OECD/WTO TRADE IN VALUE ADDED (TIVA) INDICATORS

China

China’s domestic value added content of its exports was 67% in 2009, below the OECD average (76%), the second lowest in the G20, and significantly below its level in 1995 (88%), reflecting China's increasing integration into global value chains (Fig. 1). China's accession to the WTO in 2001 accelerated this process of integration, with the foreign content of its exports increasing strongly from 19% in 2000 to 36% in 2005. This process has been characterised by significant shifts in China's specialisation. The share of value added exports of electronic products doubled to 30% between 1995 and 2009 while the contribution of textiles fell from 25% in 1995 to less than 20% in 2009. China's domestic value added content of its exports rose between 2005 and 2009 suggesting that China was beginning to extract higher value from global value chains.

Figure 1: Domestic value added content of gross exports, % (EXRDVA_EX)

The foreign content of China's exports increased significantly in all manufacturing sectors between 1995 and 2009 (Fig. 2). The Electrical equipment industry had the highest percentage at 43% in 2009, triple the percentage in 1995. Chemicals and minerals, Machinery, and Basic metals industries also had relatively high shares.

Figure 2: Foreign value added content of gross exports, by industry, % (EXGR_FVASH)
The share of intermediate imports that is used to produce exports was highest in the following product groups: Textiles and apparel (81%) and Electrical equipment (73%) (Fig. 3). Relatively high shares were apparent across most product groups (around 40%). In total about half of all China's imported intermediates are used in the production of exports, more than twice the proportion in 1995.

Figure 3: Share of imported intermediate inputs that are exported, by import category, % (REI)

China's emergence as a major exporter of electrical equipment between 1995 and 2009 has been driven by its integration into Asian value chains. Between 1995 and 2009 foreign sourced electronic products contributed around 13% of the total value of Chinese electronic exports, up from under 3% in 1995 (Fig. 4). Much of this was driven by intermediate inputs from regional partners but not insignificant contributions came from North America and Europe. Intermediates from other upstream parts of Factory Asia's value chain also increased significantly. Foreign content originating from Business services made up 6% of the total value of Chinese electronic products in 2009, with significant increases in all regions, notably Europe.

Figure 4: Foreign value added in Electrical equipment, by originating region and industry, %

[Figure 4 illustrates how the TiVA infrastructure can be used to focus on the origins of foreign value added in the output of a particular sector in a particular country].

The position of China's main export markets remained broadly unchanged in both value added and gross terms in 2009. The United States was a marginally more important destination for Chinese exports in value added terms, reflecting the relatively high share of final products exported to the United States but also Chinese value added embodied in the exports of other countries, such as Korea, whose share in value added terms was correspondingly lower than in gross terms (Fig. 5). Similarly, Korea's share of Chinese imports halved when measured in value added terms, with similar patterns for Chinese Taipei and Malaysia, further illustrating the nature of the Asian production hub. The relatively high share of domestic value added embodied in US exports, coupled with US value added embodied in the exports of other countries, saw the US displace Japan as China's main source of imports in 2009.
Figure 5a: Exports, partner shares, in gross and value added terms (as a % of total), 2009

The domestic value added embodied in exports and intermediate imports embodied in exports combine to reveal notable differences in China’s trade balance positions with some of its major trading partners (as recorded in the OECD-WTO TiVA database). Typically the pattern is characterised by smaller deficits with Factory Asia and smaller surpluses with Europe and North America, with the trade surplus with the United States shrinking by one-third when measured in value added terms (Fig. 6).

Figure 5b: Imports, partner shares, in gross and value added terms (as a % of total), 2009

Figure 6: Bilateral trade balances, USD million, 2009
In value added terms just under 30% of China’s exports reflect services (Fig. 7). This is relatively low compared to the OECD average (48%) but significantly higher than the share of services in gross terms (about 10%). This may partly reflect the consolidated nature of Chinese industries relative to OECD economies, which have in recent decades outsourced many central services, providing an indication of potential scope for increased competitiveness for Chinese manufacturers. The domestic service content of Chinese exports was relatively low in all manufacturing sectors but foreign service providers provided a relatively high share compared to other countries, making up half of the overall service content in many industries. At just under 30% the electronic equipment sector had the highest service content (Fig. 8).

Figure 7: Services content of gross exports, 2009  (EXGR_*_SV; SERV_VAGR)

Figure 8: Services content of gross exports, by industry, 2009  (EXGR_*_SV; SERV_VAGR)

The information included in this note is based on the May 2013 release of the Trade in Value added (TIVA) database. The data can be accessed from www.oecd.org/trade/valueadded. For further information, please contact us (tiva.contact@oecd.org).

Note: Some care is needed in making comparisons over the complete period 1995-2009. The underlying input-output tables used for China from 2005 are broken down into categories that better reflect global value chains and, so, estimates of the foreign content of exports in earlier years may be biased downwards compared to estimates for 2005 to 2009.