



China's international trade development and opening-up policy design over the past four decades

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ABSTRACT

China's opening-up in the past four decades has gone through three waves: the extensive margin of opening-up (1978–2001), the intensive margin of opening-up (2001–2017), and all-around opening-up (since 2017). This paper explores these three stages of the country's economic reform. China's gains from trade have been inspired by different economic factors. Before the turn of the century, the large trade volume was due to the realization of comparative advantage based on the country's factor endowment. However, after its accession to the World Trade Organization, China's gains from trade have been due, in large part, to the realization of economic scale effects associated with the larger market.

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1. Introduction

China began to reform its economy in 1978. In the past four decades, reform and opening-up have been two essential keywords for understanding China's economic development. Economic reform played a more important role than opening-up in the first two decades. Opening-up, characterized by international trade, is widely believed to have been more substantial in boosting economic growth in the past two decades, or more precisely, since 2001 when China acceded to the World Trade Organization (WTO). Due to its opening-up policies, China has become the largest trading country in the world. In 2017, its foreign trade registered RMB 27.79 trillion (or equivalently US \$4.28 trillion), with exports of RMB 15.33 trillion and imports of RMB 12.46 trillion. Since 2009, China has replaced Germany as the largest exporter in the world. In addition, since 2015, China has replaced the United States as the largest importer as well. In the past four decades, China's foreign trade volume has increased 204-fold, whereas its gross domestic product (GDP) has only increased 34-fold. In this regard, China has already successfully exhibited a miracle of foreign trade.

The realization of this foreign trade miracle can be classified in three steps: the extensive margin of opening-up (before 2001), the intensive margin of opening-up (2001–2017), and all-around opening-up (since 2017) after China's Communist Party (CCP) announced the establishment of a new era of all-around opening up in China in its 19th National Congress. The driving forces of China's foreign trade in each phase

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have been substantially different. Particularly, the first phase of the surge in foreign trade before the new century was due to comparative advantage based on the country's factor endowment. China is a labor-abundant country and its labor costs are relatively cheap. Accordingly, China exported labor-intensive products and served as the largest 'world factory.' However, since China acceded to the WTO, the cost of labor has been increasing significantly and no longer exhibits cost-saving advantages compared with many other countries, like Vietnam and other East Asian countries. Indeed, the most fundamental driving force of China's export boom is the realization of increased market size à la Krugman's (1979) increasing returns-to-scale. This scale effect has been more pronounced in recent years after China initiated its all-around trade liberalization and opening-up.

The rest of the paper is organized as follows. Section 2 explores the historical development of the extensive margin of the opening-up process. Section 3 reviews the dynamic evolution of the intensive margin of opening-up. Section 4 examines the recent development of all-around trade liberalization and opening-up. Section 5 takes a step forward to explore the economic rationale of the three phases of China's opening-up policy design and concludes.

2. Extensive margin of opening-up (1978–2000)

China's opening-up strategy before its accession to the WTO included three important actions: reducing tariffs, setting up special economic zones and other industrial parks, and promoting processing trade. This section describes these economic reforms and discusses their impacts.

2.1. Tariff reductions

Before the economic reform, China adopted the import substitution strategy by setting high import tariffs and other nontariff barriers against foreign products. In 1992, the 14th Congress of the CCP announced that it would set up a market economy. Since then, China began actively cutting its import tariffs. The simple import tariff in early 1992 was still 42% and was reduced to 35% in 1994 during the WTO Uruguay Round negotiations (Figure 1). During the next 3 years, China cut its import tariffs another 50% or so. At the end of 1997, the simple import tariff was reduced to around 17%. The most important reason for taking such a big step in opening-up was that China hoped to accede to the WTO as soon as possible; in 1994, China was still only an observatory member, rather than a formal member, of the WTO.

After its accession to the WTO, China's simple import tariff was reduced from around 15% to around 10% in 2006. There are two types of import tariffs: output tariffs, which govern the import competition faced by industries or firms, and input tariffs, which capture the cost-saving effects faced by sectors or firms. China's industrial output tariff was reduced from 21.4% in 2000 to 10.27% in 2006, whereas the manufacturing firm-specific output tariff was reduced from 15.57 to 7.46% (Yu 2015). Using import values as weights to measure input tariffs in each industry, industrial input tariffs were reduced from 15.73% in 2000 to 7.71% in 2006 (Chen, Yu, and Yu 2017).

Applied Tariff Rate, Simple Mean, All Products (%)

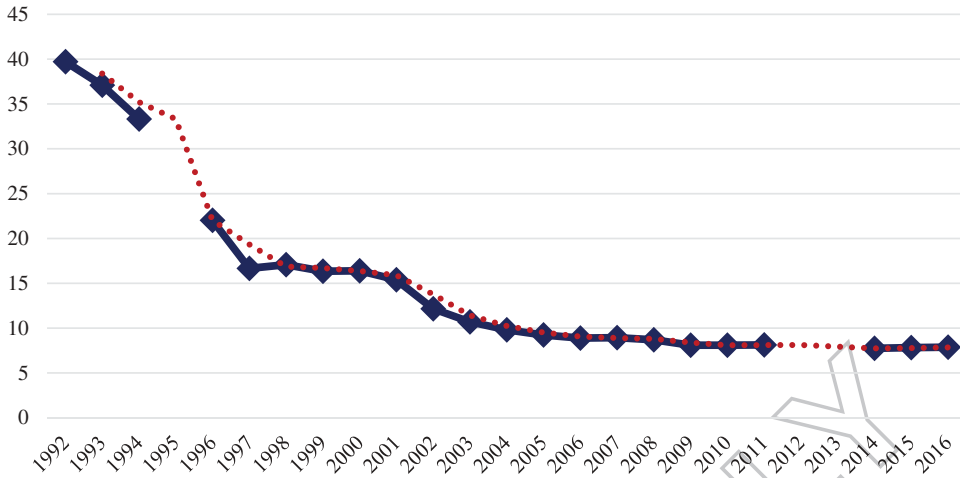


Figure 1. China's simple average import tariffs.

Source: World Bank.

When China reduces its import tariffs, its major trading partners, which are mostly WTO members, cut their import tariffs against Chinese products as well. Since a firm could export multiple products to different countries, it is important to construct firm-specific foreign external tariffs for Chinese manufacturing firms (Lileeva and Trefler 2010; Yu 2015). Firm-level foreign external tariffs were reduced only from 7.71% in 2000 to 6.90% in 2005. The reason why firm-specific foreign tariffs were not cut much was that China's most important export destinations were high-income countries. Such countries usually already had low import tariffs (Rodriguez-Lopez and Yu 2017).

Trade liberalization has been very significant for the Chinese economy. To understand the country's economic development, it is essential to understand the realization of firm productivity, since 'productivity is not everything, but almost everything' by Paul Krugman. It has been widely accepted that trade liberalization fosters firm productivity. In the past decade, trade economists have sought to understand which tariff reductions contribute the most to firm productivity. Using Indonesian firm-level data, Amiti and Konings (2007) find that input trade liberalization (i.e. the cost-saving effect) has a higher impact on firm productivity than output trade liberalization (i.e. the import competition effect). Particularly, the effect of input tariff cuts on firm productivity is twice higher than that of output tariff cuts. Similarly, Topalova and Khandelwal (2011) find that the impact of input tariff cuts on Indian firm productivity is around nine times higher than that of output tariff cuts. Yu (2015) also finds that input trade liberalization plays an important role in boosting firm productivity for ordinary firms, whereas the impact is the opposite for non-ordinary (i.e. processing) firms. This is because processing firms in China enjoy special tariff treatment in the sense that they are exempt from the import duty. Overall, trade liberalization has contributed to around 14.5% of Chinese firm productivity growth in the new century.

2.2. Economic zones and industrial parks

The establishment of China's special economic zones was one of the most important implementations of the opening-up policy. Before 2000, the establishment of the special economic zones can be classified in three waves. The first wave was the adoption of four cities as the first special economic zones, or the 'point' phase. In early 1980, the four cities chosen were Shenzhen, Zhuhai, Shantou in Guangdong, and Xiamen in Fujian province. Shenzhen was chosen because of its excellent geographic location – it is a small village near Hong Kong. A similar rationale applies to Zhuhai, which is a small town located along the western Pearl River near Macau. Shantou was chosen because of its strong network of connections with Chinese immigrants in East Asian countries. Similarly, Xiamen was chosen because it is close to Taiwan province.

The second wave of the establishment of economic zones included many coastal cities from Dalian, a northern coastal city in Liaoning province, to Beihai, a southern coastal city in Guangxi province. The cities are all connected to become a 'line.' Indeed, this line phase included several steps of the opening-up. (1) In 1984, the Chinese government set up 14 coastal cities, including Dalian, Qinhuangdao, Tianjin, Yantai, Qingdao, Lianyungang, Nantong, Shanghai, Ningbo, Wenzhou, Fuzhou, Guangzhou, Zhanjiang, and Beihai. (2) Shortly after that, China established 11 new national economic development zones, including Dalian, Qinhuangdao, Tianjin, Yantai, Qingdao, Lianyungang, Nantong, Ningbo, Fuzhou, Guangzhou, and Zhanjiang. These 11 cities coincide with the original 12 coastal cities, because only a small area in each city, rather than the entire city, was opened in each step of the reforms. Thus, the special economic zones and industrial parks were not overlapping. (3) In 1985, the Chinese government established three special economic deltas: Pearl River, Yangtze River, and South Min River. (4) In 1988, China opened up Jiaodong Peninsula (in eastern Shandong province) and Liaodong Peninsula (east of Liaoning province). Perhaps the most important milestone was opening up the whole Hainan island, which is the second largest island after Taiwan. (5) In 1991, the government set up four bonded areas in Waigaoqiao of Shanghai, Futian and Shatoujiao of Shenzhen, and the Port of Tianjin. Thus far, China has successfully extended its economic zones from a few points to a whole line of cities along the east coast (Map 1).

The third wave of the establishment of economic zones extends the zones and parks from the cities along the east coast to the central and even western provinces. Particularly, the government set up 25 high-tech industrial development zones in Shenyang, Tianjin, Wuhan, and Nanjing. In short, in 1992 China had already established six special economic zones (the first four zones, Hainan, and Pudong in Shanghai), 54 national-level economic and development zones, 53 high-tech industrial parks, and 15 bonded zones (Naughton 2018).

All these zones – special economic zones, economic deltas, economic and development zones, and even high-tech development zones – had very similar policy designs. Particularly, foreign firms located in the zones were exempt from corporate tax in their first 3 years. In their fourth and fifth years, they had to pay a corporate tax rate of only 17%, which was half the tax rate on Chinese domestic firms. This policy lasted for around three decades. After 2012, foreign firms had to bear the identical 25% corporate tax rate as domestic firms. In addition, wholly owned foreign firms and subsidiaries



Map 1. China's industrial zones.

Source: Author's compilation.

were permitted in all types of zones. Recent studies, such as Lin, Xiang, and Yu (2018), recognize the positive impacts of the establishment of the industrial parks and economic zones on manufacturing firm productivity. 150

2.3 Processing trade

Processing trade is a key for understanding China's trade development over the past four decades. As is mentioned in Dai, Maitra, and Yu (2016), the iPhone is a perfect example of China's processing trade. Foxconn, a famous iPhone assembler in Shenzhen, imports intermediate components of smart phones from Japan, Korea, and the United States. After producing the final products domestically, Foxconn exports back to the United States and other foreign markets. 155

There are more than 16 types of processing trade in China. Two of the types are most important: processing with assembly and processing with imports. Processing with assembly requires local processing firms to sell all their products to the same foreign firms that provide the intermediate inputs. This was the most popular type of processing trade in the 1980s. By contrast, firms engaged in processing with imports can sell their final goods to foreign firms different from their original imported intermediates suppliers. This type of processing trade became increasingly popular after the 1980s. Since the mid-1990s, processing trade has accounted for more than half of China's total trade (Tian and Yu 2012). After the global financial crisis in 2008, the proportion of processing trade has decreased, due in large part to the incremental 165

labor cost in China. However, processing trade still accounted for around one-third of China's total trade in 2017 (Figure 2).

Processing trade has played a positive and important role in China's economic development over the past four decades. First, processing trade created huge job opportunities in the manufacturing sectors. However, different from ordinary exporters, processing exporting firms are less productive, as firms are not required to have any technology to engage in processing activities like assembly. On average, processing exporters are even less productive than non-exporters. Accordingly, Chinese exporting firms are less productive than non-exporting firms. This situation is known as the 'puzzle' of Chinese exporting firms. It is due, in large part, to processing trade accounting for half of China's total exports. Processing firms are the least productive compared with ordinary exporters and non-exporters (Dai, Maitra, and Yu 2016)

Industries that are intensively engaged in processing trade are labor-intensive. Processing trade thus absorbs many workers in those industries. Particularly, China had around 780 million workers in total in 2008. Among these, there were around 103 million manufacturing workers and 231 million workers in secondary industries. The four major processing industries included household appliances; toys; clothing, footwear, and hats; and leather goods. The four industries employed 13.2 million workers in 2009 and 16.2 million workers in 2014.

Second, processing trade has contributed to China's deep integration into the global division of labor. Accordingly, China has been a non-substitutable 'world factory.' Of course, this also implies that China naturally has maintained a high global trade surplus. Indeed, around two-thirds of China's trade surplus is generated from its processing trade.

Ratio of processing trade exports to total exports (%)

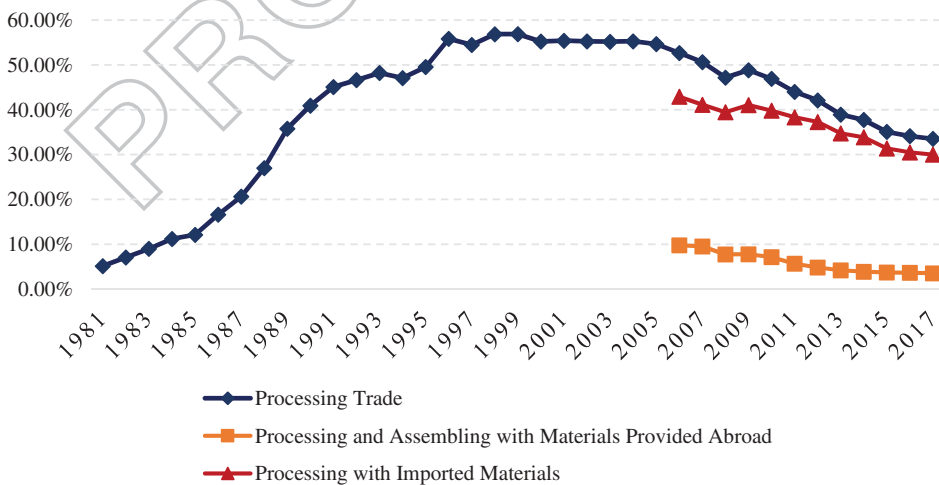


Figure 2. China's processing trade.

Source: China's Customs Yearbook (various years).

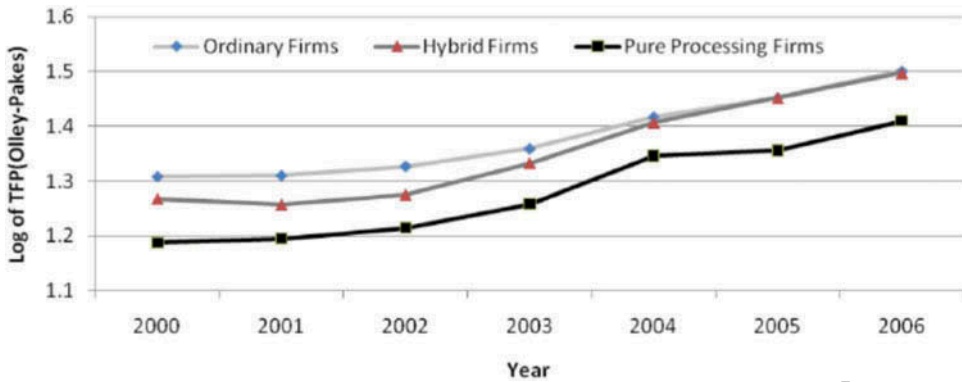


Figure 3. Productivity of Chinese exporting firms.

Source: Dai, Maitra, and Yu (2016).

TFP = total factor productivity.

3. Intensive margin of opening-up (2001–17)

Since the turn of the new century, China has focused more on its intensive margin of opening-up. That is, China is not very much interested in the extensive margin of its opening-up, like the expansion of various special zones or industrial parks. Instead, it is more interested in exploring new opening-up policies. In the new century, before 19th Congress of the CCP, four important events characterized the features of the intensive margin: accession to the WTO, establishment of export processing zones (EPZs), establishment of the free trade pilot zone, and new-economy pilot cities.

3.1. Accession to the WTO

China was one of the 23 founding members of the General Agreement on Tariffs and Trade (GATT), which was established in 1947. After China gained political independence in 1949, mainland China lost its membership and had to re-apply to join this world's largest multilateral agreement. China and Hong Kong formally applied to join GATT in 1986. It turned out that it was a long march for China's accession to the WTO. After many rounds of bilateral and multilateral negotiations, in 2001 China eventually joined the WTO, the successor of GATT, in 1994, as its 143rd member. It took China 15 years to accede to the WTO. By contrast, Hong Kong joined the GATT immediately in 1986.

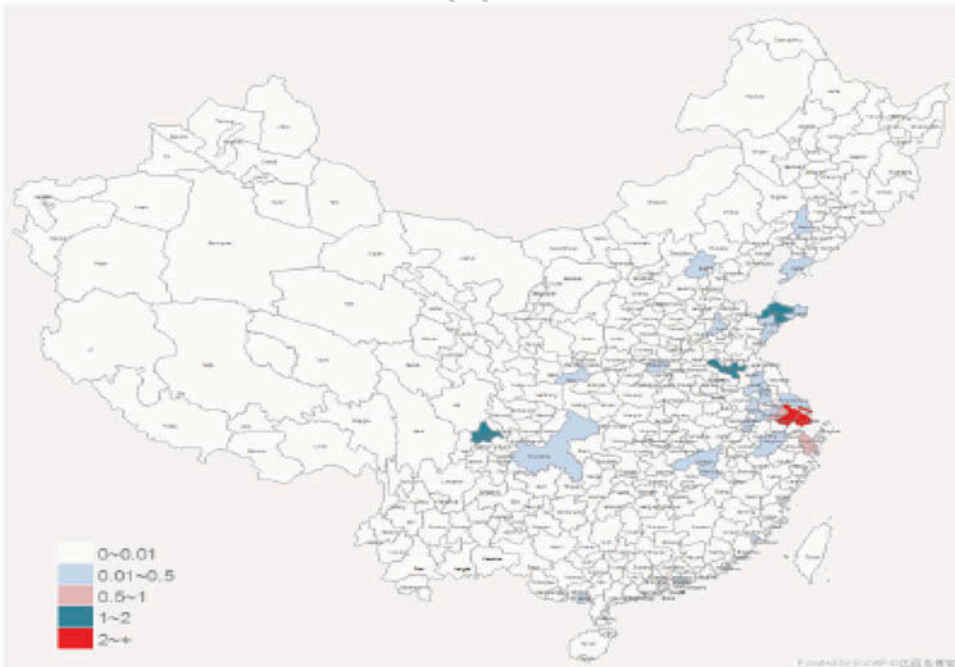
Why did it take so long for China to accede to the WTO? Certainly many factors mattered, such as the size of the economy, time of application, and status of the market economy. It takes more time for a large country to negotiate. It also makes sense that an applicant must negotiate with more existing WTO members if this applicant applies late. And whether an applicant's economy is a market economy matters for existing members to accept it. However, Wong and Yu (2015) argue that the duration of the accession process also depends on whether the new applicant has a similar political regime as most of the existing and powerful members. Particularly, if an applicant has a similar political

regime as the United States, it is much easier and hence takes less time for the country to join the GATT/WTO. 220

Nevertheless, China's accession to the WTO has brought huge mutual benefits to China and the rest of the world. Since the turn of the century, especially after 2004, the cost of labor in China has increased dramatically and the country's population dividend has shrunk fast. Compared with many East Asian countries, China no longer has significant comparative advantage on the labor-intensive margin. A significant part of China's foreign markets has been taken over by countries such as Vietnam and Bangladesh. Thanks to the accession to the WTO, China has established trade relations with many countries and enjoys the scale effects of a large market. Simultaneously, Chinese firms have been able to realize greater profits by lowering their fixed costs with the large market. As a result, China has maintained its position as the world's factory in the new century. By the same token, China's accession to the WTO has been beneficial for the rest of the world, which has enjoyed cheaper products made by China. 225 230

3.2. Export processing zones

Just before China's accession to the WTO, the government decided to establish EPZs to promote processing trade. Since then, China has set up more than 60 EPZs. Different from the earlier special economic zones and industrial parks, such EPZs were spread all over the country (Map 2). They are located not only in eastern coastal cities, but also western inland cities, like Urumchi, Xinjiang province. In terms of trade volume, the 235



Map 2. China's export processing zones.

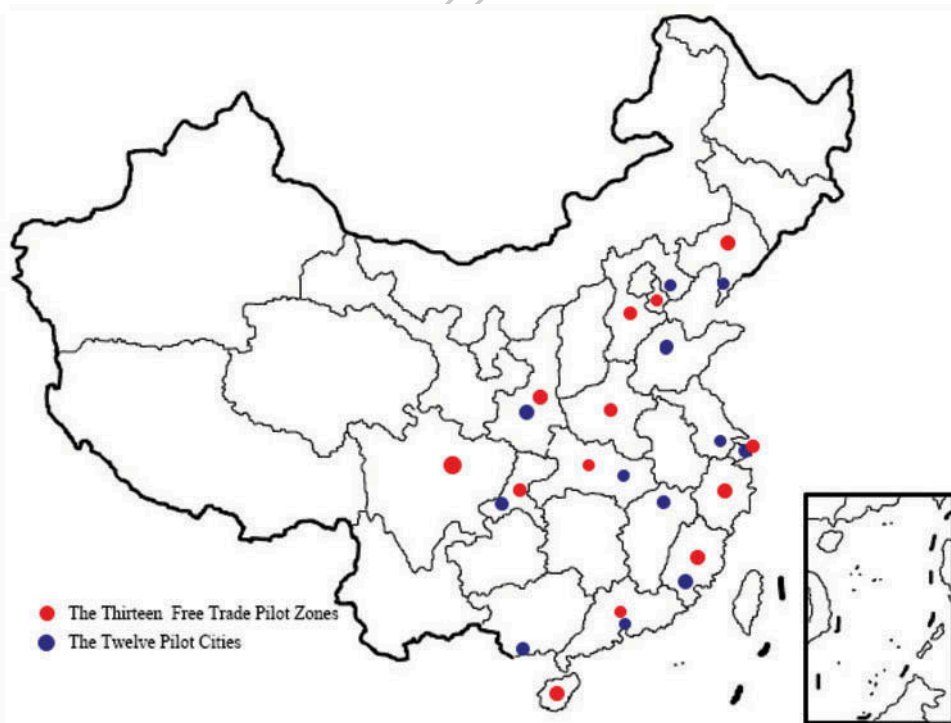
Source: Author's compilation.

Kunshan zone, Jiangsu province, is the largest EPZ. Only processing firms are allowed to enter the EPZs. They also enjoy special tariff treatment. Particularly, firms in the EPZs are treated as ‘inside the territory but outside the customs,’ as they are exempted from import duty. Recent studies, such as Fernandes and Tang (2012) and Lin, Xiang, and Yu (2018), find that firms in the EPZs have spillover effects on their neighboring firms.

3.3. Establishment of pilot free trade zones

In 2013, the government set up a pilot free trade zone (FTZ) in Shanghai. The area is not large (i.e., its initial area is only around 29 square kilometers), but its economic impact is potentially huge. The whole landscape of the establishment of the pilot FTZ can be summarized as 1 + 3 + 7 in three steps. First, the government set up the first pilot FTZ in Shanghai in September 2013. Second, it was extended to three other FTZs in large coastal provinces in April 2015: Guangdong, Tianjin, and Fujian. Third, in September 2016, the government set up seven more coastal and inland pilot FTZs in Liaoning, Shaanxi, Henan, Hubei, Chongqing, Sichuan, and Zhejiang (Map 3). The objective of the pilot FTZs is to copy and paste to other non-FTZ places if those places are ready to perform the reform.

Based on the country’s earlier experiment with special economic zones, the government implemented four roles for the pilot FTZs. First, the pilot FTZs aim to promote



Map 3. China’s pilot free trade zones and cities.

Source: Author’s compilation.

further trade and investment facilitation. More or less, this is consistent with the development of EPZs. For goods within the pilot FTZs, the government requires 'release the first line, but hold up the second line.' The idea is that the imported intermediate goods used in the FTZs will be tariff exempted (i.e. released from the first line), but the final products that use such intermediate inputs cannot be sold outside the zones to China's domestic market (i.e. hold up the second line). 260

Second, the pilot FTZs aim at promoting China's 'negative list' investment mode. Different from its previous 'positive list,' the new negative list investment mode has fewer regulations or restrictions on foreign investment in China. If the products or sectors are listed, foreigners are not allowed to invest in those areas. In other words, foreigners may invest in anything not shown on the list. This gives foreign investors huge room to invest in new industries or sectors. It turns out that this policy design has been the most successful policy reform. As it was so successful in all 11 FTZs, in 2018, the Chinese government decided to spread this policy to the whole country. 265 270

Third, the pilot FTZs aim to promote a further push to China's financial reform. Particularly, the FTZs aim to promote financial innovation with convertible capital projects and offer more financial services. It turns out that this reform so far has had only limited effects. It is not difficult to understand its limited impact, as FTZs account for only a tiny proportion of China's area. Different from the trade reform, the financial reform indeed cannot be separated clearly inside and outside the FTZs. Thus, it is difficult to perform a financial experiment in a small area and then copy it to the rest of the country. 275

Fourth, the pilot FTZs require local governments to reduce bureaucratic procedures and simplify the process of doing business within the zones. Particularly, the FTZs emphasize the implementation of after-event supervision rather than before-event approval. 280

3.4. New-economy pilot cities experiment

Different from the establishment of the pilot FTZs, the opening-up via the new-economy pilots in 12 cities is less well-known. In 2015, the government decided to choose 12 cities located in five city-groups as well as some coastal cities to experiment with the so-called 'new-economy pilot.' This experiment has lasted for 2 years but could be extended based on the performance of this new reform. The experiment is being conducted by local municipal governments, but also the Ministry of Commerce and National Development and Reform Council provides advice. 285 290

Jinan, the capital of Shandong province, is the largest among the 12 cities. Zhangzhou, a coastal city in Fujian province, was chosen mainly due to its strong connections with Taiwan province. Fangchenggang, a coastal city in Guangxi province, was chosen because it is the neighbor of one of the special economic zones in Vietnam. The government hopes to develop the bilateral border trade by setting up this new-economy zone. 295

The other eight cities are located around China's five major metropolitan areas. Particularly, Dalian, in Liaoning, and Tangshan, in Hebei, are the two northern cities closest to the Beijing-Tianjin-Hebei metropolitan area. In addition, Xi'an was chosen because it is the largest city in Northwestern China. Chongqing was chosen because it is one of the core 300

cities among the Chengdu–Chongqing mega cities. By the same token, Wuhan and Nanhang were chosen because they are two large cities in Central China. Finally, Pudong, in Shanghai, and Suzhou, in Jiangsu, are connected to the Yangtze River Delta economic belt.

The objectives of this pilot reform are to establish a new mechanism for market allocation of resources, form a new model of economic operations and management, form a new pattern of openness in all directions, and create new advantages in international cooperation and competition. Different from the FTZs, the central government does not provide any specific policies to all the new-economy zones. Instead, all the cities can ask the central government to authorize any kind of special policy treatments, if they find that such policies are necessary and important for them to develop their local economy. 305 310

The experiment of these new-economy zones focuses on six areas. First, it aims at exploring the new management mode of the government. Second, it aims at exploring the coordination of various industrial parks. Third, it hopes to explore new ways to encourage foreign direct investment. Fourth, it aims at promoting high-quality exports of domestic products. Fifth, it seeks significant improvement of financial services. Sixth, the zones should focus on promoting all-around opening-up in the regions. 315

After 2 years of the experiment, the independent evaluation panel led by the National School of Development at Peking University is satisfied with the 12 cities' new-economy reforms. Particularly, the panel recognized that the reforms have successfully improved local economic development and been helpful in the supply-side structural reform. The reforms are also helpful in promoting the One Belt, One Road initiative. 320

4. All-around opening-up

In 2017, the CCP's 19th Congress proposed that China will aim to promote all-around opening-up. Indeed, this all-around opening-up strategy is based on China's previous opening-up milestone achievement of the Belt and Road Initiative (BRI) and the Association of Southeast Asian Nations (ASEAN)–China Free Trade Agreement (ACFTA) and its successor, the Regional Comprehensive Economic Partnership (RCEP). This section reviews these important events and describes China's free trade ports and the Greater Bay Area. 325 330

4.1. ASEAN–China Free Trade Agreement

China and 10 ASEAN countries established the ACFTA in 2010. It is the largest free trade area (FTA) in the world in terms of population and the third largest in terms of GDP. It took around a decade for China and the ASEAN countries to establish this FTA. In 2002, both sides signed the framework agreement to establish the ACFTA in 2010. Two years later, China and six of the ASEAN countries (i.e. Singapore, Brunei, Indonesia, Malaysia, Thailand, and Vietnam) reached the early harvest agreement to set a zero tariff for more than 600 products mutually in 2004. At the end of 2015, China and most of the ASEAN countries had already implemented zero tariffs for most of their tradable goods. 335 340

Inspired by Trefler (2004), Wang and Yu (2018) find that the establishment of the ACFTA has had a significant positive effect on the Chinese economy. Particularly, they

analyze the short-term (employment and wage) and long-term (productivity) economic effects of tariff reduction for Chinese enterprises during the important establishment period of the ACFTA from 2001 to 2007. First, the establishment of the FTA had positive short-term economic effects on Chinese firms due, in large part, to the increased use of capital goods and complementarity between capital and skilled workers. Second, China's import tariff reductions had a weak negative effect on China's productivity. Third, overall China experienced welfare gains from the establishment of the ACFTA, as trade creation was greater than trade diversion. These findings are broadly consistent with Trefler's (2004) findings in the context of the North American Free Trade Agreement. 345

Meanwhile, Yu and Gao (2018) find that, under the framework of the ACFTA, the ASEAN countries and China have made headway in trade and investment facilitation and infrastructure cooperation, which in turn has created more job opportunities and increased regional welfare. As a result, the ACFTA is found to have reduced the poverty rate in the ASEAN countries, especially the low-income ASEAN countries (i.e., Cambodia, Laos, Myanmar, and Vietnam). 355

4.2. Regional Comprehensive Economic Partnership 360

The ACFTA is not the ultimate goal of the ASEAN countries and China. Instead, both sides aim to enlarge the regional free trade agreement. The goal is to cover all 16 countries in the Asia-Pacific region, which includes the 10 ASEAN countries and six other countries (China, Japan, Korea, India, Australia, and New Zealand). This is the so-called RCEP, which can be regarded as a high-profile Asian FTA in the new century. 365

The objective of the RCEP is to build a modern, comprehensive, high-quality, and mutually beneficial economic partnership agreement and establish an open trade and investment environment in the region. It aims to facilitate the expansion of regional trade and investment and contribute to global economic growth and development. During the 19th ASEAN Summit held in November 2011, the RCEP was introduced by ASEAN leaders. RCEP negotiations were formally launched in November 2012 at the ASEAN Summit in Cambodia. The 22nd Round of negotiations was held in Singapore from April 28 to 8 May 2018. 370

Prospective RCEP member states account for a population of 3.4 billion, with total GDP of US\$21 trillion, around 30% of global GDP. The combined GDPs of China and Japan make up more than half that amount. Once it is signed, the RCEP will be the world's largest trade bloc. RCEP negotiations cover the following areas: trade in goods, trade in services, investment, economic and technical cooperation, intellectual property, competition, dispute settlement, e-commerce, small and medium-size enterprises (SMEs), and other issues. 375 380

In addition, the RCEP recognizes the importance of being inclusive, especially to enable SMEs to leverage the agreement and cope with the challenges arising from globalization and trade liberalization. SMEs constitute a significant share of the business establishments across all RCEP participating countries and are important for every country's economic development. At the same time, the RCEP is committed to providing fair regional economic policies that mutually benefit ASEAN and its FTA partners. 385

4.3. Belt and Road Initiative

The BRI, which was initiated by the Chinese government in 2013, is devoted to improving regional cooperation and connectivity on a transcontinental scale. The initiative aims to strengthen infrastructure, trade, and investment links between China and the other BRI countries. Currently, 64 countries are actively involved in the BRI. These include 10 ASEAN countries, 18 countries in Western Asia, 8 in South Asia, 5 in Central Asia, 7 in the Commonwealth of Independent States, and 16 in Central and Eastern Europe.

The economic scale of the BRI is large. Even excluding China, which accounts for one-sixth of world's population and around 10% of world GDP, the BRI trade bloc accounts for more than two-fifths of the world's population and nearly a fifth of world GDP. According to the World Bank's estimates, the BRI trade bloc also accounts for around 75% of known energy reserves. Moreover, bilateral trade between other BRI economies and China accounts for more than one-quarter of China's total exports of US\$2 trillion. The scope of the initiative is still taking shape – recently, the BRI has been interpreted to be open to all countries as well as international and regional organizations.

The BRI consists primarily of the overland Silk Road Economic Belt, linking China to Central and South Asia and onward to Europe, and the Maritime Silk Road, linking China to the nations of Southeast Asia, the Gulf countries, North Africa, and on to Europe. Regarding bilateral trade and investment, China's trade with its partners located on the Maritime Silk Road, like the ASEAN 10 countries, is much larger than that with those located on the overland Silk Road Economic Belt.

In addition to trade and foreign direct investment, the BRI also concentrates on infrastructure projects. As one of the largest infrastructure and investment projects in history, the BRI addresses the 'infrastructure gap' and thus has the potential to accelerate economic growth across the involved countries. The initiative calls for integration of the countries into a cohesive economic area through building infrastructure, increasing cultural exchanges, and broadening trade and investment.

The BRI indeed is financially strongly supported by the Asian Infrastructure Investment Bank (AIIB), led by China and the Silk Road Fund. The AIIB was first proposed by China in October 2013. It is a development bank dedicated to lending for infrastructure projects. As of 2015, China announced that more than RMB 1 trillion (US\$160 billion) of infrastructure projects were in planning or construction. The Silk Road Fund was first announced in November 2014 by China. As a fund, its role is to invest in businesses rather than lend money for projects. Clearly, AIIB and the Silk Road Fund contribute to fostering economic connectivity within the BRI framework. Recent studies, like Zhang et al. (2018), also find evidence that the BRI indeed promotes the internationalization of the renminbi.

4.4. Free trade ports experiment

The notion of free trade ports was first brought up in a report to the 19th National Congress of the CCP. Chinese President Xi Jinping explicitly pointed out that the country will allow more freedom to reform the pilot FTZs and explore the establishment of free trade ports.

As introduced by Tian et al. (2018), a free trade port is a port area within the territory of a country or region that is not subject to the usual customs control, with free access to overseas goods and funds. The main feature of a free trade port is that, from the perspective of administrative supervision, it is outside the customs jurisdiction of the country. 435

A free trade port has the features of a port and an FTZ, with many trade-related functions, including product processing, logistics, and warehousing. But it is a more open platform than an FTZ. Practically, the construction of free trade ports will help FTZs advance toward the goal of being a more transparent institutional environment, like Singapore and Hong Kong. Meanwhile, breakthroughs in the areas of trade facilitation measures, ship fuel prices, financial support, customs supervision, and inspection and quarantine are necessary for free trade ports. As a result, free trade ports will be able to respond better to the profound changes in the global environment. 440

The most successful international free trade ports can be used to identify some major common characteristics. First, greater trade facilitation and an efficient legal system in a free trade port create higher mobility of labor and capital, attracting a large amount of transit shipments and multimodal transportation. Second, most international free trade ports have undergone industry and trade upgrading and have good financial, logistical, and legal systems, allowing them to develop various types of trade. Third, free trade ports are not only logistics and transportation centers, but also headquarters economies. Fourth, the development of free trade ports is based on the industry structure of the surrounding areas. Finally, the administrations of free trade ports are empowered by central governments. 445

Compared with international free trade ports, there is still much room for China to improve in the construction of its free trade ports, including attracting trade, talent, and finance. To begin, it is necessary to improve the convenience for businesses engaging in trade in the ports. For example, a secure and effective electronic customs clearance system is needed to speed up the integration of customs and simplify its procedures. Furthermore, developing a more livable environment and better services for businesspersons and international talent is a necessary step for free trade ports to improve the fluidity of personnel as well as the ability to attract talent. Last but not least, the ports should continue to adhere to the relevant policies on openness and improve efficiency in cross-border foreign exchange settlement. All these measures will support re-export trade financially, reduce trade risks for enterprises, and encourage more international companies to establish headquarters in the free trade ports. 455 460 465

4.5. Greater Bay Area

The 19th CCP report pointed out ‘promoting the formation of a new pattern of all-around opening-up.’ If the BRI and RCEP construction are treated as the key content of the new pattern of all-around opening-up, the Guangdong–Hong Kong–Macau Greater Bay Area (GBA) indeed is an important domestic carrier of the BRI. Thus, the construction of the Guangdong–Hong Kong–Macau GBA is the most urgent task of China’s opening-up. 470

The GBA includes nine municipal areas, Hong Kong, and Macau. The nine municipal cities are on the east and west banks of the Pearl River: Shenzhen, Dongguan, Huizhou, Guangzhou, Foshan, Jiangmen, Zhaoqing, Zhongshan, and Zhuhai. In this sense, the GBA coincides with the Pearl River Delta, which is identified as the best economic development zone in China, along with the Yangtze River Delta. 475

So far, the detailed development scheme has not been formally released by the Chinese central government. But it is widely believed that development of GBA should focus on the following perspectives. 480

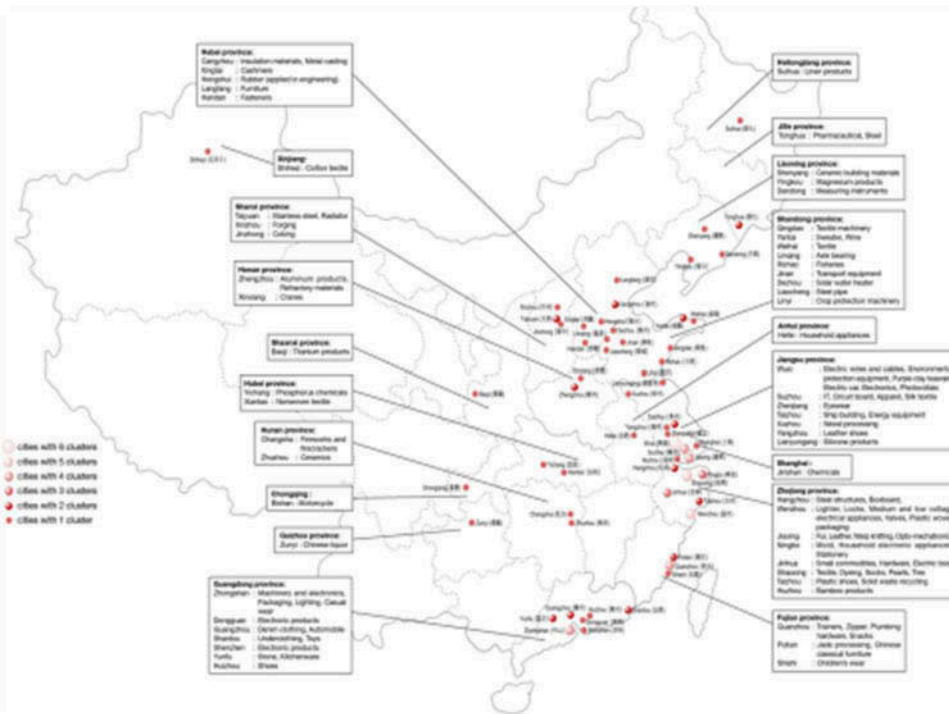
First, it is essential for the GBA to focus on manufacturing industries rather than services industries only. As the world's largest 'world factory,' China's strong manufacturing base can effectively avoid unsteady and low economic development. Today, Guangdong province, where the GBA is located, accounts for one-third of the country's exports. The coordinated development of the three industries – manufacturing, services, and finance – is the guarantee of China's sustainable economic development. To build the Guangdong–Hong Kong–Macau GBA, the real economy and the financial economy should be combined, focusing on the real economy. The services industry can play an auxiliary role to boost the GBA economy. 485 490

The second important task for construction of the GBA is to focus on innovation. Today, China is transforming from a manufacturing power to an innovation power. The Guangdong–Hong Kong–Macau GBA should play a key role in the construction of an innovative country. Indeed, Shenzhen, one of the four core cities in the GBA, has already become the capital of China's innovation hub. The research and development (R&D) intensity of Shenzhen, defined as R&D over firm sales, was as high as 4.1%, higher than the 2.6% in the Guangdong–Hong Kong–Macau GBA and 2.4% in Organisation for Economic Co-operation and Development countries. 495

The third objective is to achieve institutional innovation. It is interesting that the GBA enjoys the regional system features of '1 + 2 + 3 + 4.' That is, one country, two systems (socialism in mainland China and capitalism in Hong Kong and Macau), three different customs (Mainland China, Hong Kong, and Macau), and four core cities located in the GBA (Guangzhou, Shenzhen, Hong Kong, and Macau). 500

China's manufacturing development is mixed with its industrial clusters. As shown in Map 4, among China's current industrial clusters, almost every industrial prefectural city has its own dominant industry with strong competitive advantage. Thus, similar to other regional development, it is essential for cities in the GBA to develop that are industries consistent with their own comparative advantages based on their factor endowment and economic structure. For instance, Hong Kong certainly is an international finance center, international trade center, and international services center. As the capital of Guangdong province, Guangzhou should work hard to become a cultural center, transportation hub, and trade center. Shenzhen can be classified as the R&D and innovation center. Macau, along with its neighbor, Zhuhai, and the western inland city Zhaoqing, can be identified as a tourism city and services center. Finally, the other five cities – Dongguan, Huizhou, Foshan, Zhongshan, and Jiangmen – should make every effort to become high-end manufacturing centers. 505 510 515

Fourth, the GBA should pay more attention to its ecological environment. Similar to the Xiongan New Area, the Guangdong–Hong Kong–Macau GBA is identified as a national strategy as well as a millennium plan. A good ecological environment is one of



Map 4. China's industrial clusters.

Source: Compiled by Lifang Co. Ltd.

the guarantees for sustainable economic development. Compared with the other inland areas, the current ecological environment of the GBA is in good shape according to the China Geological Survey. Therefore, it is important for local governments in the GBA to maintain the good ecological environment. 520

5. Conclusions

This paper has described China's international trade development and opening-up policy design over the past four decades since the country began its economic reform. Overall, there have been three waves of the opening-up policy design: extensive margin, intensive margin, and all-around opening-up. 525

It is essential to understand the most important driving forces of China's international trade over the past four decades. As argued in the paper, China's labor cost has been increasing over the past several years. Although the cost of labor is still lower than that in developed countries such as the United States, European Union, and Japan, China's labor cost is increasing. This has been especially true since the global financial crisis when China surpassed the Lewis turning point. China's growing role in international trade before the country's accession to the WTO was driven mainly by the realization of comparative advantage based on cheap labor. This was especially true for labor-intensive industries, where the cost of labor cost is one of the most important 530 535

input factors. Moreover, cheap labor, to some extent, affected the incremental exports of machinery and transport equipment. This is because China's foreign trade in machinery and transport equipment is mainly conducted through processing trade, which essentially takes advantage of the low cost of labor. 540

By contrast, after the global financial crisis, China's international trade collapsed, possibly due to weak foreign demand and export credit constraints (Feenstra, Li, and Yu 2014). The volume of foreign trade returned to its previous level in 2013. In 2009, China became the world's largest exporter. The main driving force of China's incremental international trade is, in large part, the realization of scale economics with the large international market, according to the increasing returns-to-scale theory of Krugman (1979) and Melitz (2003). One piece of evidence of this is that the proportion of processing trade keeps decreasing whereas total trade volume is increasing. Thus, the traditional comparative advantage theory cannot explain this new phenomenon. 545 550

In this paper, I have abstracted away China's development of inward and outward foreign direct investment, due to the space constraint. Yes, this aspect of the country's development is equally important for understanding the whole landscape of China's opening-up policy design. I leave the topic for future research. 555

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