able to produce goods and services. Physical capital is purchased by firms using financial capital, which in turn is borrowed in financial markets by selling bonds and shares and obtaining loans from banks and other financial institutions. The ultimate source of financial capital is the savings of the general population and of foreigners who are willing to purchase domestic financial assets. Consequently, savings and the resulting spending by firms on physical capital (called investment spending) are key determinants of economic growth.

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Rich countries are able to accumulate large amounts of savings because of the higher level of aggregate income. In poor developing countries, where many people have to survive on less than a dollar a day, savings are insufficient, and firms have to rely on foreign capital, which either is borrowed if the country has good credit ratings or comes in the form of development aid. One of the distinctive features of East Asian economies is the high level of savings, which has helped them grow rapidly and achieve the status of "miracles." In the United States, consumption spending by individuals and households represents about 70% of aggregate spending in the economy, whereas the share of investment spending is only around 20%. In East Asia, consumption spending contributes less than 50%, while the share of investment spending is between 30% and 40% and can be as high as 50% in the case of Singapore. The main reason for these differences is the savings rate. Over the past 20 years, the personal savings rate in the United States has been very low and even negative in recent years. In East Asia, households save between 20% and 30% of their income. Given that the high savings rates are responsible for the rapid growth of East Asian economies, this phenomenon requires a more detailed analysis.

The research literature has provided several explanations (for China, see Modigliani & Cao, 2004; for Japan, see Horioka, 1990). People are able to save while they are young and able to work. As they grow older and their physical and mental abilities decline, they can retire and live off their savings. This means that the East Asian countries, with their relatively youthful demographic profile at the start of the growth period, were best positioned to achieve a higher savings rate. At the same time, this also means that the savings rate is likely to decrease in the future due to a fall in the birthrate (caused either by population control or by rising affluence) and aging, which change the demographic profile by increasing the share of retirees in the population. A second important reason is the low level of social security in East Asian countries during the period of rapid growth. Although nowadays, Japan, South Korea, and Taiwan offer social security benefits similar to those in other rich nations around the world, these were introduced or amended only decades after their growth picked up. In China, the elderly have traditionally relied on their children and family for support. The socialist system in China has also ensured that those who worked in the cities and in state-owned enterprises enjoyed social security benefits. With the demise of the large family as a result of population control and the fundamental reform of the socialist economic system, people in China have been facing an uncertain future. A new system of social insurance was introduced only a few years ago, but it has a very limited coverage and is not functioning properly yet. The lack of insurance against unemployment or hardships after retirement has certainly encouraged people in East Asia to save more.

An additional but related issue was the lack of properly functioning financial markets. One of the reasons why Americans have a savings rate close to zero is because they have an easy access to credit due to the highly developed financial markets. In East Asia, this was not the case in the initial decades after growth accelerated. In China, mortgages and car loans were introduced only very recently, and financial markets remain largely underdeveloped. Under such circumstances where credit is unavailable, people are forced to save for years if they want to purchase durable goods or residential property.

Country-specific reasons also have contributed to higher savings and investment rates in East Asia. In Singapore, all employed individuals are required to contribute to the Central Providence Fund, a social security scheme run by the government (Peebles & Wilson, 2002). The contribution rates have varied between 40% and 50% of net wages in the past two decades and can be seen as a form of "forced savings." In China, the high investment rates are not only due to the abundant pool of domestic savings but have benefited from an

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enormous inflow of foreign direct investment. Since the 1980s, China has managed to attract Western firms with preferential conditions such as tax benefits, free land, and low wages. Since the 1990s, every major company in the world has set up shop in China, making it by far the largest recipient of foreign direct investment.

The Role of Total Factor Productivity

Now that the two major factors responsible for the rapid growth in East Asia have been identified and discussed, it is important to examine their actual contributions to growth. As mentioned above, the pace of growth and development in East Asia has received considerable attention. From 1960 to 2000, the real GDP per capita in Japan, Taiwan, South Korea, Hong Kong, and Singapore grew at an annual rate of between 5% and 6% on average. China, which began a transition to a market economy in 1978, achieved an annual growth rate of almost 9% over the past three decades. In contrast, the corresponding growth rate in the United States and Western Europe from 1960 to 2000 was around 2%. This dramatic difference in growth rates suggests that East Asian countries will catch up with the Western countries and surpass them in the next few decades. However, for this to happen, East Asian economies would have to sustain the same high level of growth in the long run. Whether they are able to achieve this has sparked a major debate in the literature.

The particular issue at stake is the relative contribution of physical capital accumulation to growth in East Asia. According to the basic growth model developed by Robert Solow in 1956, economies grow as they accumulate physical capital through savings. For a given savings rate and population growth rate, the lower the amount of capital per worker, the higher the growth rate of output per worker. However, as the economy grows and continues to accumulate capital, the growth of output per worker slows down because of the diminishing marginal returns to capital. In other words, the model predicts that if East Asian growth was mainly fueled by investment in capital, then sooner or later the growth rates are going to decrease to the levels observed in mature economies of the United States and Western Europe. The Solow growth model offers two possible solutions to stem the slowdown. Countries could increase their savings rates, which would boost investment, or they could decrease population growth, which would contribute to higher levels of capital per worker. These measures are not suited for East Asians because of the extremely high savings rates in East Asia that are unlikely to rise further and because of the policies of population control that have already created problems such as an aging labor force. Furthermore, the two measures can boost the growth rate only temporarily. In the long run, the diminishing marginal returns to capital kick in.

When Solow tested his model using U.S. data, he found that besides capital and labor, a third factor also contributed to GDP growth. This third factor was not explained by the model and was termed *total factor productivity* (TFP). It is believed that TFP represents technological innovation and efficiency improvements. Given that theoretically there are no limits to technological and efficiency improvements, TFP becomes the only factor in the model that can result in sustainable growth in the long run. The debate on growth sustainability in East Asia thus focuses on how large the share of TFP is relative to that of physical capital accumulation.

The proponents of the idea that growth in East Asia is not sustainable at the high levels of previous decades have been dubbed the “accumulationists” because they believe that physical capital accumulation is by far the most important contributor to growth in these economies, whereas TFP plays only a minor role. The definitive work from this viewpoint

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consists of a series of detailed empirical studies conducted by Alwyn Young and published in the mid-1990s (Young, 1994). The findings indicate that the growth of TFP in East Asia from 1966 to 1990 varied between 0.2% in Singapore and 2.3% in Hong Kong. In comparison, the growth rate of physical capital accumulation was shown to be between 8% and 14%. Although the TFP growth rates for East Asia are higher than for the United States or Western Europe, they are not large enough to explain the significant differences in growth rates of output per worker.

Inspired by Young's results, Paul Krugman, the recipient of the 2008 Nobel Prize in economics, published a famous article in 1994 that presented the accumulationist viewpoint in polemic terms. Krugman compared the development pattern in East Asia to that of the Soviet Union, which shocked the West with its claims of rapid industrialization and technological advances in the 1950s. At the time, many believed that the Soviet Union might be able to surpass the Western countries in terms of production and innovation. But in the following decades, it became obvious that the rapid growth of the Soviet economy was based entirely on increases in labor force participation, often using repressive methods, and on physical capital accumulation, achieved through forced savings. When the limits of manpower and the diminishing returns to capital took effect, the growth rate dropped, and in the absence of any technological innovation, the economy stagnated. The economic decline was ultimately one of the reasons for the breakdown of the Soviet system.

Krugman (1994) argued that the rise of the East Asian economies is very similar to the story of the Soviet Union in the 1950s, implying that because their growth was so dependent on physical capital accumulation and in the absence of efficiency improvements, it would eventually have to slow down. He focused on Singapore, which managed to double the share of the employed population, boosted its investment rate beyond 40% of GDP, and achieved significant improvements in the education level of the labor force. However, as Young (1994) had shown, TFP growth was zero, and because the limits to further increases in employment, investment, and education were reached, it was likely that economic growth would slow down significantly in the future. When the article was published in the early 1990s, East Asian economies were revered as economic miracles, and Krugman's attitude toward this prevalent view was expressed in his article's title, “The Myth of Asia's Miracle.”

Krugman's (1994) article received wide attention in East Asia, particularly in Singapore, and provoked the publication of numerous articles that attempted to refute his arguments by adopting an “assimilationist” view of East Asian growth. Nelson and Pack (1999) agree that physical capital accumulation has been a major determinant of growth but argue that the technology that East Asian economies adopted from advanced countries was also assimilated in a manner that allowed genuine technological innovation to take place later. The process of assimilation encompassed entrepreneurship, learning, risk taking, creativity, and the adoption of better management techniques. Krugman did not see anything miraculous about the performance of East Asian economies because they mirrored similar attempts of other countries in the past that relied on investment to boost growth. In contrast, Nelson and Pack view the Asian economies as unique because of their efforts to learn and innovate from adopted foreign technology. To support their view, they used a sample of economies with very high investment rates and calculated the corresponding expected growth rate. Taiwan, Korea, Singapore, and Hong Kong were the only ones to significantly exceed the predicted growth rate, suggesting that additional factors must have played a role besides high rates of investment. If these factors reflected technological progress and innovation, then they would be able to sustain the extraordinary growth rates in East Asia in the long run.

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Additional Growth Determinants

So far, the discussion of factors that have contributed to the phenomenal growth of East Asian economies has focused mostly on the technical aspects of aggregate production. However, the growth performance of these countries was also affected by the environment in which growth occurred. Historical, political, geographical, cultural, and institutional factors have all played a role in shaping the economic behavior of individuals, firms, and the government in East Asia. Many of these variables are unique to the region and are thus crucial to understanding the rapid development that these countries have undergone.

Historical Determinants

The modern history of East Asia begins with the arrival of European and American imperialism in the nineteenth century. At the time, China was considered to be the regional superpower. It was an empire as large as the whole of Europe with a history and culture going back thousands of years and surrounded by tributary states. The Western powers, including Great Britain, France, Germany, and the United States, were developing rapidly and were looking for trade opportunities around the world. East Asia was a lucrative market because it produced goods that were highly valued in the West, such as tea, silk, porcelain, and spices. The Chinese imperial government restricted trade with Europeans to the port of Canton. The Japanese imperial government, which had tried to isolate the country for centuries, allowed foreigners to trade only at the port of Nagasaki. To be able to buy Chinese goods, the British were exporting opium to China, which was grown in British India. On the other hand, the Chinese government was seeking to limit the import of opium. This conflict soon sparked a war that ended with the defeat of the Chinese and the signing of a treaty in 1842. China was required to pay large reparations, open several port cities to trade, secede Hong Kong to Britain, and allow British citizens to reside and trade in China without being subject to its laws. In Japan, the United States also used “gunboat diplomacy” to sign similar treaties in the 1850s. Other Western powers soon followed the example of Britain and the United States.

The port cities that were opened to trade quickly became major commercial, financial, and industrial centers. This was facilitated by inflows of foreign capital and imports of advanced foreign technology. Shanghai, which was a small fishing village at the time, became a booming metropolis. Hong Kong, which was now a British colony, underwent a similar development. There is some debate about the impact of Western imports and production on the traditional industries in China. Some argue that cheap imports destroyed entire industries that relied on traditional technology and were not able to compete. Others suggest that there was a dual economy in which traditional and modern industries coexisted.

The humiliating defeat at the hand of the European powers weakened the imperial governments in China and Japan and caused numerous protests, riots, and rebellions. Government officials in both countries realized the need for fundamental reforms that would allow them to withstand the assault by Western powers. However, China and Japan went separate ways that were crucial for their future economic development.

Despite several reform proposals, the imperial government in China remained weak, indecisive, inefficient, and corrupt. It lacked a national policy of economic development and did not have the necessary capital to fund the industrialization of the country. In contrast, Japan strengthened the imperial powers and implemented a number of economic and political reforms that were vital for the development of the country in the twentieth century. Land and tax reform ensured a steady stream of revenue for the government, which it used to finance

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industrialization efforts. Modern factories were built, and foreign advisers were hired. Commercial banks were set up, and a central bank was created to oversee the monetary system. An efficient government administration was formed, and a constitution introduced elections and a parliament. Education became compulsory, and a modern army trained by foreigner military advisers was created. By the end of the nineteenth century, Japan had become a rapid-growing regional power that was starting to expand abroad. Soon it defeated China and Russia in regional wars and occupied Korea and Taiwan. Despite the destruction of its economy during World War II, Japan was able to recover quickly, drawing upon its experience of growth and development in the late nineteenth and early twentieth centuries.

Political Determinants

The government played a crucial role during the period of rapid growth in East Asia, but very few countries in the region were democracies. Until the 1990s, South Korea and Taiwan were military dictatorships, and Hong Kong was a British colony. Singapore has been ruled by the same party since the 1950s. China has been a Communist country since the 1950s. This suggests that authoritarian political institutions are associated with economic growth in East Asia. This argument is supported by the findings of a seminal article by Barro (1996), who examined 100 countries over the period 1960–1990, which coincides exactly with the period of rapid growth in East Asia, and found that growth and democracy were negatively correlated.

While their economic policies have certainly contributed to rapid growth, authoritarian governments in East Asia have attempted to defend their repressive measures regarding human rights by creating a value system that claims to be better suited to the specific characteristics of the East Asian cultures than Western-style democracy. These “Asian values” have focused on the central role of an “enlightened” authoritarian government that knows what is best for the citizens of the country and achieves these goals using a mix of rewards and punishments. It promises political stability, social harmony, and economic growth, which are considered beneficial for the entire society. At the same time, citizens are expected to be loyal to and respectful of the government, avoiding demonstrations, criticism, and political debates. Those who dare to protest are severely punished.

Proponents of Asian values argue that democracy and human rights are Western concepts that are not suited for Asian cultures. Human rights are thus seen not as a universal concept that applies to all people across cultures. One of the most vocal supporters of Asian values is Lee Kuan Yew, a former prime minister of Singapore who ruled the island nation for decades and whose son is the current prime minister. However, not all East Asian countries are in favor of a system of Asian values that supports authoritarian governments. In the 1990s, South Korea and Taiwan made the transition from military dictatorships to dynamic democracies with free elections, multiparty systems, and respect for human rights and the rule of law. Former dissidents and democracy proponents who were jailed during authoritarian rule, such as Kim Dae-jung in South Korea and Chen Shui-bian in Taiwan, were elected presidents of their countries and strongly disagreed with the idea of Asian values providing cover for repressive authoritarian regimes.

Trade and Exchange Rates

All East Asian economies have in common that their rapid growth was associated with an export-oriented development strategy. Government efforts focused on fostering industries that produced goods for the world market. In many cases, high-quality goods were produced exclusively for export, whereas more inferior goods were reserved for the domestic market. To

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generate profits from exports, companies had to learn about their competitors and their customers abroad and were forced to make improvements, introduce new technologies, innovate, and increase efficiency to stay competitive. The government benefited as well by imposing export taxes and accumulating reserves of foreign currency.

Export-oriented industries received government support in several forms. They were provided with cheap credit, import tariffs were eliminated for inputs needed by these industries, labor unions with demands for higher wages and better working conditions were suppressed, and the exchange rate was devalued to make exports competitive. Initially, exports from East Asia consisted mostly of textiles, plastic, and steel, but over time these economies started producing more sophisticated products such as chips, computers, and cars. Lower production costs, competitive pricing, and a gradually improving quality and design enable East Asian exports to increase their market share in Europe and the United States. Over the 1970s and 1980s, trade frictions between Western and East Asian countries increased due to the growing trade surplus accumulated by East Asian economies, and calls for the protection of domestic industries in the United States became louder. To avoid trade sanctions, Japan, South Korea, and Hong Kong agreed to voluntarily restrain their exports to the United States and open up their markets for U.S. firms.

China was largely closed to the world until the late 1970s. Since then, export-oriented industries have sprung up along the coast, and China was transformed into one of the major producers of manufactured goods in the world. To attract foreign direct investment, the Chinese government created special economic zones that were located along the coast. Foreign companies were lured by beneficial conditions such as tax waivers. However, the main goal of the government was to enable domestic firms to learn from advanced technologies used in Western firms. For this reason, all foreign firms were required to team up with a Chinese partner. Over the 1990s, Chinese exports grew rapidly, and the large trade surpluses irritated the United States and the European Union. China joined the World Trade Organization in 2001 but has been accused by its trading partners of dumping products on foreign markets at below cost, restricting access to its domestic market for foreign firms, and not doing enough to protect intellectual property rights.

One of the major friction points concerns exchange rates. Most East Asian economies have had fixed exchange rates during the period of rapid economic growth. Fixed exchange rates provide stability but also give governments a tool with which they can manipulate trade flows. East Asian governments have tended to undervalue their currency. In other words, their currencies were exchanged for fewer U.S. dollars than would have been the case without a fixed rate. This is beneficial for the exporting industries because it makes Asian goods cheaper for the American consumer and boosts exports. Those who are hurt by this system are the U.S. exporters who have difficulties selling their goods to Asian consumers because of their relatively high price. The disadvantage of fixed exchange rates is that governments need to be ready to defend them against market fluctuations and speculative attacks. To maintain a fixed exchange rate, governments need foreign currency reserves that they either buy or sell on the foreign exchange markets.

China is one of the countries that have consistently kept an undervalued currency against the U.S. dollar. The resulting boom in Chinese exports to the United States has provided Chinese companies with U.S. dollars that they deposit in China. At the same time, the increased demand for the Chinese currency pushes up its value, making it necessary for the government to intervene and buy dollars. Over the years, China has accumulated more than $1 trillion in reserves. Given that not all the money is needed to defend the fixed exchange

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rate, the Chinese government set up an investment company that was given the task to buy shares in profitable projects around the world. In addition, Chinese companies, which are often partially owned by the government, have also been on the lookout to purchase foreign assets. Something similar happened in the 1980s when Japan was in the same position. At the time, Japanese companies bought famous U.S. companies and landmarks, such as Hollywood studios and the Rockefeller Center in Manhattan. The Chinese companies and the investment corporation have focused much of their attention on natural resources that China desperately needs to grow. Oil, natural gas, metal ores, and other minerals have attracted Chinese companies to invest in African countries, which are often considered too risky for Western companies. Other targets of Chinese investment abroad include companies with valuable brands or technology or an established market share. The most famous examples are the takeover of the IBM personal computer business by Lenovo, a Chinese computer firm, and the purchase of Rover, a British car producer, by a Chinese company. Last, Chinese investors have also poured money into U.S. government securities as well as in more risky shares in private equity firms.

As with the Japanese companies in the 1980s, the current inflows of Chinese investment have resulted in calls for protectionist measures against China, arguing that Chinese companies have an unfair advantage because of their undervalued currency and government subsidies, which they use to accumulate dollars that in turn are used to buy American assets. Furthermore, by purchasing U.S. assets, the Chinese pour money into the U.S. economy and thus contribute to cheap credit for U.S. firms and consumers. The resulting liquidity, however, has been blamed for the high debt levels among U.S. consumers, which ultimately caused the freezing of capital markets in 2008.

A possible solution to the problem of consistent trade surpluses and large accumulations of dollar reserves is for China to give up its fixed exchange rate. This would lead to the appreciation of the Chinese currency, making Chinese goods more expensive for American consumers and thus decreasing the trade surplus. At the same time, the stronger Chinese currency would increase the purchasing power of the Chinese consumers who would now be able to afford more American goods. This would also reduce the U.S. trade deficit but would also rebalance the Chinese GDP, increasing the share of personal consumption at the expense of investment spending. The U.S. government has been trying for years to pressure China to allow its currency to appreciate. China has responded by fixing its currency against a basket of currencies rather than only against the U.S. dollar. In addition, the Chinese currency is allowed to fluctuate in a relatively narrow band. Despite these measures, the Chinese currency remains largely undervalued. The Chinese government is reluctant to let its currency float because export industries generate growth and employment. An appreciation of the Chinese currency could slow down growth and result in an increase in unemployment, which in turn could fuel social unrest.

The Asian Financial Crisis

The Asian financial crisis is an important event in the development process of East Asian economies because it affected the entire region, plunged the economies into a severe recession, and shattered belief in the “Asian miracles.” The crisis began in Thailand in 1997 and was associated with the large inflows of portfolio investment from abroad during the 1990s (Corsetti, Pesenti, & Roubini, 1999). Asian banks and financial institutions had borrowed heavily from abroad, which led to a boom in lending domestically. The main problem was that the short-term inflows from abroad were used for long-term lending, which made the financial system vulnerable. In addition, much of the domestic lending was used for risky

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projects and speculation on the property markets. When several financial institutions in Thailand missed their payments on foreign debt, international investors panicked and began pulling their money out of East Asia. This resulted in a wave of bankruptcies, closures, and layoffs. As in other Asian countries, the Thai currency was fixed to the U.S. dollar, which made it vulnerable to a speculative attack. The government attempted to defend the fixed exchange rate but, after losing billions of U.S. dollars in reserves in a matter of weeks, eventually gave up and allowed the value of the currency to be determined by the markets. The crisis soon spread across the region, and Singapore, Taiwan, and South Korea were forced to give up their currency pegs or devalue their currency to stay competitive.

China was one of the least affected economies because its financial markets were still underdeveloped, its currency was not convertible, and strict capital controls prevented inflows of portfolio investment from abroad. In contrast, South Korea was one of the most prominent victims of the crisis. Korean banks had borrowed abroad in foreign currency but loaned to the domestic conglomerates that dominate the Korean economy in domestic currency. When the Korean currency lost value, the foreign debt mounted, resulting in bank insolvencies. Several large conglomerates burdened with debt were also declared bankrupt. The Korean government was forced to seek financial help from the International Monetary Fund (IMF). The billion-dollar loan, however, was conditional on a deep restructuring of the financial sector, strict budget discipline, and further reforms of the industrial structure. Although Japan was also severely affected by the Asian financial crisis, it had experienced its worst recession in 1990–1991 when an asset bubble that had developed over the preceding years burst. What followed was a decade of extremely weak economic performance with growth rates of between 0% and 3%.

The slowing growth in Japan over the 1990s and the economic shocks of the Asian financial crisis tarnished the image of the “Asian miracle” and appeared to confirm the predictions by Krugman (1994). Although most East Asian economies managed to recover from the crisis a few years later, they were not the same dynamic economies of earlier decades. At the same time, China emerged as the new economic power in East Asia and continued to captivate the world with annual growth rates of more than 10%.

Conclusion

From 1960 to 1990, several East Asian economies achieved phenomenal growth and became synonyms for successful development. This chapter provided an overview of the factors that have contributed to this extraordinary growth performance. Physical capital accumulation has been identified as the single most important determinant of growth and was largely the result of very high saving and investment rates, two common features across all East Asian economies. The danger associated with relying exclusively on investment is that sooner or later growth would slow down due to the diminishing marginal returns to capital. Measures aimed at population control have reduced the population growth rate and have boosted GDP per capita. However, they have also led to a more rapid aging of the population and thus risk having a negative effect on future growth. The share of TFP in growth has been a matter of debate, with some arguing that it was at par with other economies, while others insisted that it played a crucial role in the miraculous performance of East Asian economies.

Beyond the factors of production and technology, various other historical, political, cultural, and institutional factors have contributed to the development process. The first contacts with Western imperialism revealed the necessity of fundamental reforms to modernize the East Asian economies and societies. While Japan succeeded early on in learning from the West,

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China's inefficient government system, lack of reforms, and low revenue prevented it from taking an active role in the modernization of the country. Trade has also been a key factor in the success stories of East Asian countries, although it has increasingly led to frictions about trade surpluses, dumping, and subsidies with its trading partners. Fixed exchange rates were also helpful to achieve growth, but in later decades, they became a liability and were eliminated. The Asian financial crisis was a severe blow for the economies involved and shattered the beliefs in the Asian miracle.

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- physical capital
- fixed exchange rate
- China
- Asian financial crisis
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- South Korea

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