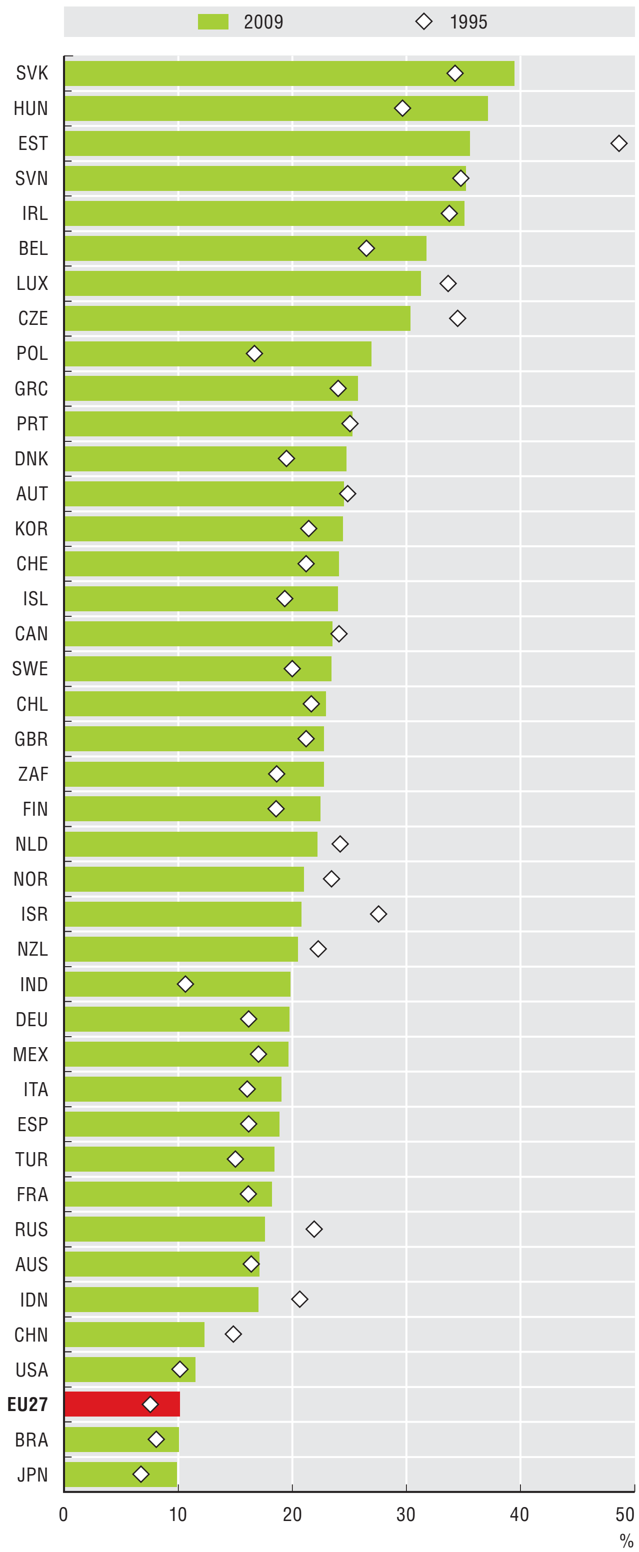
7. Global demand

Foreign value added embodied in domestic final demand, 1995 and 2009

As a percentage of GDP



Source: OECD-WTO, Trade in Value Added (TiVA) Database, *http://oe.cd/tiva*, May 2013. StatLink contains more data. See chapter notes.

StatLink http://dx.doi.org/10.1787/888932904412

Foreign value added embodied in domestic final demand is the value of a final good or service consumed domestically that is generated by other countries. It shows how industries abroad (upstream in a value chain) are connected to consumers at home, even if there is no apparent direct trade relationship. It can also be described as "imports of value added". With a few exceptions, dependency on other countries to fulfil domestic demand increased between 1995 and 2009.

This growing interdependency may limit the degree to which policy makers directly influence growth and job creation within their national borders. Moreover, policies to promote domestic activities can have spillover effects in other countries. Similarly, policies that target domestic demand may be less effective because of the large foreign value added content in final demand.

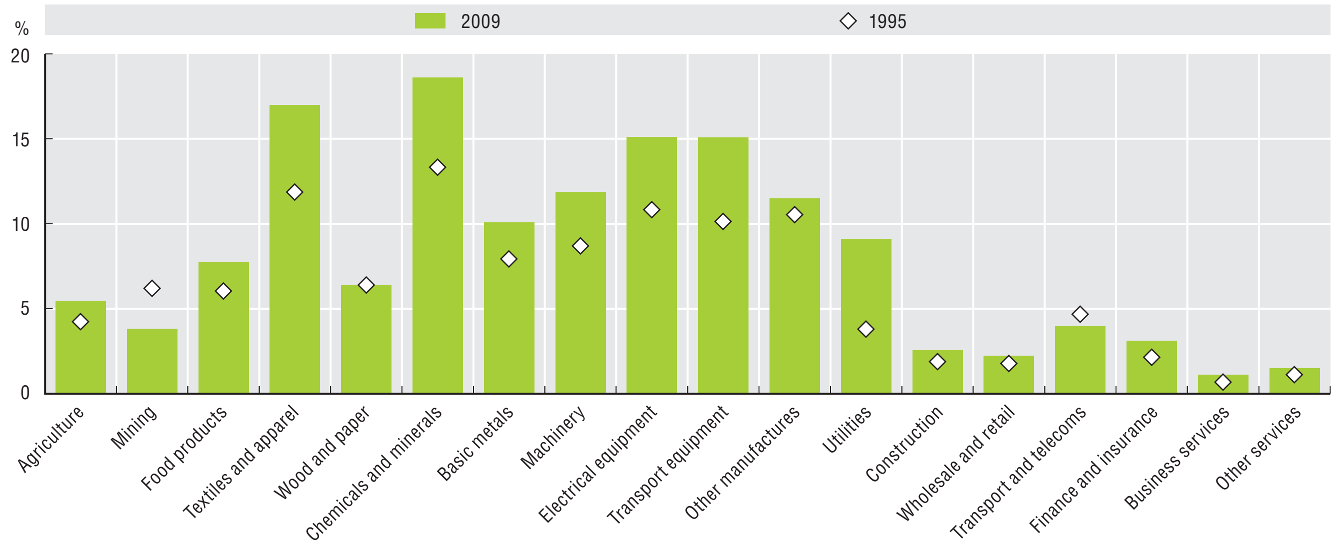
The level of foreign value added in an economy's final demand is determined by its industry composition, its demand patterns and relative product prices. Fulfilment of domestic final demand by foreign production is linked to the technical characteristics of products and is far more developed in manufacturing than in services, which are less likely to be sliced up than manufacturing products, particularly if they require face-to-face contact between the provider and the consumer. Foreign value added is very large in basic industries that make heavy use of imported primary goods such as minerals and chemicals but also textiles and transport equipment. Fragmentation is also significant for modular products in high-technology industries such as electronics, where the share of foreign value added in final demand increased by 50% across OECD countries between 1995 and 2009, from 10% to 15%. Meanwhile, Brazil, China and Indonesia rely increasingly on domestic production to satisfy domestic demand for electronic products.

Definitions

Sectors are defined according to the following ISIC Rev.3 economic activities: Agriculture (Divisions 01-05), Mining (10-14), Food products (15-16), Textiles and apparel (17-19), Wood and paper (20-22), Chemicals and minerals (23-26), Basic metals (27-28), Machinery (29), Electrical equipment (30-33), Transport equipment (34-35), Other manufactures (36-37), Utilities (40-41), Construction (45), Wholesale and retail (50-55), Transport and telecoms (60-64), Finance and insurance (65-67), Business services (70-74) and Other services (75-99).

Foreign value added embodied in domestic final demand, by sector, OECD average, 1995 and 2009

As a percentage of final expenditure on sectors' products

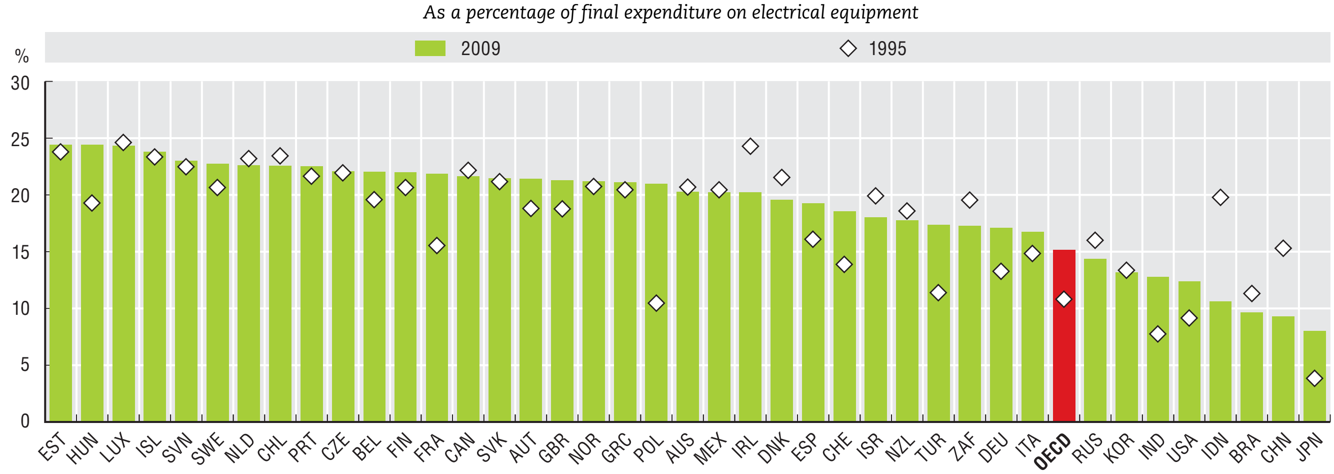


Source: OECD Inter-Country Input-Output (ICIO) Database, May 2013. StatLink contains more data.

StatLink http://dx.doi.org/10.1787/888932904431

Foreign value added embodied in domestic final demand for electrical equipment, 1995 and 2009

As a percentage of final expenditure on electrical equipment



Source: OECD Inter-Country Input-Output (ICIO) Database, May 2013. StatLink contains more data. See chapter notes.

StatLink http://dx.doi.org/10.1787/888932904450

Measurability

In an input-output framework of n_1 countries and n_2 industries, value added from country *a* embodied in foreign final demand can be shown to be equal to

$$v\,(I-A)^{-1}y$$

Where, if $n = n_1 \times n_2$, v is a $1 \times n$ vector with value added to output ratios in industry *i* of country *a*, zero otherwise; *y* is a $1 \times n$ vector of final demand with zero entries for the final demand of country *a*; and A is an input-output coefficient matrix with dimension $n \times n$.

A matrix can be built showing the inputs from industry *i* of country *a* required to produce outputs from industry *j* in country *b* for domestic consumption or export. Aggregating can yield indicators of domestic value added in foreign final demand and foreign value added embodied in domestic final demand as presented here.

A "proportionality" assumption is used when official data on imports by industry are unavailable. It assumes that for a given product, the proportion of intermediates purchased by an industry from abroad is equal to that of imports to total domestic demand in that product. Where this assumption is used, refinements are introduced by using estimates of bilateral trade that differentiate between imports of goods for intermediate use and for final demand.

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