

TRADE IN VALUE ADDED: CHINA

The international fragmentation of production in global value chains (GVCs) challenges the way we look at the global economy. Today, “what you do” - the activities a firm or country is involved in - matters more for growth and employment than “what you sell” - the products that make up final sales or exports.

Understanding how GVCs work and how they affect economic performance is essential, as is determining which policies help derive the greatest benefits, and reduce the risks. The OECD-WTO Trade in Value Added (TiVA) database facilitates analysis of GVCs by measuring trade in value-added terms to generate new insights about the commercial relations among economies and the process of value creation. Drawing on the third version of the TiVA database, this note describes China’s trade patterns in value-added terms, with a view to informing policy debates in a range of areas, including trade, innovation, and investment.

Accompanying this note is a User Guide designed to assist interpretation and provide context to the indicators presented: http://www.oecd.org/sti/ind/TiVA_2015_Guide_to_Country_Notes.pdf

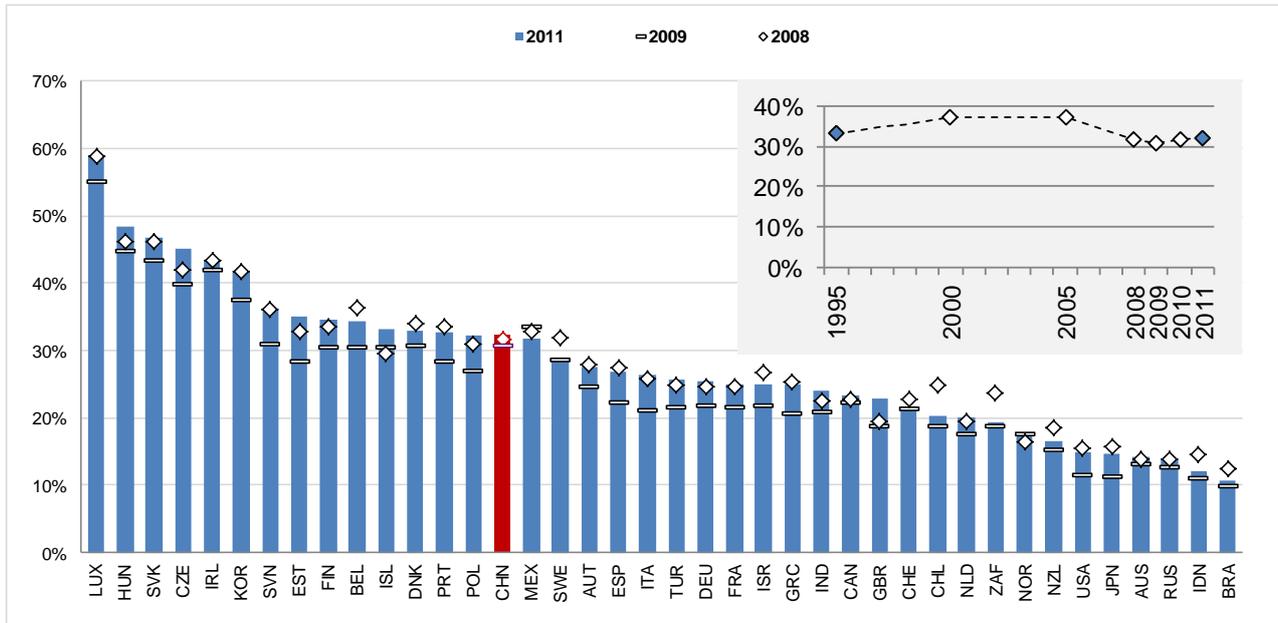
Key findings

- With a foreign content share of over one-third of exports (second only to Korea in the G20) China is highly integrated within Global Value Chains.
- The data provide important signals that China is moving upward in the value-chain as the contribution from processing services declines and domestic services providers integrate upstream.
- But China’s export orientation in many industries remains relatively low, with less than one-quarter of manufacturing value-added driven by foreign final demand. In key export sectors, however, such as ICT & electronics, these shares are above 60%.
- China's trade surplus with the United States was one-third smaller in 2011 when measured in value-added terms compared to it being measured in gross exports terms.

The role of foreign and domestic value added in exports

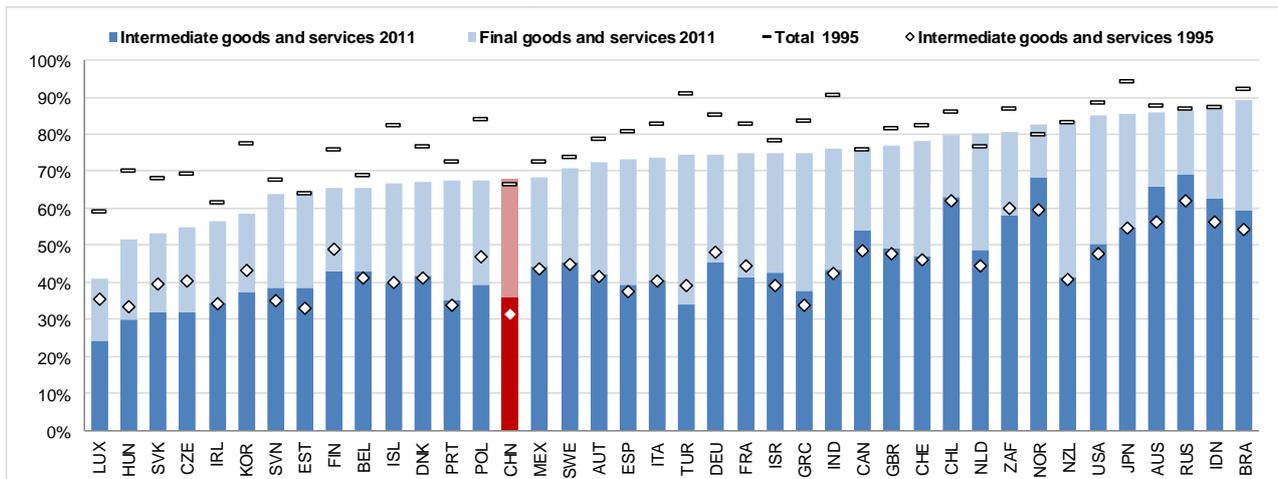
The foreign content share (one-third) of China's exports in 2011 was significantly above the levels seen in other large economies and second only to Korea within the G20. Like in many other countries, the share of foreign content in exports has begun to pick up again following the crisis (Figure 1). High levels of integration in GVCs are not however a new phenomenon. Even before its accession to the WTO, the foreign content share of China's exports was around one-third, and these levels have broadly remained the same over the past two decades. However total economy trends mask very important sub-trends.

Figure 1. Foreign value added content of gross exports by country
percent, 2008, 2009, and 2011 (right insert = time series for China)



Of China's total exports of domestic value added in 2011, 52.9% reflected exports of intermediates, which is significantly lower than the OECD average (61.5%) but higher than the equivalent shares in 2009 (50.0%) and 1995 (47.3%) (Figure 2).

Figure 2. Domestic value added content of gross exports by end-use category by country
percent, 1995 and 2011



Significant structural change has occurred over the last two decades, with China going from being predominantly an exporter of textiles to an exporter of high-tech products (Figure 3a). But across nearly all sectors this structural change has been accompanied by a significant increase in the domestic value-added content of China's exports increase significantly, possibly reflecting an increasing ability to upgrade within the value-chain, either through increased specialisation in higher value-added activities or increased participation (spill-overs) in domestic value-chains by upstream intermediate suppliers or indeed both. In 1995, for example around three-quarters of the total value of ICT exports reflected foreign content but by 2011 this had fallen to just over half, with similar large declines seen in other hi-tech sectors, such as Electrical Machinery and Transport Equipment (Figure 3b).

Figure 3a. China's industry share of domestic and foreign value content of gross exports
percent of total gross exports, 2011

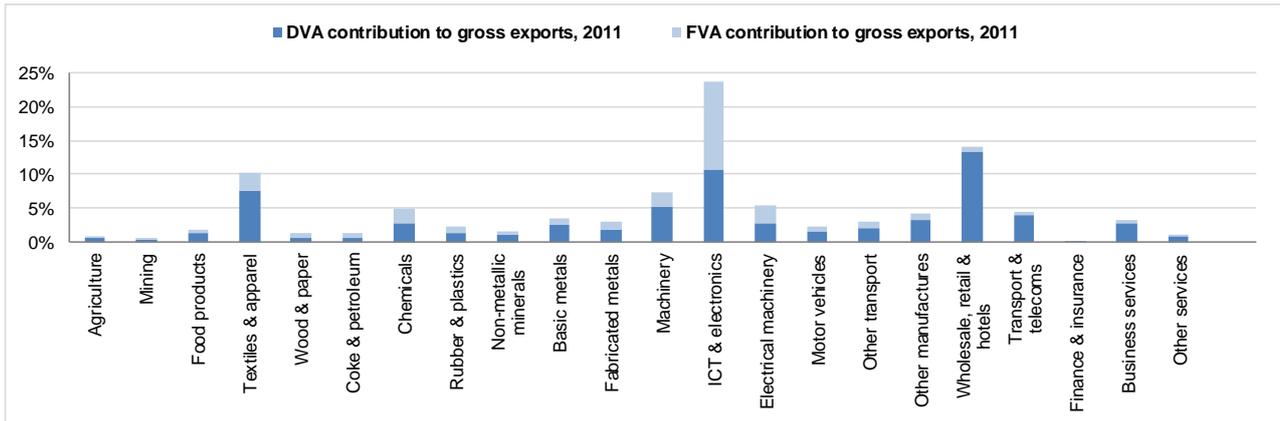
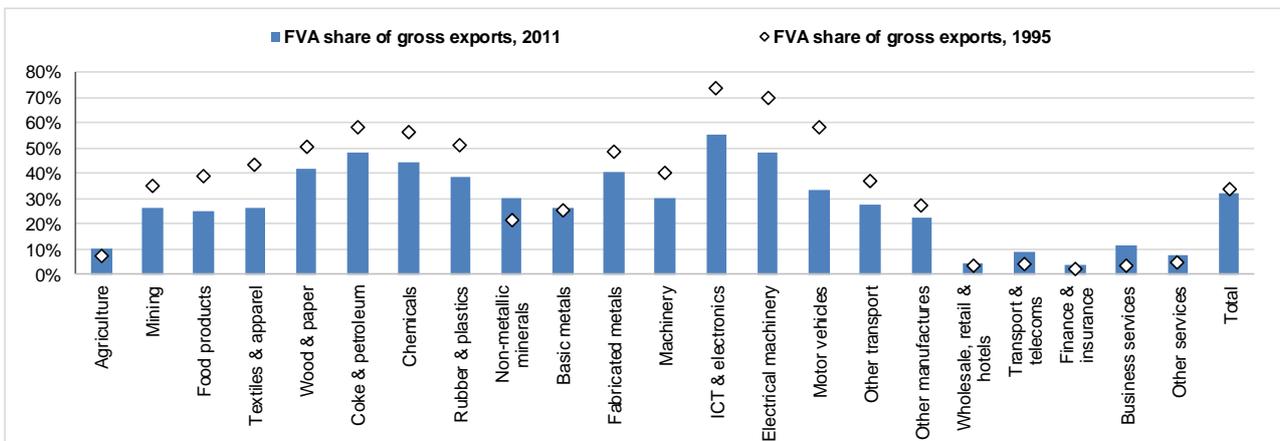
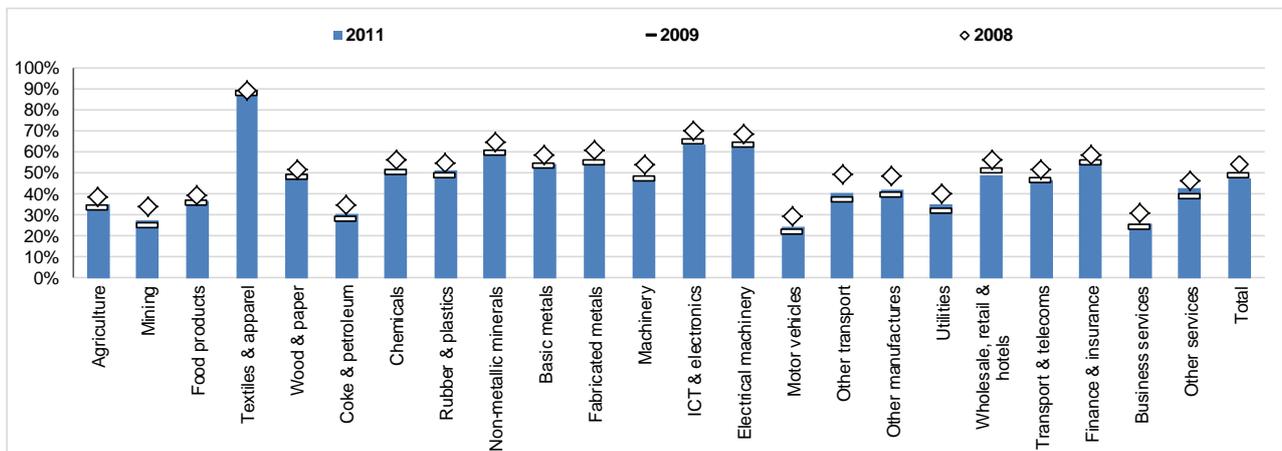


Figure 3b. China's foreign value added content of gross exports
1995 and 2011



Of the total value of China's imports of intermediate products and services, 47.2% was subsequently embodied in exports, a higher share compared to OECD countries (39.3%) but slightly below the equivalent figure in 2009 (49.1%) and also below China's 2008 position (Figure 4). The imported products with the highest shares embodied in exports were Textiles & apparel, Electrical machinery and ICT & electronics, at 88.3%, 64.1% and 63.1% respectively.

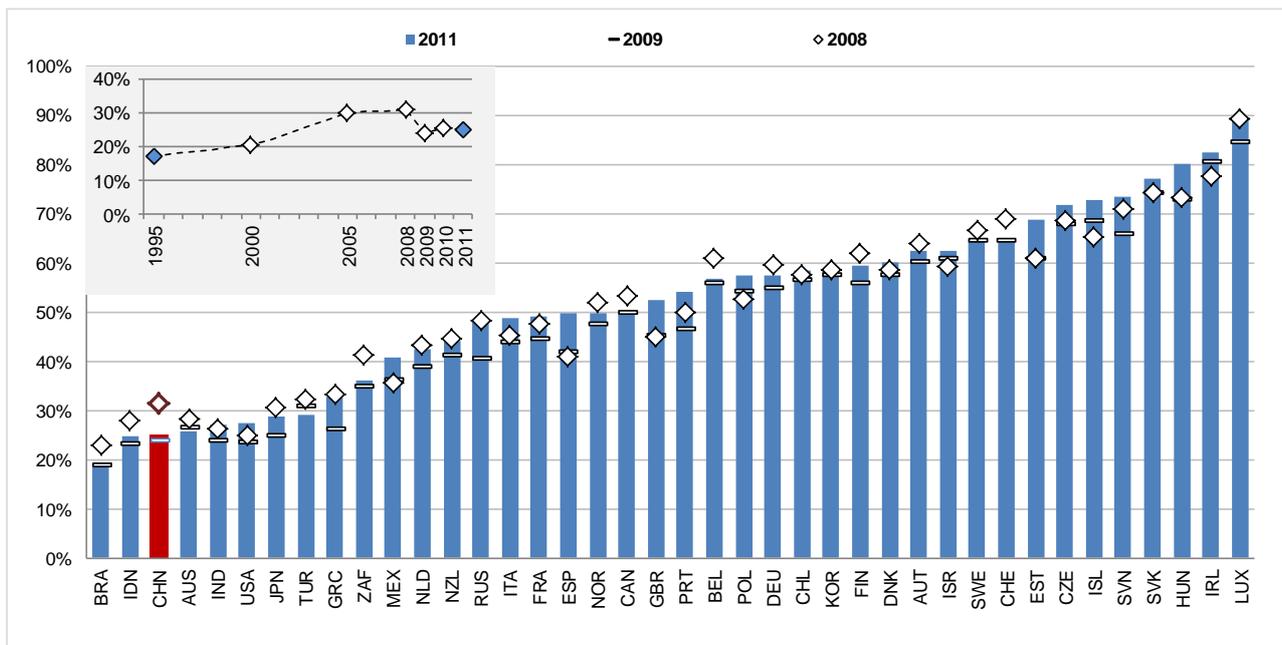
Figure 4. China's imported intermediate inputs used for exports, by import category
percent of intermediate imports, 2008, 2009, and 2011



The destination of domestic value added produced in China

Of the total domestic value added produced by the manufacturing sector in China, only 25.0% was driven by foreign final demand in 2011, higher than the equivalent figure in 2009 (23.8%) and significantly higher than 1995, but lower than in 2008 (31.2%) and lower than the OECD average (41.9%) in 2011 (Figure 5). However, this level partly reflects China's size, with China standing around the average for similar sized economies, only marginally below the United States and Japan.

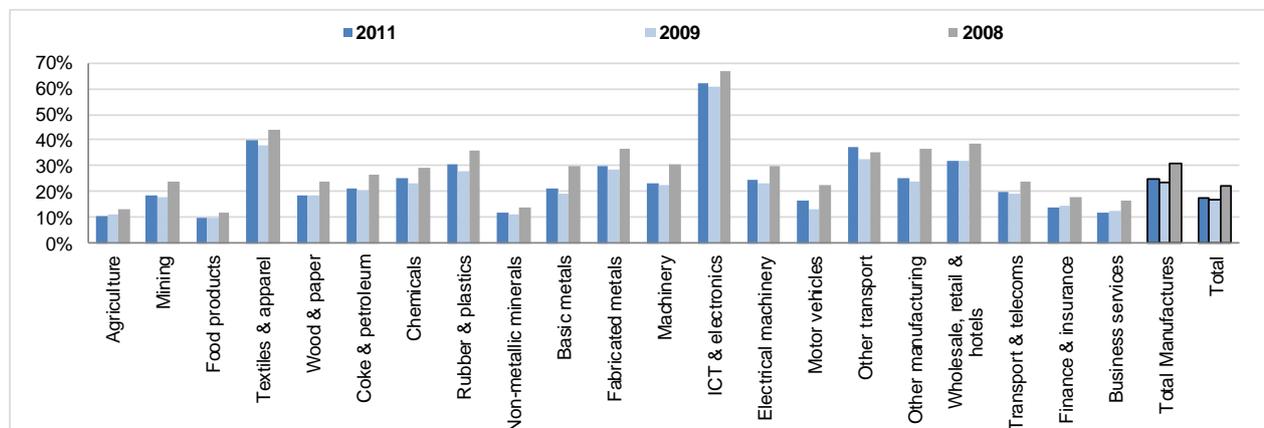
Figure 5. Manufacturing domestic value added in foreign final demand by country,
percent of total manufacturing value added, 2008, 2009, and 2011 (left insert = time series for China)



Note: Final demand excludes inventories: See also http://www.oecd.org/sti/ind/TiVA_2015_Guide_to_Country_Notes.pdf

But in some sectors, notably ICT and electronics, where around two-thirds of all domestic value-added was driven by foreign final demand, the export orientation of Chinese manufacturers was very high (Figure 6).

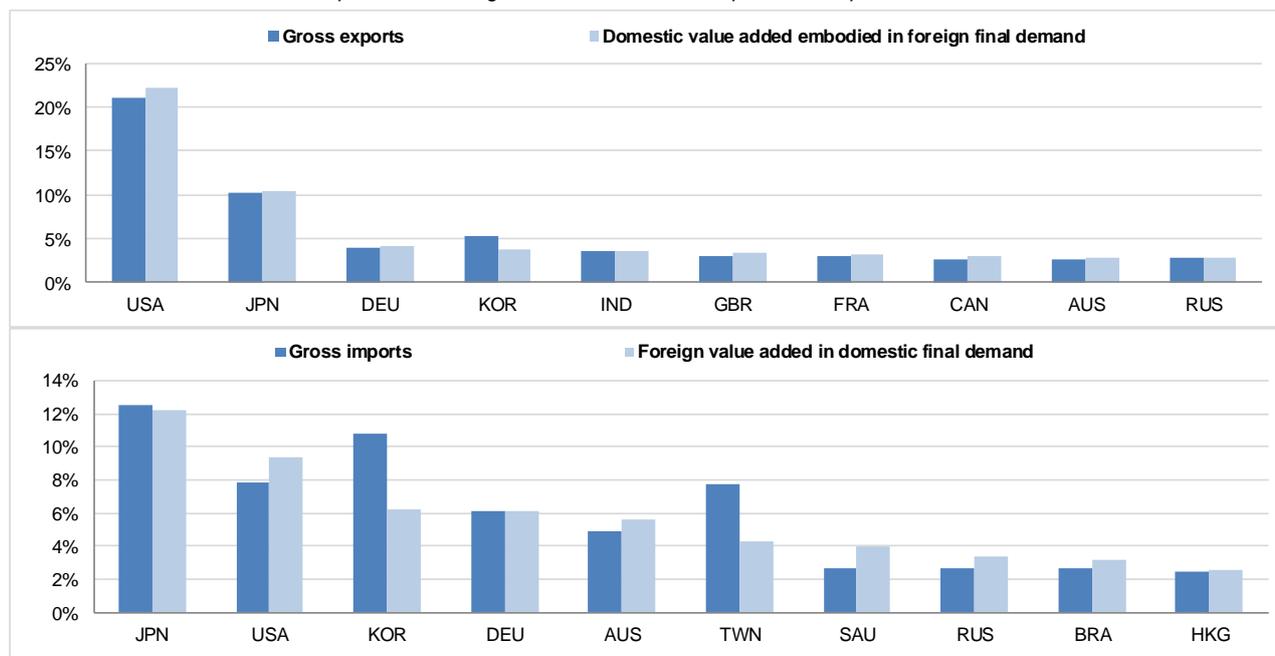
Figure 6. China's domestic value added in foreign final demand, percent of value added by industry, 2008, 2009, and 2011



Note: Final demand excludes inventories: See also http://www.oecd.org/sti/ind/TiVA_2015_Guide_to_Country_Notes.pdf

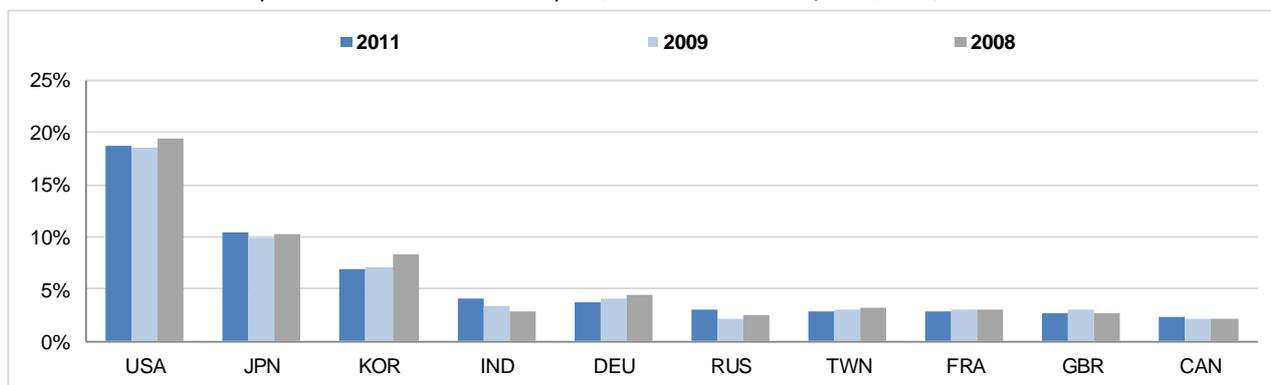
In gross terms, the United States (21.1%), Japan (10.3%) and Korea (5.3%) were the three most important Chinese export market destinations, relatively similar from the positions in value-added terms, although Germany (4.1%) outranks Korea as China's third largest export market in value added terms (Figure 7 top). Significant changes arise however when looking at imports in value-added terms. For gross imports, China's top three partners were Japan (12.5%), Korea (10.8%) and the United States (7.8%), while in value-added terms the United States jumped to second with 9.4%, and Korea's share falls significantly to 6.2% (Figure 7, bottom). Trade in value-added terms significantly changes China's bilateral trade balances; in 2011, China's trade surplus with the United States for example was one-third smaller in value-added terms compared to gross measures.

Figure 7. China's exports to and imports from main partner countries percent of total gross and value added exports and imports, 2011



Despite the strong regional aspect of Factory Asia, the United States (with a share of 18.8%) is the largest destination of direct exports of intermediates in value-added terms, followed by Japan (10.4%) and Korea (7.0%) (Figure 8).

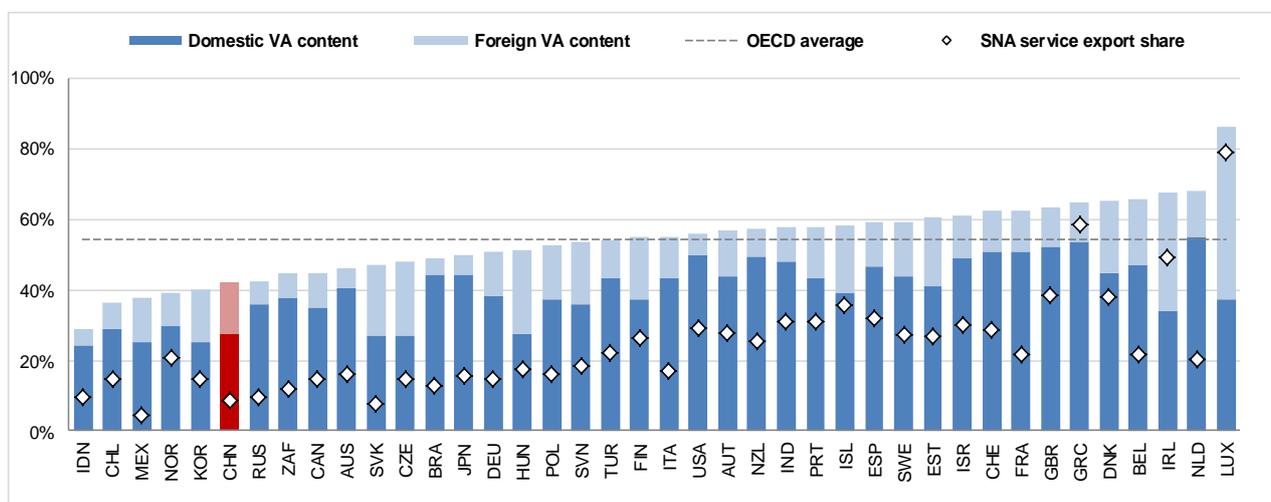
Figure 8. China's domestic value added embodied in intermediate exports to main partner countries
percent of total intermediate exports, in value added terms, 2008, 2009, and 2011



The importance of services

The service sector's share of total exports of domestic value added has changed relatively little in China over the past two decades, fluctuating around 40% (41.9% in 2011, Figure 9). Although this is below the OECD average (54.3%) the foreign value added share is significantly higher than for the OECD. But this higher share of foreign value added is lower than the equivalent figure in 1995, as domestic services providers have increasingly become integrated within value-chains.

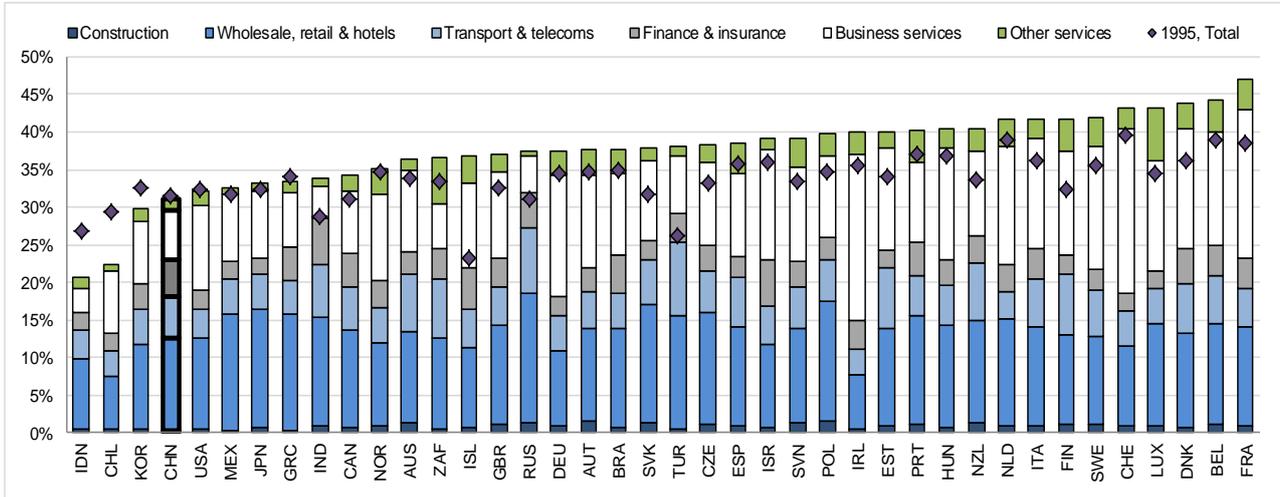
Figure 9. Services content of gross exports by country, gross and value-added terms,
percent of total gross exports, 2011



Note: SNA services export shares include re-exports in the denominator, and include any actual differences in free on board and basic prices (the distribution margin provided by resident distributors to resident exporters) in goods.

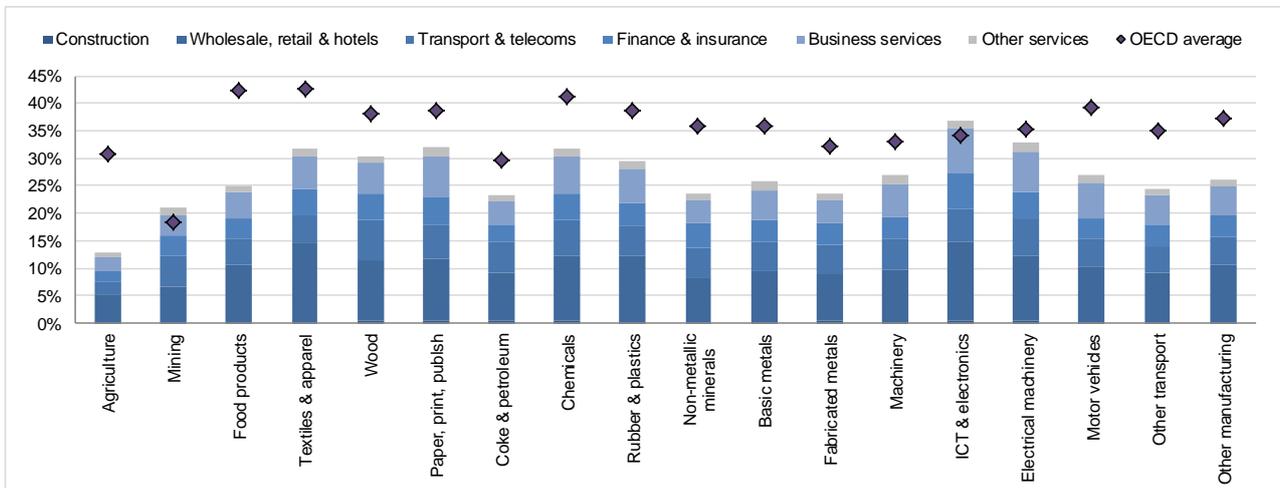
As for exports of manufactured goods alone, 31.1% of the total value reflected services sector value-added, below the OECD average (36.9%). Of this share, the Wholesale, Retail & Hotels sector accounted for 12.2% of total gross exports, with Business services and Transport & Telecoms accounting for 6.6% and 5.6% respectively (Figure 10).

Figure 10. Services value added embodied in manufacturing exports, by country, percent of total gross exports, 1995 and 2011



The services content of exports at the sectoral level was below the OECD average in nearly all industries except, notably, in ICT and Electronics, the largest source of China's exports, and also in Mining (Figure 11).

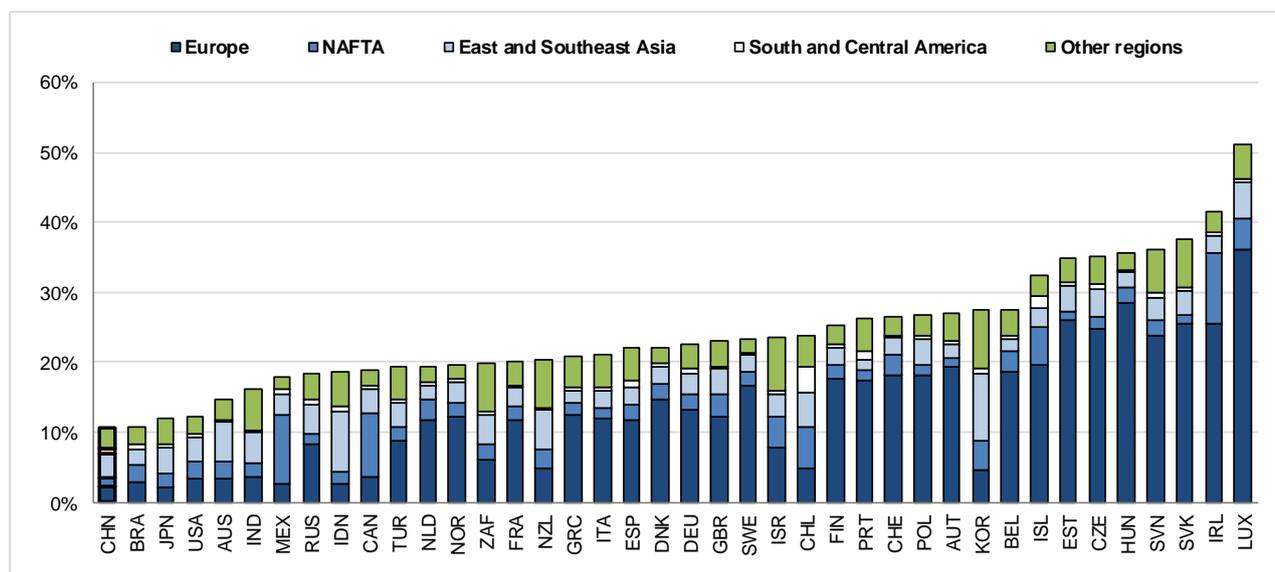
Figure 11. China's Services content of gross exports, by exporting industry and service category percent of gross exports by industry 2011



The origin of domestic consumption

In 2011, only 10.5% of China's total final domestic consumption reflected foreign content, with as little as 2.1% from Europe, 1.4% from NAFTA, 3.4% from East and Southeast Asia, 0.7% from South and Central America and 3.0% from other regions (Figure.12). This was lower than any country in the OECD and other major economies.

Figure 12. Foreign value added content of domestic consumption by country
by source region, 2011



Further Information

The information included in this note is based on the 2015 edition of the Trade in Value Added (TiVA) database.

» Access the data at <http://oe.cd/tiva>

» Please contact us with your questions at tiva.contact@oecd.org