

In the past 40 years, China has transformed from an isolated economy into the world's biggest trading nation. China became the world's largest exporter in 2009 and the world's largest trader (exports plus imports) in 2012, surpassing Germany and the United States, respectively. China has now achieved a degree of openness that is exceptional for a large, continental economy. At its peak in 2006, China's total goods trade (exports plus imports) amounted to 65% of GDP, far higher in that year than the level in the United States (21%), Japan (28%), or India (32%). Since 2006, trade has ebbed as a share of China's rapidly growing GDP—and has risen in India and Japan—but there is no doubt that trade will continue to be a crucial dynamic sector driving China's growth and modernization.

Basic economics teaches that countries benefit from trade. Economies with different factor endowments gain when they can trade with each other. Economies tend to export products that intensively use their abundant factors of production and import goods that intensively use their scarce factors of production. China provides abundant evidence of this general principal. China's labor-rich and land-poor economy benefited enormously from the opening to trade after the 1970s that unleashed a flood of labor-intensive exports (clothing, shoes, and toys) while enabling the import of essential food and raw materials. As integration deepened, China was able to import sophisticated machinery that was capital- and technology intensive. China's rapid growth would have been inconceivable without this trade. Exporting enabled the labor-intensive manufacturing sector to expand more rapidly than any other part of the Chinese economy, generating employment and income, while imported supplies of raw materials and embedded technology enabled China to rapidly cut costs and improve efficiency.

International trade facilitated the growth miracle in another way: by giving Chinese businesses a virtually inexhaustible market, it allowed structural transformation to roar forward without impediment. Market saturation was not an obstacle, and Chinese exports spread to every corner of the globe. Finally, besides the huge direct

benefit of trade, the desire to access those benefits was a major indirect driver of market-oriented reform in the domestic economy. Trade liberalization was an integral part of China's economic reform process from the beginning. After years of trade growth, a new phase of trade policy reform began when China entered the World Trade Organization (WTO) on December 11, 2001. WTO entry also symbolized China's coming of age as a participant in the global economic community. An enormous systemic transformation was necessary to convert China from one of the world's most economically isolated economies into a global economic player. International opening and domestic economic reform were complementary processes that are often paired in a single term to describe the post-1978 period: "reform and opening" (*gaige kaifang*). This chapter traces both the quantitative growth of trade and the institutional changes that made it possible.

In today's global economy, trade and investment are increasingly closely linked. In China, trade was driven by foreign investment that was itself part of an East Asia-wide economic restructuring (see chapter 17). China adapted a package of liberalization policies to take advantage of the opportunities that it faced. China developed close relations with existing exporters in Hong Kong and Taiwan and crafted a dualistic trade regime under which it could adopt relatively liberal rules on export-processing trade while still protecting domestic markets. These rules enabled China to integrate closely into the cross-border production networks that were developing at this time. Today, all the key characteristics of China's trade are readily comprehensible in terms of these networks: commodity composition, technological sophistication, and international partner composition. The chapter concludes with some observations about China's future trade growth.

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## 16.1 Background

### 16.1.1 Early Days

In the early days of the People's Republic of China, from 1949 through 1960, China dramatically reoriented its trade away from the Pacific and toward the Soviet Union. Although the traditional Pacific trade was shut down, China remained open to trade and aid, which now came almost entirely from the Soviet bloc. More than two-thirds of China's trade between 1952 and 1960 was with Communist Party-led countries, and 48% was with the Soviet Union alone. Trade was a leading sector in China's economic transformation; total trade grew to about 12% of GDP in 1955. China imported industrial materials such as steel and diesel fuel, as well as machinery, most crucially the complete industrial plants that were the centerpiece of China's First Five-Year Plan (1953–1957; see chapter 4). China exported textiles and

processed foods, and the Soviet Union extended credit that supported moderate Chinese deficits. The Great Leap Forward (GLF) (1958–1960) at first encouraged further growth in trade with the socialist countries as China's frenzied investment drive increased its demand for imported machinery.

### 16.1.2 Economic Isolationism

The economic crisis and famine that followed the collapse of the GLF led to dramatic changes in every aspect of China's economy. China began a long, slow retreat into international economic isolation. The break with the Soviet Union after 1960 meant the virtual end of trading relations with China's biggest trade partner. Imports from the Soviet Union dropped sharply, and by 1970, trade with the Soviet Union accounted for only 1% of total Chinese trade. Trade did not grow at all between 1959 and 1970: exports were exactly the same in 1970 as in 1959 (\$2.26 billion). Imports of industrial goods were curtailed sharply in the immediate post-GLF crisis, and scarce foreign exchange was diverted to desperately needed grain imports. The early 1970s were thus the low point of China's relations with the world economy; imports and exports together were only 5% of GDP in 1970 and 1971. At the same time, relations with the West remained distant and on occasion threatening. China was on a war footing through 1971 and intentionally encouraged regional self-sufficiency within China as well as internationally. The foreign-trade system provided insulation from world market forces.

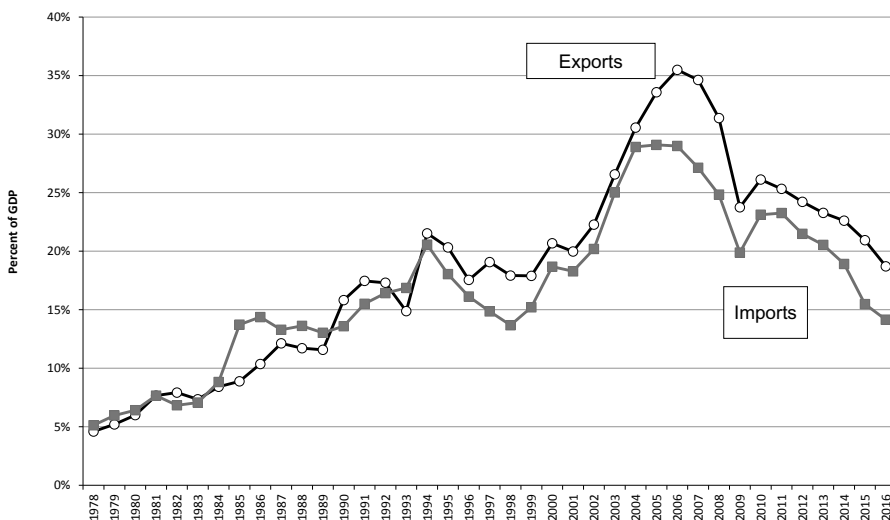
China adopted conscious policies of self-reliance. In fact, China had little to export during this period. In the wake of the GLF, China's households were perilously close to the subsistence margin, and the food and light consumer goods that China had previously exported were now in short supply domestically. Scarce foreign exchange was used to import grain from Canada, Australia, and Argentina, while the remaining foreign exchange available had to be carefully husbanded to enable the import of a few critical industrial materials, including petroleum and steel. The output from China's new heavy industries was not of good-enough quality to find foreign markets. In any case, preoccupied with the Cultural Revolution, China had little information on foreign markets. A quarter of China's exports went to tiny Hong Kong, the largest market. Cut off from its supplies of Soviet technology, China made do with a few small, selective purchases from suppliers of new technology in Japan and Europe.

In the mid-1970s, the economy began to recover from the worst of the Cultural Revolution. Supplies of light consumer manufactures, especially textiles, began to increase and become available for export. Even more important, petroleum output from China's main field at Daqing began to increase rapidly, and China started to export oil. It was obvious that China could reap substantial gains from reengaging

with world markets. But how would this be done? As foreign-exchange earnings began to increase, China rapidly stepped up its technology purchases from the West and Japan. Fertilizer plants and steel mills were at the front of the queue of desperately needed technology items. These trading relationships seemed set to continue growing, and ambitious technology-import programs multiplied in 1977–1978. But when oil-field development programs fell through, it was unclear where the foreign currency needed to pay for the imports would come from. China for the first time was forced to confront the inherent problems created by its command-economy trading system. Driven initially by a serious short-run foreign-exchange crisis, China began to systematically open its economy.

### 16.1.3 China's Emergence as a Trade Power

In 1978, China began a remarkable 30-year process of economic opening. The results are displayed graphically in figures 16.1 and 16.2. As shown in figure 16.1, trade responded quickly to policy reforms at the end of the 1970s and grew at a sustained rapid pace. By 2001–2002, both exports and imports had increased their share of GDP from 5% to 20%, transforming China's economy in the process. Even given this performance, what happened next was remarkable: China's trade growth accelerated after 2002 in the wake of WTO membership and successful reforms. Exports soared to 35% of GDP in 2006–2007, outpacing imports and

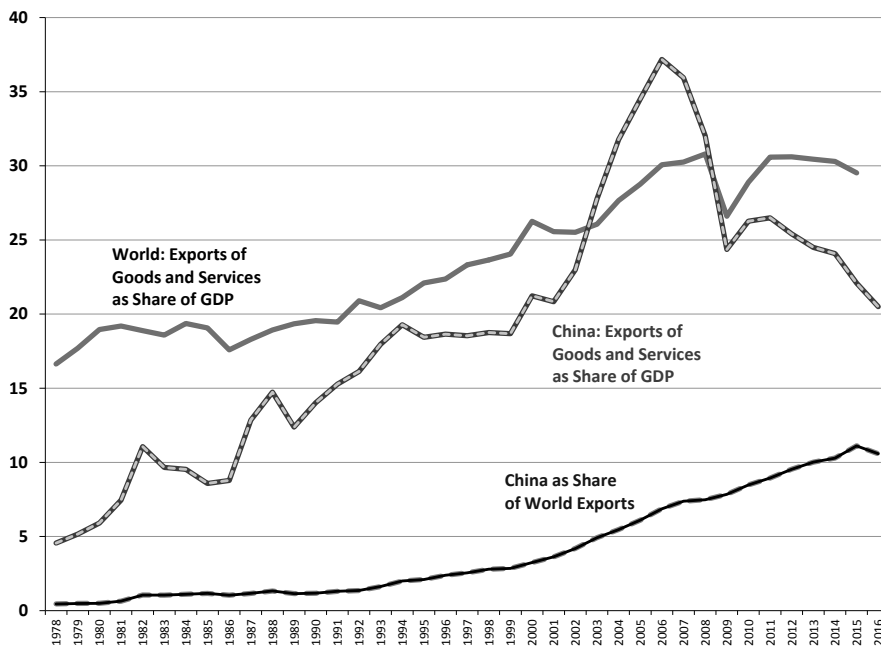


**Figure 16.1**

Exports and imports (share of GDP).

Sources: SYC, updated from General Administration of Customs.

opening up a large merchandise trade surplus for the first time (peaking at 7.4% of GDP in 2007). Figure 16.2 shows that by 2001–2002, China had just caught up with average world levels of trade openness (as measured by the export/GDP ratio). After 2002, it soared ahead, becoming substantially more open than the world average, a remarkable outcome given China's large size and continental character (usually associated with lower trade ratios). Since 2007, China's trade ratios have dropped substantially. They fell quickly during the global financial crisis of 2008–2009, stabilized, and then fell rapidly again after 2014. By 2016, they had returned to approximately where they were in 1998–1999. China's merchandise trade surpluses declined to below 3% of GDP after 2010 but widened again because of the drop in commodities prices after 2014. Figure 16.2 sheds additional light on these changes. China's export ratio has dropped back below the world average (perhaps to a more predictable place for a large continental economy). However, it may be surprising to see that China's share of world exports continued to inch upward until 2015 (shown by the dashed line). The explanation is this: since the global financial crisis of 2008–2009, world trade and China exports both grew slowly (until 2014) and then declined (until 2016). However, in the rest of the world,



**Figure 16.2**

China's exports in global context.

Source: World Bank, World Development Indicators (WDI).

GDP growth has also slowed dramatically, so the export/GDP ratio has been stable, while Chinese GDP has continued to grow moderately rapidly, so exports as a share of GDP have declined.

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## 16.2 Reforming the Trade System

### 16.2.1 The Challenge

The foreign-trade system that Chinese leaders sought to reform in the late 1970s was a typical Soviet-style command-economy trading system that had been adapted to serve China's economic isolation. The domestic economy was rigorously separated from the world economy by what we might term a "double air lock" that controlled flows of both goods and money. The first air lock was the centrally controlled foreign-trade monopoly. Twelve national foreign-trade companies (FTCs) exercised monopolies over both imports and exports. Only authorized goods were allowed to pass through this layer of control. The second air lock was the foreign-exchange system. The value of the Chinese currency (the renminbi, RMB, or yuan) was set arbitrarily, and it was not convertible. Individuals could not exchange renminbi for foreign currency without special authorization, which was very difficult to get. Overlapping, redundant controls covered the flows of both goods and money. The only way to navigate this tangle of administrative controls was to be included in the foreign-trade plan.

The double-air-lock system was designed to insulate the domestic economy from the world economy while allowing a few key commodities to pass through the air locks. The FTCs bought and sold domestic commodities at planned prices and world commodities at world prices. When imports passed through the air lock, they were repriced in accordance with domestic planned prices, and the FTCs regularly cross-subsidized money-losing products with revenues from profitable ones. The socialist price system was thus completely insulated from the influence of world prices. As discussed in chapters 4 and 20, socialist prices were set so as to privilege the state-owned industrial system. Low relative agricultural prices and high industrial prices were used to concentrate profits in state-owned factories, where they could be harvested for the government budget. If world market forces had been allowed to affect domestic prices, they would have gradually eroded the socialist price system and the government's traditional institutions for mobilizing resources. The socialist price system is an extreme version of the price relationships created by the common "import-substitution-industrialization" (ISI) development strategy. In ISI strategies, developing countries erect barriers against industrial imports, thereby protecting their new industries and (they hope) fostering industrialization. In China as well, one of the functions of the traditional foreign-trade system was to protect state-owned industries.

In this system of control, foreign trade served the interests of China's planners, who had simple preferences. The purpose of foreign trade was to import goods that could not be produced by Chinese firms and that would resolve domestic shortages or bottlenecks (food or raw materials) or bring in modern technology (embodied in industrial machinery). Exports were viewed as a sort of necessary evil, required because exporting was the only way to pay for imports. If planners deemed goods "not needed" for the domestic economy, they could be exported, but the cost of producing export goods was largely irrelevant, while the import of nonessential goods was severely restricted.

When Chinese planners stepped up the pace of technology imports in 1978–1979, they quickly overshot their supply of foreign exchange. Foreign-exchange reserves, small to begin with, melted away at alarming speed. Foreign-trade reforms then began in an urgent attempt to increase and diversify sources of foreign exchange. Luckily, China was surrounded by dynamic, export-oriented market economies, including Hong Kong. China turned to these dynamic neighbors as it sought to begin opening up.

### 16.2.2 Initial Reform Steps

Rather than tackle the enormous task of transforming the whole foreign-trade system, Chinese policy-makers initially took modest but innovative steps to open up new trade channels in the southern provinces of Guangdong and Fujian in 1978–1979. The objective was to make use of the proximity of these provinces to Hong Kong and, to a lesser extent, Taiwan. At this time, Guangdong Province was only a second-tier player in China's foreign trade, accounting for one-seventh of China's export revenues in 1978. Neighboring Hong Kong, however, was already a huge trading power. In fact, tiny Hong Kong exported as much as all of mainland China at this time. China's first step in opening came in 1978 when Hong Kong businesses were allowed to sign export-processing (EP) contracts with Chinese firms in the Pearl River delta. For example, a Hong Kong firm would ship fabric to a Chinese rural firm and have it sewn into shirts. The Chinese firm would be paid a processing fee, while the Hong Kong firm would own the fabric and shirts at all times, so they did not have to pass through the foreign-trade system's air locks at all. In this way, the export-production network already created by Hong Kong could expand into China, but Chinese industrial firms were not exposed to import competition (since it was required that the goods produced be exported).

Shortly thereafter, four special economic zones (SEZs) were set up in Guangdong and Fujian. The SEZs—described more fully in chapter 17—gave foreign businesses a foothold for their EP trade. Like other export-processing zones, the SEZs allowed imports in duty-free as long as they were used in the zone to produce exports. As in other developing countries, policies like the SEZs and export processing allowed

China to selectively promote exports alongside what was still primarily a system of import-substitution industrialization. The zones were enclaves that did not overly threaten the system of domestic protection. Guangdong and Fujian Provinces were also given special powers within the existing foreign-trade system. The provincial divisions of national FTCs were granted autonomy, as well as the right to retain foreign-exchange income they generated. Provincial authorities developed strong incentives to expand trade, and officials in both provinces became well known for their willingness to bend rules to facilitate trade. The special provisions, the incentives, and, above all, the proximity of Hong Kong fundamentally transformed Guangdong Province and made it into an export powerhouse. For the next 15 years, exports from Guangdong and Fujian grew twice as rapidly as those from the rest of China. Those provinces were fundamentally transformed from economic backwaters into crucial nodes in the global trade economy. Moreover, as we will see later, these two key early steps—reliance on Hong Kong as an intermediary and the importance of EP trade—have continued to shape China's trade development in important respects.

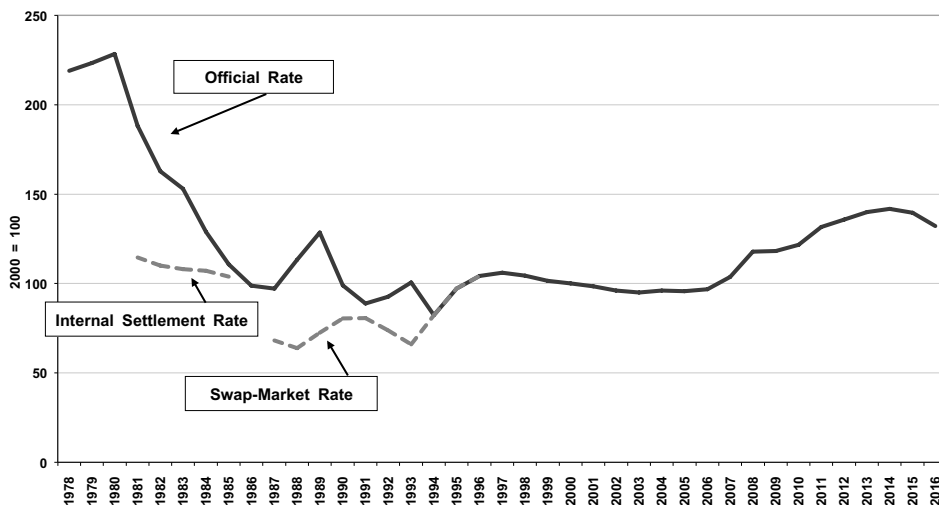
### 16.2.3 Liberalizing the Foreign-Trade System

By the mid-1980s, having created some initial breaches in the traditional system in Guangdong and Fujian, Chinese policy-makers began the task of liberalizing the main national trading system. Despite some occasional missteps (imports surged more than 50% in 1985), between 1984 and 1986, reformists created a provisional modified trade system. There were four key elements: (1) setting a realistic exchange rate, (2) demonopolizing the trading system, (3) liberalizing import prices, and (4) setting up a normal tariff system. Within a few years, they had transformed the rules for trade, largely dismantled the old foreign-trade monopoly, and created a framework for the subsequent growth of trade and investment. The policy stages in this transformation are worth noting:

**a. Devaluation.** A realistic currency value is a prerequisite for successful trade reform. Before reform, China, like most socialist and ISI economies, maintained an overvalued currency. In 1980, the official rate was 1.5 Chinese yuan to the U.S. dollar; at this rate, it was generally not profitable to export. Trade liberalization could not take place because at this unrealistic exchange rate, no company could make money exporting, while the demand for cheap foreign exchange to import was enormous. Figure 16.3 shows that by 1986, the official exchange rate for the RMB had declined by 57% in real terms against the dollar.<sup>1</sup> Figure 16.3 also shows that on the

1. The real exchange rate adjusts for inflation in both economies, using the consumer price index in China and the GDP deflator in the United States. Note that changes in the currency value affect the calculations of openness reported earlier in this chapter. Devaluation makes an economy appear more open because the value of the GDP denominator (measured in domestic currency units) declines





**Figure 16.3**

Real dollar value of the renmibi (2000 = 100).

Sources: Annual nominal RMB/USD rate, deflated by the Chinese CPI and U.S. implicit GDP deflator; *SYC* and Saint Louis Federal Reserve Bank.

way to devaluation, Chinese policy-makers twice introduced dual exchange-rate systems. The first time, between 1981 and 1985, an “internal settlement rate” made it profitable for trade companies within the foreign-trade monopoly to export. The second time, policy-makers created a “swap market”—a lightly regulated secondary market—where exporters outside the foreign-trade system could sell their foreign-exchange earnings. In this market, dollars went for a higher RMB price, thus contributing to a further, market-driven devaluation of the yuan. These dual exchange-rate systems were examples of the dual-track reform strategy applied to foreign trade.

In 1994, another stage of reform further devalued the official rate and unified it with the swap-market rate at 8.6 to the dollar. At the same time, access to foreign exchange was dramatically liberalized, and the currency was made convertible on the current account at that time.<sup>2</sup> This brought the overall and official rates to their lowest level in the reform era; markets for foreign exchange stabilized, and exports

relative to the trade numerator (measured in dollars). Also, focusing on the RMB exchange rate with the U.S. dollar does not account for changes in the value of the dollar relative to other world currencies.

2. “Convertible on the current account” means that anyone with a verifiable transaction on the current account (i.e., export, import, service transaction, or profit/interest payments) can purchase foreign exchange by showing proof of that approved transaction.

and imports both jumped (figure 16.1). Subsequently, the exchange rate was essentially pegged to the dollar, remaining at 8.27 through mid-2005. Changes in real rates between 1994 and 2005 were due entirely to differentials in domestic inflation rates (later changes are discussed below).

**b. Demonopolization of the foreign-trade regime.** The number of companies authorized to engage in foreign trade was allowed to expand dramatically. Industrial ministries were allowed to set up FTCs; the provincial branches of the former national foreign-trade monopolies became independent; and many local governments and SEZs set up trading companies. By 1988, there were 5,000 FTCs, every single one of which was state owned. Direct export and import rights were also granted to some 10,000 manufacturing enterprises. Exports were liberalized much more rapidly than imports. Equally important, there was a steady shift away from the trade plan and in the direction of financial incentives. The old export procurement plan was abandoned in 1988. Foreign-exchange targets and contracting systems similar to those used in industry were applied to FTCs (see chapter 14). Provinces contracted to make fixed annual payments of foreign exchange to the central government and retained all foreign exchange earned above the contract.

**c. Liberalizing prices.** World prices were gradually allowed to influence domestic prices. On the export side, competing FTCs became much more cost sensitive: exporting predominantly on their own account, FTCs recontracted with domestic enterprises in an effort to lower costs. FTCs sought out cheap producers of labor-intensive goods, which were often township and village enterprises (TVEs). The share of exports produced by TVEs increased rapidly, accounting for one-fifth of procurements by FTCs by the mid-1990s. On the import side, the system steadily adapted to transmit world price signals to the domestic economy. Imports began to be priced according to the agency system, in which domestic prices equal the world price plus a commission paid to the importer, instead of being assigned a domestic planned price equivalent. Stronger incentives pushed trading companies to adapt to opportunities that were increasingly shaped by world prices.

**d. A system of tariffs and nontariff barriers.** Chinese reformers proceeded cautiously. They were wary of making mistakes and afraid of import surges, trade deficits, and hard-currency debt. Therefore, even as reformers dismantled the planned trade system, they erected high tariff walls and substantial nontariff barriers to maintain a degree of protection of the domestic market. Under the old air-lock system, tariffs had existed but had been irrelevant because the FTCs would carry out the trade plan, and revenues and tax payments were redistributed later as necessary. In the early 1980s, a new tariff system was introduced that set high tariffs for the next two decades. According to the analysis of the World Bank (1994, 56, 67), China's tariffs were similar to those of other highly protected developing countries. The unweighted

mean tariff was 43%, and the trade-weighted mean tariff was 32% (the same as that of Brazil at that time). Equally important were nontariff barriers (NTBs). The same World Bank study found that 51% of imports were subject to one or more of four different overlapping nontariff barriers. Indeed, NTBs and tariffs were “used in a complementary fashion to achieve the government’s objectives” (67). For example, nonessential consumer goods had high tariffs, while consumer “essentials” were “canalized” to monopoly FTCs administered by the central government. Overall, the most important NTB was simply that import rights were primarily reserved for the state-owned FTCs. Manufacturing enterprises sometimes had limited trading rights but were authorized to import only for their own production needs. Overall Chinese imports were regulated by a combination of tariffs, quotas, and administrative guidance exercised over state-owned trading companies.

After the mid-1980s, China had in place a system of high tariffs, multiple nontariff barriers, and abundant administrative discretion that in many ways was typical of a developing country pursuing an ISI strategy. This was far better than the previous planned system. Steady reforms created an essential minimum of flexibility that allowed access by new exporters and transmitted world prices to the economy. But this partially reformed system was by no means liberal enough in itself to create the dramatic Chinese export success. Instead, the most important such measure was the creation of an entirely separate export-processing trading regime, which allowed exporters to simply bypass the old centralized foreign-trade monopoly.

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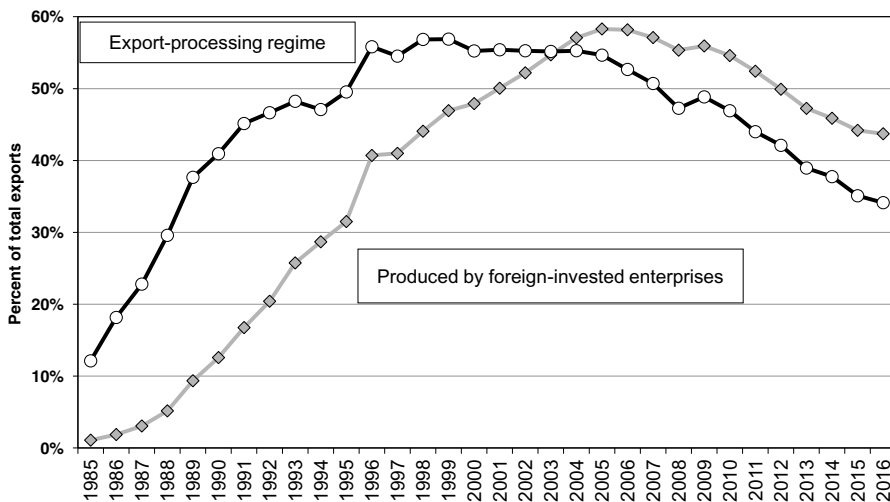
### 16.3 A Dualist Trade Regime: The Strange Career of Export-Processing Trade

The early experiments with export-processing contracts that had begun in Guangdong Province as early as 1978 gradually grew into a full-blown export-processing regime. After 1986, recognizing the opportunities for China in the ongoing restructuring of Asian export-production networks, Chinese policy-makers started supporting the “Coastal Development Strategy.” All types of firms in the coastal provinces, including TVEs, were allowed to engage in processing and assembly contracts. Foreign investors began to move into China’s coastal provinces on a large scale, and they were allowed to adopt a more flexible variant of export-processing contracts in which they took ownership of components and raw materials imported duty-free. By the late 1980s, China had established what were, in essence, two separate trading regimes. EP or export-processing trade grew rapidly and soon surpassed “ordinary trade” (OT) in size, notwithstanding the significant reforms that had been made in the OT system.

These two trading systems exist to the present day. However, their functions and relative roles have changed in surprising ways. Originally introduced as a makeshift

way to allow Hong Kong businesses to employ cheap Chinese labor to sew blue jeans, EP trade has morphed into a massive system that is an integral part of virtually all global high-technology production networks, particularly electronics. Precedents for the Chinese EP regime can be found in the trade strategies followed by East Asian forerunner economies, but what is unusual is the sheer scale on which these provisions were introduced in China. In most countries, such concessionary provisions are circumscribed within a designated and strictly policed EP zone. In essence, China created a gigantic EP zone throughout the entire coastal region. Although China's SEZs attracted a lot of attention, it is arguably more important that the boundaries of the EP regime extended far beyond the SEZs, to wherever an export-oriented firm was located.

The exemption from duties on imported inputs provided a significant cost advantage to firms in the EP regime. More important was that under the EP regime, exporters—predominantly foreign-invested enterprises (FIEs)—were allowed to sidestep the entire complex and unwieldy apparatus of import controls, canalization, and regulatory monopolies that restricted development of trade under the OT regime. Given these advantages, EP trade grew much more rapidly than OT trade. Figure 16.4 shows the enormous difference these factors made. The EP regime and FIEs together were the motors of China's export expansion. Figure 16.4 shows that EP trade climbed to 56% of total exports in 1996; it thus accounted for two-thirds of the increase in exports to that date. EP exports maintained this share through 2005 and only then



**Figure 16.4**

Share of exports from export-processing regime and foreign-invested enterprises.

Source: General Administration of Customs.

began a long, steady slide. FIEs, the largest number of which are from Hong Kong and Taiwan, have almost automatic access to the EP system and often received special tax concessions as well (chapter 17). FIEs inexorably increased their share of total exports in every year, starting from only 1% in 1985, reaching 58% in 2005, and maintaining roughly that share through 2010. From a small base, FIEs gradually became important players in China's export growth, and between 1992 and 2005, they accounted for fully 63% of incremental exports. Clearly, the liberalization of the environment for foreign investment played a fundamental role in China's export success. The flip side of FIE export growth was the relatively less impressive performance of domestic firms. Ironically, domestic exporters had to wait for WTO membership to kick in before they could fully realize their export potential.

Processing trade got a new lease on life after the turn of the century, when it became the preferred mode for businesses producing electronics hardware for export. Complex electronics goods like desktop and laptop computers, smartphones, and telecommunications equipment were and are assembled in China's coastal regions. These products require large quantities of imported high-tech components, particularly central processing units and other semiconductors, as well as flat-panel displays (chapter 15). Thus the processing trade system was key to the integration of China's high-tech economy with that of Taiwan, Korea, and Japan and the creation of a pattern of triangular trade (described later).

After 2005, the share of both EP exports and FIE exports began a long, slow, steady decline. Of course, declining share is not the same thing as declining trade, and EP exports expanded through 2014, when they were double, in dollar terms, what they had been in 2005. Moreover, a certain part of the declining share of EP trade has been taken up by trade through bonded zones (special areas that for legal purposes are outside the domestic customs regime). These accounted for 7% of exports in 2014. Thus, although EP trade is no longer the driver of China's export expansion, it still constitutes one of the largest trading systems in the world, and it grew until 2014 (exports in all categories were lower in 2016 than in 2014).

Until recently, Chinese policy-makers thought of EP trade as a second-best type of trade, from which Chinese domestic firms do not benefit adequately. EP firms are often described as being stuck in the low-value-added links of production chains, of which U.S. high-tech giants are often the architects. To a certain extent, the relative decline of EP trade is due to this feeling. It is empirically accurate that, particularly in electronics production networks, Chinese firms are typically concentrated in labor-intensive assembly stages. However, this specialization reflected China's relative factor endowment when it was rapidly integrated into these networks. Only in 2016 did the Chinese government awake to the importance of EP exports and the possibility of expanding and upgrading those links. In any case, the more important reason for the relative decline of EP trade is that in the wake of China's WTO

membership, the overall trade environment became far more open. We now turn to those changes.

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## 16.4 WTO Membership and Steps to an Open Economy

From the mid-1990s, building on its achievements in creating a functioning trading regime, China began to move in the direction of a genuinely open economy. Membership in the WTO was a powerful motivating factor. Reforms undertaken before WTO accession in order to strengthen the case and prepare the economy for WTO membership were nearly as important as those undertaken afterward. The 1994 foreign-exchange reforms were part of the coordinated package of fiscal, financial, and trade reforms that were rolled out simultaneously at the end of 1993 and the beginning of 1994 (chapter 5). These unified the foreign-exchange market and greatly liberalized access to foreign exchange. One of the advantages of policy coordination was that the national taxation system was shifted to a much larger reliance on the value-added tax (VAT). The rules of the WTO permit exporters to rebate VAT on exports. Initially, the intention of reformers was to move quickly to full currency convertibility, including on the capital account, and establish a “managed float” for the Chinese currency. In this system, a flexible exchange rate would adjust to changes in supply and demand for foreign exchange, but the central bank would still intervene in the foreign-exchange market on occasion to stabilize the currency.

These plans were never realized, even though WTO membership went forward. In the macroeconomic turbulence that followed the Asian financial crisis of 1997–1998, all Asian currencies, including the RMB, came under intense downward pressure. The “managed float” gradually became a de facto fixed exchange rate vis-à-vis the U.S. and Hong Kong dollars. When Chinese exports started to grow rapidly after 2002, the fixed exchange rate, the lack of capital-account convertibility, and the relatively low value of the renminbi remained in place, setting the stage for the development of large trade surpluses after 2005 (figure 16.1; discussed in section 16.4.3).

### 16.4.1 The Changing Significance of WTO Membership

When China formally applied to rejoin the General Agreement on Tariffs and Trade (GATT, the forerunner of the WTO) in 1986, it seemed that the process might be quick and relatively painless. After all, China was at that time a pioneer of market reforms and was looked on in the West at least as favorably as Poland and Hungary, already GATT members. But it was not until 15 years later that China finally became the 143rd member of the WTO, on December 11, 2001. During those protracted negotiations, both China and the world trading institutions changed in fundamental ways.

The Uruguay Round negotiations that created the WTO in 1996 signaled a fundamental shift in the terms of global trade negotiations. Earlier agreements had been restricted to a clearly delineated “foreign-trade sector,” and negotiations had focused on border taxes and restrictions. After 1996, negotiations increasingly concerned domestic regulation in the negotiating economies. In part, this shift came about because modern developed economies are now primarily service economies, and so international agreements understandably go beyond the former focus on internationally traded goods. Since services almost always involve some physical presence at the point of delivery, agreements about trade in services inevitably involve negotiations about regulation and investment conditions in the receiving, or importing, country. During the Uruguay Round, trade liberalization was achieved by a “grand bargain” between developing and developed countries: Developing countries got the promise of greater access for their agricultural products and light manufactures, especially textiles, and textile import quotas were eliminated in developed-country markets. Developed countries got the promise of improved access for, and protection of, their corporations operating in developing-country economies. This grand bargain cleared the way for the creation of the WTO and the extension of trade negotiations into new areas relating to services, investment, and intellectual property rights. This was exactly the bargain that China was required to make as a condition for WTO membership: granting broader and fairer access to its economy in exchange for greater access for its light manufactured exports to other countries. The terms of this complex bargain involved a vastly more complicated negotiating process than had initially been anticipated.

#### 16.4.2 China’s WTO-Driven Trade Reform

On the trade side, the most fundamental issue from the beginning was the requirement that China open up its OT regime. Most important was China’s commitment to extend trading rights without restrictions, including giving trading rights to domestic and foreign private companies. Eventually, these new provisions were included in a foreign-trade law effective July 1, 2004. Under this law, the Chinese government no longer restricts trade to a limited number of state-owned FTCs. An exception is made for a few agricultural commodities where state trading is still permitted. In those cases, China committed to a system of tariff-rate quotas (TRQs) for specific products, agreeing to lower tariffs, but only to a certain ceiling to protect against import surges. The accession agreement specifically commits China to distribute a minimum share of the TRQ allocations to nonstate traders. The commitment to a more accessible trade system was the most important component of WTO accession in the foreign-trade arena.

Next most important were commitments to lower tariffs. China began lowering tariffs in preparation for WTO membership immediately after the foreign-exchange

reforms of 1994, well before the actual agreements were finalized. The average nominal tariff was reduced in stages from 43% in 1992 to 17% in 1999, the year when the breakthrough in WTO negotiations finally came. In the agreement, China committed to lowering average industrial tariffs to 9.4% by 2005; this rate was achieved in 2004. The agreement lowered average agricultural tariffs to 15%, a rate that was also easily achieved.

### 16.4.3 The Impact of China's WTO Membership

WTO accession provoked substantial anxiety among Chinese policy-makers and, to a certain extent, the Chinese public. There were worries about whether Chinese industries were competitive with sophisticated foreign firms, and whether Chinese agriculture could withstand an onslaught of imported food. These worries turned out to be unfounded. Chinese industry responded well to the competitive challenge of import liberalization, and even the automobile industry (the focus of many fears) entered a golden age of expansion after WTO membership. Perhaps most striking is that far from being deluged by rapid import growth, China experienced a surge of exports in the wake of WTO membership that changed China and the world. Without FTCS acting as gatekeepers to the world market, Chinese domestic firms seized the opportunity for rapid expansion (see table 16.1).

The productivity surge in the wake of WTO membership was not well anticipated, and policy-makers were slow to respond. As figure 16.1 shows, China's exports surged from 2003 through 2007, while import growth lagged after 2004. A very large trade surplus opened up, averaging 7% of GDP from 2006 through 2008.<sup>3</sup> At this time, China's exchange rate had been fixed against the U.S. dollar since the Asian financial crisis (1997–1998), and it began to appreciate slightly only after July 2005, when the nominal peg was loosened. As figure 16.3 shows, the real value of the RMB was still significantly below its levels in 1997–1998 as late as 2005. (Given an unchanged nominal exchange rate, the real value was lower because inflation had been lower in China than in the United States.) Appreciation of the RMB would have helped moderate the growth of the trade surplus and keep global trade more balanced.<sup>4</sup> In fact, this is what happened after RMB appreciation began in earnest in November 2007. In 2009, China launched its massive stimulus program, and this expansion in domestic demand (which increases imports), combined with RMB appreciation, brought the surplus back down to manageable levels by 2010. In 2011, the Chinese surplus in

3. There is no absolute standard for a large surplus or deficit, but a widely accepted rule of thumb is that anything above 4% of GDP is unambiguously "large."

4. Currency appreciation makes a country's exports more expensive (and therefore less competitive) and imports less expensive (and therefore more attractive). Therefore, after a lag, appreciation reduces a trade surplus or increases a trade deficit, all else held constant.



**Table 16.1**

Chinese exports: Share of total by firm ownership.

	1995	2005	2016
State-owned enterprises	66.7%	22.2%	10.3%
Foreign-invested enterprises	31.5%	58.3%	43.7%
Private domestic firms	0.2%	14.7%	43.6%
Collective and other	1.5%	4.8%	2.4%

Sources: *China Customs Statistics* (1995, 12; 2005, 12); General Administration of Customs.

goods trade had declined to 2% of GDP, before widening again to 4.6% of GDP in 2016.

This period of explosive Chinese trade growth created a significant shock in global trading relationships. Large trade surpluses from large trading countries cause major trade tensions, and there is no global mechanism to induce countries to reduce such large surpluses. During 2006–2008, many countries, including the United States, urged China to let its currency appreciate more rapidly, but China rejected these criticisms as unwarranted interference in domestic policy-making. In the United States, imports from China tripled between 2001 and 2007, creating substantial economic dislocation. The U.S. bilateral trade deficit jumped from \$83 billion in 2001 to over \$259 billion in 2007 (according to U.S. Customs data). This rapid change overwhelmed the domestic adjustment process in the United States. Autor, Dorn, and Hanson (2013) showed that local labor markets in the United States that were most exposed to competition from Chinese imports lost the most, and that trade-related job losses were not made up by increased employment in nontraded or export-oriented sectors in those localities. In other words, the frictions involved in adjusting to trade were costlier and longer lasting than economists typically expect. As a result, the costs of trade were large and persistent, as well as geographically concentrated. The gains from trade to the United States were also large, but they were spread over all U.S. consumers (in the form of lower prices) or taken as higher profits of U.S. firms importing goods. Since this episode was followed immediately by the global financial crisis, there was no opportunity for economic growth in the United States to reduce the adjustment costs.

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## 16.5 Composition of Trade

Each stage of the liberalization of China's foreign-trade system has been associated with a surge in exports and imports. The result has been an extraordinarily diverse basket of export goods, combined with an import basket dominated by resources, intermediates, and components.

### 16.5.1 Exports

After 1979, exports at first grew rather indiscriminately. As late as 1985, petroleum was China's largest single export, accounting for 20% of export earnings. Between 1985 and 1995, the systemic changes described in section 16.2.3 drove a dramatic shift to the export of labor-intensive commodities and a correspondingly large decline in natural-resource-based exports. One of the marks of the inefficiency of China's foreign-trade regime before liberalization was that light, labor-intensive manufactures were a small share of China's exports despite China's obvious factor endowments. However, by 1995, all of China's top export commodities were labor-intensive manufactured goods, most strikingly textiles and garment exports, footwear, sporting goods, and miscellaneous manufactures.

The renewed liberalization of the trading regime signaled by WTO accession led to another surge in China's trade. The growth of traditional labor-intensive manufactures, particularly garments, remained robust. Aided by the end of textile import quotas in 2004, production and exports shifted to China. The post-WTO surge was also associated with a dramatic increase in the share of machinery and electronics, from 22% in 1995 to 47% in 2007, after which it leveled off. In other words, having already shifted to encompass labor-intensive manufactures, China's exports now deepened to include manufactures that are much more capital and technology intensive. This has left China exporting an extraordinarily broad range of manufactures, an export composition more typical of a developed country. Openness initially led to an export bundle that strongly reflected China's fundamental factor endowments; then, as development continued, that export bundle broadened smoothly to include goods that embodied increasing capital and technology. The most important exports and imports in 2016 are shown in table 16.2.

Rising wages for semi-skilled and unskilled workers are eroding the cost competitiveness of China's labor-intensive exports. Overall, labor-intensive manufactures made up 27.7% of China's exports in 2016, down from 33.5% in 2003. The decline was concentrated in textiles and garments, which declined to 12.5% of exports in 2016 from 18% in 2003. All other labor-intensive manufactures—shoes, toys, sporting goods—have almost maintained their share, slipping only from 15.5% to 15.2% over the same period. Shifts in competitiveness are manifesting slowly. In part, this is because some labor-intensive production has migrated inland, where wages are lower (section 16.8); in part, it reflects the excellent trade infrastructure and network of suppliers that helps keep overall costs low in China. As table 16.2 shows, electronics products are still important, and have retained their share unchanged. Machinery and industrial materials, such as steel, have increased their share of exports. China's export composition shows a steady shift away from labor-intensive products toward capital-intensive products over the past decade. However, these shifts should be

**Table 16.2**

Top import and export categories, 2016 (billions of US\$).

	Imports	% of total		Exports	% of total
Semiconductors	227.0	14.3	Computers, components, LCDs	163.2	7.8
Petroleum and products	144.1	9.1			
Autos and auto parts	74.4	4.7	Clothing	157.8	7.5
Agricultural products except grain	69.1	4.4	Telephone handsets	117.1	5.6
Computer components, LCDs	59.2	3.7	Textiles	105.0	5.0
Iron ore	57.7	3.6	Agricultural products	72.6	3.5
Copper and copper ore	47.1	3.0	Semiconductors	61.0	2.9
Grain	41.5	2.6	Finished steel	54.5	2.6
Plastic raw materials	41.3	2.6	Furniture	47.8	2.3
Coal	24.5	1.5	Shoes	47.2	2.3
			Automobile parts	45.6	2.2

Source: General Administration of Customs.

understood in the context of rapid growth: exports in 2016 were five times what they had been in 2003, and even textile and garment exports were 3.3 times greater. From the standpoint of the global market, Chinese competitiveness is still formidable, even in traditional labor-intensive manufactures.

### 16.5.2 Imports

Imports have continued to be concentrated in resources and capital- and technology-intensive products. The larger volume of these imports has increased China's gains from trade. Many of the most important Chinese imports serve essentially as land substitutes, stretching China's limited land endowment. However, the composition of these imports has shifted significantly in the past decade. In 2003, 23.9% of China's imports were capital-intensive commodities, often produced in heavy, process-technology industries: steel, chemicals, synthetic fibers, and plastic raw materials. These commodities have declined to 17% of China's imports, reflecting the substantial growth of China's heavy industrial base.<sup>5</sup> Instead of importing these processed industrial materials, China now imports an extraordinary quantity of natural resources and mining products: 34.2% of total imports, more than double the 16.1% share in 2003. The most important category comprises oil and gas, accounting for 10.1% of total imports. Metallic ores—primarily iron and copper—make up 6.6% of imports. Finally, food, beverages, and oilseeds make up another 5.8% of imports. These capital- and land-intensive products account for over half of imports. The next

5. SITC categories 5 and 6, excluding 65 textiles.

major category of imports consists of skill-intensive commodities including machinery, transport machinery, and electronics. Electric and electronic equipment—mostly high-tech components for hardware assembled in China—account for 28.5% of imports.

Chinese trade overwhelmingly corresponds to comparative-advantage principles and is likely of enormous benefit to the Chinese domestic economy. China has a substantial impact on world markets for several of these commodity groups: copper, iron ore, fertilizers, and, increasingly, petroleum. These are areas where Chinese demand moves world markets.

### 16.5.3 Service Trade

China's service trade—exports and imports—has grown gradually over 30 years from 2% of GDP in the mid-1980s to 6.4% of GDP in 2015. China's service trade has three distinctive features. First, the overall size of China's service trade as a share of GDP is only half the world average (13%). Service trade as a share of GDP increases with GDP per capita, so the contrast is not quite so sharp when China is compared with middle-income country average (8.8%), but it is still striking. Second, among 2015 services the biggest service import was "travel and tourism" (56%), much higher than the world average (28%). It follows that nontravel service imports are a much smaller share of GDP than world averages (1.7% versus 4.7%). Third, since 2012 the service trade has consistently been in deficit of over 1% of GDP (1.2% in 2015). The service trade deficit can be set beside the consistent surplus in goods trade, reducing China's overall current account surplus. However, 90% of the service deficit accrues to the travel and tourism sector; all other service sectors combined are close to balance.

How do we explain these patterns? First, the large size of travel imports is at least partially a real phenomenon, reflecting the explosion of Chinese travel abroad and the large number of Chinese studying abroad (educational expenses abroad are included in travel). However, the very large recorded expenditures per traveler suggest that this item disguises some capital flight, as the opportunity of travel is used to purchase assets abroad (chapter 17). Taking account of this special factor, it is clear that service trade in general has fallen behind the robust pace set by growing goods trade. This seems to indicate that service-trade liberalization has lagged the liberalization of the goods trade. For many countries, business services, finance, and insurance are the largest service imports, but for China these are quite small. Since service trade often requires a physical presence, and thus investment, in the importing country, small service trade is plausibly related to slow liberalization of the investment environment for services (chapter 17).

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## 16.6 Technological Sophistication

The rapid increase in China's export of electronics goods, especially laptop computers, is truly impressive. Does this trend mean that China is becoming a technology power? From an uncritical look at the data, particularly the share of China's exports classified as "high technology," the answer would seem to be "Yes." As shown in figure 15.4, China is by far the world's largest exporter of "high-technology" goods and accounts for nearly all the increase in global high-technology exports since the turn of the century. Thus China seems to have not only a strikingly diverse export economy, but also one that is unusually sophisticated.

However, this conclusion is based on misleading data. Virtually all the high-tech electronics goods that China exports are produced under the EP trading regime, and more than 85% are produced by FIEs. Electronics production worldwide is carried out through global production networks, chains that link production, research, and services that are performed in many different countries. China is already an integral link in many of these production networks. But inspection of the products exported and the processes carried out in China reveals that China is overwhelmingly concentrated on the final assembly stage of production. This is a labor-intensive, medium-skilled activity, not a high-tech activity. Classification of China's exports by technological level can thus be extremely misleading because while the final product is technologically sophisticated, the actual value added in China is not (e.g., for a laptop computer). Indeed, from the standpoint of value added in China, the activity is more usefully grouped with other labor-intensive products, such as garments and toys. Upward, Wang, and Zheng (2013) found that electronics goods were the largest single contributor to Chinese manufactured exports but had the lowest share of domestic value added in export value (36%) of any sector.

The distinction between value added in export production and gross value of exported commodities is important and has been the subject of much recent empirical work (Koopman et al. 2010; Koopman, Wang, and Wei 2012). For every economy, value added in export production is less than the gross value of exports, but this difference seems to be especially large in China, probably because of the history of reliance on EP trade. Upward, Wang, and Zheng (2013) found that the share of domestic value added in China's manufactured exports was 53% in 2003 and increased to 61% in 2006. Although they asserted that this is relatively low in an international context, the growth rate is rapid. These adjustments influence our judgments of China's trade sophistication, diversity of exports, and degree of openness, in each case causing us to lower our estimate. However, the rapid pace of increase of domestic value added indicates that China is rapidly climbing the ladder of sophistication. By the time our measures have been comprehensively improved, China may

have already changed the patterns the measures are designed to analyze. The rapid increase in domestic value added demonstrates some of the benefits of participation in global production networks. China started off in low-value-added stages of production, but its participation turns out to have been a good way to facilitate technological borrowing, benefiting from learning by doing, and generating spillovers for domestic firms.

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## 16.7 Trade Partners

The pattern of China's trade partners also reflects the history described above (see table 16.3). China runs huge trade deficits with Korea and Taiwan and huge trade surpluses with the United States, the EU, and Hong Kong. In the case of Hong Kong, the surpluses are a secondary phenomenon, matched by Hong Kong's surpluses with the United States and the EU. These flows reflect the patterns of import of components and subassemblies from Taiwan and Korea (and, to a lesser extent, Japan), followed by assembly and reexport, primarily to developed-country markets (including Japan). This triangular pattern is strongly characteristic of China's trade and reflects the close linkages between foreign direct investment and trade (since the exporting

**Table 16.3**  
China's largest trading partners, 2015 (billions of US\$).

	Exports	Imports	Total trade	Surplus
United States	502.6	150.5	653.2	352.1
Japan	160.6	143.1	303.7	17.5
Hong Kong	261.1	12.8	273.9	248.3
Republic of Korea	90.2	174.6	264.8	-84.3
Germany	103.3	87.7	191.0	15.7
Taiwan	44.9	143.3	188.2	-98.4
Australia	46.3	73.9	120.2	-27.6
Malaysia	33.2	53.3	86.5	-20.0
United Kingdom	63.0	18.9	81.9	44.1
Thailand	40.9	37.2	78.1	3.7
Brazil	30.7	44.3	75.1	-13.6
India	61.6	13.4	75.0	48.2
Viet Nam	49.4	25.1	74.6	24.3
Singapore	42.1	27.6	69.7	14.6
Netherlands	38.4	8.8	47.2	29.6

Source: SYC (2016, table 11-6).

firms in China are often subsidiaries of firms from Taiwan or Korea). The rapid internationalization and geographic redistribution of production networks in the wake of China's adoption of the EP trading system created this triangular trade.

## 16.8 Accommodating Structural and Regional Change

Growth of trade has accommodated the structural changes described in chapters 6 and 7 of this volume. Long-distance migration from interior provinces to the booming export-manufacturing zones of the coast has been a central part of the Chinese developmental experience and a key driver of structural change. The steady expansion of the export sector permitted the steady expansion of urban employment during the period when labor supply was growing rapidly. Most important, export expansion allowed the high-investment, rapid industrialization growth strategy to roar forward without impediment as people and production moved to export areas.

Foreign trade unsurprisingly benefits the coastal regions of China, and the coastal provinces grew significantly more rapidly than inland provinces on the strength of trade-related demand through 2006 (section 2.6). Different coastal regions, however, responded to the stimulus of trade at different times and in different ways. In the early years, trade provided an enormous stimulus to the southern coastal provinces of Guangdong and Fujian. Table 16.4 shows that the share of China's total exports produced in the Southeast—the coastal provinces of Guangdong, Fujian, and Hainan—rose dramatically from 16% in 1978 to 45% in 1995. These provinces benefited the most from preferential policies during the 1980s and from the growth of foreign investment and EP trade. Guangdong, in particular, was encouraged to take “one step ahead” of the rest of the economy and become an economic showcase—perhaps even to become a “Fifth Tiger,” following the “Four Tigers,” the newly industrialized

**Table 16.4**  
Regional shares of China's exports.

	1978	1995	2005	2010	2016
Southeast	16%	45%	36%	34%	36%
Lower Yangtze	35%	21%	38%	42%	37%
Northeast / North Coast	40%	22%	18%	17%	15%
Rest of China	9%	11%	7%	8%	13%

Source: *SYC* (2016, table 11-9); *SAC* (2017, 96).

Southeast: Guangdong, Fujian, and Hainan.

Lower Yangtze: Shanghai, Jiangsu, and Zhejiang.

Northeast/North Coast: Shandong, Beijing, Tianjin, Hebei, Liaoning, Jilin, and Heilongjiang.

economies of Korea, Taiwan, Hong Kong, and Singapore. During this initial period, the rise of the Southeast eclipsed the growth of the region that had traditionally been China's richest and most sophisticated economic macroregion, the Lower Yangtze (chapter 2). The Lower Yangtze grew robustly in the 1980s but was not oriented toward foreign trade in the same way as the Southeast.

However, after the mid-1990s, the Lower Yangtze came roaring back. Powered by significant inflows of foreign investment (see chapter 17), the Lower Yangtze saw its share of Chinese exports increase significantly, climbing back above its previous high to 42% in 2010. The share of the Southeast, by contrast, declined to 36% in 2005, before stabilizing. During this period, its exports continued to grow at a pace that would be considered quite healthy in most economies, and it managed a significant technological upgrading in the Shenzhen SEZ (section 15.4.4).

Inland provinces remained second-tier players until 2010, when their share of exports was still only 8%. However, after 2010 several large exporters began to move inland in search of lower wages. Chongqing, Sichuan, and Henan increased exports very rapidly through 2014 as national policy supported their bids for some of the large electronics assemblers. In 2016, inland provinces produced 13% of China's exports. Thus, China's export miracle has in fact been composed of three successive waves: the Southeast, the Yangtze Delta, and the inland provinces taking the lead in export expansion in different periods.

The areas left outside this story have been the closely linked Northeast and northern coastal regions (section 2.3), whose relative share has declined steadily. These northern regions were a major force in China's trade in the 1980s, with their diversified heavy industrial base and petroleum. However, their share had slipped to 15% by 2016, and the three provinces of the Northeast now produce only 2.6% of China's exports. The region is in danger of becoming economically marginalized. By contrast, both the Lower Yangtze and southeastern China have maintained their positions in China's export economy. Guangdong Province is still the single largest exporting province, and has the highest export/GDP ratio, at 55% in 2016. This is well below its peak in the mid-1990s, when the value of exports (a gross value) was more than 100% of GDP (a net concept). Guangdong is not as export-dependent as Malaysia or Thailand (67% and 69% respectively), but is similar to export powers such as Korea or Poland (42% and 52%). The Lower Yangtze has an export/GDP ratio of 34%, about the same as Mexico (38%). Inland China, with exports just under 6% of GDP, is considerably less export-oriented than Brazil, at 12.5%. There are dramatic differences in the degree of openness and of trade dependence among China's regions.



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## 16.9 Conclusion

China has achieved trade success through a combination of domestic economic reform and restructuring and an astute accommodation of the opportunities created by East Asian economic restructuring and foreign investment. Its achievement is especially impressive given how far China has come: from one of the most closed economies in the world, China has developed into the most open large economy in the world, and it has done so with a minimum of disruption and trade-related economic distress. China is like an economic union of a very open coastal economy and a less integrated inland economy, for example, a union of Malaysia and Brazil. Moreover, the very high trade/GDP ratios of economies like Malaysia or Thailand are achieved precisely because those countries are integral parts of cross-border global production networks, especially prominent in electronics. Those networks involve high-value items crossing borders as trade in order that relatively simple processing activities can be performed in different locations. This means that the value added in the export sector is small relative to the value of the trade flows. Of course, this is exactly the kind of activity that the Chinese dualistic trade regime was designed to encourage in the first place. But this outcome reminds us that the trade/GDP ratio is an index of openness, not a measure of the size of the traded-goods sector. Actual Chinese value added in the export sector is a smaller share of total national value added than might have been guessed just by taking clues from the trade/GDP ratio.

China's trade growth has enormous momentum. Since about 2005, wages of unskilled workers have climbed rapidly, and the cost competitiveness of labor-intensive manufactures has eroded. Moreover, the slowing global economy means that demand from developed countries can no longer be expected to grow as robustly as in the past. Therefore, foreign trade is unlikely to be as conspicuous a leading sector in the future as it was in the first decade of the twenty-first century. Whereas between 2000 and 2007, net exports (exports minus imports) were growing steadily, adding to aggregate demand, net exports declined (with the shrinking trade surplus) from 2008 through 2014. This means that trade has been making a net negative contribution to aggregate demand. These important structural changes will have enormous implications for China's trade growth in the future.

However, China continues to have strong trade competitiveness. Trade-related infrastructure in China is among the very best in the world (chapter 2). WTO-related liberalization lowered transaction costs, as well as import costs, as access to trading opportunities multiplied. In the years since WTO accession, a more open and integrated trade regime has propelled China to the front ranks of world traders. Because China's factor endowments vary significantly from those of the developed countries, China has a lot to gain from globalization. Its labor-rich and land-scarce economy

will continue to benefit greatly from exchange based on comparative advantage, while its dynamic and relatively well-educated labor force can quickly absorb technology and skills by observing and imitating global best practice. China has more to gain from globalization than any other economy in the world except perhaps the United States.

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