

China's Foreign Trade: Perspectives From the Past 150 Years

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1. INTRODUCTION

IN the year 2007, China's imports accounted for 31 per cent of its GDP, larger than for similarly developed India (25 per cent) and about twice the size of imports for either Japan (16 per cent) or the United States (17 per cent). Recently, China has also become the world's largest exporter. Today, business delegations from all over the world come to China, often accompanied by their political leaders, to ensure they are not left out of the China trade. The lure of China's big market is nothing new. The British Plenipotentiary Sir Henry Pottinger announced after Britain's victory over China in the First Opium War (1840–42) that China's potential for trade was so vast 'that all the mills of Lancashire could not make stocking stuff sufficient for one of its provinces' (Chinese Maritime Customs (CMC) 1933, p. 39). In hindsight, Pottinger was overly optimistic: it took some 150 years more until China would deliver on its promise for world trade.

The trade history of China is important for how it has affected global production and earnings in poor and rich countries alike. Many contemporary analysts view China's recent pre-eminence primarily as the result of the post-1978 reforms, perhaps contradicting the idea that sustained economic growth requires simultaneous political reform.¹ Present-day discussions on Chinese development have moved to a focus on China's currency interventions that keep the *Renminbi* from appreciating or on China's entry into the WTO in the year 2001.² We contend that

¹ See Rawski (1999), Woo (1999), and Sachs and Woo (2000). The rule of the Communist Party in China (CPC) began in the year 1949, and starting with the year 1978 market-oriented reforms were implemented.

² See Krugman (2010) and Cline (2010) on China's currency; contrarian views are Wei (2007) and Reisen (2010). On the trade effects of China's entry into the WTO, see Lardy (2002) and Whalley (2006).

understanding the fundamental forces behind China's increasingly dominant position in world trade require going further back than 1978. Reaching to the nineteenth century and earlier, we are in a better position to identify what is (and was) China's 'normal' level of foreign trade, and how these levels changed under different trade regimes, from 1840 to the present.

The legacy of the forced opening of China by Western powers, however, is controversial. While some say it slowed down her growth, others hold that China would have actually benefited from the increase in trade – had it not arrived through gunboats. Yet another view is that foreign trade at the time was too trivial in size to matter for China. In this paper, we take the first steps to addressing the impact of the opening of China on trade and economic growth by adopting the long-run view of China's foreign trade. Our approach is also much more quantitative in focus compared to previous research. Based on information from the CMC service, the organisation set up and run by the West to govern China's foreign trade, our first contribution is to present new evidence on China's foreign trade during the treaty port era (1842–1948).

China, it must be remembered, was a failing state in the nineteenth century, in the sense that the ruling Qing government (1644–1911) was by then increasingly unable to project effective rule over every part of the empire. Laws which prohibited opium imports (in place since 1729), were for the most part disregarded by smugglers and officials alike. Although a customs apparatus was present, corruption also meant that the state did not or could not collect significant amounts of revenues to fund public goods because local power competed with officially stated goals. The CMC revolutionised the system of foreign trade in China by introducing a consistent set of rules. In the process, the CMC collected detailed information on trade not only for China as a whole but also for individual ports of trade within China.

To the extent that uncertainty reduces economic activity, this transfer of a Western institution may increase trade and welfare, and the evidence presented below supports that notion. Our analysis of China's foreign trade during the treaty port era yields a number of findings important for current research in international trade. First, although the volume of trade after liberalisation was not large in the beginning, there was a very notable expansion in the diversity of product categories and new goods that were imported into China, a point that previous authors have overlooked. We find that the number of new goods imported by China grew by about 6 per cent per year between the 1860s and 1940s, which is about 50 per cent faster than what that figure was in the United States between 1970 and 2000. This shows that product variety gains are not limited to highly developed countries; in fact, they may be more important for poorer countries.

Second, the expansion of ports did more than increase geographical diversity. It also helped to increase the volume of goods imported. An important intermediary in this process was Hong Kong, which functioned as an entrepôt.

The importance of Hong Kong also suggests high fixed learning costs to trade during this period. We show that larger countries conducted less of their trade with China through Hong Kong than smaller countries. In addition, subsequent to every change in the trade regime (e.g. right after the opening of new CMC treaty ports), Hong Kong's trade intermediation becomes less important over time.

Furthermore, China's recent position in world trade appears less exceptional in the light of its long-run history. While other factors no doubt play a role, a large part of China's recent growth in trade is attributable to two factors. First, it is a reversion from the depressed levels of the pre-1978 period and is attributed to lifting of trade restrictions imposed during that period. As we show below, China's share of world trade at the turn of the twenty-first century was similar to that of the year 1925. Second, China's current footprint in world trade is mainly that of a very large country rapidly industrialising.

We are not the first to study the opening of China for trade in the nineteenth century. This subject has been looked at by a number of authors (Morse, 1926; Fairbank, 1978), and the question parallels more recent papers by Bernhofen and Brown (2004, 2005) on Japan's opening of trade. Work on this period is inextricably linked to the fact that this trade came about through a quasi-colonial set-up imposed by Western powers, reflecting China's diminished position in the world during this period. In certain earlier writings, the foreign intrusion is seen in an overwhelmingly negative light, and by implication, the foreign trade it generated was detrimental to Chinese interests. These authors refer not only to opium addiction, but also to more general effects of foreign trade in destroying domestic industry.³ A counterargument is that the foreign trade was small and the extent of foreign penetration was very limited, certainly insufficient to effectively counter the forces of China's traditional culture and society, as well as government, to lead to a higher rate of economic development.⁴ The implication of the argument being that foreign trade would have carried benefits to China, but did not because foreign influence was ultimately very minor. In either case, these authors rarely provide conclusive evidence on trade that supports these claims.⁵ By relying on the detailed information on foreign trade in the CMC archives, our analysis extends the largely descriptive accounts in Morse (1926) and Fairbank (1978).

³ For example, Hou (1965) argues that foreign trade (and investment) ruined the domestic handicraft industries, disrupted agriculture, and foreign firms did not compete on a level playing field with Chinese firms (p. 1). According to this view, foreign imperialism in trade slowed down China's economic development.

⁴ Dernberger (1975) provides a summary of these views.

⁵ More generally, the quantitative information that studies on historic trade of China present tends to be limited (e.g. the classic study by Remer, 1926) and from the summaries by Yang and Hou (1931) and Hsiao (1974).

Previous authors have examined the information collected by the CMC service, although thus far most of this analysis has been undertaken by historians who have written in detail about many institutional aspects of the CMC (Brunero, 2004, Van de Ven, 2004; Bickers, 2008).⁶ In terms of economic analysis, Rawski (1970) has shown that even though treaty ports were opened to foreign merchants, Western traders continued to rely heavily on Chinese middlemen (so-called *compradors*) to conduct their business in China. More recently, Mitchener and Yan (2010) have studied the role of foreign trade for China's wages in the early twentieth century, arguing that a surge in trade around the First World War caused a decline in the relative skilled wage in China.⁷ Our work differs, first, in that we cover a longer time period, from pre-1850 until today, which allows us to place the CMC era into the broader context of economic development in China and elsewhere. In addition, we contribute to a better understanding of the economics of trade intermediation and the role of new goods for the welfare gains of international trade by focusing also on the regional and commodity dimensions of China's foreign trade.⁸

New goods are known to be important in driving overall trade growth (Hummels and Klenow, 2005). Our analysis of the range of goods that is traded, or the extensive margin, is related to Feenstra (1994) and Broda and Weinstein (2006). The latter authors show that a large fraction of welfare gains from trade for the United States in the late twentieth century can be attributed to the availability of goods that could not be had before.⁹ Little is known, however, about the trade effects of new goods during historical periods.¹⁰ To our knowledge, there has been no analysis of new goods and the ensuing welfare effects for China in this period.

A number of studies have recently analysed other key aspects of China's foreign trade regime since 1978, highlighting the factors that are driving it as well

⁶ Many of these works are related to a project at Bristol and Cambridge (<http://www.bristol.ac.uk/history/customs/>), which has also started to make information on trade during the CMC period available on the Internet. Moreover, CMC information has helped to better understand how trade shaped the history of economies such as Taiwan (Ho, 1978; Mizoguchi and Umemura, 1988), as well as China's role in the greater Asian context during the early twentieth century (Kose, 1994, 2005).

⁷ While mostly relying on information on prices from Hsiao (1974), Brandt (1989) also employs CMC data on trade volumes in his analysis of the integration of Chinese regions with the South Asian rice market from 1870–1936.

⁸ Antràs and Costinot (2010), Blum et al. (2009), Ahn et al. (2010), as well as Feenstra and Hanson (2004) are recent analyses of intermediation in international trade.

⁹ The arrival of a new good through trade reduces its price from infinity to something finite, and the welfare gains from this depend on whether close substitutes were already available or not.

¹⁰ Hersh and Voth (2009) estimate the combined gains from increases in tea, sugar, and tobacco consumption in England at more than 10 per cent between the years 1600 and 1850. They employ information on foreign trade to estimate new good consumption, which is used together with other data to back out preference parameters.

as its impact on other economies (Branstetter and Lardy, 2008; Amiti and Freund, 2010; Brambilla et al., 2010; Hanson and Robertson, 2010; Wang and Wei, 2010). Because the focus in these studies is on a relatively short period, they place less emphasis than we do on natural advantages and disadvantages across regions and the gradual rise and decline of countries in the world.¹¹ Exceptions to this are Maddison (2007) and Chow and Shen (2005).¹² Our work differs from theirs in that although the era we examine is far earlier in time, we are actually able to provide an even more disaggregated picture of foreign trade of China by exploiting the primary CMC sources.

The remainder of the paper is as follows. The next section sets the stage by summarising what is known facts about China's early foreign trade as well as the events that led to the opening in the 1840s. In Section 3 of the paper, we first describe the organisation of foreign trade in China before presenting key findings on the arrival and diffusion of new goods and trade intermediation in China during the treaty port era. A synthesis of China's foreign trade in the post-1949 era is provided in Section 4, which emphasises putting China's very recent trade growth into historical perspective. A summary as well as a discussion of China's extraordinarily high level of trade openness today is provided in the concluding Section 5.

2. CHINA'S FOREIGN TRADE BEFORE 1842

China has been engaging in foreign trade since ancient times. Overland trade in luxury goods such as silk, slaves and spices took place with the Mediterranean along the famed Silk Road since around 1,000 BC. In the fourth- and fifth-century CE, Chinese junks appeared in Siam (Thailand), Ceylon (Sri Lanka) and India, and by the eighth century Canton (Guangzhou) had established itself as the centre of seagoing trade with the Arab merchants from the Persian Gulf. The majority of China's early trade by the eleventh century was with relatively proximate countries, mostly in Asia.¹³ Trade routes with Japan and Korea, as well as the Philippine Islands, were established by the twelfth century, and by the early 1400s a Ming dynasty (1344–1644) admiral commandeered expeditions from China going west to as far as

¹¹ By showing that the relatively rich regions of China in the late twentieth century were already relatively advanced in the early eighteenth century, Keller and Shiue (2007) argue that the effect of the post-1978 reforms can be easily overestimated due to natural advantages such as access to water transport.

¹² See also Lardy (1994, p. 2) who discusses China's contribution to world trade for most of the twentieth century.

¹³ Interregional trade flows over land and sea connected China with South and Southeast Asia, Central Asia and the Islamic world around the eleventh century AD, according to Curtin (1984). See also Findlay and O'Rourke (2007).

West Africa. Much of China's substantial trade with Asian countries was initiated by China and conducted well into the nineteenth century with seagoing Chinese junks.

When trade costs along the Silk Road increased because of the disintegration of the Mongol empire as well as the Ottoman conquest of Constantinople (1453) and Alexandria (1517), this provided one more reason for European countries to explore the sea route to the East: to trade in silk, pepper, ginger and other goods. In the year 1517, the Portuguese were the first to reach China, and in 1557 they were allowed to settle in Macao. Other European countries with trade interests soon followed – the Spanish reached China in 1575, the Dutch in 1604 and the British in 1637.¹⁴ The latter two nations established a lasting interest, with the Dutch gaining a hold on Taiwan and British traders operating out of Zhousan (in Zhejiang), Xiamen (in Fujian) and Guangzhou (in Guangdong).

The extent of international trade was not only affected by the state of technology (ships, navigation, etc.), but also by the policies towards trade from the respective governments. The East India Company, for example, held a monopoly for British trade with China since the year 1600. Arguably this restricted British trade with China.¹⁵ For its part, while China's policy towards foreign trade seesawed back and forth between being more or less open over the centuries, on average it was fairly restrictive, often allowing only limited exchange between specific domestic and foreign traders in specific areas. Foreign trade – when legal – occurred generally under a tributary system, under which foreigners received the right to trade in China for limited periods of time.

China's official policy to limit trade with the West has been at times expressed very clearly.¹⁶ Yet foreign trade in China was confined to a single port as of the end of the eighteenth century not because the government was blind to potential gains of trade, but because it seemed the most expedient way to manage trade. The court considered the potential benefits of foreign trade to be small relative to the difficulties of managing the discord between foreigners and native populations in China. The overriding concern was that the foreign traders, who were not always engaged in peaceful trading activities, would threaten domestic stability by inciting unrest, disorder and promoting piracy. Considering the fates of many under-defended populations and territories during of this period of European empire building overseas, this was not a

¹⁴ Spain acquired the Philippines in 1565 and annexed Portugal in 1580, both of which spurred Spanish activity towards China.

¹⁵ A deregulation act was passed in 1694, but no effective new competition emerged from it.

¹⁶ For example, in turning down a request to extend foreign trade privileges for the British beyond the city of Canton, the Qianlong emperor wrote in 1793 to the British King George III that 'strange and costly things do not interest me ... I [...] have no use for your country's manufactures'. The full letter can be found at <http://academic.brooklyn.cuny.edu/core9/phalsall/texts/qianlong.html>.

completely irrational decision. Trade restrictions in China were thus employed to achieve domestic policy goals.¹⁷

Was there evidence for strong demand for foreign goods in China? James Matheson, a partner in Jardine Matheson & Co., one of the top trading firms in Asia, remarked in 1819 after a public auction sale of Lancashire cotton piece goods that although it was well attended by numerous dealers, the shirtings were impossible to sell because they appeared to be inferior imitations of a local substitute. As late as the 1830s, Matheson traders reported that the Chinese native *nankeen* cotton cloth was superior in quality and cost compared to Manchester cotton goods.¹⁸

Without a suitable commodity for export to China, silver (which had to be mined in the Americas) was used to purchase Chinese silk, porcelain and tea. In an increasingly mercantilist Europe, this gave cause for concern, and the Chinese demand for opium as a recreational drug slowed this drain of specie. Opium was mostly exported from British India and smuggled into China since the Chinese government outlawed the import of opium. Although enforcement was weak and smuggling was rampant, the ban on the opium trade also epitomised the sentiment of Western traders that China restricted the entry of foreign goods.¹⁹ When in 1839, a newly appointed Chinese commissioner acted relatively forcefully in destroying an illegal opium shipment into China, Britain resorted to military action, beginning the First Opium War (1840–42). The course of defeat was swift. British military forces took Canton, moved up the coast and along the Yangtze River, captured Shanghai and eventually reached the Grand Canal, on which provisions were sent to the capital, and thus in effect threatening Beijing itself.

The Treaty of Nanjing (1842), which China was forced to sign, stipulated that an indemnity had to be paid as compensation; in addition, Hong Kong was ceded to Britain. Moreover, foreign nationals had the right to residence and to own property in treaty ports, and while living in China they also were subject to jurisdiction according to their own nationality and not to Chinese laws. In foreign trade, the treaty abolished the traditional tributary system, liberalised the highly regulated *Co-Hong* trading system at Guangzhou and opened additional ports (initially only four) to foreign trade. Trade duties were limited to 5 per cent or less on all goods. Opium was not mentioned in the treaty, implying that its trade was now legal in China. Soon after, the United States and France concluded similar treaties with China, the Treaty of Wanghia and Treaty of Whampoa, respectively.

¹⁷ For example, in the 1660s the Qing prohibited merchant junks to go abroad and evacuated all populations living near the coast of Southern China to subdue a rebellion on Taiwan.

¹⁸ Greenberg (1951, p. 2).

¹⁹ The abolition of the East India Company's monopoly on trade with China in 1834 exacerbated the situation, because it led to more Western entry in the China trade.

3. TRADE UNDER THE TREATY PORT SYSTEM (1842–1949)

a. The Emerging Institutions and Organisation

While the Treaty of Nanjing did away with central elements of China's foreign trade system – in particular the notion that trade was part of the tributary system and that Canton was the only port open to trade – initially, the Chinese Customs authority remained in charge of processing foreign trade. However, with a relatively weak central government whose authority was eroded after the Opium War even as it was preoccupied with suppressing domestic uprisings (in particular the *Taiiping* Rebellion, 1844–60), foreign trade revenue collection fell primarily in the hands of provincial and local authorities. These local officials were ill-equipped to handle the larger volume of trade coming in, and foreign trade was not subject to a consistent set of rules. On the contrary, payment of trade taxes was a matter of bargaining power, and rife with corruption.²⁰

The creation of the CMC Service emerged out of this vacuum of power.²¹ The CMC was founded in 1854 by the foreign consuls in Shanghai to collect maritime trade taxes that were going unpaid because of the inability of Chinese officials to collect them during the *Taiiping* Rebellion. Although the CMC was nominally under the jurisdiction of the Chinese government's Foreign Office (*Zongli yamen*), in practice it operated under the management of foreign powers, and its upper level staff came from abroad. Initially, staff were mostly British, although other Western countries later joined. The top CMC position and director of its operations, was called the Inspector-General (IG), who worked side by side with his Chinese counterpart, called the Superintendent of Customs, who oversaw the collection of trade taxes from the so-called native trade, that is, from Chinese-owned junks.

Early on, opposition to the CMC came, first of all, from foreign consuls who feared that the Inspectors were usurping some of their powers. Moreover, foreign merchants initially were opposed to the CMC because now they had to deal with customs formalities that before were left in their entirety to (Chinese) middlemen and clerks. Within only a couple of years, however, foreign businessmen had come to prefer the consistent and predictable customs treatment by the new CMC system, and over time the frictions between consuls and CMC officials became less severe.²²

²⁰ Tax collection was poor even in major ports such as Shanghai. The British Consul of Shanghai estimated in one year that the loss of tariff revenue in Shanghai was at least 25 per cent, and complained that 'two or three sleepy menials at \$5 or \$6 a month' were the sole means existing for the collection of duty, with which he was bound by the Treaty of Nanjing to cooperate; (CMC 1933, p. 81).

²¹ The Service was called Imperial Maritime Customs Service until 1912.

²² For example, in 1857 the British Consul reported that 'the feeling of the foreign merchant is generally in favour of the foreign inspectorship system, for it places all on an equality' (CMC 1933, p. 81).

The Chinese central government naturally resented the loss of sovereignty that came with the Treaty of Nanjing, but the introduction of the CMC also substantially increased the net tariff revenues it received.²³ Local Chinese government officials probably sustained a net decline in benefits as the CMC reduced their ability to withhold revenues from the central government and strike deals. Moreover, smugglers, pirates and adventurers saw their prospects of gain diminished with the arrival of the CMC, especially because over time the CMC extended its responsibilities to include anti-smuggling operations. Later, the CMC also expanded its involvement into postal administration, coastal police, harbour and waterway management, and weather reporting.

From the point of view of Western powers, the establishment of the CMC not only broadened their political influence in China but also ensured that China would have the means to pay the indemnities imposed on it after the First and Second (1856–60) Opium Wars. The information derived from this system was so credible that China was even able to put the tariff revenue down as collateral against which it could borrow from abroad.²⁴ Another motive, arguably the most important, was that the West wanted to support the expansion of commercial exchange between China and their own countries and that meant a more open and consistent Chinese system.

The CMC was responsible for the examination of cargo, prevention of smuggling, the assessment of treaty tariffs on exports, imports and coastal trade, with the ultimate goal of calculating tax revenues that were due. The nominal tariff was fixed to yield a rate of approximately 5 per cent *ad valorem*; however, over time the effective rate was often lower, around 3 per cent, because of price increases. The CMC jurisdiction extended to 'foreign-type' vessels, in particular steam ships, whether owned by foreigners or by Chinese, and to junks chartered by foreigners. While junks owned by Chinese were hence covered by the native Customs, on which there is almost no information, the success of steam ships over sailboats in the second part of the nineteenth century meant that the CMC was responsible not only for virtually all of the direct trade with foreign countries but also the large majority of coastal and river trade within China.

There were five Chinese ports open for foreign trade in 1842 per the Treaty of Nanjing, eleven more were added after China was defeated in the Second Opium War (1856–60) through the Treaty of Tientsin, and more were added over time (mostly before the turn of the century). The CMC did not establish

²³ The long-term CMC director Robert Hart estimated that while under the native system the costs of tariff collection were rather above than below 100 per cent, under the CMC at Shanghai costs were only around 2 per cent of the revenues (CMC 1933, p. 81).

²⁴ While China collected without doubt higher tariff revenues due to the introduction of the CMC, it is not entirely clear whether net of paying for the war indemnities any of that additional revenue was left.

customs stations in all ports, but focused on the ports that were important for foreign trade.²⁵ The geographical proliferation of CMC ports over time yields an interesting port margin of foreign trade that will be analysed below. Generally, the more important ports are opened relatively early, which means that even in the 1860s the CMC covered 80 to 90 per cent of all foreign trade. With the opening of the CMC customs station in Kowloon in the year 1886, virtually all of China's foreign trade was covered.²⁶

Information collected by CMC customs officials includes both the value and the quantity of imports and exports at the commodity level for each port. This includes trade within China, for example the number of cotton shirtings that were first imported by Shanghai and then re-exported to other Chinese regions or to other countries. The CMC also collected data on the tonnage of foreign ships, because this was needed to assess tonnage dues.

The CMC data collection system underwent a number of changes, in part owing to changing international practice, and in part owing to structural change of the economy.²⁷ This is to be expected over a long period of close to 90 years – 1859 to 1948. The quality of the data collected by the CMC is generally considered to be high. The data are internally consistent and generally matches up well with the corresponding trade data for the same flow from other countries. This may not be surprising given that the typical foreign CMC employee was highly skilled, being a graduate from a renowned university, such as Cambridge, Harvard, Oxford or Yale.

b. China's Overall Foreign Trade

We begin by summarising China's overall foreign trade, which provides a useful benchmark for the more disaggregated analysis below. All data come from directly from the annual CMC reports. Figure 1 shows the evolution of China's aggregate foreign commodity trade.²⁸ Two things are apparent. One, for the period shown China was more likely to have a trade deficit than a trade

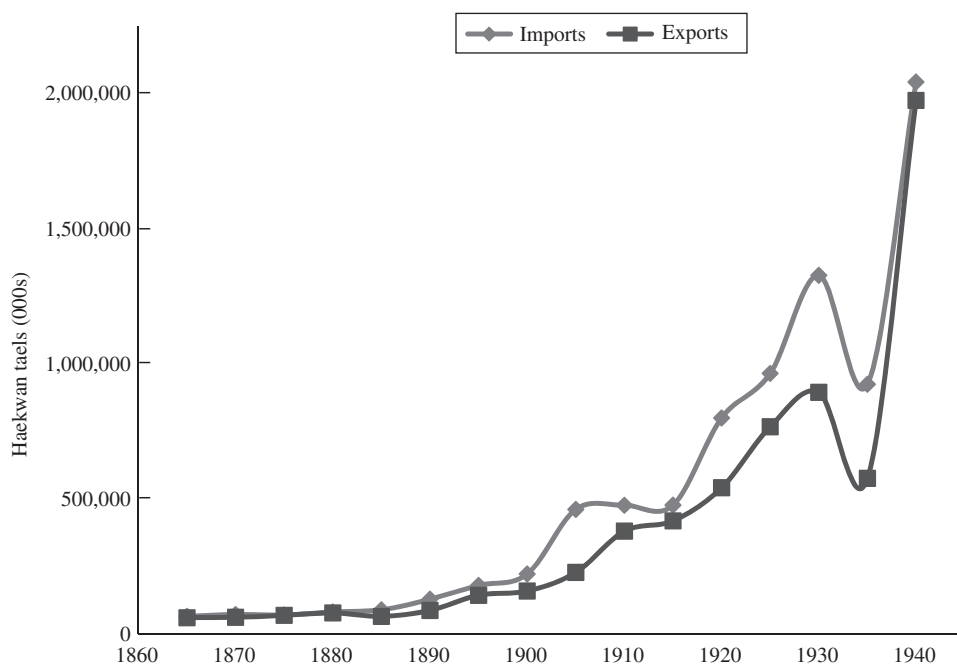
²⁵ For example, by the year 1915 there were 92 treaty ports but only 48 of these maintained a CMC customs station. In addition to ports opened by international treaties, there were ports opened by the Chinese government unilaterally but where foreigners could not reside, as well as 'ports of call' where foreign steamers could dock.

²⁶ Kowloon was important for trade with Hong Kong, being located opposite to Hong Kong Island.

²⁷ As an example of the former, in 1904 the CMC switched from reporting trade in market values to cost, insurance, and freight (cif) values for imports and free on board (fob) value for exports. Structural change triggered several changes in the goods classifications, both nationally as well as at the level of the individual port.

²⁸ Reported are nominal values of *Haekwan Taels*, the currency adopted by CMC organisation. No adjustments have been made for territorial changes, for example Manchuria, which became part of Japan in 1931. The reports present also international exchange rates to the world's major currencies, as well as quantities. Shown in the graph are total imports; a fraction between 1 and 5 per cent of these were re-exported from China to other countries.

FIGURE 1
China's Foreign Trade, 1865–1940



surplus in its commodity trade, the difference to be covered by bullion or international debt. Two, the volume of China's overall foreign trade is relatively stable before the year 1885. Afterwards, the evolution of her trade is rather well summarised by a linear trend. Except for the collapse in trade in the aftermath of the Great Depression, there are no major deviations from a linear trend, and the average growth rate of both imports and exports is about 5 per cent per year. This is substantially lower than in the most recent past; between the years 2000 and 2008, the growth rate of China's foreign trade was about 18 per cent per year, as we discuss below. One also notes that the impact of the First World War on China's trade growth was limited. With the European countries' trade strongly declining, this is consistent with the idea that China gained market share in world trade during this period.²⁹

c. Country Composition

Turning to the composition of China's foreign trade across countries, we analyse the nineteenth and twentieth centuries separately because there were

²⁹ Mitchener and Yan (2010) emphasise the impact of trade on Chinese factor prices during this period.

TABLE 1
Average Trade Shares, 1865–1900

<i>Imports</i>	%	<i>Exports</i>	%
Hong Kong	41.36	Great Britain	31.65
Great Britain	24.82	Hong Kong	26.94
British India	18.23	Continental Europe	11.86
Japan	5.80	USA	11.07
USA	2.65	Russia	5.82
Continental Europe	2.31	Japan	4.93
Other countries	4.84	Other countries	7.73

some major changes over time. Table 1 shows China's main trade partners on both the import and the export side between the years 1865 and 1900.

The role of Hong Kong for intermediating China's trade (entrepôt trade) is well known. Only a small fraction of China's imports from Hong Kong are produced in Hong Kong, and analogously, only a small part of Chinese exports to Hong Kong are consumed in the latter. Table 1 quantifies this for the nineteenth century at about 40 per cent for China's imports and almost 30 per cent for exports. Because the ultimate origin and destination of China's trade through Hong Kong is not known for all years, the following analysis nets out trade through Hong Kong. We will return to China's entrepôt trade below.

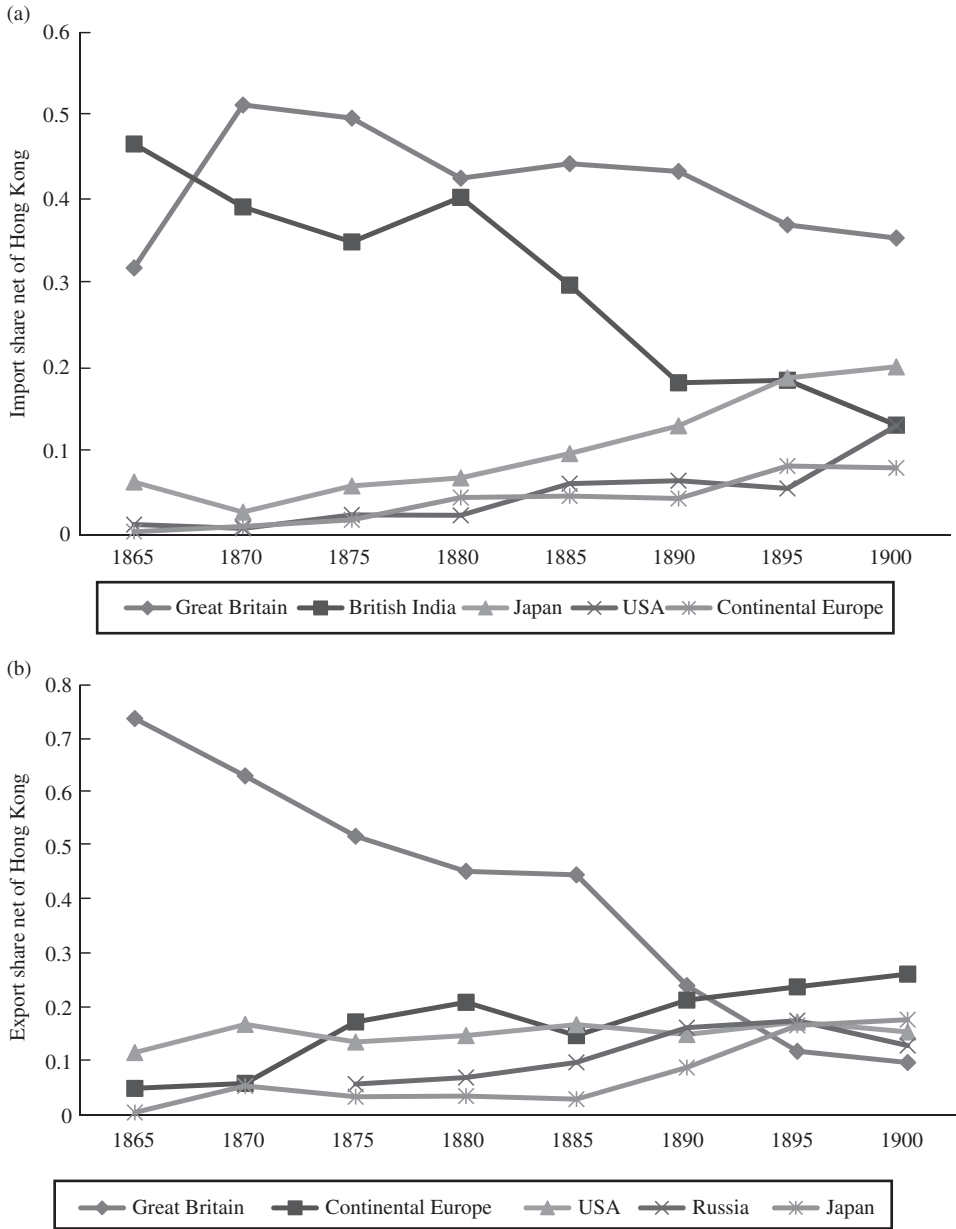
Figure 2a shows the composition of China's imports between 1865 and 1900. The largest sources of imports early on were Great Britain, together with British India, with about 90 per cent of Chinese imports in 1870 (not through Hong Kong). The importance of India declines over time, which is in part due to opium imports falling relative to other imports. Among import sources outside the British Empire, there is primarily Japan, and its share of China's imports rises to about 20 per cent by 1900. This is still only about half of China's imports from Great Britain. For Western sources other than Great Britain, imports from the United States by 1900 are almost twice as large as those from Continental Europe.³⁰

The export side of China's trade is shown in Figure 2b. The main story here is that while China exported primarily to Great Britain at the beginning of the period around 75 per cent of the (non-Hong Kong) trade, by 1900 the British share was only 10 per cent. The flip side of this is an increasing importance of exports to Continental Europe and more exports to Japan.³¹ In contrast to imports, India is not among the major Chinese export destinations, in part due

³⁰ Here, Continental Europe includes the Scandinavian countries. Also note that we have dropped the remainder trade share that brings the total to 100 per cent for readability in this and the following figures.

³¹ To some extent this is because Chinese goods went increasingly directly to France or Germany instead of to London first.

FIGURE 2
China's Foreign Trade by Country between 1865 and 1900. (a) Imports; (b) Exports



to the two countries having overlapping comparative advantage. Moreover, Russia during this time accounts for a significant portion of exports, while it is not important for imports.

TABLE 2
Major Sources of Chinese Imports, 1900–46

	%
Japan	24.51
USA	22.05
Great Britain	17.02
British India	9.65
Germany	4.19
Java (Dutch East Indies)	2.91
French Indo-China	2.39
Russia (Soviet Union)	2.10
Belgium-Luxemburg	1.85
Singapore	1.56
Australia	1.25
Other countries	10.53

With the turn of the century, a number of additional countries became important in China's trade; Table 2 shows the breakdown of China's imports for 1900–46.

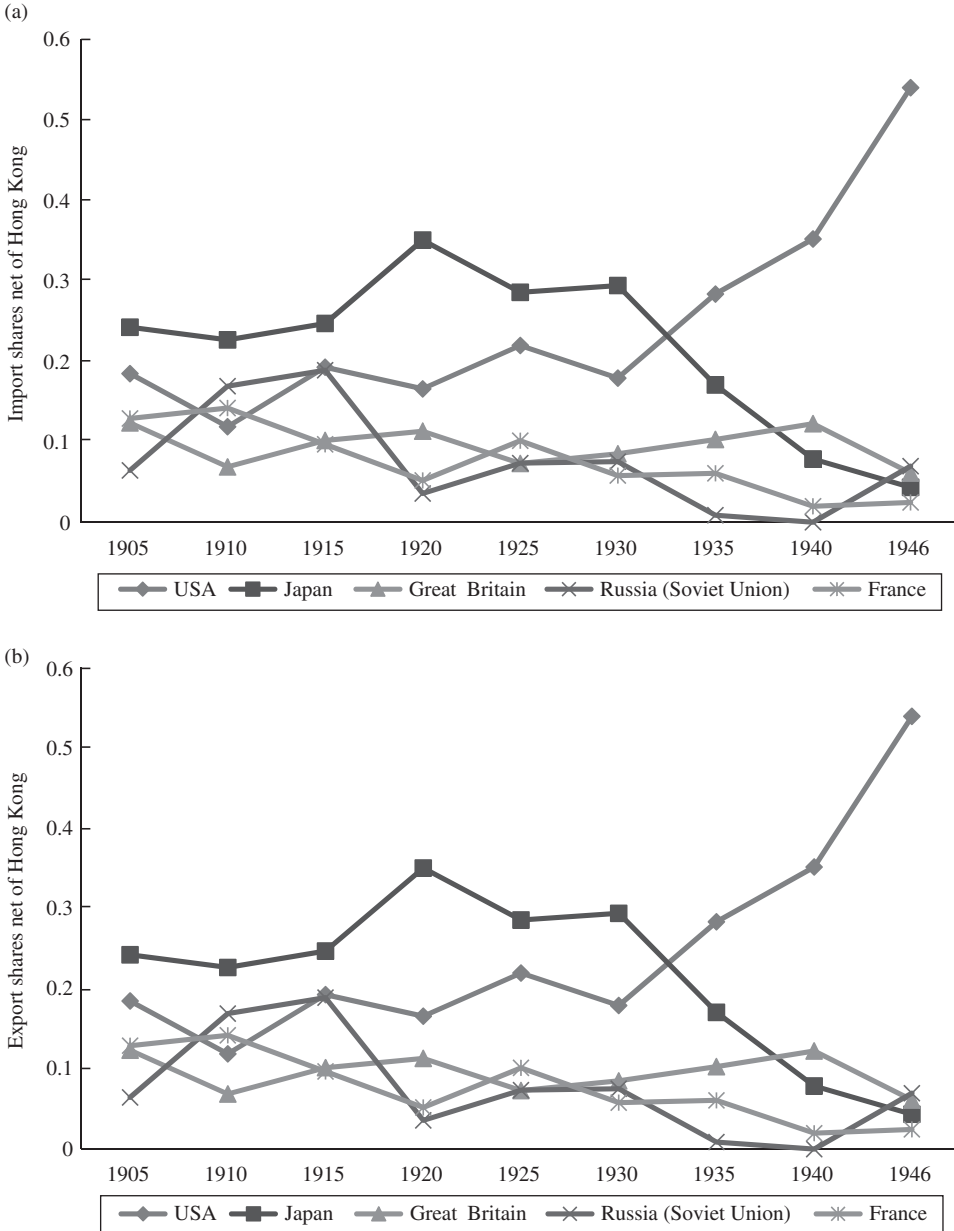
During the first half of the twentieth century, Japan was the most important source of Chinese imports, followed by the United States while Great Britain had fallen to third place.³² Beyond the level of overall trade, the nature of goods imported from these countries differed, with Great Britain and the USA exporting relatively more machinery and other producer goods than Japan to China. Significant amounts of trade were also imported from a range of other proximate sources such as Dutch East Indies, French Indo-China, Singapore and Australia. Among the Continental European countries, the relatively early industrialisers, Germany and Belgium were more important than Italy, for example. Overall, while the relative importance of trade with the British Empire had diminished, the evolution of China's trade patterns was smoothly transitioning along the foundations laid during the nineteenth century.

Examining Chinese import patterns for the early twentieth century over time indicates that Japan's role changed significantly over this half-century. Figure 3a shows that its share rose from 20 per cent to close to 40 per cent between 1915 and 1925 before falling drastically – close to zero at the end of the Second World War.³³ The impact of the war is also reflected in the reduced share for Germany, which was also among the losing powers of the Second World War. The United States, however, had become more important as a source of

³² Table 2 shows the patterns of imports directly into China, netting out the trade through Hong Kong.

³³ To some extent the decline in Japan's importance is the consequence of territorial changes; Japan's occupation of Manchuria from 1931 onwards lowered in this sense, China's foreign trade with Japan.

FIGURE 3
China's Foreign Trade by Country, 1905–46. (a) Imports; (b) Exports



imports, even though the dramatic increase of the US share (to more than 60 per cent) is to some extent because it was the only major country whose economy had not been destroyed through the Second World War.

The changing importance of China's export destinations is shown in Figure 3b. The United States accounts for more and more of its exports during this period, ending up with more than half by 1946. Japan's importance peaked during this half-century after the First World War but rapidly fell thereafter. Great Britain's share hovers around 10 per cent throughout this period, and in this way it remains a major destination for Chinese goods, in contrast to other European countries, such as France. There is also a relatively high fraction of Chinese exports, about 25 per cent, going to countries other than those shown in Figure 3b. This is as much a sign of China's success in penetrating new markets as of income growth in another set of countries.

d. Comparing China with Other Countries

At the beginning of the twentieth century, trade statistics for many other countries in the world became available. It is therefore useful to examine China's share in world trade in comparison with other countries. These are shown in Table 3.³⁴

China accounted for about 2 per cent of world trade from 1913 to 1938, with a peak in the 1920s. As we will see below, it took a large part of the twentieth century before it returned to that share of world trade. Comparing China with other countries, it had about three-quarters of the foreign trade of Japan and around two-thirds of that of India. Not surprisingly, during this period China's foreign trade fell far short of industrialised countries such as Great Britain, the United States and Germany.

Table 4 shows how these trade shares compare with population and GDP shares across countries. First, China's share of world trade is smaller than its share in world GDP. This, however, is also true for the United States, Japan and India, although to a varying degree. Moreover, if we focus on the similarly developed India, the ratio of trade to population for India is 1/5 while it is 1/13 for China. At the same time, it is difficult to conclude from this that China's foreign trade was unusually small, because for a given world population foreign trade is bound to fall with the size of a country's domestic population, and China's was nearly 50 per cent larger than India's at this time.³⁵

To summarise, after the Opium Wars, Britain and other major European countries were the main trade partners. However, by the early twentieth century, the regional emphasis was already starting to shift towards other

³⁴ Figures for China are from the CMC reports, various volumes. They are very similar to those reported in the Statistical Yearbooks of the League of Nation, on which the figures for the other countries are based; see League of Nations (1940).

³⁵ We take this issue up again in the concluding section.

TABLE 3
World Merchandise Trade, by Country. Exports Plus Imports as Share of World Total (%)

Country	Year				Mean
	1913	1925	1930	1938	
China	1.88	2.30	1.83	1.98	2.00
Great Britain	15.24	14.90	13.44	13.90	14.37
USA	11.15	14.31	12.61	10.70	12.19
Japan	1.79	3.07	2.62	3.20	2.67
British India	3.60	3.59	2.87	2.50	3.14
Germany	13.12	8.00	9.65	9.20	9.99

TABLE 4
Trade, GDP and Population 1913 (In Per Cent of the World Total)

	Foreign Trade	GDP	Population
China	1.88	8.83	24.38
Great Britain	13.24	8.21	2.55
United States	11.15	18.92	5.44
Japan	1.79	2.62	2.29
India	3.60	7.47	16.94

Notes:

GDP and population data are from <http://www.ggdc.net/MADDISON/oriindex.htm>. Foreign trade, from Table 3.

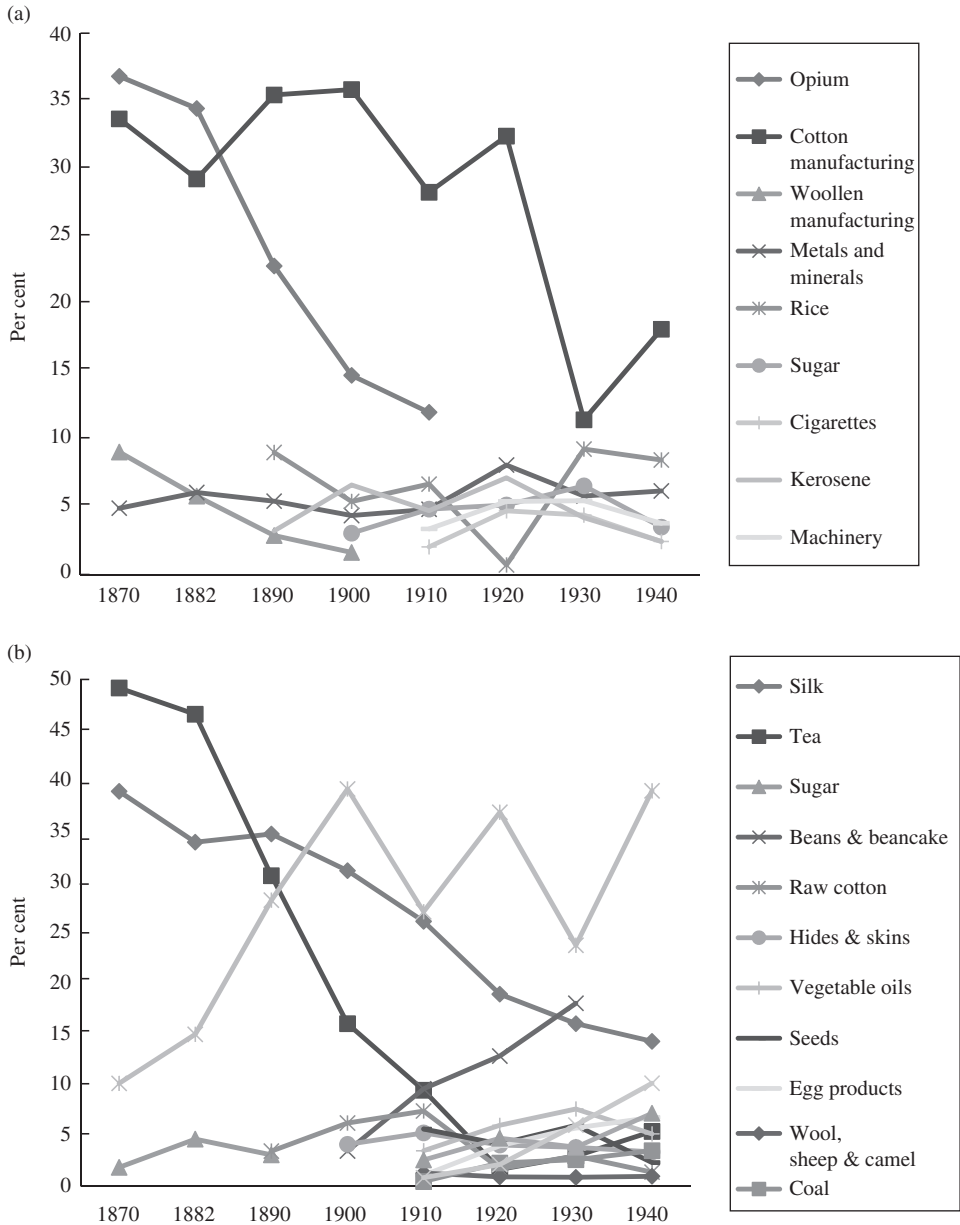
countries, the United States and Japan. Part of the reason may have been attributed to the mix of commodities that were traded.

e. Commodity Structure

Figure 4a gives the basic information on imports. In the early years, the single most important import was opium, with around 37 per cent in the year 1870, before its importance declined, due both to an increase in domestic production on the one hand, and on the other, increasingly effective domestic and international laws that by 1917 banned both domestic and imported opium use. Cotton manufactures accounted for around 30 per cent of all imports until 1920, while woollen manufactures imports, which never caught on very much in China, started to disappear around the turn of the century.

China became a rice importer around 1890, and this accounts on average for 7 per cent of China's total imports. The share of metals and minerals is quite stable (around 6 per cent), while machinery is imported in substantial amounts only starting around 1910. China's imports became more diverse, and the share of products not explicitly shown in Figure 4a is rising over time.

FIGURE 4
China's Foreign Trade by Commodity, 1870–1940. (a) Imports; (b) Exports



On the export side, the initially dominating categories are tea and silk products, accounting for about 70 per cent in the year 1870 (see Figure 4b). We also see that the relative importance of tea declines faster than that of silk, although it

experiences something of a revival from a low level after the year 1920. Animal products such as hides and skins, but also ores, minerals, and coal, as well as seeds and oils have been moderately important throughout this period. Around the year 1910, China started to export textile products in substantial amounts, and by 1940 textile products account for about 10 per cent of exports.

Summing up, China traded mostly cotton goods and opium for tea and silk before importing a broader range of producer as well as consumer goods by the early twentieth century.

f. Extensive Margin of Trade

We now show that China's new goods margin grew substantially during the treaty port era. The main publication of the CMC, the *Returns to Trade*, provides detailed information on the exact type of goods traded, which enables us to investigate how the extensive margin changed from year to year. In the following, we define all imports categorised under the same name as a single good.³⁶ Table 5 summarises the growth in the number of goods imported to China from 1868 to 1947.³⁷

The table shows that the number of different cotton goods almost tripled in more than 25 years (1868–94). There is also evidence for the 'destruction' of goods: the number of different woollen products falls from 20 to 11 over the same period.

Overall, the number of different imports in China rises from 80 to 483, or 504 per cent for the period 1868 to 1947. Table 6 shows the corresponding evolution of the extensive margin on China's export side; here, the increase is 474 per cent for the same period.

How do these figures compare with other evidence? Broda and Weinstein (2006) find that over the period of 1972–2001, the number of new imports in the United States grew by 119 per cent, or 4.1 per cent per year. The 504 per cent increase in import variety we have calculated for China during the years 1868 and 1947 translates into a rate of import variety growth of 6.4 per cent

³⁶ This definition may understate the growth in the extensive margin to the extent that the elasticity of substitution for the same good across exporters is not infinite. Along these lines, Broda and Weinstein's (2006) definition counts as a new good import also imports of an old good from a new exporter. We adopt this approach only when the CMC explicitly assigned separate names. For example, 'Drills, English', 'Drills, Dutch', and 'Drills, American' are regarded as three different goods.

³⁷ The names of goods changed over the 80 years, making it possible that the name of one good in 1868 might be linked to multiple goods in 1947. The main concern is that we look at nomenclature changes, rather than at a new good, and that this is driving our extensive margin results. This is one of the reasons why we adopt a conservative definition of what constitutes a new good. We also compare the number of goods belonging to a certain goods group over time, which is relatively robust to nomenclature changes.

TABLE 5
Number of Goods Imported, by Group, for the Period 1868–1947

<i>Group</i>	<i>Year</i>	
	<i>1868</i>	<i>1894</i>
Cotton goods	11	29
Woollen goods	20	11
Metals	19	22
Sundries	30	39
Miscellaneous piece goods	0	2
Total	80	103
	1946–47	
1. Cotton piece goods, grey	8	
2. Cotton piece goods, white or dyed	24	
3. Cotton piece goods, printed	6	
4. Cotton piece goods, miscellaneous	6	
5. Cotton, raw; cotton yarn and cotton thread	7	
6. Cotton manufactures, sundry	8	
7. Flax, ramie, hemp, jute and manufactures thereof	9	
8. Wool and manufactures thereof	20	
9. Silk and manufactures thereof	9	
10. Metals and ores	47	
11. Machinery and tools	18	
12. Vehicles and vessels	12	
13. Miscellaneous metal manufacturers	32	
14. Fishery and sea products	15	
15. Animal products, canned goods and groceries	16	
16. Cereals and flour	7	
17. Fruits, seeds and vegetables	10	
18. Medicinal substances and spices	8	
19. Sugar	6	
20. Wines, beer, spirits, table waters, etc.	11	
21. Tobacco	5	
22. Chemicals and pharmaceuticals	25	
23. Dyes, pigments, paints and varnishes	23	
24. Candles, soap, oils, fats, waxes, gums and resins	20	
25. Books, maps, paper and wood pulp	22	
26. Hides, leather and other animal substances	16	
27. Timber	10	
28. Wood, bamboos, rattans, coir, straw and manufactures thereof	19	
29. Coal, fuel, pitch and tar	4	
30. Chinaware, enamelledware, glass, etc.	10	
31. Stone, earth and manufactures thereof	4	
32. Sundry	46	
Total	483	

per year. Given that we adopt a more conservative definition of what constitutes a new good, this suggests China's goods range during the CMC period at a higher rate than the United States' during the late twentieth century. It could

TABLE 6
Number of Goods Exported, by Group, for Period 1868–1947

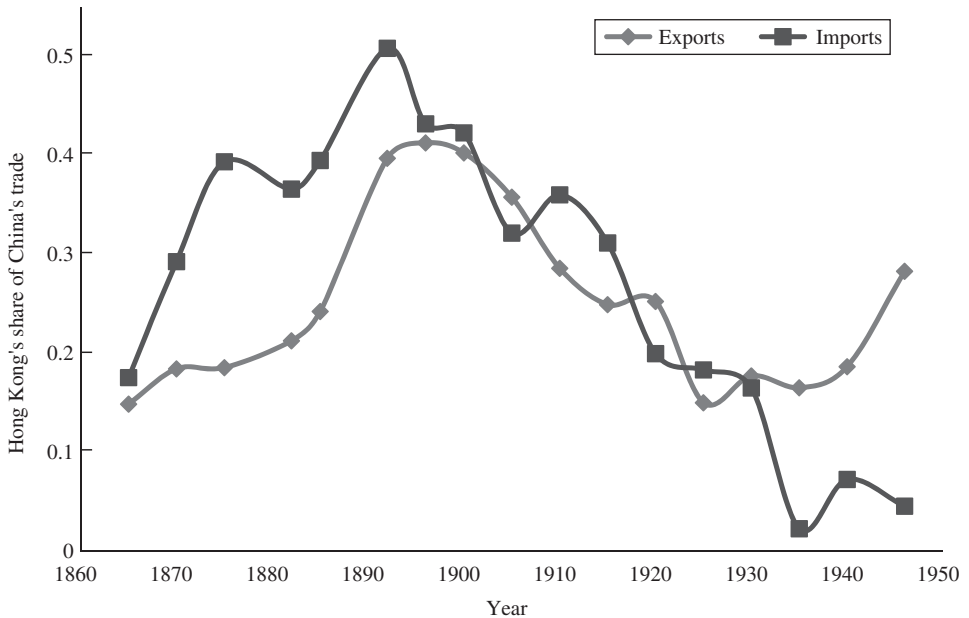
<i>Group</i>	<i>Year</i>	
	<i>1868</i>	<i>1894</i>
Total	62	64
	1946–47	
1. Animals and animal products	33	
2. Hides, leather and skins	32	
3. Fishery and sea products	4	
4. Beans and peas	10	
5. Cereals and cereal products	17	
6. Dyestuffs, vegetable	2	
7. Fruits, fresh, dried and preserved	13	
8. Medicinal substances and spices	10	
9. Oils, tallow and wax	11	
10. Seeds	12	
11. Spirituous beverages	3	
12. Sugar	1	
13. Tea	10	
14. Tobacco	4	
15. Vegetables	14	
16. Other vegetable products	6	
17. Bamboo	3	
18. Fuel	4	
19. Rattan	2	
20. Timber, wood and manufactures thereof	7	
21. Paper	5	
22. Textile fibres	27	
23. Yarn, thread and plaited and knitted goods	9	
24. Piece goods	14	
25. Other textile products	17	
26. Ores, metals and metallic products	19	
27. Glass and glassware	2	
28. Stone, earth, sand and manufactures thereof	7	
29. Chemicals and chemical products	11	
30. Printed matter	3	
31. Sundry	44	
Total	356	

be that the range of product growth is inversely related to the time since trade opening, or more broadly the level of development of a country. Future work will have to examine this question further.

g. Hong Kong's Role in Intermediating China's Trade

As demonstrated above, Hong Kong played a major role as entrepôt for China's trade during the nineteenth century, and recent research suggests Hong

FIGURE 5
 Hong Kong as an Entrepôt for China's Trade, 1865–1945



Kong intermediated about 50 per cent of China's exports during the 1990s (Feenstra and Hanson, 2004). Information from the CMC statistics together with the recent data for the 1990s give us Hong Kong's share in the China trade over an extended time period. This allows us to examine Hong Kong's long-run role as an entrepôt.³⁸

Figure 5 presents the share of Hong Kong in China's exports and imports between 1865 and 1946. On average, Hong Kong accounted for about a quarter of China's trade on both the import and the export side. While substantial, this is lower than during the most recent past. At a minimum, this suggests that trade intermediation does not necessarily decline over time, even as economies become more sophisticated or communication systems improve.

Moreover, it is clear that the importance of Hong Kong was far from constant over time. The broad pattern is one of rising shares of both imports and exports during the last 35 years of the nineteenth century before both declines from then until the mid-1930s. After that, Hong Kong's role in intermediating exports and imports follows different trends: a growing importance for exports, with close to 30 per cent by the end of the Second World War, while the share

³⁸ Another interesting question, beyond the scope of this paper, is how a major trading firm such as Li and Fung today compares to the *compradors*, or middlemen, of the China trade in the nineteenth century.

of imports continues to fall to about 5 per cent in 1946. With around 50 per cent of China's trade going through Hong Kong in the 1990s, this implies huge swings for the role of Hong Kong as China's trade intermediary.

One possible explanation for these changes may be that establishing international trade links requires paying a fixed cost to acquire knowledge specific to a market. In that case, trade intermediation can thrive because it may not be optimal for a given European exporter, for example, to acquire this market-specific knowledge individually.³⁹ Along these lines, the decline in intermediation from 1895 to 1935 could be attributed to the cumulative effects of learning about selling in China on the part of the exporters. This might have reduced their costs of selling directly as opposed to through intermediaries.⁴⁰

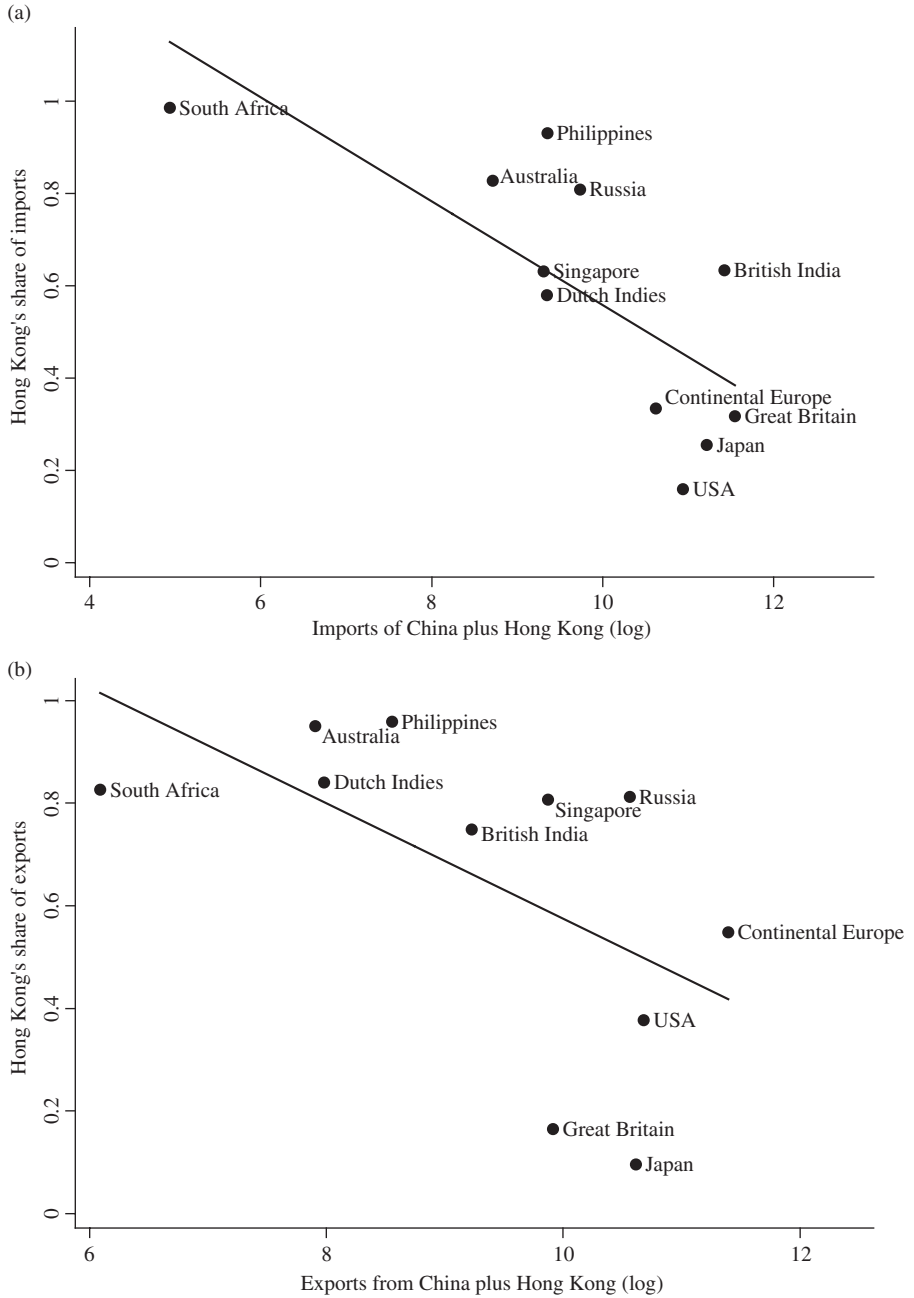
There are two pieces of evidence consistent with the idea that the extent of intermediation is affected by fixed costs of trade. First, note that right after the opening of the first five ports, Hong Kong's share for imports and exports is comparable (17 per cent and 15 per cent, respectively, in the year 1865). However, in the following years the import share climbed much faster than the export share. From the point of view of a potential new European exporter with limited knowledge of China, Hong Kong (a British colony since 1842) was likely to be more accessible than one of the recently opened ports in Qing China. In contrast, from the point of view of foreign traders, it is less crucial for exports from China to Europe, Japan or the United States to be channelled through Hong Kong before being shipped to overseas destinations. Therefore, it may not be surprising that Hong Kong's share of exports is lower than that for imports and rising more slowly.

Second, for a number of years the CMC recorded in detail the ultimate origin of imports and destination of exports from Hong Kong. These data can be combined with data on China's direct foreign trade to examine the determinants of Hong Kong's role as an entrepôt. Figure 6a shows Hong Kong's share of all foreign imports to China *and* Hong Kong, across exporters in the early 1900s. There is a clear negative relationship with the size of trade: countries that export relatively little to China and Hong Kong, such as Australia or the Philippines, tend to ship through Hong Kong whereas big traders such as Great Britain or Japan export directly to ports in China. This is consistent with fixed

³⁹ Similarly, Feenstra and Hanson (2004) argue for the 1990s that Hong Kong traders may have an informational advantage in trade between China and the rest of the world, which allows them to identify Chinese producers who can meet foreign quality standards. Young (1999) presents evidence that transport costs do not account for all the increases in the price as they pass through entrepôts.

⁴⁰ Consistent with the idea of market-specific learning, the CMC noted that initially Western exporters were surprised to not be able to sell large quantities of knives and forks, or pianofortes in nineteenth century China (CMC, 1933, p. 39).

FIGURE 6
 Hong Kong as an Entrepôt is More Important for Small Trading Nations.
 (a) Imports; (b) Export



costs of market access. On the export side, we find a similar pattern although not quite as strong (see Figure 6b).

The figures show that several of the countries with relatively small amounts of trade are located near to South East Asia and thus are closer to Hong Kong than to the centre of China. To control for the impact of relative location, we move to a regression framework. The results are given in Table 7.

From column 1, the volume of trade accounts for 54 per cent of the variation in the share of trade intermediation of Hong Kong on the import side. While it is clear that Hong Kong's share tends to be higher the closer exporting nations are to Hong Kong relative to Shanghai (from column 2), the impact of size remains significant. In fact, the impact of the volume of trade on Hong Kong's share of intermediation is quantitatively almost twice that of distance. While volume matters also for Hong Kong's share of China's exports, the effect is not quite as strong as for imports, as columns 3 and 4 of Table 4 demonstrate. This analysis provides empirical support for the hypothesis that trade intermediation is affected by the costs of obtaining information, search, and matching between buyers and sellers.

This analysis has emphasised that Hong Kong has been a particularly important port for China's trade at least since the nineteenth century. Future research can take advantage of Hong Kong's position to study the economics of trade intermediation in no small part because information on Hong Kong's trade was recorded separately from China's because Hong Kong belonged to Britain between 1842 and 1997. During the treaty port era, however, all of China's trade was collected at the level of the port, or more precisely customs station, and as we noted above these were increasingly located throughout China.

TABLE 7
Determinants of Intermediation in Trade

	<i>Import Share</i>		<i>Export Share</i>	
Trade volume	-0.112 (0.034)	-0.095 (0.033)	-0.113 (0.045)	-0.059 (0.026)
Relative distance to Shanghai		0.404 (0.234)		0.750 (0.077)
R^2	0.54	0.67	0.33	0.67
$p > F$ -stat	0.01	<0.01	0.03	<0.01
Beta trade		-0.622		-0.304
Beta distance		0.371		0.642

Notes:

Dependent variable: Hong Kong's share of imports in China plus Hong Kong's imports (columns 1 and 2), and Hong Kong's share of exports of China plus Hong Kong's exports (columns 3 and 4). Trade volume is log imports (exports) to (from) China and Hong Kong in columns 1 and 2 (3 and 4). Second regressor is the log difference in distance between Shanghai and Hong Kong. Robust standard errors in parentheses. $N = 11$.

TABLE 8
New Goods and New Ports

<i>Regional Dimension</i>	<i>Commodity Dimension</i>	
	<i>Existing Goods</i>	<i>New Goods</i>
Existing ports	A	B
New ports	C	D

h. Goods Margins and Port Margins in China's Trade

Our analysis above has shown that the number of different goods in China's trade has grown rapidly during the treaty port era. This extensive margin is distinguished from the intensive margin of trade, which are changes in the trade volume for a given set of goods. Another dimension that can be examined is changes in trade at different ports, making it possible to observe how foreign goods diffuse throughout a country. This is particularly useful when countries are relatively large or interregional transport is limited, as in China during this period. Table 8 depicts these two dimensions of trade.

The following analysis presents some initial evidence on the relative importance of the goods and ports dimension in China's trade from the CMC sources. Our analysis begins by focusing on the foreign trade of a particular economy (first row in Table 8, cells A and B) for Shanghai. Information on Chinese trade during the treaty port era can be employed to shed additional light on the availability of specific commodities in additional regions of China (cells C and D in Table 8).

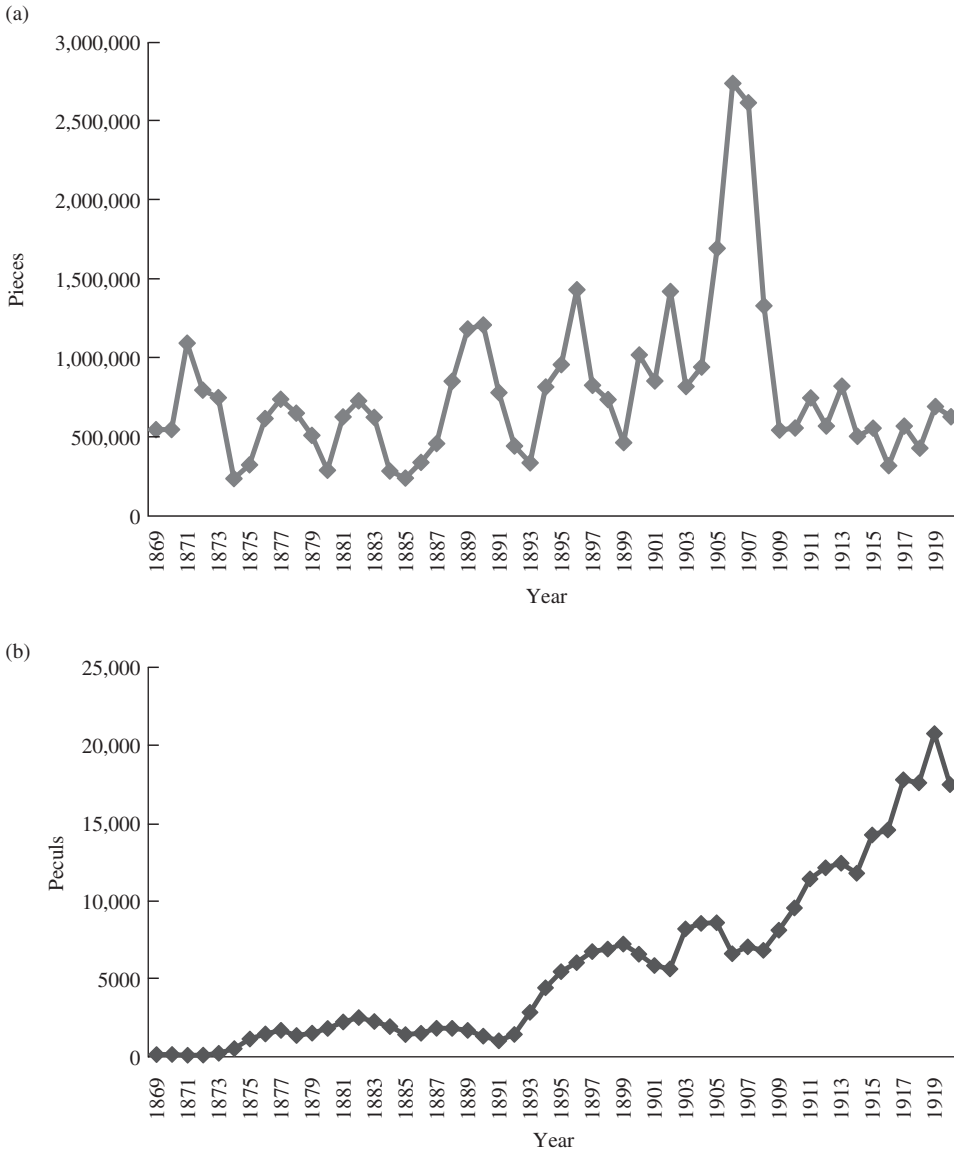
i. Intensive and Extensive Margin in Shanghai

We first turn to imports at Shanghai, the most important Chinese port during the treaty port era, for a particular cotton good, 'Shirtings and Sheetings, Grey', as an example of the intensive margin for a given region (cell A).⁴¹ Figure 7a shows the import quantities of 'Shirtings and Sheetings, Grey' to Shanghai from 1869 to 1920.⁴² The quantity of imports did not vary much in the first two decades (1869–89). There was a dramatic increase around 1905, when imports nearly tripled, before collapsing to about one fifth by 1910. Such sharp

⁴¹ We choose this particular commodity for two reasons. First, it was a significant traded good throughout the CMC era, being assigned 'No. 1, Group 1' in the commodity classification system created in the 1940s. Second, it is a relatively homogenous product, and changes in its quantity tend to be caused by changes in imported volume, rather than changes in imported varieties within the category.

⁴² For many commodities, the CMC recorded both quantity and value data. The figure shows net imports, namely, the quantity locally consumed.

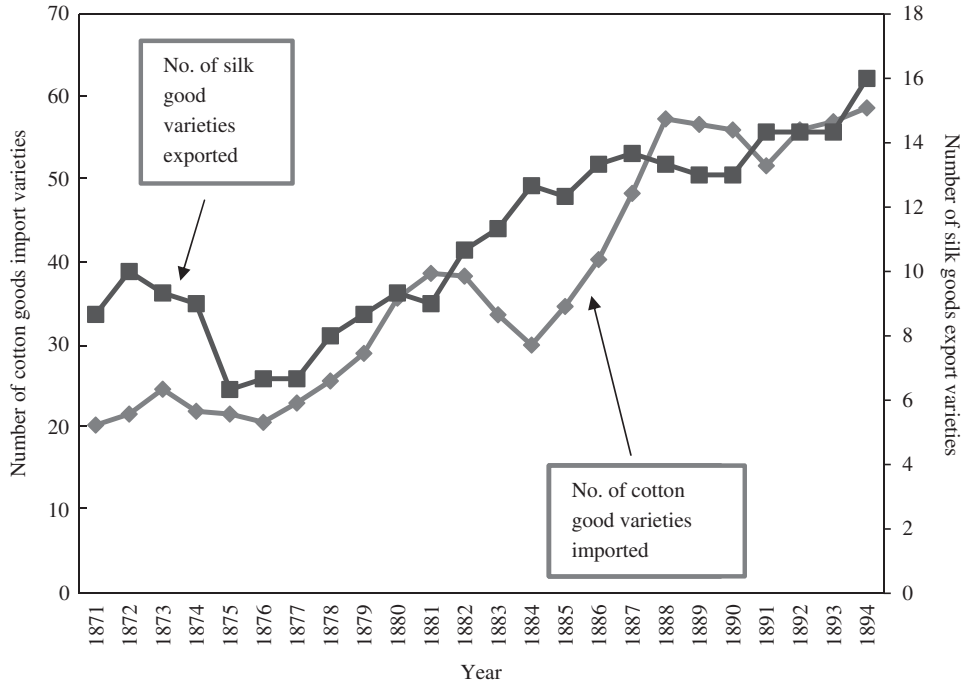
FIGURE 7
 Shanghai's Trade at the Intensive Margin. (a) Imports of Grey Shirts and Sheetings; (b) Export of Silk Cocoons. Three-year Moving Average Shown



trade dynamics are rarely observed without commodity-level data. One explanation may be that domestic production substituted for Shanghai's imports.

For other commodities, the evolution was more gradual. Figure 7b shows Shanghai's Silk Cocoon exports from 1869 to 1919. These are values for

FIGURE 8
New Goods Traded at Shanghai. Three-Year Moving Average Shown



cocoons that were produced in the local Shanghai economy (referred to as ‘original exports’ in the CMC publications). As in the case of the specific cotton good imports, the volume of silk cocoon exports were quite stable for 1870s and 1880s. Between 1895 and 1930, however, Shanghai’s exports for this good quadrupled.

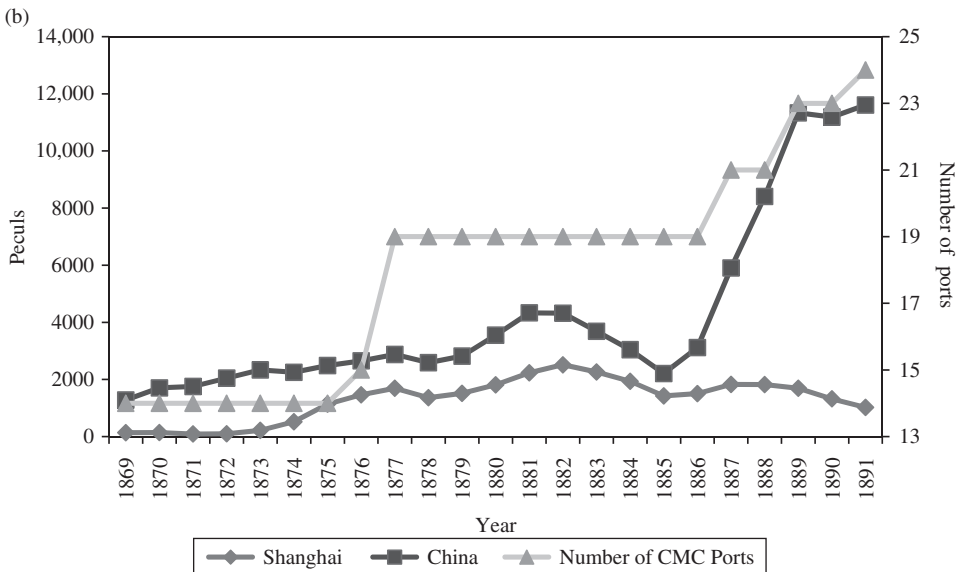
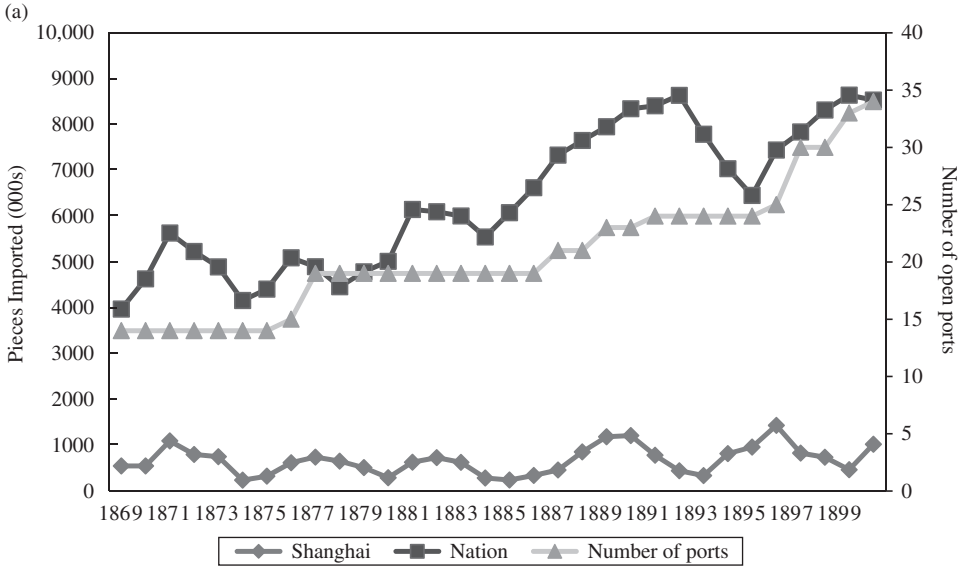
We have shown above that the number of product varieties that China imported and exported increased substantially over the treaty port period. Information on port-level activity makes it possible to study the availability of new goods at a regional level as well (cell B in Table 8). Specifically, Figure 8 shows that the number of silk good varieties exported from Shanghai increased substantially between 1871 and 1894 (right scale). Moreover, the number of cotton good varieties imported over the same period almost tripled (left scale).⁴³ This is the same order of magnitude as for China as a whole (see Table 5), consistent with the idea that many of the goods that were new to China were introduced first in Shanghai.

⁴³ The scale in Figure 8 is not comparable to that of Table 5, because Shanghai’s goods classification is more disaggregated than that for China as a whole.

j. Intensive Growth Through More Ports

The extent to which a particular good becomes available in more and more regions is captured in Figure 9a. We show the quantity of imports of Grey

FIGURE 9
The Growth of Trade Through New Ports. (a) Imports of Grey Cotton Shirtings and Sheetings; (b) Exports of Silk Cocoons. Three-Year Moving Average Shown



Shirtings and Sheetings in Shanghai together with national imports of the same good for the period 1869–99. Clearly, Shanghai's imports do not change much while national imports more than double. The increase in China's imports is because of the opening of additional treaty ports, which went from 16 to 34 over this period. We refer to this as the port intensive margin of trade.

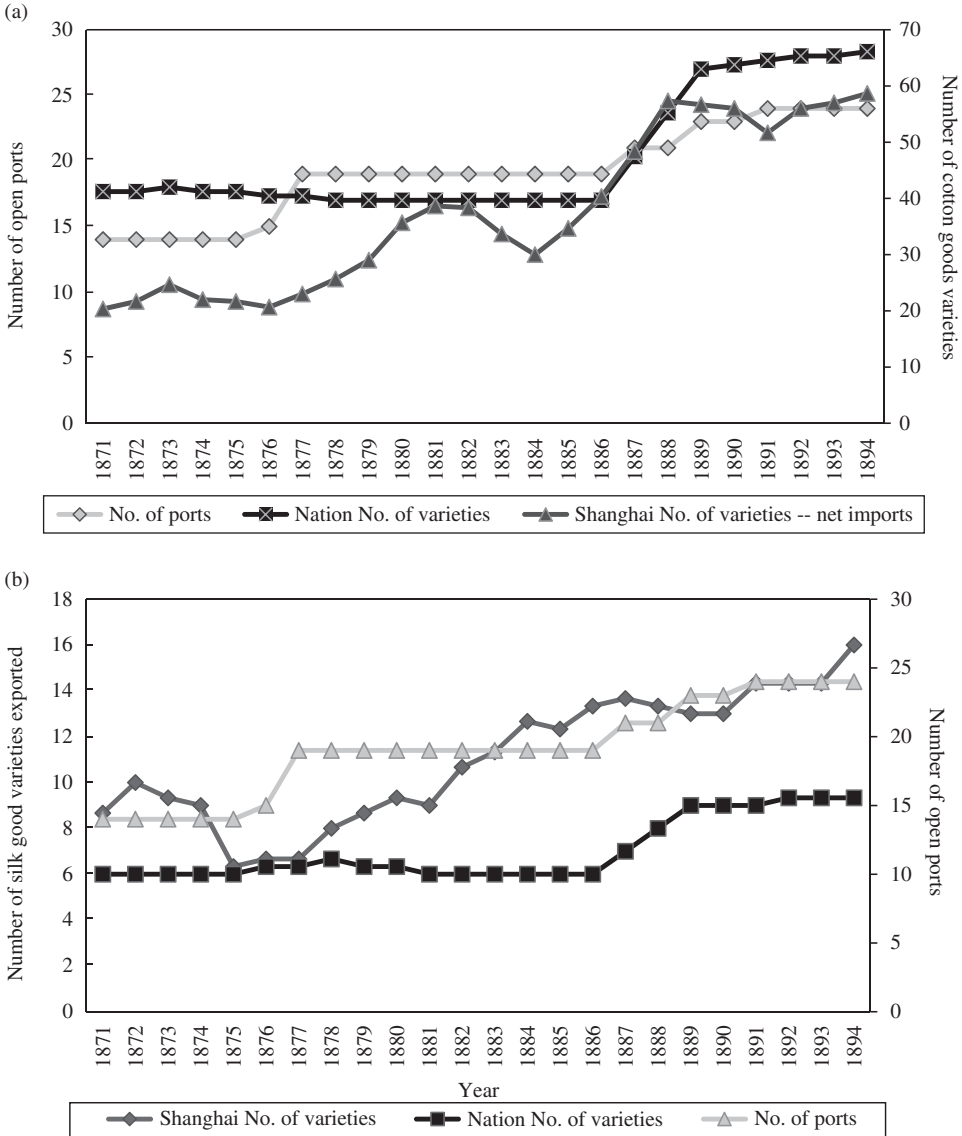
The growth of exports of Silk Cocoons is also in part owing to the port margin, although it is more nuanced as Figure 9b shows. The increase in the number of open ports between 1875 and 1877 did not much affect the number of Silk Cocoons exported by China beyond changes in Shanghai's exports. In contrast, the new ports in the late 1880s added substantially to Chinese Silk Cocoon exports. This may be explained by new ports lowering local producers' costs of exporting.

k. Trade Growth with New Goods and New Ports

Figure 10a shows that between 1870 and 1885, there is a moderate growth in the number of cotton goods varieties imported by Shanghai while the national number of cotton goods varieties is flat. This is because at a given point in time the CMC port statistics are more disaggregated than the national statistics, so that the increase in product variety at the port level does not necessarily show up.⁴⁴ Once the number of different cotton piece goods imported in Shanghai begins to increase more rapidly, national statistics also record a variety increase (after the year 1885). It is reasonable to assume that the trade of Shanghai brought about the greater variety of goods to China as a whole. More often than not, Shanghai led in terms of importing new foreign goods and other areas of China followed. This is supported by the fact that Shanghai's import varieties declined in 1891 but overall Chinese import varieties did not decline accordingly – the imports of new varieties by other ports, once started, would no longer be affected by whether Shanghai continues to consume it. This trend – Shanghai leading the nation – is not apparent when we look at exports of silk goods. In Figure 10b, the sustained increase in the number of national varieties between 1886 and 1889 comes at a time when the number of varieties exported by Shanghai is not changing much.

⁴⁴ Over time, the national statistics caught up with the port level classifications. The delayed adjustment explains well the fact that in Figure 10a import varieties to Shanghai started to rise around 1884, but national import varieties did not rise accordingly until 1886, exactly the moment when the number of ports rose significantly.

FIGURE 10
 New Goods and New Ports in the Late Nineteenth Century.
 (a) Imports of Cotton Goods; (b) Exports of Silk Goods. Three-Year
 Moving Averages Shown



4. CHINA'S FOREIGN TRADE SINCE 1949

The overall economic system after 1949 was modelled after the Soviet Union and raised savings from the rural sector to benefit industrial production

(Naughton, 2007; Brandt and Rawski, 2008). Foreign trade was generally conducted by state enterprises that had limited incentives to operate efficiently because their position was not contested by competition.⁴⁵ The overall regime adopted by China was geared towards self-sufficiency and import substitution, which as such was not atypical for a relatively poor country during this period. Nevertheless, China's own trade regime together with the trade liberalisations of the GATT⁴⁶ member countries meant that China's role in world trade shrank after 1949. While before the Second World War China accounted for around 2 per cent of the world's imports plus exports (see Table 3 above), estimates suggest that China's share had fallen by the 1950s to around 1.7 per cent and by the 1970s to around 0.7 per cent (Lardy, 1994, p. 2).

Quantitative information on China's foreign trade during the period 1949–79 is very limited. This stands in stark contrast to the treaty port era, but it corresponds to the small net gains that China was expecting to reap from participation in world trade. Foreign trade data were collected, as in most other countries, in the process of administering trade taxes through customs. However, this took place only intermittently. For example, data collection was discontinued during the years of the Cultural Revolution (1966–78). Moreover, no customs data were published until 1984. Estimates of China's foreign trade, both at the aggregate and commodity level, have been made by various analysts based on information from China's trading partners, from statistical sources compiled by the UN, the OECD and other countries.⁴⁷

These data suggest an average annual growth rate for the value of imports between 1952 and 1964 of 4 per cent, while exports grew at 6 per cent.⁴⁸ Trade growth accelerated subsequently, with annual real export growth of 12.9 per cent per year for exports and 12.3 per cent for imports between 1970 and 1978.⁴⁹ For the earlier post-Second World War period, Figures 11a and 11b show major commodities that China imported and exported, respectively.⁵⁰

⁴⁵ The State Planning Commission controlled the amounts that could be imported and exported, and the great majority of commodities were traded through a limited number of firms owned and controlled by the Ministry of Foreign Trade. In addition, there were sharp geographic and production divisions in official regulations governing which firms could access foreign trade. An open trade regime was permitted for firms engaged in export processing, but domestic enterprises functioned under a restricted trade system. Also, private firms engaged in international trade in the transitional period until the mid-1950s (Fukao et al., 2006).

⁴⁶ GATT stands for General Agreement on Tariffs and Trade, founded in 1947 to manage the post-Second World War system of international trade.

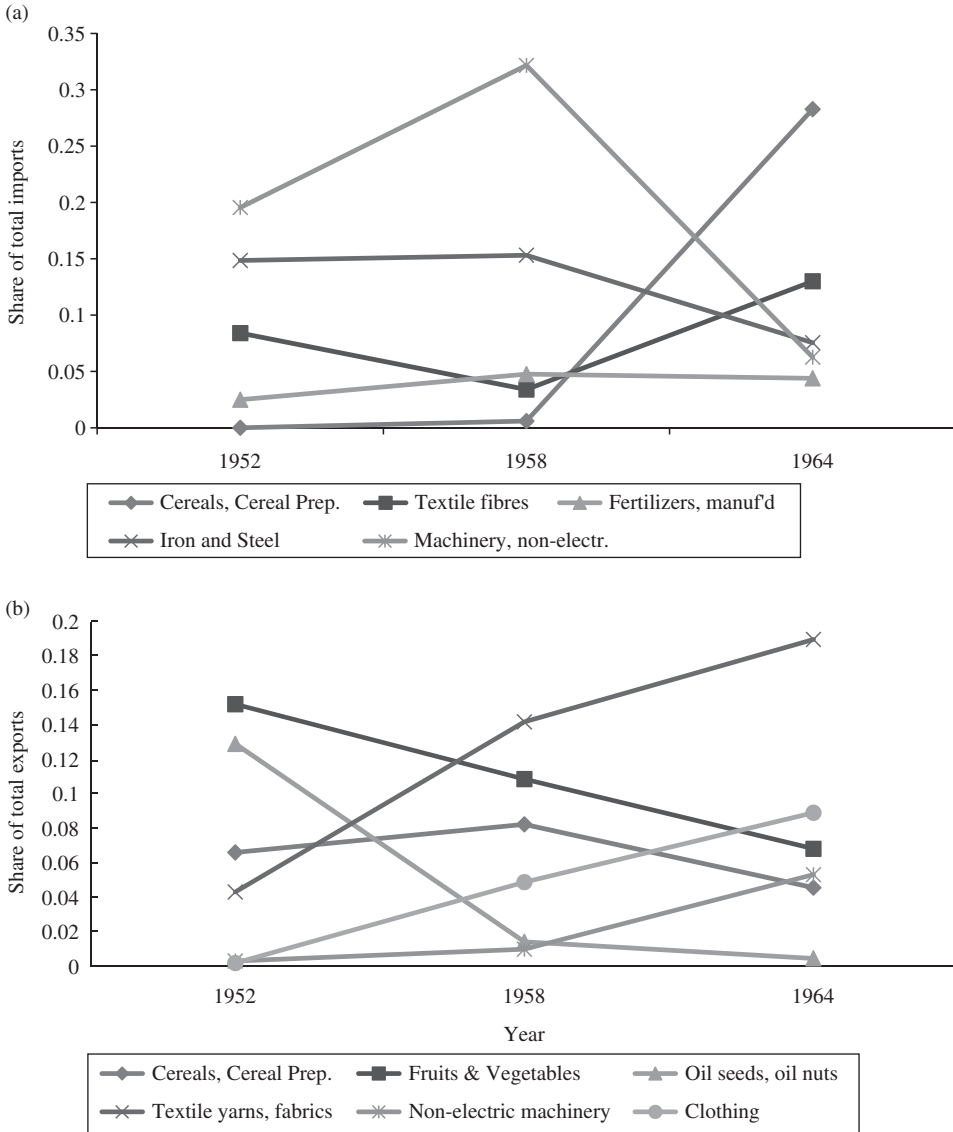
⁴⁷ A number of estimates, including those by the Japanese Institute of Development Economics and the US Central Intelligence Service, are compared in Fukao et al. (2006).

⁴⁸ Nominal values, from Fukao et al. (2006, Tables A1 and A2).

⁴⁹ Nominal value of trade in \$US, from Fukao et al. (2006, Table 2; CIA figures); conversion to real growth using US consumer price indices (CPI) from the US Bureau of Labor Statistics.

⁵⁰ The listed commodities account for about 50 per cent of China's imports and 40 per cent of China's exports.

FIGURE 11
China's Trade by Commodity, 1952 and 1964.
(a) Major Imports; (b) Exports



Over the years 1952–64, produce as well as seeds and nuts became less important export articles, and China switched from being a net exporter to importer of cereals. There is evidence for vertical specialisation in form of an increasing share of textile fibre imports at the same time when the textile fabrics and

clothing export shares are growing. There is also substantial intra-industry trade for some products, for example the nonelectrical machinery sector.

Economic reforms that opened China to trade with the world began in 1978. The oil price shocks and the ensuing world recession together with still high statutory tariff rates throughout the 1980s contributed to a slowdown of China's trade growth between 1981 and 1987, when imports grew at an annual rate of 10.4 per cent and exports with 5.2 per cent on average.⁵¹ Compared to other countries, however, these rates were high. Figure 12 shows China's share in the world's total exports and imports of goods and services from 1970 to 2007.⁵²

China's share in world trade did not change much between 1970 and 1978, while after 1978 China's share increased substantially, consistent with a trade liberalising impact of the 1978 reforms. Other breakpoints in Figure 12 occur around 1990 and around 2000, and in each case the rate at which China gains in terms of her world trade share increased, with China's rate of trade growth increasing overall during this period. Between 1978 and 1990, trade growth is 7.5 per cent, between 1990 and 2000 it comes to 13.5 per cent, and between 2000 and 2007 it is 16.2 per cent.⁵³ An important event that strengthened China's foreign trade ties further is its accession to the World Trade Organisation in 2001.

Despite these impressive increases, only in 1994 did China surpass its share of world trade in the mid-1920s (2.3 per cent, see Table 3). This suggests that success over the last several decades may be less exceptional, and more 'back to normal' than it at times appears. It is thus far unclear what the long-run share of China in the world's foreign trade will be. From Figure 12, we can rule out that it is 2.3 per cent, the value in 1925, because by 2007 China's share has reached almost 7 per cent, with no sign of break in the trend. Indeed, in 2008 China's share in world merchandise trade accounted for close to 8 per cent, ranked third in the world after the United States and Germany, although intermediate goods trade plays a larger role for China than for the other two countries.⁵⁴

Economically speaking, 1925 is implausible because at the time China was only starting to industrialise whereas large parts of Europe, North America and Japan were already much further on their own development paths. The relatively long period of 70 years that it took until China's world trade share reverted back to its 1925 value may also be a sign of the severity of China's hiatus in terms of foreign trade during the period from 1949 until 1978.

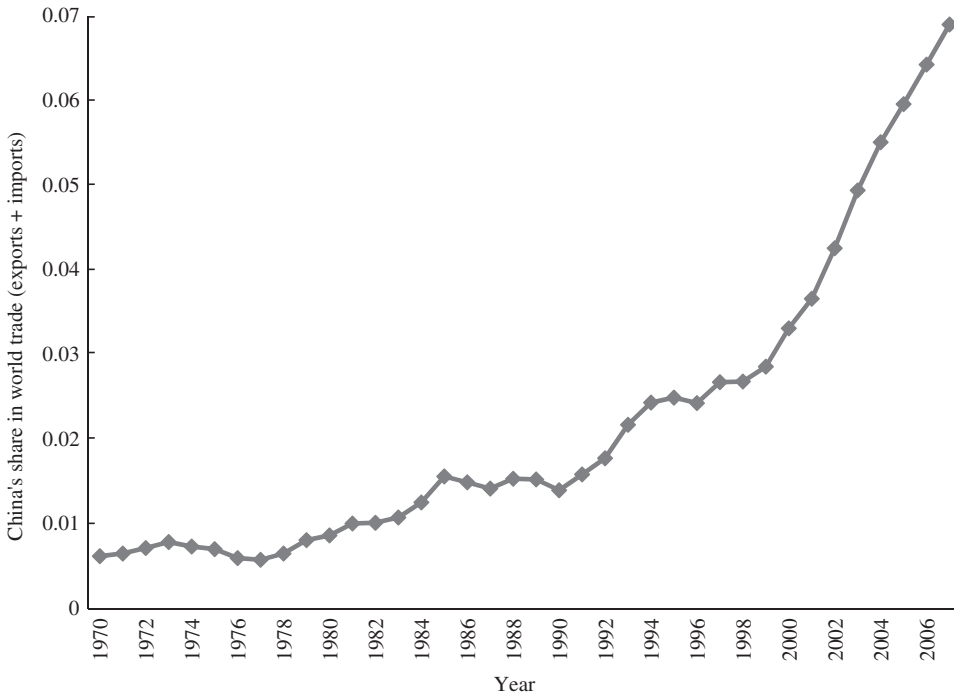
⁵¹ Fukao et al. (2006, Table 2; CIA estimates), combined with US CPI.

⁵² Source: World Development Indicators (WDI), The World Bank.

⁵³ From WDI, exports and imports in constant \$2000.

⁵⁴ See Koopman et al. (2008), Feenstra and Wei (2010). The latter volume also covers in-depth analyses of the causes and consequences of China's very recent trade, which we will not repeat here. The chapters in Feenstra and Wei (2010) examine also China's inward and outward FDI, macroeconomic dimensions, as well as policy aspects.

FIGURE 12
China's Share in World Trade, 1970–2007



5. CONCLUDING DISCUSSION

China's foreign trade over the last 150 years has evolved in some broad cycles. There was first the restrictive stance of the Qing government which was lifted under pressure from Western gunboats in the mid-nineteenth century. After the year 1949, the tide moved against foreign trade again in the form of restrictive policies because of the Cold War, before general poor performance of the centrally-planned economy led to another round of trade opening as part of the post-1978 reforms. Arguably, China was forced to open its economy to foreign trade in both instances. And in both cases, foreign trade increased soon after liberalisation.

Employing rich information on China's foreign trade during the treaty port era from the CMC statistics yields a number of new results. First, there was a strong expansion in product diversity, with many new goods being imported and exported. Second, information on port-level trade enables us to document the regional diffusion of foreign goods through China, which we show was related to the expansion of the port system over time. Third, the importance of

Hong Kong as an intermediary in China's trade has undergone long-term fluctuations, and Hong Kong is also disproportionately used by relatively small traders; these results support the existence of learning in the presence of some fixed costs of trade.

China's trade growth during the last three decades is to some extent the flip side of the severe trade depression during 1949–78. China eclipsed her 1920s high in world trade by the early 1990s, but her trade growth continued. While China's industrialisation is part of the explanation, it is important to understand how far this process has gone and what its sources are. The following will approach this by considering China's trade openness through the lens of history.

Large countries tend to be less open to trade than smaller countries, not least because many goods are available domestically. Figure 13a shows the export-to-GDP ratio, our measure of trade openness, versus the share of the world population for a cross-section of countries in the year 1913. There is a negative and strong relationship between country size and openness (R^2 of 0.74). It may not be surprising that China fits the general pattern in Figure 13a because the nineteenth-century opening of China was a form of colonisation in which Western powers imposed their institutions of trade, thereby triggering institutional change in China that may have made it similar to the mostly Western (-influenced) countries shown in the figure.⁵⁵

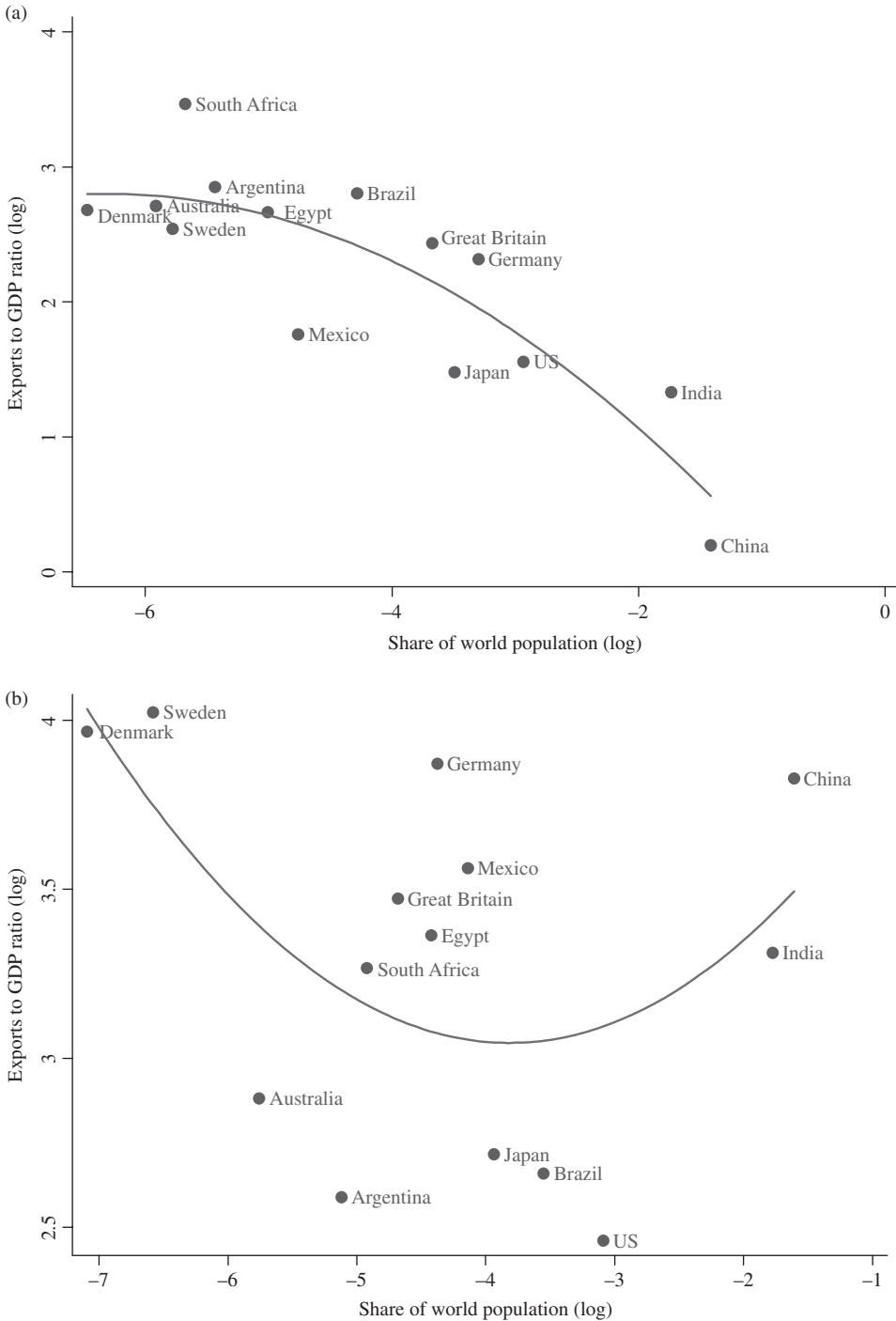
Repeating this analysis for the year 2006, almost three decades after China's most recent trade opening, a quite different picture emerges. Figure 13b shows that China's trade openness now is very high – and given its size, this is a puzzle. One may think of China's substantial processing trade – which raises exports but not GDP – but China is highly open even compared to other countries with higher processing trade, such as Mexico.⁵⁶ China's openness today is closer to Denmark's than to Mexico's, which is remarkable given that there are roughly 250 Chinese for every one Dane in the world.

If China's economy today is extraordinarily open to trade, this constitutes a major reversal from the past. Relatively little is known about how China has transformed itself. In future work, we will employ port-level information on the regional distribution of China's internal and external trade as it was shaped during the treaty port era to better understand the process of integration into the world economy, and how it is related to their economic growth. More generally, we believe that further research on the interaction of the institutional legacy from colonisation and China's foreign trade will shed new light on a number of important development issues.

⁵⁵ See Nunn (2007) and Levchenko (2007) for recent work on the role of institutions for trade.

⁵⁶ Koopman et al. (2008) and Feenstra and Wei (2010) examine China's processing trade.

FIGURE 13
Foreign Trade Openness Versus Share of World Population. (a) Year 1913; (b) Year 2006



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