

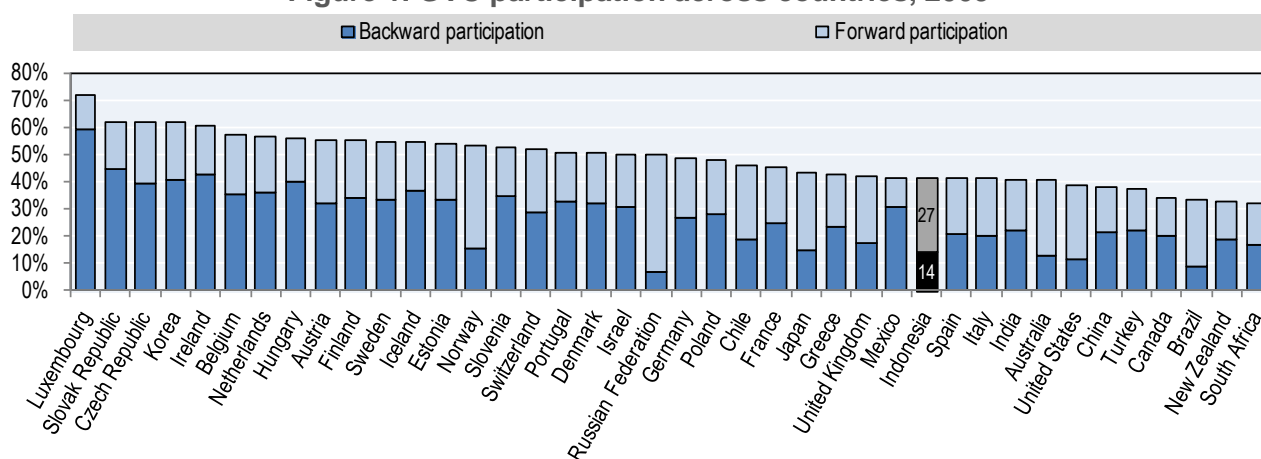


## GLOBAL VALUE CHAINS (GVCs): INDONESIA

### Participation in GVCs

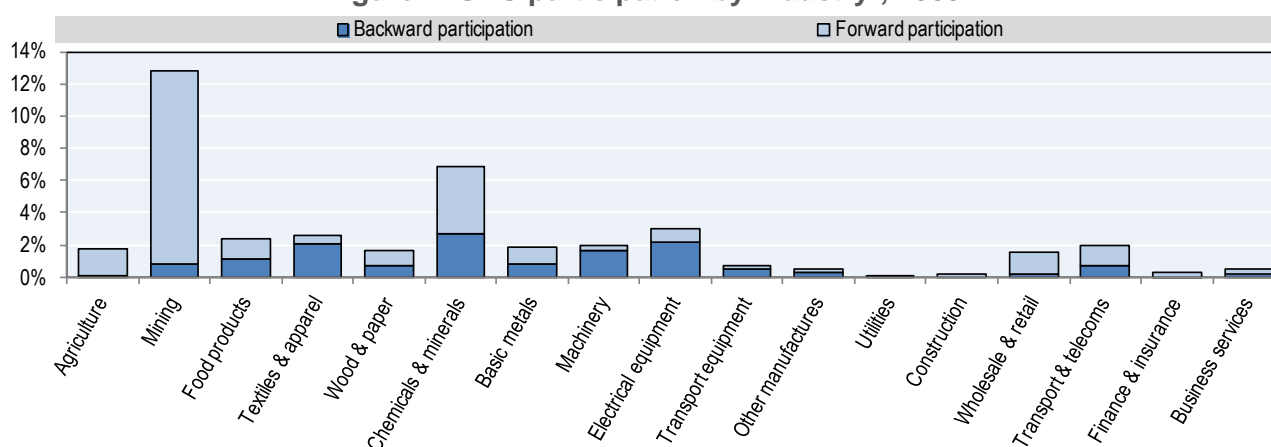
Countries' integration in the global economy is nowadays closely linked to their participation in GVCs. One indicator measuring the participation of countries in GVCs<sup>1</sup> shows what percentage of a country's exports are part of GVCs: either because of upstream links – that is looking back along the value chain and measuring foreign inputs/value added included in a country's exports – or downstream links – i.e. measuring the domestic inputs/value added of the country contained in the exports of other countries by looking forward along the value chain.

**Figure 1. GVC participation across countries, 2009**



- The participation of Indonesia in GVCs through exports is mainly driven by downstream links as other countries intensively use Indonesian intermediates in their exports. This high degree of forward participation is, among others, closely linked to Indonesia's large exports of natural resources (Figure 1).
- Mining and chemicals are two industries in which Indonesia is strongly involved in GVCs through its exports of intermediates which are then included in the exports of other countries further down the chain. Indonesia also participates in a number of other manufacturing GVCs, but to a lesser extent, mainly through the use of imported intermediates in these industries' exports (Figure 2).

**Figure 2. GVC participation by industry<sup>2</sup>, 2009**



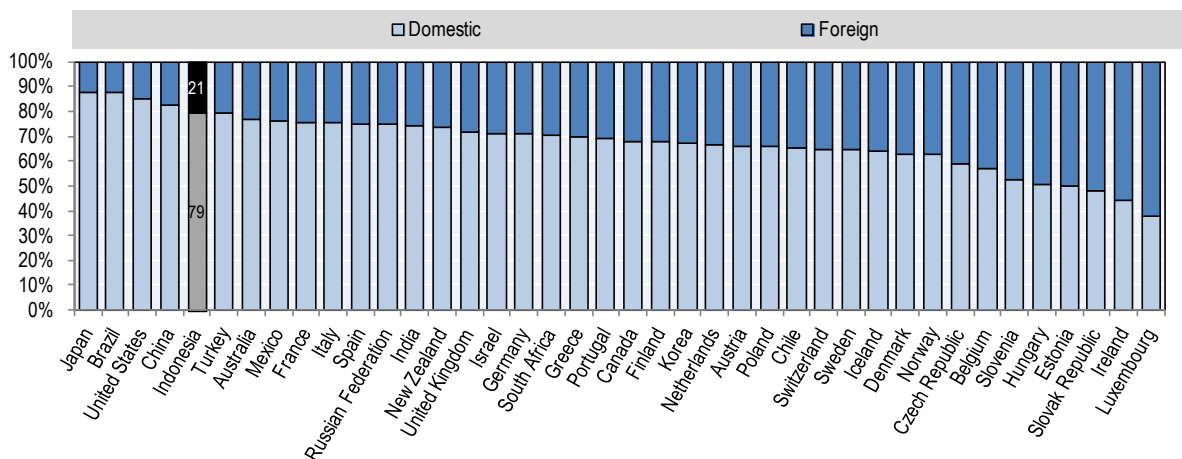
- Note: 1) This indicator of GVC participation focuses on intermediates which are produced in one country and then included in another country's exports; it has been introduced by Koopman et al. (2011) 'Give Credit Where Credit Is Due: Tracing Value Added in Global Production Chains'; see also Miroudot and De Backer (2013) 'Mapping of GVCs'. GVC participation is influenced by the size of the economy, stock of natural resources, distance to world markets, composition of exports (final versus intermediates), etc.
- 2) The indicator on the industry level is expressed relative to total country exports (instead of industry exports) in order to take into account the importance of the industry in the total export composition of a country.

This descriptive note complements the OECD publication "Interconnected Economies: Benefiting from Global Value Chains". The country-specific indicators on GVCs are based on the OECD-WTO Trade in Value-Added database (TiVA – <http://oe.cd/tiva>), both data and indicators are accessible on [stats.oecd.org](http://stats.oecd.org). For further information on the OECD work on GVCs, please contact us ([sti.contact@oecd.org](mailto:sti.contact@oecd.org)) or visit our website (<http://oe.cd/gvc>). May 2013

## Distribution of value added along the value chain (manufacturing and market services)

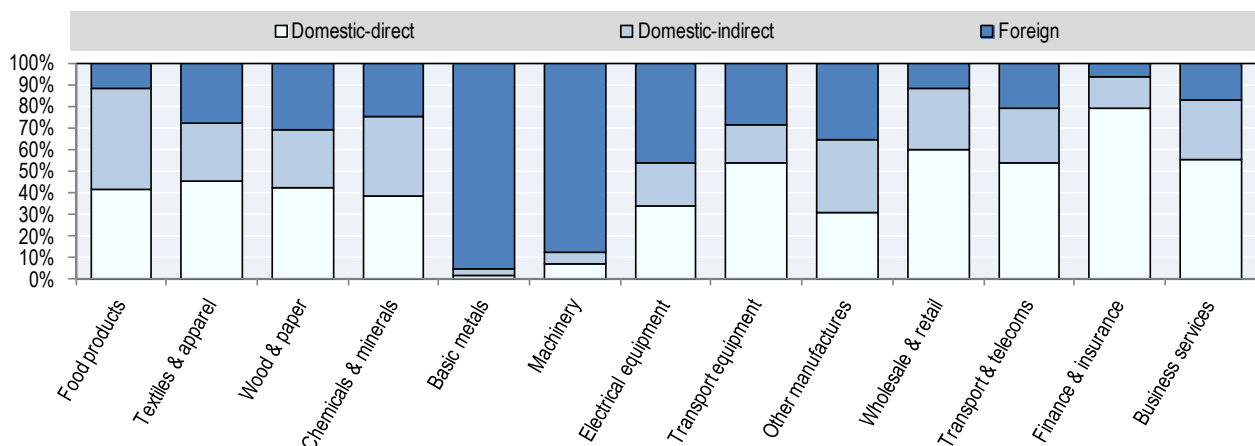
The ability to participate in GVCs is instrumental for economic integration, but benefiting from GVCs depends on how much value a country creates in GVCs. Similar to the stylised approach applied for individual products (e.g. Apple's iPhone), the contribution of different industries and countries along the value chain can be calculated at the aggregate level<sup>3</sup>. Final demand in countries (i.e. sales within the domestic market) is made up of value added created by foreign and domestic industries; a further distinction between direct (i.e. within the industry) and indirect (i.e. in upstream industries) domestic value added can be made at the level of individual products.

**Figure 3. Domestic and foreign value added in final demand across countries<sup>4</sup>, 2009**



- The majority of the final demand for manufactured goods and market services in Indonesia represents value added that has been created domestically. The foreign value added share was about 21% in 2009 (Figure 3).
- Market services show, as expected, the largest domestic value added, especially direct domestic value added. The final demand of manufactured goods sold in Indonesia includes higher shares of indirect domestic value added as well as foreign value added (Figure 4). Domestic value added (direct and indirect) represents the majority of final demand for a large number of products, e.g. food, textiles, wood, transport equipment.

**Figure 4. Domestic and foreign value added in final demand by products<sup>5</sup>, 2009**



Note: 3) Timmer et al. (2012) 'New Measures of European Competitiveness; A Global Value Chain Approach' calls this measure GVC-income.

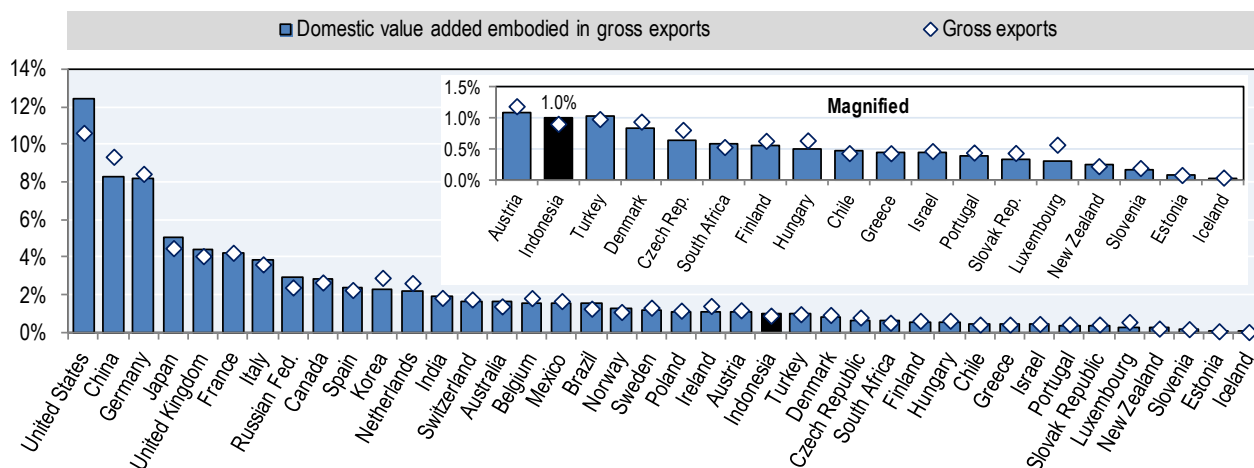
4) Only manufactured goods and market services are included given the prominence of GVCs in these industries.

5) Since trade and transport margins are grouped together in the wholesale/retail sector, distribution services for final goods are not included in the industry decompositions.

## Export shares in GVCs

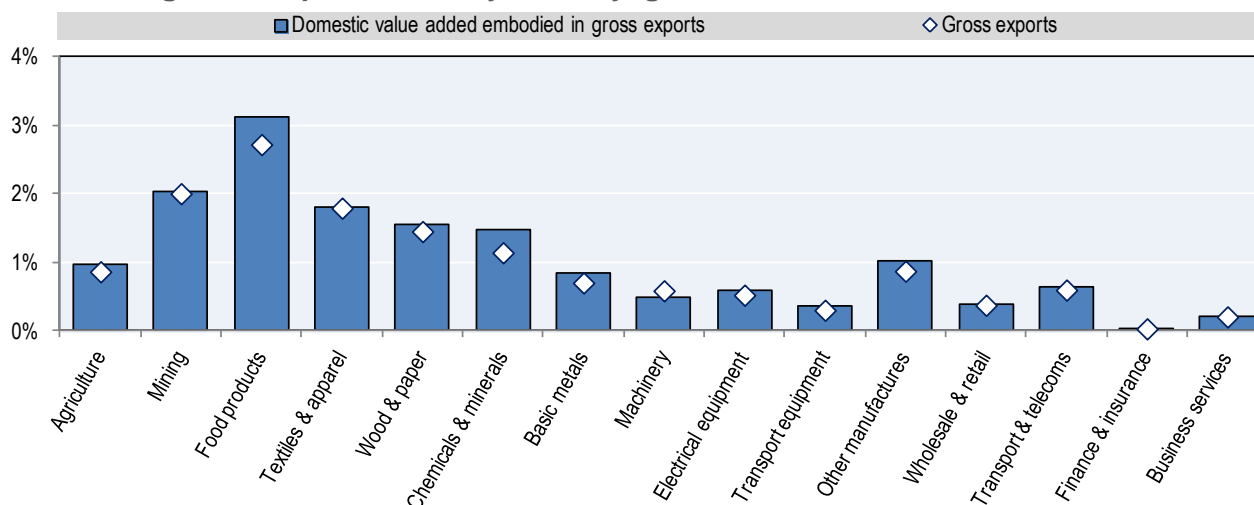
Countries create (and capture) value added in domestic markets as well as foreign markets (through exports). In an era of GVCs, gross export shares are however less meaningful in measuring the international performance of countries. National economies increasingly specialise in specific activities (assembly, logistics, R&D, etc.) instead of entire industries within GVCs. Because of the international dispersion of productive activities across countries and the uneven distribution of value along the value chain, export shares in value added terms are more accurate indicators of countries' competitiveness in the global economy.

**Figure 5. Export shares<sup>6</sup> across countries, gross and value added terms, 2009**



- Indonesia's total exports represented 1% of total world exports in value added terms, which is above Indonesia's share in gross exports (0.9%), illustrating the production of intermediate inputs and domestic value added by Indonesia (Figure 5).
- Large export industries like food and chemicals in Indonesia show higher export shares in value added terms than in gross terms, reflecting the relatively high domestic value added content of Indonesia's exports. Other manufacturing industries show lower value added shares. As exports of natural resources require less intermediate goods, the export shares in agriculture and mining are roughly the same (Figure 6).

**Figure 6. Export shares by industry, gross and value added terms, 2009**

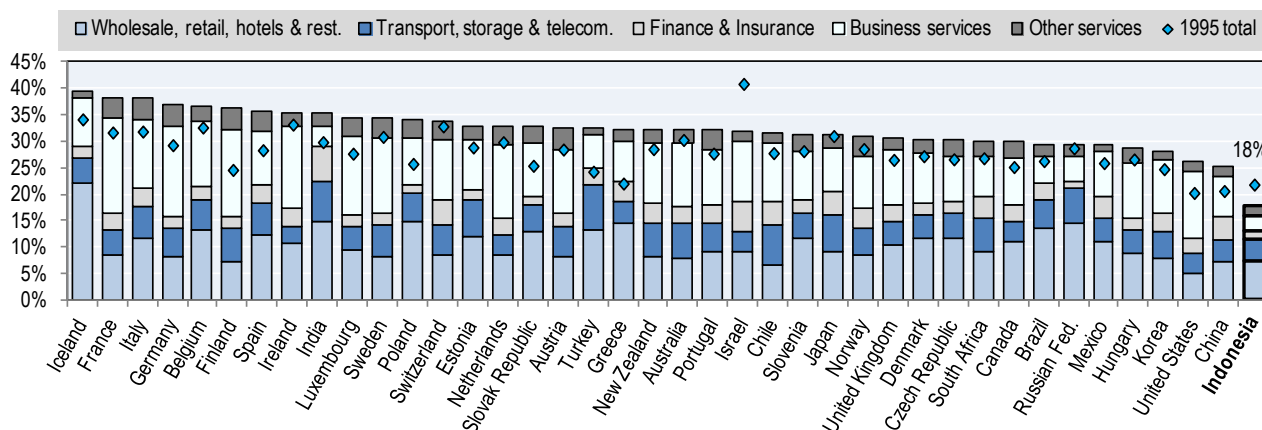


Note: 6) Exports include intermediate, capital as well as final products, hence this indicator provides additional insights into the export activities of countries within GVCs, complementary to the GVC participation index discussed above.

## Competitiveness in manufacturing GVCs: the role of services

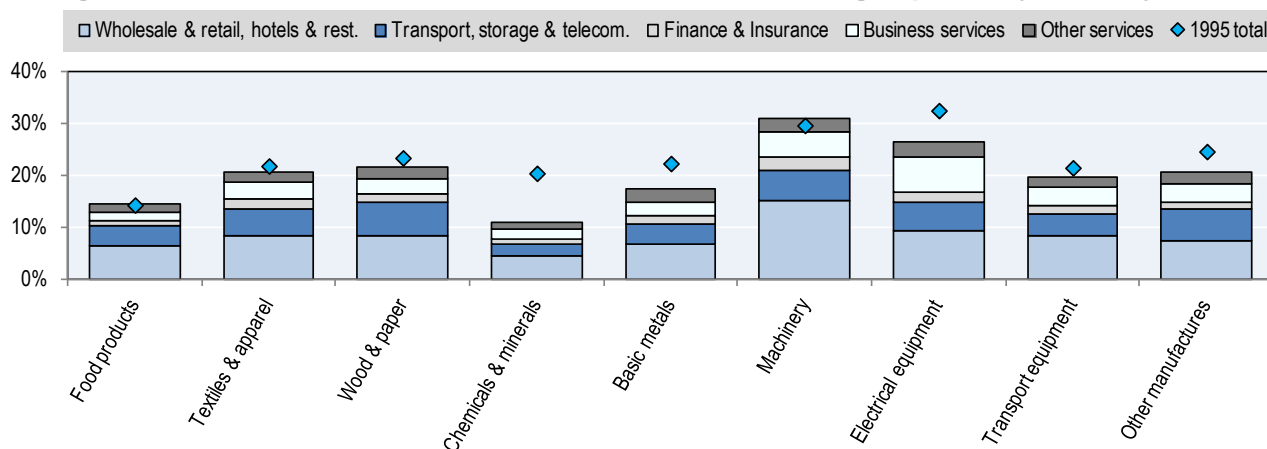
Manufacturing today involves much more than the pure production of goods and increasingly includes service-related activities both upstream and downstream in the value chain. Manufacturing exports include significant value added from service industries<sup>7</sup>: firms increasingly use logistics, communication services, business services, etc. to facilitate the efficient functioning of GVCs. In addition, services (e.g. design, development, marketing, warranties and after-sales care) help to differentiate, customise and upgrade products, enabling firms to capture more value.

**Figure 7. Services value added embodied in manufacturing exports<sup>8</sup>, across countries, 2009**



- Less than 20% of the value of Indonesia's manufacturing exports represents services value added: especially distribution services and to a lesser extent business services, transport and telecommunications and financial services. Services have become less important in manufacturing exports between 1995 and 2009 (Figure 7).
- The services value added content of exports has decreased in almost all manufacturing industries in Indonesia. Exports of different manufacturing industries show a similar distribution across service sectors; distribution services are the most prevalent category in the exports of each manufacturing industry (Figure 8).

**Figure 8. Services value added embodied in manufacturing exports, by industry, 2009**



Note: 7) The results only account for traded services and thus represent a lower bound of the contribution of services to manufacturing exports. R&D services for example are often performed in-house.

8) Distribution services for final goods are not included.