TRADE IN VALUE ADDED: KOREA

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 Korea’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

- Korea is highly integrated within global value chains, with the highest share of foreign content (41.6%) of exports in 2011 in the G20, a near doubling over the last two decades.

- Integration within Factory Asia drives Korea's value chains, with China being by far the most significant importer of Korea's exports of intermediates in value-added terms in 2011, accounting for 37.1% of the total. However, the United States still imported over 10% of all Korea's intermediate exports in value-added terms in 2011.

- Over half of all of Korea's intermediate imports in 2011 were destined for use in producing exports, with shares of up to two-thirds in products used in key export industries such as ICT & electronics and Motor Vehicle (parts and components).

- However the service content of Korea's manufactured exports was the second lowest in the OECD in 2011, lagging behind only Chile (a significant exporter of refined copper).
The role of foreign and domestic value added in exports

Korea had the highest foreign content of exports among the G20 in 2011 (41.6%), with shares nearly doubling since 1995 (22.3%), and up from the recent crisis low of 2009 (37.5%) and the same as its pre-crisis level in 2008 (Figure 1).

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

Of Korea’s total exports of domestic value added in 2011, 63.8% reflected exports of intermediates, higher than the equivalent share in 2009 (53.8%), in part reflecting the rebound in GVCs which were disproportionately affected by the crisis, and higher in than 1995 (55.8%) (Figure 2). Korea’s total exports of domestic value added share in intermediates in 2011 was marginally higher than the OECD average of 61.5%.

Figure 2. Domestic value added content of gross exports by end-use category by country
percent, 1995 and 2011
Direct exports by the ICT & electronics industry generated the greatest source (both direct and upstream) of domestic value added in 2011, accounting for 11.4% of the total value added of exports. The next three most important industries were the Wholesale, retail & hotels sector (7.4%, reflecting tourism and upstream distribution services), Motor vehicles (6.6%), and Other transport equipment (4.6%) (Figure 3a). The largest foreign contributions were in the ICT & electronics and Coke & petroleum industries, which together contributed 15.4% to Korea's total exports.

The three industries with the highest foreign value added shares in Korea's exports in 2011 were Coke & petroleum (80.8%), Basic metals (53.6%) and Chemicals (53.1%), compared to 59.6%, 36.3% and 27.0% in 1995 (Figure 3b). Shares were higher across all industries compared to 1995.

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

Figure 3b. Korea’s foreign value added content of gross exports
1995 and 2011
Of the total value of Korea's imports of intermediate products and services, over half (53.7%) was subsequently embodied in exports, higher than the OECD average (39.3%) and the equivalent figure in 2009 (51.1%) (Figure 4). The products with the highest shares were ICT & electronics (67.8%), Motor vehicles (60.0%) and Mining (59.3%).

The destination of domestic value added produced in Korea

Of the total domestic value added produced by the manufacturing sector in Korea, 58.5% was driven by foreign final demand in 2011, higher than the equivalent figure in 2009 (57.4%) but lower than in 2008 (58.7%) , and significantly higher than the OECD average (41.9%) in 2011 (Figure 5).

At the total economy level, one-third (33.5%) of Korea's domestic value added was driven by foreign final demand, with significant differences across industries. ICT & electronics (74.3%) and Other transport equipment (73.7%) had the highest level of export orientation in Korea, with the lowest shares in Agriculture (12.3%) and Food products (13.4%) (Figure 6).

In gross terms, China (30.9%), the United States (11.1%) and Japan (7.8%) were the three most important Korean export market destinations. While in value-added terms, China (19.1%) remained the most important export market, the gap with the United States (17.3%) closed significantly, reflecting Korean value-added embodied in Chinese exports to the United States (Figure 7, top). For imports in gross terms, Korea's top three partners were China (17.3%), Japan (12.1%) and the United States (10.8%), while in value-added terms the United States (13.6%), only marginally behind China (14.4%), displaced Japan (11.5%) in second place (Figure 7, bottom).

Looking only at exports of intermediates goods and services, China was by far the most significant importer of Korea's exports of intermediates in value-added terms in 2011, accounting for 37.1% of the total. The United States (11.0%), Japan (7.2%) and Chinese Taipei (3.3%) were the next three most important markets (Figure 8).

Figure 8. Korea'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

In 2011, the service content of total exports in Korea was 40.1%, significantly below the OECD average of 54.3% and the third lowest in the OECD (Figure 9).

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, 29.7% of the total value reflected services sector value-added, below the OECD average (36.9%) and the second lowest in the OECD. Of this share, the Wholesale, retail & hotels sector accounted for 11.4% of total gross exports, with Business services and Transport & Telecoms accounting for 8.4% and 4.6% respectively (Figure 10).

At the sectoral level, the services content of exports was highest in Textiles & apparel (34.8%), ICT & electronics (33.0%) and Chemicals (32.5%), but shares were significantly below the OECD average in all sectors except for Mining and ICT & Electronics (Figure 11).
The origin of domestic consumption

In 2011, 27.4% of Korea's total final domestic consumption reflected foreign content, of which Europe contributed 4.5 percentage points (pp), NAFTA 4.2 pp, East and Southeast Asia 9.5 pp, South and Central America 0.9 pp and other regions 8.3 pp (Figure 12).

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