TRADE IN VALUE ADDED: CZECH REPUBLIC

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 the Czech Republic’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

- The Czech Republic is highly integrated within the European value-chain with nearly half (45.1%) of total exports reflecting foreign content.
- Integration is especially high in the ICT & Electronics and Motor Vehicles industries, which together account for over one-quarter of gross exports, and where the foreign content shares were around two-thirds in 2011.
- The export orientation of Czech manufacturing is very high with nearly three-quarters of all domestic value-added being driven by foreign final demand in 2011 (over 95% for ICT & Electronics).
- Nearly half of the value of exports reflected service content, with half of this provided by foreign services providers, pointing to the high services content of the Czech Republic’s imports.
The role of foreign and domestic value added in exports

The foreign content of the Czech Republic’s exports (45.1%) was amongst the highest in the OECD in 2011, significantly up on 2009 (39.9%) and the pre-crisis level of 42.1% in 2008 (Figure 1), and has increased by 14.6 percentage points since 1995.

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

Of the Czech Republic’s total exports of domestic value-added in 2011, 58.6% reflected exports of intermediates. This was below the OECD average (61.5%) but higher than the share in 2009 (53.7%), in part reflecting the rebound in GVCs which were disproportionally affected by the crisis, and the share in 1995 (57.9%) (Figure 2).

Figure 2. Domestic value added content of gross exports by end-use category by country
percent, 1995 and 2011
Direct exports by the Motor Vehicles industry generated the greatest source (both direct and upstream) of domestic value added in 2011, accounting for 7.3% of the total value of exports. The next three most important industries were Wholesale, Retail & Hotels at 5.8%, Transport & telecoms at 5.3% and Machinery at 4.8% (Figure 3a). The largest foreign contributions were in the ICT & Electronics and Motor Vehicles industries, which together contributed 17.0% of the Czech's Republic’s total exports.

The foreign content of exports increased in nearly all industries between 1995 and 2011, with significant increases in industries with high international fragmentation of production, such as ICT & Electronics. The three industries with the highest foreign value added shares in the Czech Republic’s exports in 2011 were Coke & Petroleum, ICT & Electronics, and Basic metals, with 76.6%, 67.1%, and 57.4% respectively, compared to figures of 44.2%, 45.2% and 35.4% in 1995 (Figure 3b).

Figure 3a. Czech Republic’s industry share of domestic and foreign value content of gross exports

Figure 3b. Czech Republic’s foreign value added content of gross exports

1995 and 2011
Of the total value of the Czech Republic's imports of intermediate products and services, two-thirds (63.3%) was subsequently embodied in exports; significantly higher than the OECD average (39.3%) (Figure 4), and also higher than the equivalent figure in 2009 (58.7%). The products with the highest import shares were ICT & Electronics, Rubber & Plastics and Basic Metals, at 89.5%, 76.7% and 75.8% respectively.

The destination of domestic value added produced in Czech Republic

Of the total domestic value added produced by the manufacturing sector in Czech Republic, nearly three-quarters (71.6%) was driven by foreign final demand in 2011, higher than the equivalent figures in 2009 (67.9%) and 2008 (68.7%) and significantly higher than the half in 1995, (Figure 5).

At the total economy level, 41.0% of the Czech Republic's domestic value added was driven by foreign final demand, but significant differences exist across industries. ICT & Electronics (95.1%) and Basic metals (86.9%) had very high levels of export orientation, and even in those industries with the lowest rates of export orientation, shares were over a quarter: Food products (27.4%) and Finance & insurance (31.5%) (Figure 6).

In gross terms, Germany (28.2%), Poland (6.0%) and the UK (5.8%) were the three most important Czech export market destinations. In value-added terms, the top three export destinations were Germany (22.3%), France (6.1%), and the United States (6.1%) (Figure 7, top), reflecting the Czech Republic’s integration within European value chains and in particular Czech value-added embodied in German exports to the United States. For imports, the Czech Republic's top three partners were Germany (24.9%), China (9.3%) and Poland (8.2%), while in value-added terms they were Germany (21.0%), Russia (8.5%), and China (6.9%) (Figure 7, bottom).
Looking only at exports of intermediate goods and services, Germany was by far the most important destination market, importing almost a third of the Czech Republic’s intermediate exports in 2011, with neighbours in the European value chain, Poland and the Slovak Republic, importing a further 13.4% (Figure 8).

Figure 8. Czech Republic’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 sector’s share of total exports of domestic value added in the Czech Republic was just under a half (48.1%), below the OECD average of 54.3%. Nearly half of the total services content reflected foreign services, partly reflecting the hi-tech (knowledge) content of the Czech Republic’s imports (e.g. ICT and motor vehicle intermediates), (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, 38.4% of the total value reflected services sector value-added, slightly above the OECD average (36.9%). Of this share, the Wholesale, Retail & Hotels sector accounted for 14.7% of total gross exports, with Business services and Transport & Telecoms accounting for 10.9% and 5.7% respectively (Figure 10).

At the individual sectoral level, the services content of exports was highest in ICT & electronics (43.9%), Textiles & apparel (42.8%) and Chemicals (40.7%) (Figure 11).
The origin of domestic consumption

In 2011, over one-third (35.0%) of the Czech Republic’s total final domestic consumption reflected foreign content. The largest contribution came from Europe with 24.7 percentage points, followed by East and Southeast Asia (4.1 pp), NAFTA (1.8 pp), and South and Central America (0.5 pp) with the rest of the world contributing a further 4.0 pp (Figure.12).

**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](http://oe.cd/tiva)

» Please contact us with your questions at [tiva.contact@oecd.org](mailto:tiva.contact@oecd.org)