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EFFECTS OF THE PEOPLE'S REPUBLIC OF CHINA'S STRUCTURAL CHANGE ON THE EXPORTS OF EAST AND SOUTHEAST ASIAN ECONOMIES

Hyun-Hoon Lee, Donghyun Park, and Kwanho Shin

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Hyun-Hoon Lee, Donghyun Park,
and Kwanho Shin

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ABSTRACT

The Chinese economy is slowing down and, at the same time, it is in the midst of a structural transformation from an export- and investment-led economy to a domestic demand- and consumption-led growth paradigm. While there are widespread concerns in the People's Republic of China's (PRC) trading partners about the effect of the PRC's growth slowdown on their exports, the PRC's structural change is also likely to have a significant impact—e.g. the PRC will import fewer machines and more cosmetics. The central objective of our paper is to empirically examine the effect of the PRC's structural transformation on the exports of East and Southeast Asian economies, which have close trade linkages with the PRC. We find that economies which failed to increase the share of consumption goods in their exports to the PRC suffered larger declines in their exports to the PRC. In addition, economies that suffered losses in their shares of the PRC's parts and components imports suffered losses in their shares of the PRC's total imports.

Keywords: People's Republic of China, East Asia, export, global value chain, structural change

JEL codes: F14, F41

I. INTRODUCTION

The People's Republic of China's (PRC) sustained rapid growth and rise as a globally significant economy is perhaps the single biggest trend in the global economic landscape in the last few decades. However, since the global financial crisis, the PRC's growth has slowed down visibly. To some extent, the growth deceleration reflects a natural, normal, and welcome transition to slower but still healthy and more sustainable growth rates. Related to but separately from the deceleration, the Chinese economy is in the midst of an extensive structural transformation from export- and investment-led growth to domestic demand- and consumption-led growth. Another key dimension of the PRC's structural change is its declining role as the end point of global manufacturing value chains—i.e. importing parts and components (P&Cs), and assembling them into final goods for exports.

Most of the world's attention has centered on the spillover effects of the PRC's growth slowdown. There are widespread concerns outside the PRC that the PRC's slower growth will adversely affect exports, all the more so since large and growing exports to the PRC contributed to the growth of many countries around the world prior to the global financial crisis. What is often overlooked but may be equally significant is the impact of the PRC's structural transformation on the exports of other economies. For example, as a result of the PRC's shift from investment-led growth to consumption-led growth, the PRC may import more consumption goods such as cosmetics and less investment goods such as machines. And, the PRC's declining role in global value chain (GVC) as an importer and assembler of P&Cs is likely to reduce its imports of P&Cs.

The central objective of our paper is to empirically examine the effect of the PRC's structural change on the exports of East and Southeast Asian economies, using the UN Comtrade database. These economies have close trade linkages with the PRC, which suggests that the PRC's growth slowdown and structural transformation may have a substantial impact on their exports. Our analysis is largely descriptive, and we will delve into both dimensions of structural change outlined above—(i) shift toward consumption-led growth and (ii) declining role as an assembler of imported P&Cs.

The rest of the paper is organized as follows. Section II briefly reviews some relevant literature. Section III examines the PRC's structural transformation. Using UN's Comtrade data, section IV investigates the effects of the PRC's structural changes on the exports of East and Southeast Asian economies. Further investigation is also conducted in section V, using Organisation for Economic Co-operation and Development–World Trade Organization's (OECD–WTO) Trade in Value Added (TiVA) data. Section VI concludes.

II. LITERATURE REVIEW

The PRC has become the central hub of Factory Asia, closely linked to other East and Southeast Asian economies in GVCs via trade in intermediate inputs. More specifically, the PRC has positioned itself at the end of the value chain, using imported intermediate goods for production of goods for exports rather than for domestic consumption. Regional production networks in East Asia connect relatively more advanced countries such as Japan and the Republic of Korea, which produce P&Cs, with the PRC, which assembles them into final for export to the United States (US) and elsewhere. This trade pattern has been well documented by a number of studies including Arndt and Kierzkowski (2001), Athukorala (2005; 2009; 2010), Kimura and Ando (2005), Ando and Kimura (2009), Kimura (2009), and Escaith and Inomata (2013). However, the PRC's structural transformation from an assembler and exporter of P&Cs to an economy which increasingly produces goods for the domestic market is likely

to reduce its central role in GVC. More precisely, the PRC's declining role as the end point of Factory Asia will diminish its appetite for imported P&Cs. The effect may be especially tangible in East and Southeast Asian economies, which export a lot of P&Cs to the PRC.

Sophisticated P&Cs are produced by countries with more advanced technological capacity. On the other hand, these P&Cs can be assembled using low-cost labor in poorer, technologically less-advanced countries such as the PRC. The PRC's export success has been due largely to its rapid integration into GVCs based on importing P&Cs and assembling them for export. See, for example, Amiti and Freund (2010) and Lee, Park, and Wang (2013) for an anatomy of the PRC's imports. Yet an important dimension of the PRC's structural transformation is its rapid technological upgrading and progress, which is enabling it to produce more high-tech P&Cs, reducing the need for imports. This poses a risk to economies at the high end of GVC—e.g., Japan and the Republic of Korea. In short, both key features of the PRC's structural change—shift from exports to domestic demand and rapid technological catch-up—are eroding the PRC's position as the central hub of Factory Asia and global value chain.

While these production networks are part of GVCs, they have generally been confined to East Asia. Johnson and Noguera (2012a, 2012b, 2014) stress the strong role for proximity in explaining fragmentation patterns and point out the empirical regularity that many GVCs can be more accurately described as “local” production chains.¹ Hence, participation in these production networks has shaped the dynamics of manufacturing industries in many of East and Southeast Asian economies. However, recently, the PRC is experiencing changes in its role in GVCs. More specifically, the PRC is undergoing a structural transformation from an export-led economy to a domestic demand-led economy. The PRC's growing technological capacity has enabled it to produce some advanced P&Cs itself, so it is no longer entirely dependent on imports from neighboring countries.

At the same time, the PRC is rebalancing from investment toward consumption. Investment used to drive the PRC's growth, in some years accounting for nearly two-thirds of gross domestic product (GDP) growth (Prasad, 2009). However, this heavy dependence on investment has resulted in an exceptionally high investment rate, above 50% of GDP. This high level of investment has proven to be costly. As emphasized by Lee, Syed, and Xueyan (2012), the cost of financing such high rates of investment tends to be mispriced, only to be corrected abruptly through crises. They conclude that the current investment rate is 10% of GDP higher than suggested by fundamentals. Qin and Song (2009) also document compelling evidence of pervasive overinvestment in the PRC based on measures of investment efficiency. Recently the Chinese government also emphasized the “new normal” economic paradigm of a growth rate around 7%, and a growth based less on heavy industrial investment and more on domestic consumption.²

III. STRUCTURAL CHANGE IN THE PEOPLE'S REPUBLIC OF CHINA

In this section, we examine two dimensions of the PRC's ongoing structural transformation—(i) the relative contribution of investment and consumption to the PRC's economic growth, and (ii) its changing role in GVCs, in particular the pattern of its trade in intermediate goods.

¹ See also Baldwin and Lopez-Gonzalez (2014), for several testable hypotheses of GVCs.

² See, for example, Green and Stern (2015), for the details of “New Normal” for the PRC's strategy in achieving structural changes.

Based on Chinese aggregate data, we calculate the contributions of consumption, investment, government, and net exports to economic growth, and see if the contribution of investment has been declining while the contributions of other components such as consumption have been rising. Table 1 presents the contribution of private consumption, government consumption, investment, and net export to GDP growth. Table 1 shows that investment has contributed the most since 2001. However, after peaking in 2009 at 80%, it has decreased sharply since then. In contrast, the contribution of consumption has been rising since 2006. In addition, the contribution of total consumption, i.e. sum of private consumption and government consumption, has become higher than 50% and overtook investment since 2011. Overall, the evidence lends some support to the notion of a structural transformation from an investment-led economy to a consumption-led economy.

Table 1: The Composition and Contribution of Consumption, Investment, and Net Exports

(a) Composition

| Year | Share Out of Total GDP | | | |
|------|------------------------|------------|----------------|----------------|
| | Consumption (%) | | Investment (%) | Net Export (%) |
| | Private | Government | | |
| 1985 | 51.6 | 14.3 | 38.1 | -4.0 |
| 1986 | 50.4 | 14.5 | 37.5 | -2.4 |
| 1987 | 49.9 | 13.7 | 36.3 | 0.1 |
| 1988 | 51.2 | 12.8 | 37.0 | -1.0 |
| 1989 | 50.9 | 13.6 | 36.6 | -1.1 |
| 1990 | 48.9 | 13.6 | 34.9 | 2.6 |
| 1991 | 47.5 | 14.9 | 34.8 | 2.7 |
| 1992 | 47.2 | 15.2 | 36.6 | 1.0 |
| 1993 | 44.4 | 14.9 | 42.6 | -1.8 |
| 1994 | 43.5 | 14.7 | 40.5 | 1.3 |
| 1995 | 44.9 | 13.3 | 40.3 | 1.6 |
| 1996 | 45.8 | 13.4 | 38.8 | 2.0 |
| 1997 | 45.2 | 13.7 | 36.7 | 4.3 |
| 1998 | 45.3 | 14.3 | 36.2 | 4.2 |
| 1999 | 46.0 | 15.1 | 36.2 | 2.8 |
| 2000 | 46.4 | 15.9 | 35.3 | 2.4 |
| 2001 | 45.3 | 16.0 | 36.5 | 2.1 |
| 2002 | 44.0 | 15.6 | 37.8 | 2.6 |
| 2003 | 42.2 | 14.7 | 41.0 | 2.2 |
| 2004 | 40.5 | 13.9 | 43.0 | 2.6 |
| 2005 | 38.9 | 14.1 | 41.5 | 5.4 |
| 2006 | 37.1 | 13.7 | 41.7 | 7.5 |
| 2007 | 36.1 | 13.5 | 41.6 | 8.8 |
| 2008 | 35.3 | 13.2 | 43.8 | 7.7 |
| 2009 | 35.4 | 13.1 | 47.2 | 4.3 |
| 2010 | 34.9 | 13.2 | 48.1 | 3.7 |
| 2011 | 35.7 | 13.4 | 48.3 | 2.6 |
| 2012 | 36.0 | 13.5 | 47.7 | 2.8 |
| 2013 | 37.7 | 15.0 | 48.2 | -0.8 |

continued on next page

Table 1 continued

(b) Contribution to GDP Growth

| Year | Real GDP Growth Rate (%) | Contribution | | | |
|------|--------------------------|-----------------|------------|----------------|----------------|
| | | Consumption (%) | | Investment (%) | Net Export (%) |
| | | Private | Government | | |
| 1985 | 13.5 | 55.2 | 11.3 | 55.0 | -21.5 |
| 1986 | 8.8 | 42.8 | 15.5 | 33.8 | 7.8 |
| 1987 | 11.6 | 46.7 | 8.9 | 29.4 | 15.0 |
| 1988 | 11.3 | 56.1 | 9.3 | 39.8 | -5.2 |
| 1989 | 4.1 | 48.7 | 20.2 | 32.9 | -1.8 |
| 1990 | 3.8 | 31.7 | 13.8 | 20.3 | 34.2 |
| 1991 | 9.2 | 39.3 | 22.7 | 34.7 | 3.3 |
| 1992 | 14.2 | 45.7 | 16.6 | 44.5 | -6.9 |
| 1993 | 14.0 | 36.2 | 13.9 | 60.1 | -10.2 |
| 1994 | 13.1 | 41.0 | 14.3 | 34.8 | 9.9 |
| 1995 | 10.9 | 50.2 | 7.5 | 39.5 | 2.8 |
| 1996 | 10.0 | 51.0 | 14.5 | 30.3 | 4.2 |
| 1997 | 9.3 | 39.7 | 16.6 | 15.8 | 27.9 |
| 1998 | 7.8 | 46.9 | 23.9 | 27.6 | 1.6 |
| 1999 | 7.6 | 58.5 | 29.6 | 35.6 | -23.8 |
| 2000 | 8.4 | 51.6 | 25.5 | 24.8 | -1.9 |
| 2001 | 8.3 | 35.1 | 17.6 | 47.9 | -0.6 |
| 2002 | 9.1 | 31.6 | 11.0 | 50.6 | 6.7 |
| 2003 | 10.0 | 28.5 | 7.9 | 64.4 | -0.8 |
| 2004 | 10.1 | 31.1 | 9.4 | 54.2 | 5.2 |
| 2005 | 11.3 | 29.2 | 15.4 | 32.8 | 22.6 |
| 2006 | 12.7 | 27.3 | 11.7 | 42.8 | 18.3 |
| 2007 | 14.2 | 31.3 | 12.2 | 41.0 | 15.4 |
| 2008 | 9.6 | 31.1 | 11.9 | 55.5 | 1.6 |
| 2009 | 9.2 | 36.3 | 12.0 | 79.7 | -28.0 |
| 2010 | 10.4 | 31.8 | 14.2 | 53.9 | 0.1 |
| 2011 | 9.3 | 40.4 | 14.0 | 49.8 | -4.2 |
| 2012 | 7.7 | 38.1 | 14.5 | 43.0 | 4.3 |
| 2013 | 7.8 | 37.7 | 15.0 | 48.2 | -0.8 |

GDP = gross domestic product.

Note: The composition and contributions are based on nominal values. The nominal GDP and its components are collected from China Statistical Yearbook 2014 compiled by National Bureau of Statistics of China, 2013. The real GDP growth rate is also collected from the same source except for the 2013 value that was calculated using data from the International Monetary Fund, World Economic Outlook Database, April 2015.

Sources: China Statistical Yearbook 2014; Authors' calculations based on the International Monetary Fund, World Economic Outlook Database, April 2015.

We now examine how the PRC's structural change has altered the PRC's position in GVCs. When intermediate goods cross borders several times before final assembly, conventional trade statistics, which record the total value of goods passing through customs, exaggerate trade because of double counting. Another problem is that when a country exports, only domestic value added contributes to GDP, which refers to the aggregate value added that a country produces during a specific period of time. In May 2013, the OECD and the WTO released its first version of TiVA database, integrating national input-output tables with trade data.³ Using the OECD-WTO's TiVA database, we examine the PRC's changing position in GVCs and its consequences for the PRC's value-added exports.

One indicator measuring the participation of a country in GVCs is GVC participation rate, which is the sum of backward participation rate (measuring foreign value added included in a country's exports) and forward participation rate (measuring the domestic value added of the country included in the exports of other countries). Table 2 shows the PRC's backward participation rate and forward participation rate. The share of foreign value added in the PRC's exports was 33.3% in 1995 and increased to 37.2% in 2000 and to 37.4% in 2005. However, it decreased to 32.1% in 2011, suggesting that the share of imported intermediate goods in the PRC's exports is decreasing and the PRC's position at the end of the value chain is weakening. In contrast, the PRC's value added embodied in foreign exports has continuously increased from 9.5% in 1995 to 15.6% in 2011, suggesting that the PRC's role as a supplier of intermediate products is rising.

Table 3 shows the backward participation rate and forward participation rate in 2011 not only for the PRC but also for selected Asian economies. With backward participation rates above 40%, Singapore, the Republic of Korea, and Malaysia stand out as economies that use imported inputs intensively in their exports. In contrast, the exports of Indonesia and Japan contain the lowest level (less than 15%) of foreign value added. Interestingly, these two countries' forward participation rate in GVCs (the country's value-added share included in the exports of other countries) is over 30%, the highest level among the Asian economies. On the other hand, the forward participation rate of the PRC and Thailand is a little over 15%, the lowest level among the Asian economies. Thus, even though the PRC's exports of intermediate products have increased, the PRC's role as a supplier of intermediate goods in GVCs remains limited.

Table 4 shows the foreign value-added share of the PRC's exports in different industries. Between 2005 and 2011, the share of foreign value added in the PRC's exports decreased most drastically in the "electrical and optical equipment" industry, from 67% to 53.8%, even though it still remained higher than other industries. The PRC's position at the end of the value chain is also weakening in "transport" (from 38.7% to 30%). Table 5 reports a similar pattern. The share of reexported intermediate imports in the PRC's exports fell between 2005 and 2011, from 59% to 47.2%. The share fell the most in electrical industry (from 74.4% to 63.2%) and in food products (from 64.3% to 53.9%). As of 2011, textiles (88.3%) had the highest share of reexported intermediate imports, followed by electrical and optical equipment (63.2%).

³ OECD. OECD.Stat. <https://stats.oecd.org/index.aspx?queryid=66237>

Table 2: The PRC's Trade in Value Added: Forward and Backward Linkage Indicators, All Industries, 1995–2011
(%)

| Source | People's Republic of China | |
|-----------|--|--|
| Partner | World | |
| Indicator | FVADEX_SH: Backward participation in GVCs: Foreign VA embodied in exports, as % of total gross exports | DVAFEX_SH: Forward participation in GVCs: Domestic VA embodied in foreign exports, as % of total gross exports |
| Year | | |
| 1995 | 33.3 | 9.5 |
| 2000 | 37.2 | 10.8 |
| 2005 | 37.4 | 13.3 |
| 2011 | 32.1 | 15.6 |

GVC = global value chain, PRC = People's Republic of China, VA = value added.

Source: OECD–WTO's Trade in Value Added (TiVA) Database. <https://stats.oecd.org/index.aspx?queryid=66237>

Table 3: Asian Economies' Trade in Value Added: Forward and Backward Linkage Indicators, All Industries, 2011
(%)

| Year | 2011 | |
|-------------------|--|--|
| Industry | CTOTAL: TOTAL | |
| Partner | World | |
| Indicator | FVADEX_SH: Backward participation in GVCs: Foreign VA embodied in exports, as % of total gross exports | DVAFEX_SH: Forward participation in GVCs: Domestic VA embodied in foreign exports, as % of total gross exports |
| Economy | | |
| PRC | 32.1 | 15.6 |
| Japan | 14.6 | 32.8 |
| Republic of Korea | 41.6 | 20.5 |
| Hong Kong, China | 20.4 | 23.2 |
| India | 24 | 19.1 |
| Indonesia | 12 | 31.5 |
| Malaysia | 40.6 | 19.8 |
| Philippines | 23.5 | 27.4 |
| Singapore | 41.7 | 19.9 |
| Thailand | 39 | 15.4 |
| Viet Nam | 36.3 | 16 |

GVC = global value chain, PRC = People's Republic of China, VA = value added.

Source: OECD–WTO's Trade in Value Added (TiVA) Database. <https://stats.oecd.org/index.aspx?queryid=66237>

Table 4: Foreign Value-Added Share of the PRC's Exports, Different Industries
(%)

| Indicator | EXGR_FVASH: Foreign value-added share of gross exports | | | |
|--|--|------|------|------|
| | 1995 | 2000 | 2005 | 2011 |
| Industry | | | | |
| CTOTAL: TOTAL | 33.4 | 37.3 | 37.4 | 32.2 |
| C01T05: Agriculture, hunting, forestry and fishing | 7.0 | 7.8 | 10.1 | 10.2 |
| C10T14: Mining and quarrying | 35.0 | 30.2 | 26.6 | 26.2 |
| C15T37: Total Manufactures | 48.1 | 50.6 | 48.0 | 40.1 |
| C15T16: Food products, beverages and tobacco | 38.9 | 35.3 | 25.2 | 25.4 |
| C17T19: Textiles, textile products, leather and footwear | 43.3 | 38.2 | 30.9 | 26.5 |
| C20T22: Wood, paper, paper products, printing and publishing | 50.2 | 51.2 | 37.3 | 42.0 |
| C23T26: Chemicals and nonmetallic mineral products | 49.6 | 49.9 | 43.6 | 41.4 |
| C27T28: Basic metals and fabricated metal products | 34.4 | 38.6 | 33.2 | 32.5 |
| C29: Machinery and equipment, nec | 40.1 | 39.0 | 34.8 | 30.4 |
| C30T33: Electrical and optical equipment | 72.6 | 75.3 | 67.0 | 53.8 |
| C34T35: Transport equipment | 46.9 | 42.6 | 38.7 | 30.0 |
| C36T37: Manufacturing nec; recycling | 28.1 | 25.9 | 25.9 | 22.3 |
| C40T41: Electricity, gas and water supply | 4.2 | 6.0 | 7.8 | 9.3 |
| C45: Construction | 5.9 | 7.5 | 11.4 | 12.1 |
| C50T74: Total Business Sector Services | 3.3 | 5.0 | 5.8 | 6.3 |
| C75T95: Community, social and personal services | 4.4 | 5.5 | 7.6 | 7.7 |

nec = not elsewhere classified, PRC = People's Republic of China.

Source: OECD-WTO's Trade in Value Added (TiVA) Database. <https://stats.oecd.org/index.aspx?queryid=66237>**Table 5: Reexported Intermediate Imports of the PRC, Different Industries**
(%)

| | Indicator | IMGRINT_REII: Reexported intermediate imports as % of intermediate imports | | | |
|--|-----------------|--|------|------|------|
| | Country Partner | People's Republic of China | | | |
| | Unit | World | | | |
| | Time | Percentage | | | |
| Industry | | 1995 | 2000 | 2005 | 2011 |
| CTOTAL: TOTAL | | 58.3 | 57.8 | 59.0 | 47.2 |
| C01T05: Agriculture, hunting, forestry and fishing | | 32.2 | 37.4 | 41.2 | 34.8 |
| C10T14: Mining and quarrying | | 26.1 | 27.4 | 33.4 | 27.5 |
| C15T37: Total Manufactures | | 62.1 | 62.2 | 64.3 | 53.9 |
| C15T16: Food products, beverages and tobacco | | 54.8 | 50.8 | 45.9 | 36.3 |
| C17T19: Textiles, textile products, leather and footwear | | 93.8 | 93.6 | 92.1 | 88.3 |
| C20T22: Wood, paper, paper products, printing and publishing | | 67.8 | 65.9 | 57.0 | 49.3 |
| C23T26: Chemicals and nonmetallic mineral products | | 58.2 | 55.4 | 55.4 | 48.3 |
| C27T28: Basic metals and fabricated metal products | | 65.3 | 69.1 | 64.1 | 54.3 |
| C29: Machinery and equipment, nec | | 49.8 | 56.8 | 56.0 | 48.1 |
| C30T33: Electrical and optical equipment | | 67.3 | 63.1 | 72.4 | 63.2 |
| C34T35: Transport equipment | | 28.0 | 29.8 | 34.8 | 26.5 |
| C36T37: Manufacturing nec; recycling | | 49.9 | 53.4 | 52.0 | 41.9 |
| C40T41: Electricity, gas and water supply | | 31.4 | 26.6 | 36.9 | 35.1 |
| C45: Construction | | 41.7 | 50.7 | 50.7 | 38.7 |
| C50T74: Total Business Sector Services | | 56.5 | 57.2 | 57.7 | 48.7 |
| C75T95: Community, social and personal services | | 47.6 | 52.6 | 46.9 | 42.5 |

nec = not elsewhere classified, PRC = People's Republic of China.

Source: OECD-WTO's Trade in Value Added (TiVA) Database. <https://stats.oecd.org/index.aspx?queryid=66237>

IV. IMPACT OF THE PEOPLE'S REPUBLIC OF CHINA'S STRUCTURAL CHANGE ON THE EXPORTS OF EAST AND SOUTHEAST ASIAN ECONOMIES

In section III, we provided some evidence that the PRC is indeed undergoing a structural transformation. In this section, we investigate the effect of the PRC's structural transformation on the exports of East and Southeast Asian economies. A significant dimension of the PRC's structural transformation is a tangible change in the structure of its imports. The import requirements of an investment- and export-led economy will differ from those of a consumption- and domestic demand-led economy. Similarly, the shift from the world's assembly factory in GVCs to a technologically upgraded economy, which depends more on domestic sources of growth, will alter the composition of imports. More specifically, we can expect the shares of investment goods such as machines and the shares of P&Cs in the PRC's imports to decline, and the share of consumption goods to correspondingly rise.

In this section, we report and discuss the main findings from our analysis of UN Comtrade data. Figure 1 plots the share of consumption goods and capital goods from 1995 to 2014 in the PRC's total imports—panel (a) is the share of consumption goods and panel (b) is the share of capital goods. The UN International Trade Statistics Knowledgebase suggests that trade goods can be reclassified into capital goods, intermediate goods, and consumption goods.⁴ The share of consumption goods in panel (a) is obtained by adding the PRC's total imports reported by the UN Comtrade Database in categories 112, 122, 522, 61, 62, and 63 of the Broad Economic Categories (BEC) codes. For a robust check, we also added category 51 to consumption goods.⁵ The share of capital goods in panel (b) is obtained by adding imports reported by the same source in categories 41 and 521 of the BEC codes. Panel (a) shows a U-shaped pattern in which the share of consumption goods in the PRC's total imports decreased until 2004 but then started to increase from 2005. If category 51 is added, the share of consumption goods also takes a U-shaped pattern, but the minimum occurred in 2005. Note that these minimum years coincide with the time when the contribution of consumption started to increase, in Table 1. As the contribution of consumption to growth started to increase, the share of consumption goods in total imports started to rise as well.

On the other hand, trends in the share of capital goods in imports are more complicated. Capital goods share decreased until 2000 and started to increase from 2001 to 2003 and then started to decrease again from 2004. While the contribution of investment to growth started to decrease in 2010, capital goods share started to decrease much earlier.

The PRC's position in GVCs has been also changing. As noted in section III, the value added of the PRC's exports has recently been increasing, reflecting the declining role of the PRC as the hub of Factory Asia. Figure 2 plots individual economies' consumption and capital goods shares in the PRC's imports. We include eight developing East and Southeast Asian economies which accounted for more than 1% of the PRC's total imports in 2014. Then we add Japan and India.

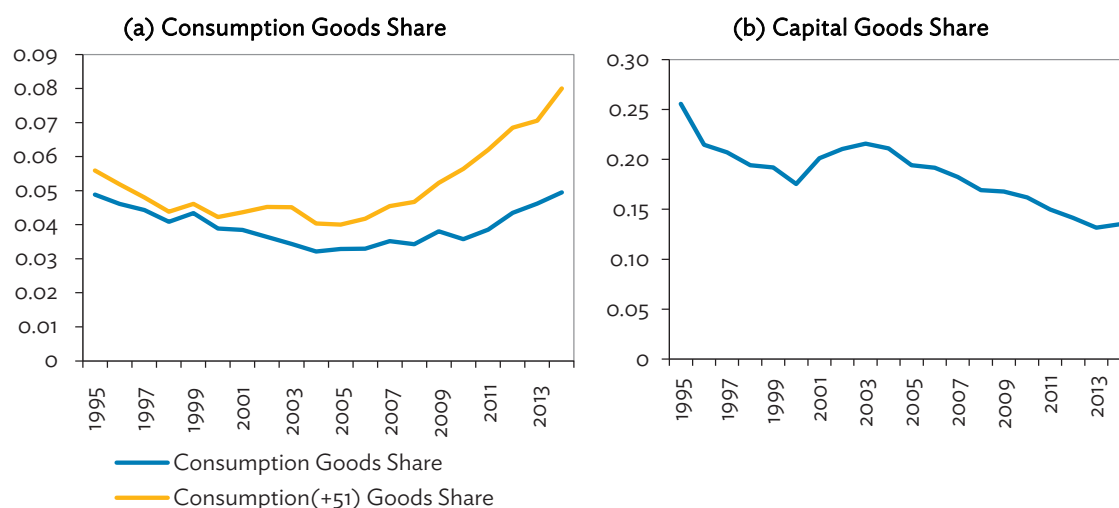
Panel (a) in Figure 2 confirms that consumption goods share is generally U-shaped even for individual economies. Interestingly, Viet Nam shows the most dramatic U-shaped pattern. Except for Singapore, consumption goods share has been increasing for every individual country since 2010 or

⁴ See <http://unstats.un.org/unsd/trade/KB/Knowledgebase/Intermediate-Goods-in-Trade-Statistics>

⁵ Category 51 is "passenger motor cars," but it is not classified as any of capital, intermediate or consumption goods by the UN knowledgebase.

2011. Panel (b) in Figure 2 also shows that the capital goods share of individual economies exhibits a similar pattern as the capital goods share of aggregate imports. Capital goods share has been decreasing for almost every country since 2011. Notable exceptions are Viet Nam and India.

Figure 1: Consumption and Capital Goods Shares in the PRC's Total Imports

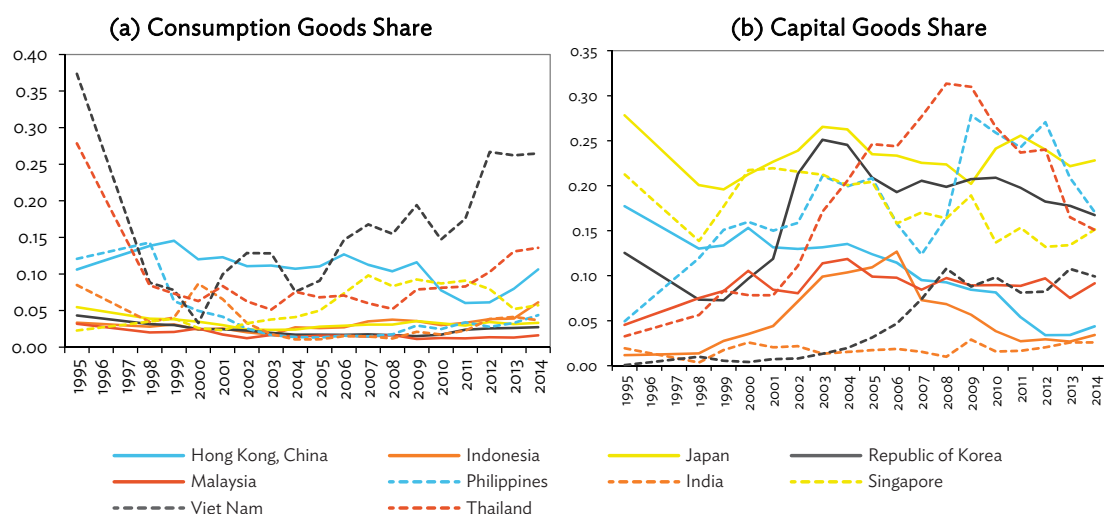


PRC = People's Republic of China.

Note: The share of consumption goods in panel (a) is obtained by adding the PRC's total imports reported by the UN Comtrade Database in categories 112, 122, 522, 61, 62, and 63 of the BEC codes for the solid line and 51 as well for the dashed line. The share of capital goods in panel (b) is obtained by adding imports reported by the same source in categories 41 and 521 of the BEC codes.

Source: Authors' calculations based on the UN Comtrade Database. <http://comtrade.un.org/>

Figure 2: Individual Economies' Consumption and Capital Goods Shares in Imports by the PRC



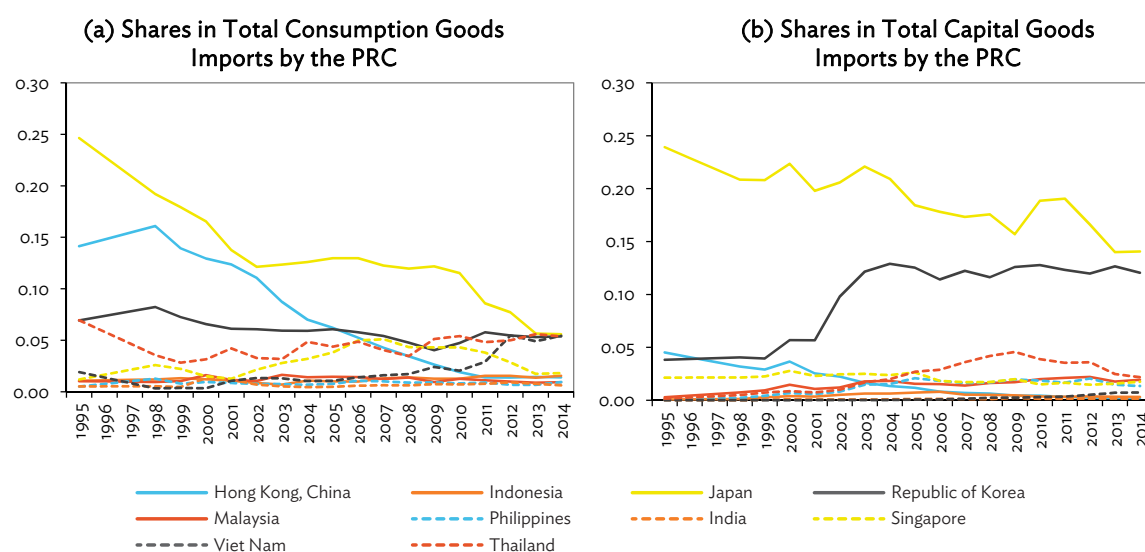
PRC = People's Republic of China.

Note: The share of consumption goods in panel (a) is obtained by adding the PRC's imports from individual economies reported by the UN Comtrade Database in categories 112, 122, 522, 61, 62, and 63 of the BEC codes. The share of capital goods in panel (b) is obtained by adding imports from individual economies reported by the same source in categories 41 and 521 of the BEC codes.

Source: Authors' calculations based on the UN Comtrade Database. <http://comtrade.un.org/>

Figure 3 illustrates individual economies' shares in the PRC's consumption goods imports (panel a) and capital goods imports (panel b) by the PRC. According to panel (a), at the beginning of the sample period, the two biggest exporters of consumption goods to the PRC were Japan and Malaysia, and the next two biggest were the Republic of Korea and Thailand. However, the shares of Japan and Malaysia declined drastically. In contrast, the shares of the Republic of Korea and Thailand remained stable during the entire sample period. The share of Viet Nam increased very rapidly in the recent period. The shares of Japan, the Republic of Korea, Thailand, and Viet Nam, the four biggest exporters of consumption goods to the PRC, became almost identical in 2014. On the other hand, in panel (b), the share of Japan in the PRC's capital goods imports did not decrease much, and the share of the Republic of Korea increased quite rapidly. In 2014, the two main exporters of capital goods to the PRC are Japan and the Republic of Korea, advanced countries that are able to produce high-tech capital goods.

Figure 3: Individual Economies' Shares in Total Consumption and Capital Goods Imports by the PRC



PRC = People's Republic of China.

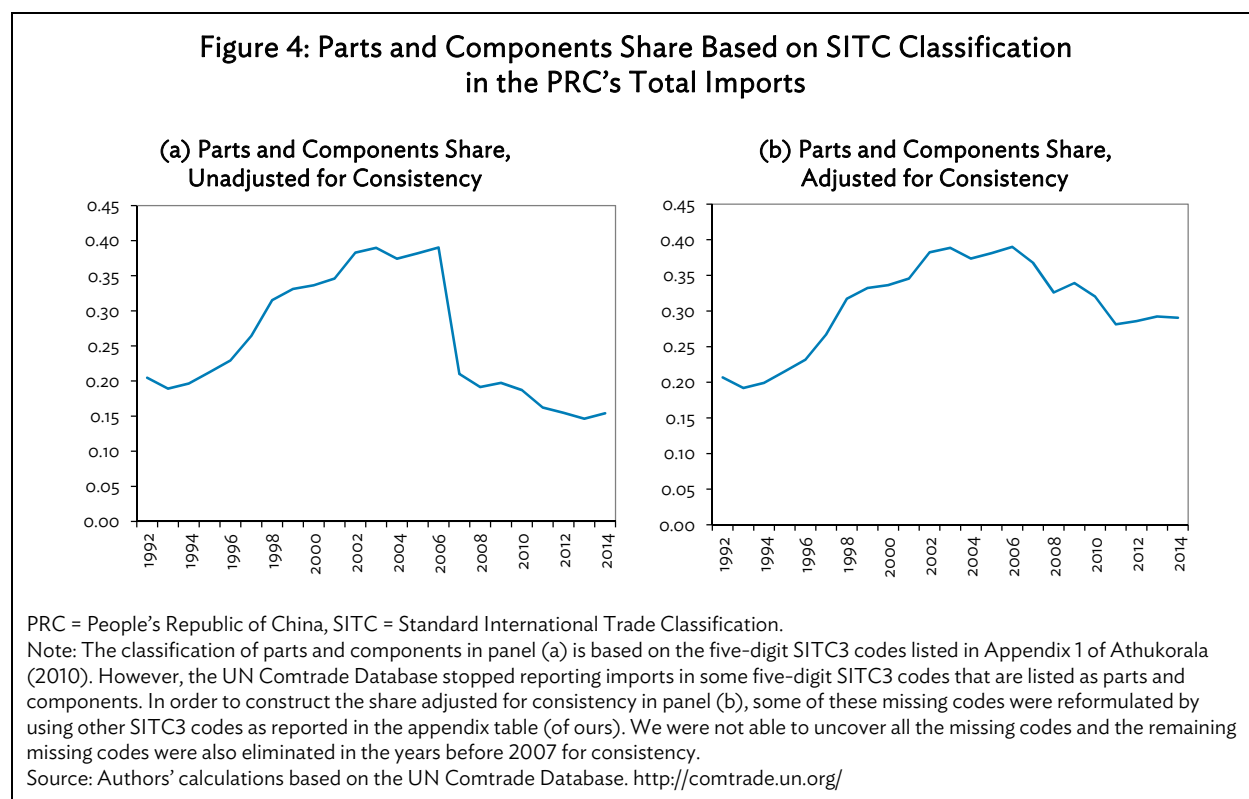
Note: Panel (a) shows individual economies' shares in the PRC's consumption goods imports and panel (b), individual economies' shares in the PRC's capital goods imports by the PRC. The consumption goods in panel (a) are obtained by adding the PRC's imports reported by the UN Comtrade Database in categories 112, 122, 522, 61, 62, and 63 of the BEC codes. The capital goods in panel (b) are obtained by adding the PRC's imports by the same source in categories 41 and 521 of the BEC codes.

Source: Authors' calculations based on the UN Comtrade Database. <http://comtrade.un.org/>

Figure 4 shows the share of P&Cs in the PRC's total imports from 1992 to 2014. The classification of P&Cs in panel (a) is based on the five-digit Standard International Trade Classification, Revision 3 (SITC3) codes listed in Appendix 1 of Athukorala (2010). However, the UN Comtrade Database stopped reporting imports of some five-digit SITC3 codes that are widely regarded as P&Cs. We believe that this omission is the main reason why P&Cs share drastically dropped in 2007.

Panel (a) shows that P&Cs share in the PRC's total imports is hump shaped and reaches its peak in 2006. Since the omission of some five-digit SITC3 codes is common during the entire period from 2007 to 2014, we can compare the shares within the period and safely conclude that the share of

P&Cs has generally been decreasing since 2007. However, since there is inconsistency in P&Cs classifications between the period before 2007 and the period since 2007, we cannot definitively conclude that the peak is 2006. If these five-digit SITC3 codes were included, the share may have still increased in 2007.



In order to construct a P&Cs share that is consistent between the two periods, some of these missing codes were reformulated by using other SITC3 codes, as explained in the appendix table. For example, if SITC3 code 76491 is missing, since SITC3 four-digit code 7649 is the sum of SITC3 five-digit codes, 76491, 76492, 76493, and 76499, we could estimate SITC3 code 76491 by subtracting SITC3 codes, 76492, 76493 and 7649 from SITC3 code 7649. We tried to estimate as many SITC3 codes as possible but were not able to identify all the missing codes. Therefore, for the sake of consistency, we dropped the missing codes altogether for years before and after 2007.

The P&Cs share adjusted through this process is reported in panel (b) of Figure 4. Panel (b) shows that P&Cs share indeed peaked in 2006. While the P&Cs share for the period since 2007 increased and the P&Cs share for the period before 2007 decreased, the P&Cs share in 2007 is still lower than that of 2006. Our evidence clearly suggests that the role of the PRC as the central hub of Factory Asia has been declining since 2006.

In order to check for the robustness of the results, we calculate P&Cs share using an alternative classification based on BEC. The BEC system classifies trade goods into seven broad categories: (i) food and beverages, (ii) industrial supplies not elsewhere specified, (iii) fuels and lubricants, (iv) Capital goods (except transport equipment), and parts and accessories thereof, (v) transport equipment and parts and accessories thereof, (vi) consumer goods not elsewhere specified, and (vii) goods not elsewhere specified.

According to the BEC classification system, four subcategories—(22) processed under category (2), (41) capital goods (except transport equipment), (42) parts and accessories under category (4), and (53) parts and accessories under category (5)—are plausible candidates for P&Cs. In order to check if the traded goods belonging to these subcategories are indeed P&Cs under the SITC3 system, we converted each subcategory into SITC3 codes. The traded goods under subcategory (42) are converted to 202 different SITC3 codes, and the results show that all of them are indeed P&Cs even under the SITC3 system. The traded goods under category (53) are converted to 58 different SITC3 codes and, among them, 46 categories are P&Cs and the remaining 12 categories are not. On the other hand, most codes converted from the subcategory (22) or (41) are not P&Cs. In the case of subcategory (22), only 63 out of 1,298 codes are P&Cs. For subcategory 41, only 38 out of 435 codes are P&Cs. These results suggest that the most reasonable classification is to include only subcategories (42) and (53) as P&Cs.

Figure 5 shows that even if P&Cs are classified using the BEC, the P&Cs share of the PRC's total imports peaked in 2006. The solid line is the P&Cs share of the PRC's imports calculated using the BEC code (42) only. The dashed line is the P&Cs share of the PRC's total imports when the subcategory (53) is added as P&Cs. We can see that there is not much difference between the two lines. More importantly, their trends are very similar to those of the P&Cs share based on the SITC3, adjusted for consistency. The dotted line, the P&Cs share based on the SITC3 (the same line as in Figure 1.b), is placed above the solid line (and the dashed line), reflecting that the former contains more trade goods as P&Cs. However, the patterns of the three lines, particularly after 2005, are almost identical.

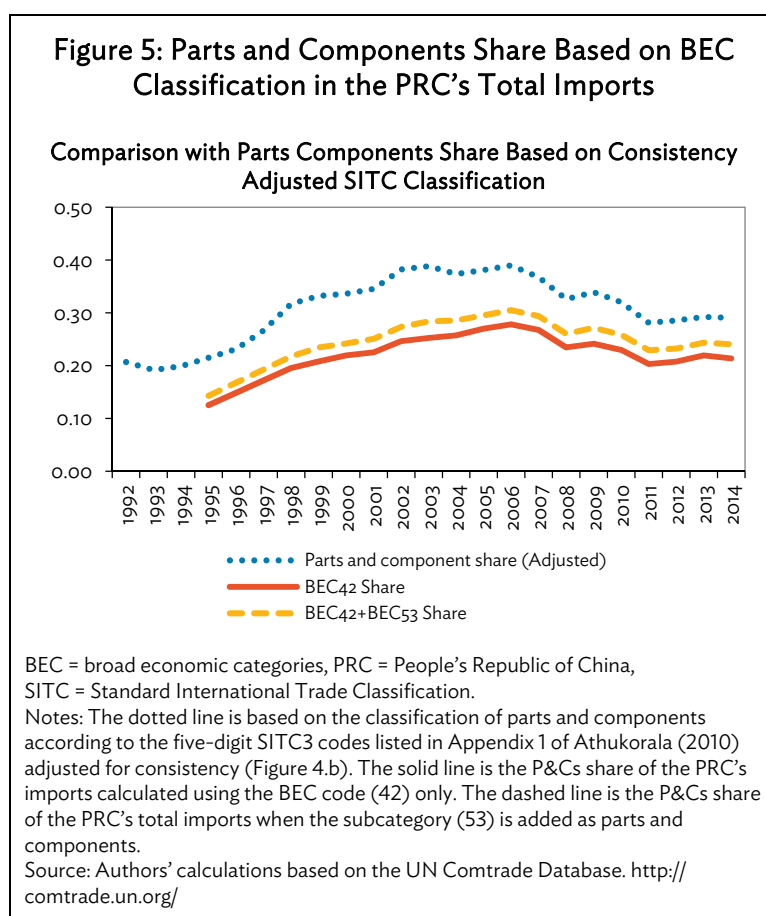


Figure 6 plots the share of P&Cs in the PRC's total imports from individual economies. Again, we can see that even for individual economies, P&Cs share is generally hump shaped. Notable exceptions are Viet Nam, the Republic of Korea, and India. Their P&Cs share continued to increase even after 2008.

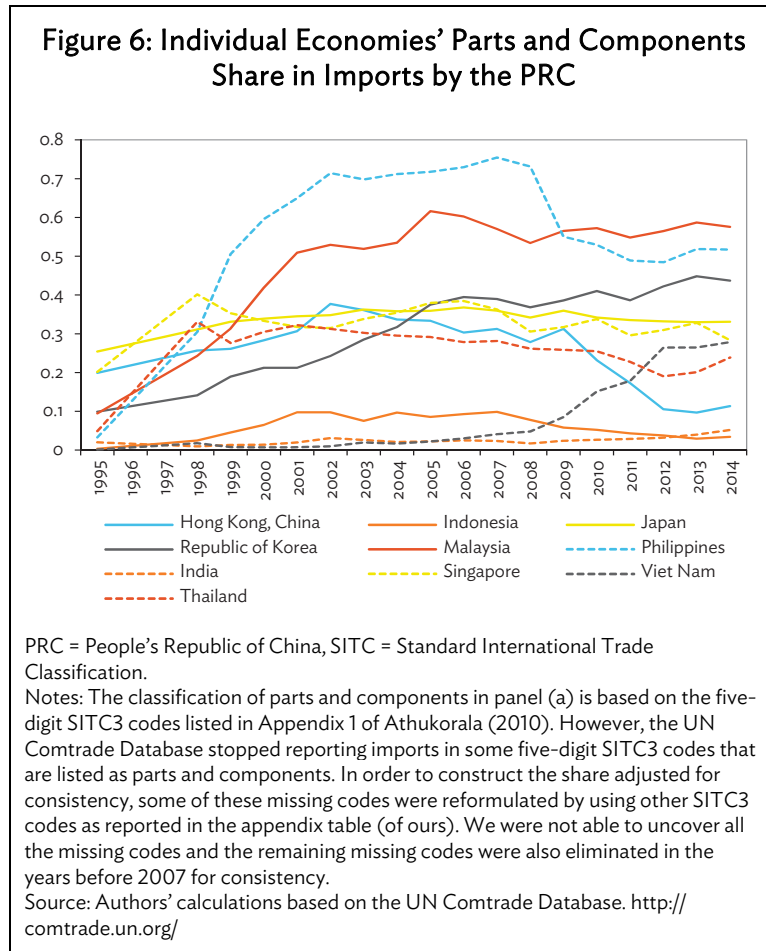


Figure 7 shows the shares of individual economies in the PRC's total P&Cs imports. The three major sources of the PRC P&Cs imports are Japan, the Republic of Korea, and Malaysia, which are relatively advanced producers of high-tech P&Cs. Interestingly, the share of Japan has been declining, while that of the Republic of Korea has been rising. The Republic of Korea recently replaced Japan as the top exporter of P&Cs to the PRC. Malaysia did not experience much change in its share, and it remains the third biggest exporter of P&Cs to the PRC. While the share of P&Cs in the total exports of the Philippines to the PRC is relatively high (Figure 6), its share in the PRC's total P&Cs imports is relatively low (Figure 7).

What are the implications of the PRC's changing import patterns for the exports of the PRC's neighbors? Intuitively, the conventional wisdom of Factory Asia—the PRC's neighbors export P&Cs to the PRC, which assembles them and reexports the assembled final goods to the US and other markets—suggests that the impact will be negative. As the PRC becomes less of a global assembler and more of an inward-looking economy, we can expect its neighbors to export less P&Cs to the PRC, and possibly less export overall. Furthermore, as the PRC shifts from an investment-led economy to a consumption-led economy, we can expect neighboring countries to export less capital goods and

possibly less overall if their exports are mainly capital goods. In contrast, countries that are able to expand exports of consumption goods to the PRC will fare better.

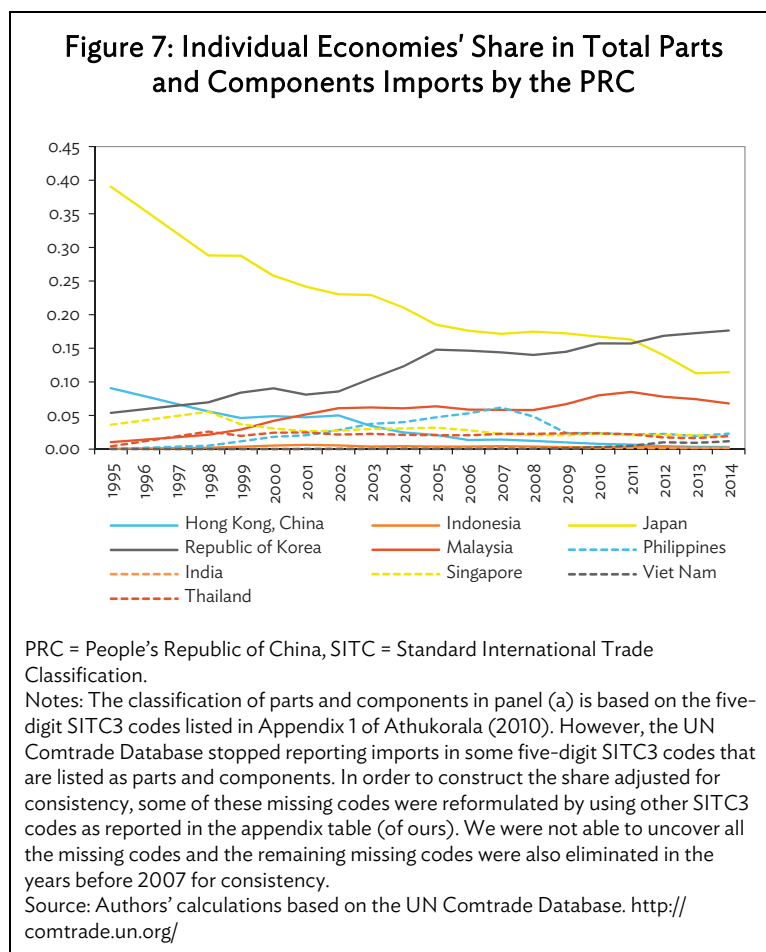
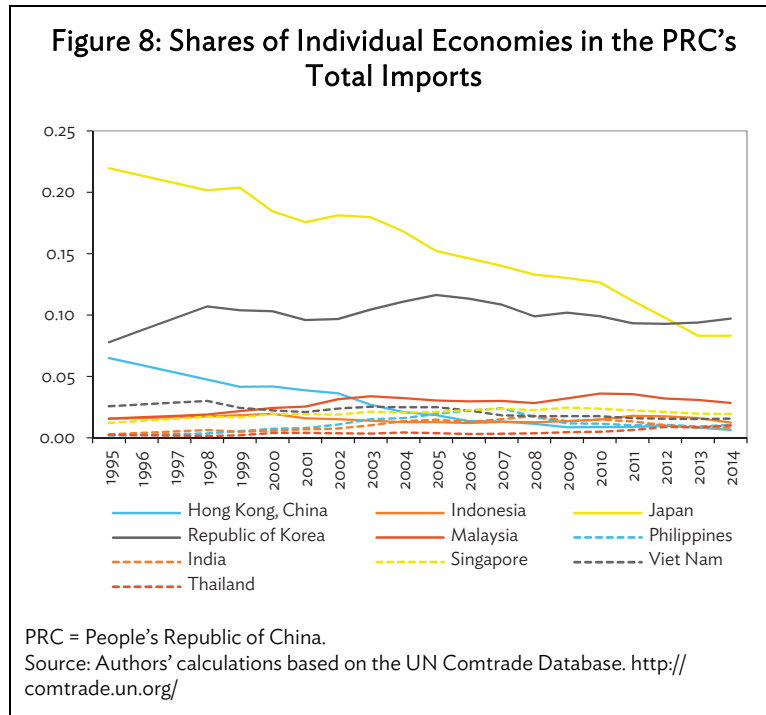


Figure 8 plots the shares of the individual economies in the PRC's total imports from 1995 to 2014. In 1995, the PRC's biggest trading partners were Japan; the Republic of Korea; and Hong Kong, China. Japan and Hong Kong, China however, have been losing their shares since the beginning of the sample period. The Republic of Korea increased its share until 2005 but since then it has also been losing ground. There is evidence that other neighboring economies' shares are also shrinking in more recent periods. These trends suggest that the PRC's structural transformation may be harming the exports of East and Southeast Asian economies.

In order to more directly gauge the impact of the PRC's structural transformations on the exports of neighboring countries, we investigate the relationship between a country's export composition and its total exports to the PRC. We expect that a country that does not adjust to the PRC's structural change would suffer a bigger loss of exports to the PRC. More specifically, if a country failed to increase the share of consumption goods share in its exports to the PRC, its overall exports to the PRC are more likely to decrease. We test this hypothesis by regressing the change in the share of consumption goods in a country's total exports to the PRC on its share in the PRC's total imports. We expect that the larger the decline (rise) in the share of consumption goods in a country's total exports to the PRC, the larger the decline (rise) in its share in the PRC's total imports. Since the share of

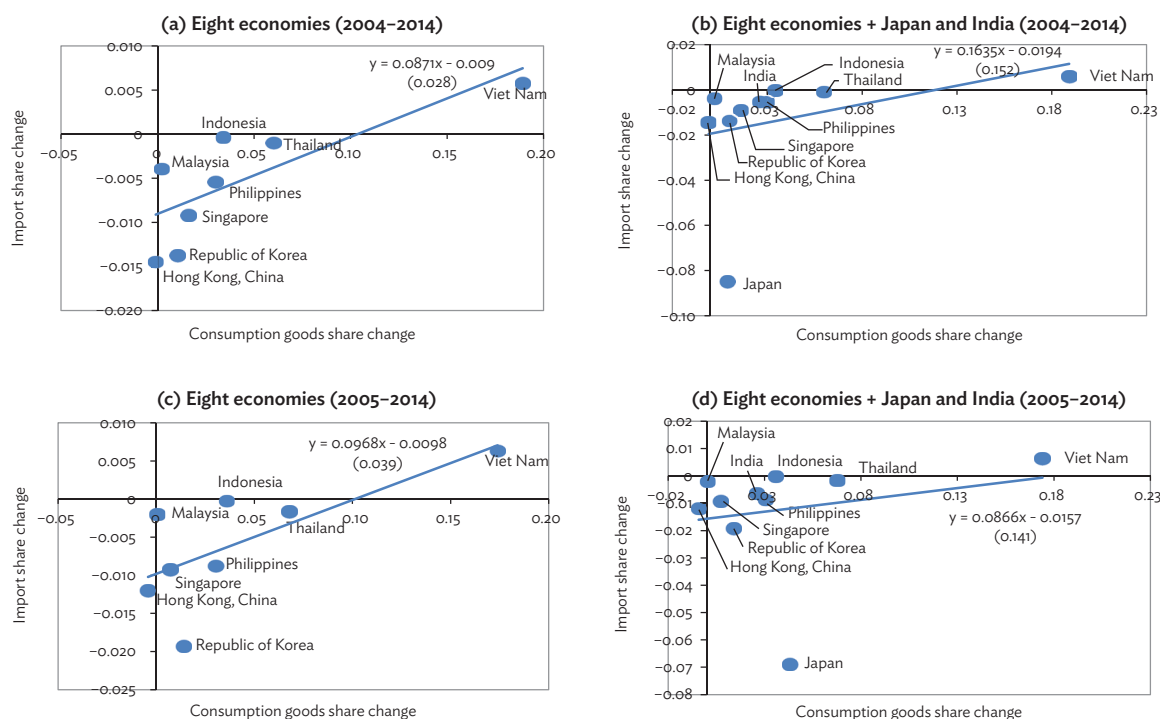
consumption goods in the PRC's total imports bottomed in 2004, we divide the sample period into two subsample periods, 1995–2004 and 2004–2014.



For major Asian economies, Figure 9 plots the change in import share against the change in consumption goods share between 2004 and 2014. During this time, the consumption goods share in the PRC's total imports increased. Panel (a) includes eight major developing East and Southeast Asian economies, each of which accounts for more than 1% of the PRC's total imports in 2014. We added Japan and India in panel (b).

Figure 9.a confirms that the changing structure of the PRC's imports can adversely affect the PRC's neighboring economies. In particular, the economies that were not able to increase consumption goods share suffer a relatively bigger decline in exports to the PRC. As shown in Figure 3.a, since the shares of most East Asian economies in the PRC's total consumption imports are not increasing, the PRC's transformation toward a more consumption-oriented economy adversely affects these economies. Adding Japan and India does not change the result in the sense that the fitted line for the relationship remains positively sloped. Japan could be considered an outlier since it experienced a huge decline in import share even though it experienced a small increase in the consumption goods share. Except for Japan, all other economies are located quite close to the fitted line. As shown in Figures 9.c and 9.d, adding category 51 to consumption goods hardly change the results.

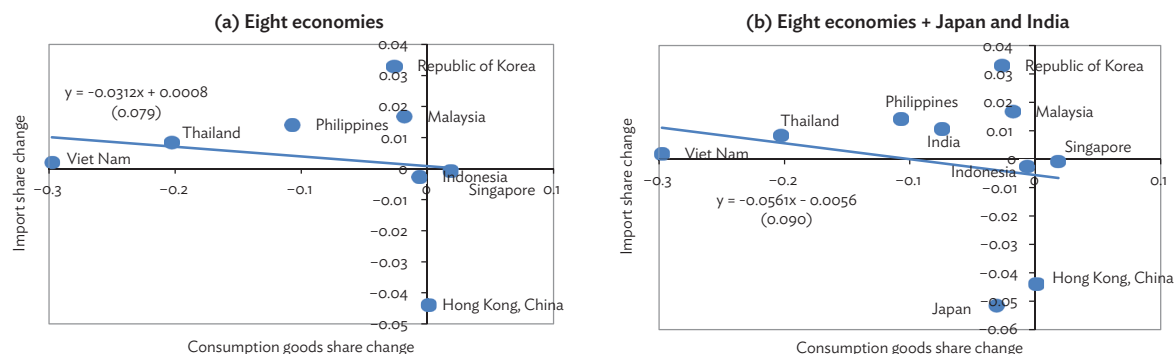
Figure 10 plots the same relationship for the period from 1995 to 2004, the subsample period during which the share of consumption goods share in the PRC's total imports declined. We do not observe any clear pattern in the relationship between the two changes either in panel (a) or in panel (b) (eight economies plus Japan and India).

Figure 9: Change in Consumption Goods Share and Change in Import Share

BEC = broad economic categories, PRC = People's Republic of China.

Notes: Eight developing East and Southeast Asian economies are selected if an economy accounted for more than 1% of the PRC's total imports in 2014. The selected economies are Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; Thailand; and Viet Nam. The horizontal axis is individual economy's change in consumption goods share between 2004 and 2014. The vertical axis is individual economy's change in import share during the same period. In Figures a and b, consumption goods includes categories 112, 122, 522, 61, 62, and 63 of the BEC codes, and, in Figures c and d, consumption goods include category 51 as well. Numbers in parentheses are standard errors.

Source: Authors' calculations based on the UN Comtrade Database. <http://comtrade.un.org/>

Figure 10: Change in Consumption Goods Share and Change in Import Share, 1995–2004

PRC = People's Republic of China.

Notes: Eight developing East and Southeast Asian economies are selected if an economy accounted for more than 1% of the PRC's total imports in 2014. The selected economies are Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; Thailand; and Viet Nam. The horizontal axis is individual economy's change in consumption goods share between 1995 and 2004. The vertical axis is individual economy's change in import share during the same period. Numbers in parentheses are standard errors.

Source: Authors' calculations based on the UN Comtrade Database. <http://comtrade.un.org/>

In Figure 11, we plot the change in import share against the change in the capital goods share between 2004 and 2014 for major Asian economies. During this period, the share of capital goods in the PRC's imports declined, and hence if a country experienced a larger contraction in the share of capital goods in its exports to the PRC, it is likely to suffer a larger decline in its overall exports to the PRC. Both panel (a) (eight economies) and panel (b) (eight economies plus Japan and India) clearly show that the larger the fall (rise) in the share of capital goods in a country's total exports to the PRC, the larger the fall (rise) in its share of the PRC's total imports. Again, Japan seems to be an outlier in panel (b). While Japan experienced only a small decline in its capital goods share, it suffered the biggest decline in import share. Figure 12 plots the same relationship between 1995 and 2004. The economies that experienced a larger increase in the share of capital goods in their exports to the PRC gained a larger share of the PRC's total imports.

Now we switch our attention to another important aspect of the PRC's structural transformations, namely the declining role of the PRC as the central hub of Factory Asia. We already showed that the share of P&Cs in most Asian economies' exports to the PRC, along with the share of P&Cs in the PRC's aggregate imports, started to fall since 2006. The share of P&Cs in exports to the PRC differs depending to development stage. For example, more technologically advanced countries such as Japan and the Republic of Korea tend to export more technologically advanced P&Cs.

We test the hypothesis that the larger the decline in the share of P&Cs in a country's total exports to the PRC, the larger the decline in its share in the PRC's total imports. Since the P&Cs share in the PRC's imports peaked in 2006, we divide the whole sample period into two subsample periods, 1995–2006 and 2006–2014.

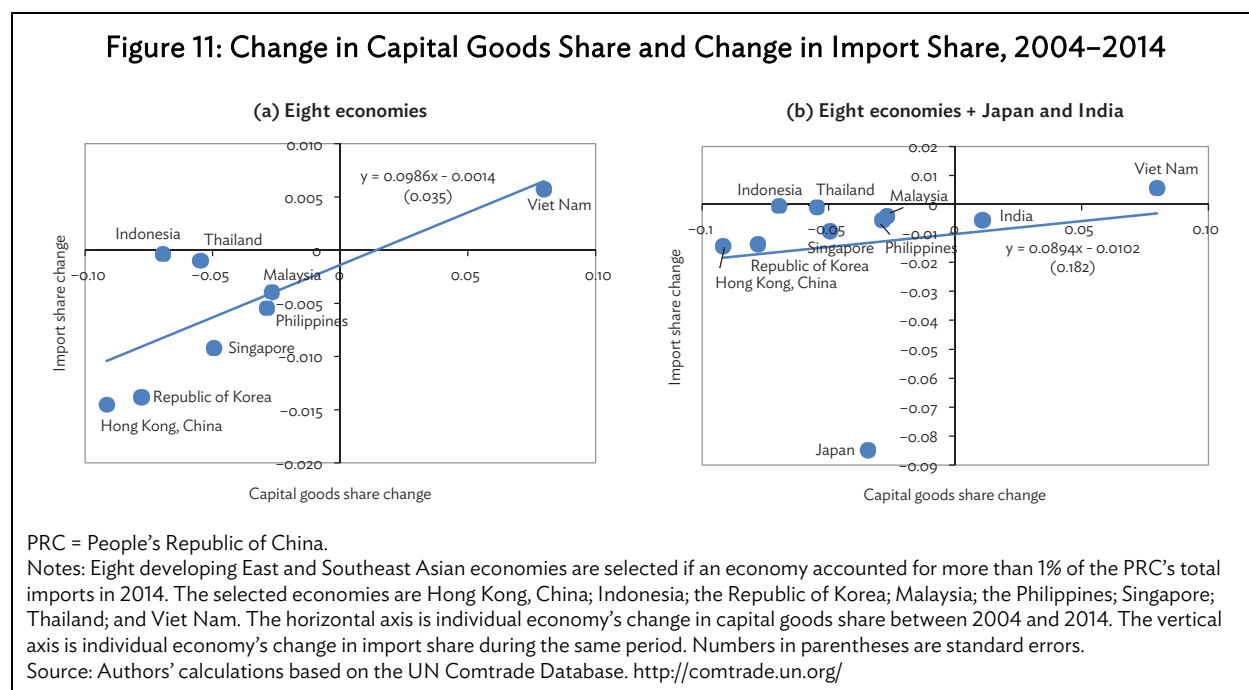
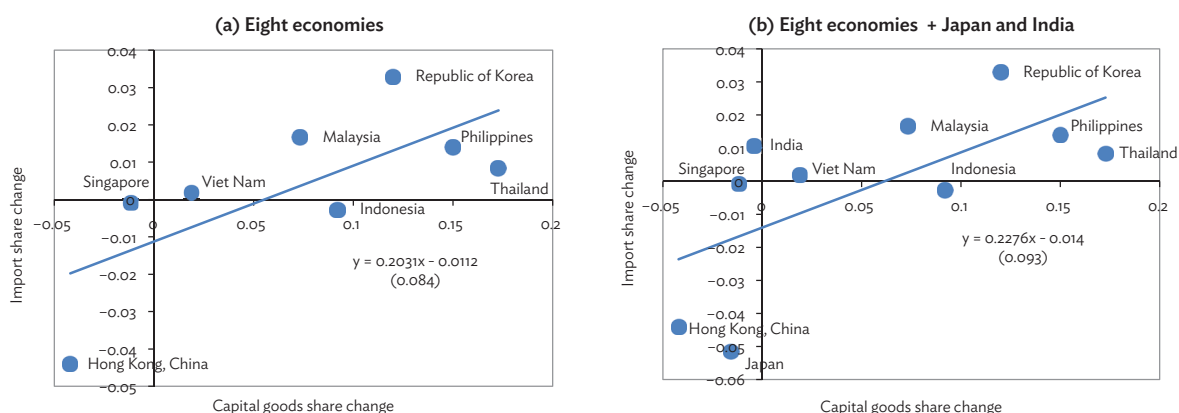


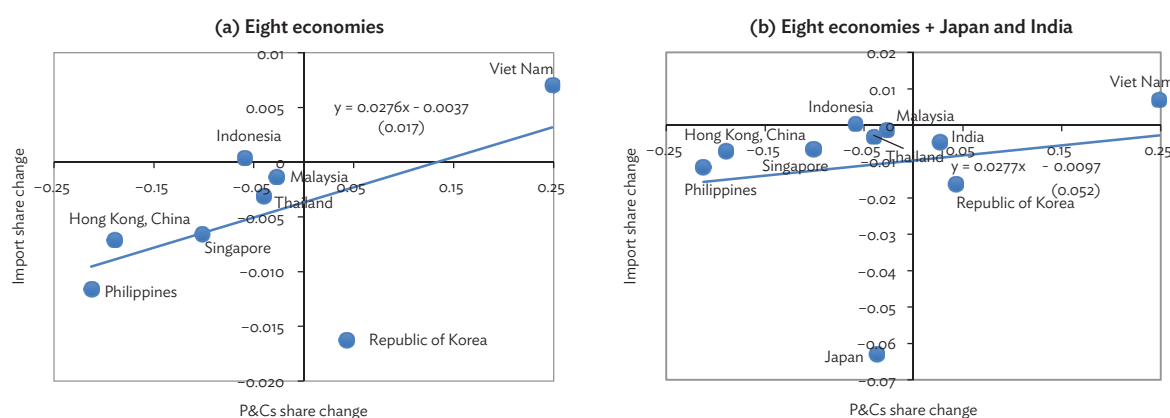
Figure 12: Change in Capital Goods Share and Change in Import Share, 1995–2004

PRC = People's Republic of China.

Notes: Eight developing East and Southeast Asian economies are selected if an economy accounted for more than 1% of the PRC's total imports in 2014. The selected economies are Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; Thailand; and Viet Nam. The horizontal axis is individual economy's change in capital goods share between 1995 and 2004. The vertical axis is individual economy's change in import share during the same period. Numbers in parentheses are standard errors.

Source: Authors' calculations based on the UN Comtrade Database. <http://comtrade.un.org/>

Figure 13 plots the change in the PRC's import share against the change in P&Cs share in a country's exports from 2006 to 2014. In panel (a), the fitted line is positively sloped, indicating that the economies that suffered a larger decline in P&Cs share lost a larger share in the PRC's total imports. In panel (b), which includes Japan and India, the fitted line remains positively sloped, with Japan standing out as an outlier.

Figure 13: Change in Parts and Components Share and Change in Import Share, 2006–2014

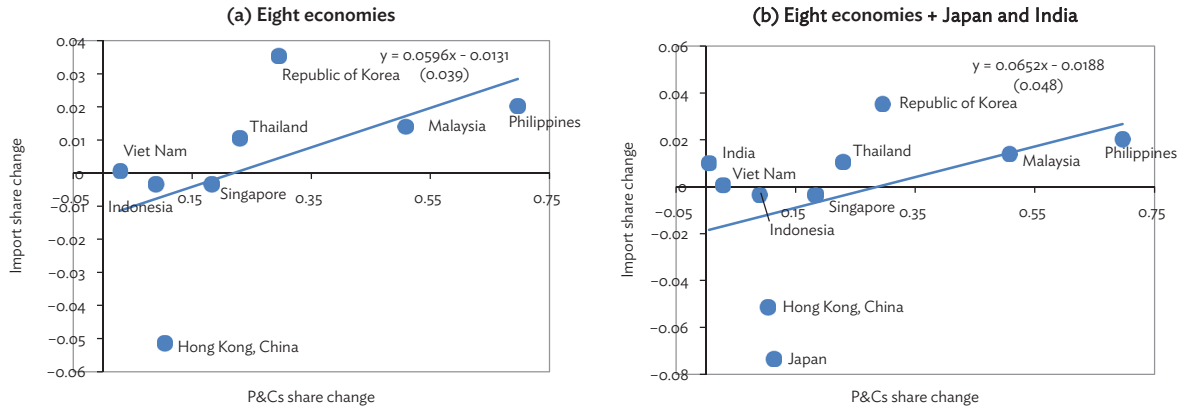
P&Cs = parts and components, PRC = People's Republic of China.

Notes: Eight developing East and Southeast Asian economies are selected if an economy accounted for more than 1% of the PRC's total imports in 2014. The selected economies are Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; Thailand; and Viet Nam. The horizontal axis is individual economy's change in parts and components share between 2006 and 2014. The vertical axis is individual economy's change in import share during the same period. Numbers in parentheses are standard errors.

Source: Authors' calculations based on the UN Comtrade Database. <http://comtrade.un.org/>

In Figure 14, we illustrate the change in the import shares of major Asian economies against the change in their P&Cs shares from 2004 to 2014. During this period, the share of P&Cs in the PRC's total PRC's imports rose. The figure shows that the economies that gained a larger share in the PRC's total imports were those economies that were able to increase the share of P&Cs in their exports to the PRC.

Figure 14: Change in Parts and Components Share and Change in Import Share, 1995–2006



P&Cs = parts and components, PRC = People's Republic of China.

Notes: Eight developing East and Southeast Asian economies are selected if an economy accounted for more than 1% of the PRC's total imports in 2014. The selected economies are Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; Thailand; and Viet Nam. The horizontal axis is individual economy's change in parts and components share between 1995 and 2006. The vertical axis is individual economy's change in import share during the same period. Numbers in parentheses are standard errors.

Source: Authors' calculations based on the UN Comtrade Database. <http://comtrade.un.org/>

In order to investigate more rigorously the importance of consumption and P&Cs goods exports to the PRC, we regress an extended gravity equation of international trade as follows⁶:

$$\text{impshare}_{it} = \beta_0 + \beta_1 \text{expshare}_{it} + \beta_2 \ln(\text{GDP}_i \text{GDP}_c)_t + \beta_3 \ln(\text{GDP}_i \text{GDP}_c / \text{Pop}_i \text{Pop}_c)_t \\ + \beta_4 \ln \text{Dist}_i + \beta_5 \text{Border}_i + \beta_6 \text{Language}_{it} + \delta \text{YEAR}_i + \varepsilon_{it}$$

where i denotes countries exporting to the PRC, c denotes the PRC, t denotes time, impshare_{it} denotes the share of country i in the PRC's total imports at time t , expshare_{it} denotes the share of consumption goods (P&Cs) in country i 's exports to the PRC at time t , GDP is real GDP, Pop is population, Dist is the distance between country i and the PRC, Border is a binary variable which is unity if country i and the PRC share a land border, Language is a binary variable which is unity if country i and the PRC have a common language, and Year denotes a set of binary variables which are unity in the specific year t . Border and Language variables are included to capture the economic distance between countries, which is not entirely represented by the geographical distance.

Table 6 presents the results of panel regression when consumption goods share is used for expshare_{it} . Since there are a number of country fixed variables included in the equation, we adopted panel regression with random effects. In columns (1)–(3), we included economies whose share in the

⁶ The extended gravity equation adds a number of extra variables such as per capita GDP, common border, and language dummies to the conventional gravity model of international trade. We collected the extra variables in the gravity equation from Rose (2004).

PRC's total import exceed 1% in 2014, which results in a total of 25 economies.⁷ We also run the regression separately for eight East and Southeast Asian economies in columns (4)–(6). The extended gravity equation fits the data quite well in the sense that the coefficient of GDP in pair ($\ln(GDP_i GDP_c)_t$) is positive and statistically significant in columns (1)–(3) and the coefficient of distance is negative and sometimes statistically significant. The coefficient of common language is mostly positive but not significant. Interestingly, however, the coefficient of land border is negative and sometimes statistically significant. This reflects that, after controlling the distance, the PRC's trade volume with economies sharing the land border, Hong Kong, China; Russian Federation; and Viet Nam, is not particularly large compared to that for other no-land-border neighborhood economies such as the Republic of Korea, Malaysia, Thailand, and Japan.

Table 6: The Impact of Consumption Share of Economies' Exports to the PRC

| | Whole World | | | East and Southeast Asian Economies | | |
|-------------------------|---------------------|--------------------|---------------------|------------------------------------|---------------------|-------------------|
| | Full Sample | 1995–2004 | 2005–2014 | Full Sample | 1995–2004 | 2005–2014 |
| Consumption share | –0.018 [0.028] | –0.026 [0.022] | –0.036 [0.035] | –0.006 [0.030] | –0.024 [0.047] | 0.018 [0.018] |
| GDP in pairs | 0.031** [0.015] | 0.026** [0.010] | 0.019** [0.009] | 0.028 [0.032] | 0.019*** [0.006] | 0.031 [0.028] |
| Per capita GDP in pairs | –0.008 [0.008] | –0.006 [0.009] | –0.002 [0.005] | 0.000 [0.026] | 0.025*** [0.010] | 0.017 [0.024] |
| Log of distance | –0.023 [0.014] | –0.029 [0.017] | –0.020* [0.011] | –0.062* [0.032] | –0.040* [0.024] | –0.047 [0.039] |
| Common land border | –0.034** [0.017] | –0.031 [0.019] | –0.031** [0.015] | –0.032 [0.022] | 0.004 [0.021] | –0.016 [0.030] |
| Common language | 0.034 [0.021] | 0.032 [0.020] | 0.007 [0.009] | 0.020 [0.066] | –0.028 [0.020] | –0.019 [0.058] |
| R-squared | 0.43 | 0.48 | 0.48 | 0.59 | 0.78 | 0.71 |
| Group of economies | 25 | 24 | 25 | 8 | 8 | 8 |
| Observations | 430 | 189 | 241 | 144 | 64 | 80 |

GDP = gross domestic product, PRC = People's Republic of China.

Notes: The dependent variable is the country's share of the PRC's total imports. All the explanatory variables except the shares and the dummy variables are taken logarithms. Consumption share is the country's consumption goods share in its exports to the PRC. The panel data estimation techniques with random effects were applied to 25 countries for the world sample and eight economies for the East Asia sample. Angola is excluded in the first subsample due to the lack of GDP data. Robust standard errors of the estimated coefficients are reported in parentheses. Intercept and year dummy variables are included (not reported). ***, ** and * indicate that the estimated coefficients are statistically significant at 1%, 5%, and 10%, respectively.

Source: Authors' calculations.

In Table 6, we also report the regression results for the full sample (1995–2014), the first subsample during which consumption goods share in the PRC's total imports declined (1995–2004) and the second subsample during which consumption goods share in the PRC's total imports increased (2005–2014). The coefficient of consumption goods share in country i 's exports to the PRC (expshare_{it}) is negative and not significant for columns (1)–(3). This reflects that while the PRC's consumption share is increasing in these years, as illustrated in Figure 1.a, the absolute level of PRC's consumption share is still low and the increase is not significant. In the regression results for the East

⁷ While Angola also passes the criteria, it was not included in the first subsample in Tables 2 and 3 due to the lack of GDP data.

Asia sample, however, the coefficient of consumption goods share becomes positive in the second subsample, during which consumption goods share in the PRC's total imports increased. However, it is still not statistically significant at the conventional level.

Table 7 presents the results of panel regression with random effects when P&Cs share is used for expshare_{it} . Again, the extended gravity equation fits the data quite well in the sense that the coefficient of GDP in pair is positive and statistically very significant and the coefficient of distance is negative and fairly significant. The coefficient of common language is positive but not significant in columns (1)–(3) for the world sample. Again, the coefficient of land border is negative and sometimes statistically significant.

Table 7: The Impact of P&Cs Share of Economies' Exports to the PRC

| | Whole World | | | East and Southeast Asian Economies | | |
|-------------------------|--------------------|---------------------|--------------------|------------------------------------|---------------------|-------------------|
| | Full Sample | 1995–2006 | 2007–2014 | Full Sample | 1995–2006 | 2007–2014 |
| P&Cs share | 0.021* [0.011] | 0.027*** [0.009] | 0.015 [0.013] | 0.041** [0.017] | 0.046*** [0.018] | 0.020* [0.012] |
| GDP in pairs | 0.031** [0.016] | 0.027** [0.011] | 0.017** [0.008] | 0.032 [0.029] | 0.022 [0.034] | 0.029 [0.020] |
| Per capita GDP in pairs | –0.009 [0.008] | –0.002 [0.009] | –0.002 [0.004] | –0.008 [0.019] | 0.023 [0.029] | –0.005 [0.012] |
| Log of distance | –0.019 [0.015] | –0.027 [0.017] | –0.015 [0.012] | –0.063* [0.034] | –0.035 [0.023] | –0.063 [0.039] |
| Common land border | –0.031* [0.017] | –0.026 [0.017] | –0.029* [0.016] | –0.030* [0.016] | 0.012 [0.030] | –0.037 [0.028] |
| Common language | 0.033 [0.021] | 0.022 [0.021] | 0.003 [0.009] | 0.036 [0.050] | –0.029 [0.076] | 0.022 [0.031] |
| R-squared | 0.42 | 0.51 | 0.47 | 0.53 | 0.72 | 0.60 |
| Group of economies | 25 | 24 | 25 | 8 | 8 | 8 |
| Observations | 430 | 237 | 193 | 144 | 80 | 64 |

GDP = gross domestic product, P&Cs = parts and components, PRC = People's Republic of China.

Notes: The dependent variable is the country's share of the PRC's total imports. All the explanatory variables except the shares and the dummy variables are taken logarithms. P&Cs share is the country's P&Cs goods share in its exports to the PRC. The panel data estimation techniques with random effects were applied to 25 countries for the world sample and eight economies for the East Asia sample. Angola is excluded in the first subsample due to the lack of GDP data. Robust standard errors of the estimated coefficients are reported in parentheses. Intercept and year dummy variables are included (not reported). ***, ** and * indicate that the estimated coefficients are statistically significant at 1%, 5%, and 10%, respectively.

Source: Authors' calculations.

In Table 7, we find much more supporting evidence for the importance of P&Cs share. For the full sample (1995–2014), the coefficient of P&Cs share is positive and statistically significant at the 10% level for the whole world and at the 5% level for East Asia, respectively. This indicates that economies that export a larger P&Cs share to the PRC takes a larger share in the PRC's total imports. When we divide the sample period, the coefficient of P&Cs share is positive, larger and much more statistically significant in the first sample period (1995–2006), during which the P&Cs share in the PRC's total imports increased. The estimated coefficients suggest that an increase in one standard deviation of P&Cs share (0.176) will lead to 0.4 % point increase in the PRC's import share in the case of the whole world sample and 0.8 % point increase for the East Asia sample. In the second subsample

(2007–2014), however, the coefficient of P&Cs share is smaller and not statistically significant even at the 10% level for the whole world and marginally significant at the 10% level for East Asia. This shows that the importance of P&Cs has weakened greatly in the second subsample during which the P&Cs share in the PRC's total imports declined.

V. FURTHER FINDINGS FROM OECD–WTO'S TiVA DATABASE

In this section, we report and discuss the main findings of our analysis of OECD–WTO's TiVA data. Table 8 shows the share of the PRC in the exports of the selected Asian economies in terms of both the conventional trade statistics (upper panel) and the TiVA statistics (lower panel). In terms of both measures, the share of the PRC in the exports of these economies has been continuously and rapidly increasing. Indeed, the two measures reveal a very similar pattern. According to the TiVA statistics, in terms of domestic value added in gross exports of the Republic of Korea, for example, the PRC's share increased from 6.8% in 1995 to 11.7% in 2000, and further to 25.7% in 2005 and 30.5 in 2011%. This is the highest level among the Asian economies, except Hong Kong, China. As of 2011, the PRC is relatively a large export market for Hong Kong, China; the Republic of Korea; Japan; the Philippines; and Malaysia. In contrast, the PRC is a relatively smaller market for India, Singapore, Viet Nam, Indonesia, and Thailand. Therefore, the relative importance of the PRC's structural change should differ for individual Asian economies.

Figure 15 shows that in 2011, trade surpluses (and deficits) of most Asian economies in their trade with the PRC was smaller in value-added terms. It is striking that the Republic of Korea's trade surplus against the PRC was \$87.7 billion in gross terms but was only \$19 billion in value-added terms. Similarly, Japan had a trade surplus of \$20 billion with the PRC in gross terms but had a trade deficit of \$3 billion in value-added terms. This is because a large share of intermediate goods imported from Japan and the Republic of Korea to the PRC was assembled into final products in the PRC and exported to other economies. As the PRC's role as an assembler in GVCs declines, the difference in trade balance between gross terms and value-added terms will become smaller.

Table 8: The PRC's Share in Exports of Asian Economies
(%)

| | PRC's Share in Gross Exports | | | |
|-------------------|------------------------------|------|------|------|
| | 1995 | 2000 | 2005 | 2011 |
| Japan | 5.2 | 8.6 | 17.0 | 25.2 |
| Republic of Korea | 6.8 | 12.0 | 26.4 | 30.9 |
| Hong Kong, China | 18.0 | 20.0 | 26.7 | 35.0 |
| India | 1.1 | 2.8 | 6.7 | 7.9 |
| Indonesia | 3.2 | 6.0 | 8.0 | 14.6 |
| Malaysia | 2.9 | 6.1 | 14.8 | 25.6 |
| Philippines | 1.9 | 4.6 | 23.4 | 23.5 |
| Singapore | 3.4 | 5.3 | 10.3 | 12.5 |
| Thailand | 2.9 | 6.7 | 10.5 | 16.6 |
| Viet Nam | 3.8 | 7.6 | 9.3 | 13.9 |

continued on next page

Table 8 continued

| | PRC's Value-Added Share in Gross Exports | | | |
|-------------------|--|------|------|------|
| | 1995 | 2000 | 2005 | 2011 |
| Japan | 5.2 | 8.6 | 16.8 | 25.0 |
| Republic of Korea | 6.8 | 11.7 | 25.7 | 30.5 |
| Hong Kong, China | 17.7 | 19.7 | 26.6 | 35.6 |
| India | 1.1 | 2.9 | 7.0 | 8.5 |
| Indonesia | 3.2 | 5.9 | 7.9 | 14.8 |
| Malaysia | 3.2 | 6.6 | 13.2 | 22.1 |
| Philippines | 2.0 | 4.5 | 19.0 | 23.1 |
| Singapore | 3.2 | 5.3 | 10.3 | 12.6 |
| Thailand | 3.1 | 6.4 | 9.8 | 16.2 |
| Viet Nam | 4.2 | 8.5 | 10.4 | 14.0 |

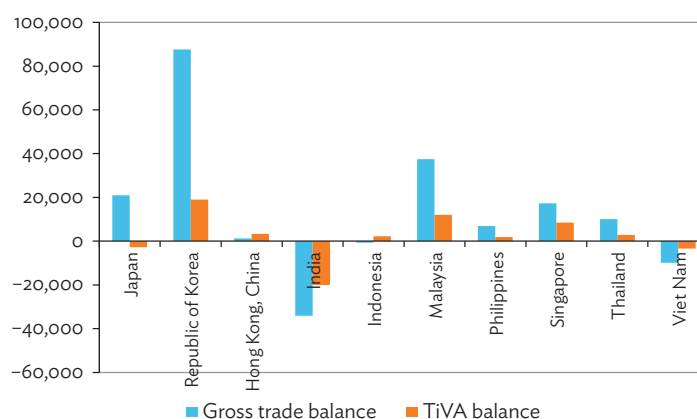
PRC = People's Republic of China.

Notes: The PRC's share is greatest in exports of Hong Kong, China followed by the Republic of Korea, Japan, and the Philippines, in terms of both gross exports and domestic value added in gross exports. It is smallest in exports of India.

Source: EXGRPSH and EXGR_DVAPSH in OECD–WTO's Trade in Value Added (TiVA) Database.

<https://stats.oecd.org/index.aspx?queryid=66237>

Figure 15: Asian Economies' Trade Balances with the PRC
(\$ million)



PRC = People's Republic of China.

Source: Drawn using BALGR and BALVAFD in OECD–WTO's Trade in Value Added (TiVA) Database. <https://stats.oecd.org/index.aspx?queryid=66237>

In the previous section, we saw that the PRC is transforming from an export- and investment-led economy to a consumption-led economy. As a consequence, the share of foreign value added in the PRC's exports has decreased, as seen in Table 4. But the pattern may differ in different industries. Table 9 reports the value-added share of East and Southeast Asian economies in the PRC's exports in different industries. Between 2005 and 2011, their value-added share decreased in exports of all industries. The fall was especially pronounced in exports of textiles, chemicals, basic metals, machinery, electrical and optical equipment, and transport equipment.

Table 9: Value-Added Share of East and Southeast Asian Economies in the PRC's Exports, Different Industries
(%)

| Source industry Exporting country Source country Time | CTOTAL: TOTAL People's Republic of China East and Southeast Asia | | | |
|--|--|------|------|------|
| | 1995 | 2000 | 2005 | 2011 |
| Exporting industry | | | | |
| CTOTAL: TOTAL | 17.7 | 18.3 | 18.3 | 12.9 |
| C01T05: Agriculture, hunting, forestry and fishing | 2.8 | 2.8 | 3.2 | 2.9 |
| C10T14: Mining and quarrying | 16.8 | 13.5 | 8.6 | 6.0 |
| C15T37: Total Manufactures | 25.7 | 25.1 | 23.8 | 16.4 |
| C15T16: Food products, beverages and tobacco | 15.8 | 11.4 | 7.0 | 6.5 |
| C17T19: Textiles, textile products, leather and footwear | 26.3 | 22.4 | 14.0 | 9.1 |
| C20T22: Wood, paper, paper products, printing and publishing | 27.8 | 21.3 | 13.2 | 11.8 |
| C23T26: Chemicals and nonmetallic mineral products | 23.9 | 20.3 | 14.8 | 11.5 |
| C27T28: Basic metals and fabricated metal products | 16.8 | 16.6 | 10.8 | 7.3 |
| C29: Machinery and equipment, nec | 18.8 | 18.0 | 14.1 | 10.3 |
| C30T33: Electrical and optical equipment | 39.2 | 39.3 | 38.6 | 27.4 |
| C34T35: Transport equipment | 20.8 | 18.8 | 15.5 | 10.4 |
| C36T37: Manufacturing nec; recycling | 15.7 | 12.3 | 10.0 | 6.4 |
| C40T41: Electricity, gas and water supply | 1.9 | 2.3 | 2.5 | 2.4 |
| C45: Construction | 2.8 | 3.0 | 3.7 | 3.0 |
| C50T74: Total Business Sector Services | 1.5 | 2.0 | 2.0 | 1.9 |
| C75T95: Community, social and personal services | 2.0 | 2.3 | 2.9 | 2.4 |

nec = not elsewhere classified, PRC = People's Republic of China.

Note: The East and Southeast Asian economies are Brunei Darussalam; Cambodia; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; Thailand; and Viet Nam; including Japan.

Source: OECD-WTO's Trade in Value Added (TiVA) Database. <https://stats.oecd.org/index.aspx?queryid=66237>

Tables 10 and 11 summarize the value-added share of Asian economies in the PRC's investment and consumption, respectively. Overall, value-added share of Asian economies is smaller in the PRC's consumption than in the PRC's investment. For example, in 2011, it was 3.35% in the PRC's consumption and 6.36% in the PRC's investment. Furthermore, the value-added share of Asian economies decreased in both the PRC's investment and consumption between 2005 and 2011.

**Table 10: Value-Added Share of East and Southeast Asian Economies in the PRC's Investment,
Different Industries**
(%)

| Indicator Partner Country Unit Time | GFCF_VASH: Value-added share of gross fixed capital formation, by source country and industry East and Southeast Asia excluding the PRC People's Republic of China Percentage | | | |
|--|---|-------|-------|-------|
| | 1995 | 2000 | 2005 | 2011 |
| Industry | | | | |
| CTOTAL: TOTAL | 6.05 | 7.2 | 9.76 | 6.36 |
| C01T05: Agriculture, hunting, forestry and fishing | 0.84 | 0.69 | 1.29 | 2.06 |
| C10T14: Mining and quarrying | 2.62 | 2.96 | 2.72 | 3.44 |
| C15T37: Total Manufactures | 6.57 | 8.97 | 12.58 | 8.05 |
| C15T16: Food products, beverages and tobacco | 2.56 | 2.25 | 3.23 | 2.72 |
| C17T19: Textiles, textile products, leather and footwear | 1.85 | 2.05 | 3.25 | 2.08 |
| C20T22: Wood, paper, paper products, printing and publishing | 5.03 | 8.74 | 7.18 | 3.98 |
| C23T26: Chemicals and nonmetallic mineral products | 4.06 | 5.51 | 8.29 | 5.85 |
| C27T28: Basic metals and fabricated metal products | 5.27 | 8.07 | 8.62 | 5.56 |
| C29: Machinery and equipment, nec | 9.67 | 11.46 | 10.46 | 6.47 |
| C30T33: Electrical and optical equipment | 12.07 | 16.78 | 32.47 | 25.64 |
| C34T35: Transport equipment | 5.1 | 3.78 | 6.38 | 5.57 |
| C36T37: Manufacturing nec; recycling | 12.01 | 4.05 | 4.61 | 1.28 |
| C40T41: Electricity, gas and water supply | 5.04 | 4.46 | 5.4 | 4.53 |
| C45: Construction | 0.32 | 0.38 | 0.55 | 0.25 |
| C50T74: Total Business Sector Services | 11.57 | 11.8 | 14.74 | 8.92 |

nec = not elsewhere classified, PRC = People's Republic of China.

Note: The East and Southeast Asian economies are Brunei Darussalam; Cambodia; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; Thailand; and Viet Nam; including Japan.

Source: OECD-WTO's Trade in Value Added (TiVA) Database. <https://stats.oecd.org/index.aspx?queryid=66237>**Table 11: Value Added Share of East and Southeast Asian Economies in the PRC's Consumption,
Different Industries**
(%)

| Indicator Partner Country Unit Time | CONS_VASH: Value-added share of total consumption, by source country and industry East and Southeast Asia excluding the PRC People's Republic of China Percentage | | | |
|--|---|-------|-------|-------|
| | 1995 | 2000 | 2005 | 2011 |
| Industry | | | | |
| CTOTAL: TOTAL | 3.47 | 3.5 | 4.53 | 3.35 |
| C01T05: Agriculture, hunting, forestry and fishing | 0.51 | 0.51 | 0.83 | 1.32 |
| C10T14: Mining and quarrying | 3.13 | 3.03 | 2.83 | 3.65 |
| C15T37: Total Manufactures | 4.6 | 5.36 | 7.9 | 5.79 |
| C15T16: Food products, beverages and tobacco | 1.25 | 0.74 | 1.31 | 1.33 |
| C17T19: Textiles, textile products, leather and footwear | 3.67 | 3.73 | 3.33 | 1.56 |
| C20T22: Wood, paper, paper products, printing and publishing | 4.65 | 5.72 | 4.63 | 3.27 |
| C23T26: Chemicals and nonmetallic mineral products | 5.28 | 6.08 | 8.37 | 6.94 |
| C27T28: Basic metals and fabricated metal products | 6.28 | 8.86 | 10.23 | 7.19 |
| C29: Machinery and equipment, nec | 7.39 | 8.29 | 8.4 | 6.29 |
| C30T33: Electrical and optical equipment | 12.26 | 13.52 | 29.63 | 24.94 |
| C34T35: Transport equipment | 5.66 | 3.33 | 5.25 | 4.7 |
| C36T37: Manufacturing nec; recycling | 9.93 | 2.12 | 2.9 | 0.83 |
| C40T41: Electricity, gas and water supply | 3.59 | 2.45 | 3.07 | 3.05 |
| C45: Construction | 5.82 | 3.59 | 4.62 | 3.32 |
| C50T74: Total Business Sector Services | 6.69 | 5.64 | 7.08 | 4.59 |

nec = not elsewhere classified, PRC = People's Republic of China.

Note: The East and Southeast Asian economies are Brunei Darussalam; Cambodia; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; Thailand; and Viet Nam; including Japan.

Source: OECD-WTO's Trade in Value Added (TiVA) Database. <https://stats.oecd.org/index.aspx?queryid=66237>

In the previous section (Table 2), we found that the share of foreign value added in the PRC's exports decreased from 37.4% in 2005 to 32.2% in 2011. Table 12 shows the shares of Asian economies as the origin of valued added in gross exports of the PRC. The valued added contributed to the PRC's exports by Japan and the Republic of Korea, the two major sources of intermediate goods, declined between 2005 and 2011. Specifically, Japan's value added in the PRC's gross exports fell from 7.26% in 2005 to 4.73% in 2011, while that of the Republic of Korea fell from 4% to 2.66%.⁸ At a broader level, the value-added share of the entire world in the PRC's exports declined between 2005 and 2011.

In contrast, the PRC's share of valued added in the selected Asian economies' gross exports increased continuously between 1995 and 2011 (Table 13). For example, the PRC's value-added share in the Republic of Korea's gross exports of the Republic of Korea was 4.75% in 2011, up from 2.91% in 2005. Thus, the PRC is gradually gaining a new position in the GVC, as a supplier of intermediated goods, rather than just an importer of those goods.

Table 12: Origin of Valued Added in Gross Exports of the PRC, All Industries
(%)

| Source Economy | 1995 | 2000 | 2005 | 2011 |
|----------------------------|-------|-------|-------|-------|
| World | 100.0 | 100.0 | 100.0 | 100.0 |
| People's Republic of China | 66.65 | 62.80 | 62.63 | 67.89 |
| Japan | 7.89 | 7.98 | 7.26 | 4.73 |
| Republic of Korea | 2.97 | 3.31 | 4.00 | 2.66 |
| Hong Kong, China | 1.57 | 1.19 | 0.68 | 0.51 |
| India | 0.14 | 0.26 | 0.55 | 0.65 |
| Indonesia | 0.58 | 0.65 | 0.51 | 0.65 |
| Malaysia | 0.45 | 0.71 | 0.78 | 0.79 |
| Philippines | 0.10 | 0.18 | 0.37 | 0.32 |
| Singapore | 0.47 | 0.56 | 0.65 | 0.60 |
| Thailand | 0.43 | 0.50 | 0.51 | 0.53 |
| Viet Nam | 0.05 | 0.14 | 0.15 | 0.17 |
| Rest of the World | 18.70 | 21.72 | 21.90 | 20.50 |

PRC = People's Republic of China.

Source: OECD–WTO's Trade in Value Added (TiVA) Database. <https://stats.oecd.org/index.aspx?queryid=66237>

Table 13: Origin of Value Added in Gross Exports of Asian Economies, the PRC's Share
(%)

| | 1995 | 2000 | 2005 | 2011 |
|-------------------|------|------|------|------|
| Japan | 0.2 | 0.4 | 1.3 | 2.2 |
| Republic of Korea | 0.74 | 1.14 | 2.91 | 4.75 |
| Hong Kong, China | 3.69 | 2.71 | 3.79 | 5.34 |
| India | 0.13 | 0.26 | 1.10 | 2.03 |
| Indonesia | 0.25 | 0.59 | 1.20 | 1.25 |
| Malaysia | 0.58 | 1.14 | 3.51 | 4.54 |
| Philippines | 0.40 | 0.70 | 1.96 | 2.41 |
| Singapore | 0.64 | 1.16 | 1.91 | 3.07 |
| Thailand | 0.51 | 0.94 | 2.36 | 4.03 |
| Viet Nam | 0.78 | 1.54 | 3.90 | 6.31 |

PRC = People's Republic of China.

Source: OECD–WTO's Trade in Value Added (TiVA) Database. <https://stats.oecd.org/index.aspx?queryid=66237>

⁸ This suggests that in 2011, the PRC exported \$1,907.3 billion amount of goods and services to the world and \$90.2 billion amount ($=0.00473 \times 1,907.3$) was due to Japan, while in 2005, the PRC exported \$764.5 billion amount and \$55.5 billion ($=0.00726 \times 764.5$) was due to Japan.

Tables 14 and 15 show the results for the electrical and optical equipment industry, in which the share of foreign value added in the PRC's exports decreased most drastically from 72.6% to 53.8% between 1995 and 2011, even though the share still remains the highest among all industries, as seen in Table 4. Accordingly, domestic share of value added increased from 27.46% in 1995 to 46.19% in 2011—i.e. by 18.74% point. Interestingly, 13.3% of 18.74% was accounted for by a decrease in Japan's share. The Republic of Korea's value-added share in the PRC's exports, which had increased between 1995 and 2005, decreased from 8.38% in 2005 to 5.85% in 2011. In contrast, Table 15 shows that the PRC's share of valued added in the electrical and optical equipment exports of all Asian economies increased continuously between 1995 and 2011. In 2011, the PRC's share of valued added is particularly high in Viet Nam (14.88); Hong Kong, China (11.1%); and Thailand (10.28%). Therefore, the PRC's role as a supplier of intermediate goods in Asia is especially evident in the electrical and optical equipment industry.

Table 14: Origin of Value Added in the PRC's Exports of Electrical and Optical Equipment (%)

| Source Economy | 1995 | 2000 | 2005 | 2011 |
|----------------------------|--------|--------|--------|--------|
| World | 100.00 | 100.00 | 100.00 | 100.00 |
| People's Republic of China | 27.46 | 24.79 | 33.04 | 46.19 |
| Japan | 23.42 | 19.60 | 15.59 | 10.12 |
| Republic of Korea | 4.35 | 5.80 | 8.38 | 5.85 |
| Hong Kong, China | 2.64 | 2.00 | 1.03 | 0.82 |
| India | 0.16 | 0.28 | 0.58 | 0.83 |
| Indonesia | 0.56 | 0.88 | 0.75 | 0.80 |
| Malaysia | 0.58 | 1.52 | 1.65 | 1.77 |
| Philippines | 0.16 | 0.55 | 1.06 | 0.80 |
| Singapore | 1.06 | 1.38 | 1.42 | 1.29 |
| Thailand | 0.55 | 0.90 | 0.90 | 0.95 |
| Viet Nam | 0.02 | 0.15 | 0.17 | 0.23 |
| Rest of the world | 39.04 | 42.16 | 35.44 | 30.35 |

PRC = People's Republic of China.

Source: OECD–WTO's Trade in Value Added (TiVA) Database. <https://stats.oecd.org/index.aspx?queryid=66237>

Table 15: Origin of Value Added in East and Southeast Asian Economies' Exports of Electrical and Optical Equipment, the PRC's Share (%)

| | 1995 | 2000 | 2005 | 2011 |
|-------------------|------|------|------|-------|
| Japan | 0.25 | 0.52 | 2.22 | 3.84 |
| Republic of Korea | 0.53 | 1.10 | 3.80 | 7.58 |
| Hong Kong, China | 4.89 | 4.04 | 6.16 | 11.10 |
| India | 0.18 | 0.39 | 1.92 | 4.37 |
| Indonesia | 0.49 | 0.87 | 2.32 | 4.61 |
| Malaysia | 0.62 | 1.34 | 6.16 | 9.09 |
| Philippines | 0.46 | 0.80 | 2.89 | 3.15 |
| Singapore | 0.62 | 1.36 | 2.37 | 4.06 |
| Thailand | 0.78 | 1.75 | 5.36 | 10.26 |
| Viet Nam | 1.22 | 1.83 | 6.03 | 14.88 |

PRC = People's Republic of China.

Source: OECD–WTO's Trade in Value Added (TiVA) Database. <https://stats.oecd.org/index.aspx?queryid=66237>

VI. CONCLUDING OBSERVATIONS

The PRC's growth has slowed down noticeably since the global financial crisis. At the same time, the Chinese economy is experiencing a great deal of structural change. While there are widespread concerns about the effects of the PRC's growth slowdown on the exports of East and Southeast Asian economies, the effects of the PRC's structural transformation on their exports are often overlooked. In this paper, we empirically examine the impact of two key dimensions of the PRC's structural transformation—(i) its shift from export- and investment-led growth to a domestic demand- and consumption-led growth and (ii) related to (i), its declining role in importing P&Cs from Asia and assembling them into final goods for export to the US and elsewhere—on the exports of 10 major Asian economies. To do so, we use data from the UN Comtrade database.

Overall, the evidence from our empirical analysis supports the notion that the PRC's structural transformation will affect the exports of Asian economies. This is plausible since the import requirements of an export- and investment-led economy will differ from those of a domestic demand- and consumption-led economy—e.g. it will import less machines and import more cosmetics. In particular, our empirical analysis yields two findings which suggest a substantial effect of the PRC's structural change on Asian exports. First, Asian economies that failed to expand the share of consumption goods in their exports to the PRC lost ground as sources of the PRC's total imports. Second, Asian economies that suffered the largest losses in their shares of the PRC's P&Cs imports suffered the largest losses in their shares of the PRC's total imports.

Our evidence implies that in the short run, the PRC's structural change will exacerbate and magnify the adverse effect of its growth slowdown on its neighbors' exports. However, in the medium to long run, the PRC's structural transformation may open up new export opportunities for Asian economies and the rest of the world. More specifically, economies that are better at catering to the PRC's growing consumption and domestic demand will be more successful in exporting to the PRC.

APPENDIX

Appendix Table: Reformulated Definitions of Parts and Components from 2007

| SITC3 | Reformulated Definiton |
|--------|--|
| 75910 | 759-7599=75910 |
| 76491 | 7649-(76492+76493+76499) |
| 77314 | 7731-(77311+77312+ 77313+ 77317+ 77318) |
| 77315 | |
| 77641 | 7764 |
| 77643 | |
| 77645 | |
| 77649 | |
| 78436* | 7843-(78431+78432+78433+78434+78435+78439) |
| 84841* | 8484-(84842+84843+84844+84845+84848+84849) |
| 88112* | 8811-(88111+88113+88114+88115) |
| 89121* | 8912-(89122+89123) |
| 89860 | counted twice through 89865+89867 |
| 89865 | dropped (ambiguous from 2007) |
| 89867 | dropped (ambiguous from 2007) |
| 89423 | dropped (ambiguous from 2007) |
| 89879 | dropped (ambiguous from 2007) |

SITC3 = Standard International Trade Classification, Revision 3.

Note: The reformulated definition shows how we uncover the P&Cs codes that are stopped reporting by the UN Comtrade Database from 2007. * indicates the code for which the reformulated value becomes 0 from 2007.

Source: Authors' compilation.

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Effects of the People's Republic of China's Structural Change on the Exports of East and Southeast Asian Economies

The People's Republic of China's (PRC) structural transformation from an export- and investment-led economy to a domestic demand- and consumption-led economy is likely to have a significant impact on its import structure. The authors' empirical analysis of the PRC's trade with major Asian economies confirms this conjecture. Asian economies which failed to export relatively more consumption goods to the PRC suffered larger declines in overall exports to the PRC. In addition, Asian economies that exported relatively less parts and components to the PRC saw their shares of the PRC's total imports decline. Overall, the PRC's structural change is having a significant impact on the pattern of its trade with its neighbors.

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