



Global value chains in an uncertain trade and investment environment

Recent developments based on the OECD TiVA database and the joint OECD-Statistics Finland study

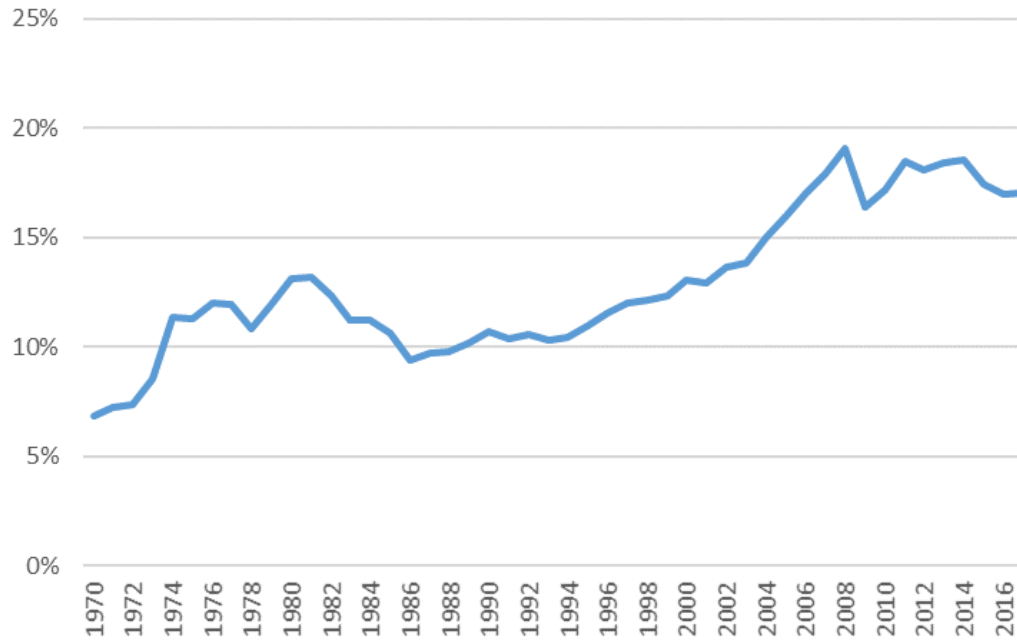
Sébastien Miroudot, OECD

Economic Council of Finland
5 February 2020



Globalisation has peaked

Global import intensity of production (1970-2017)

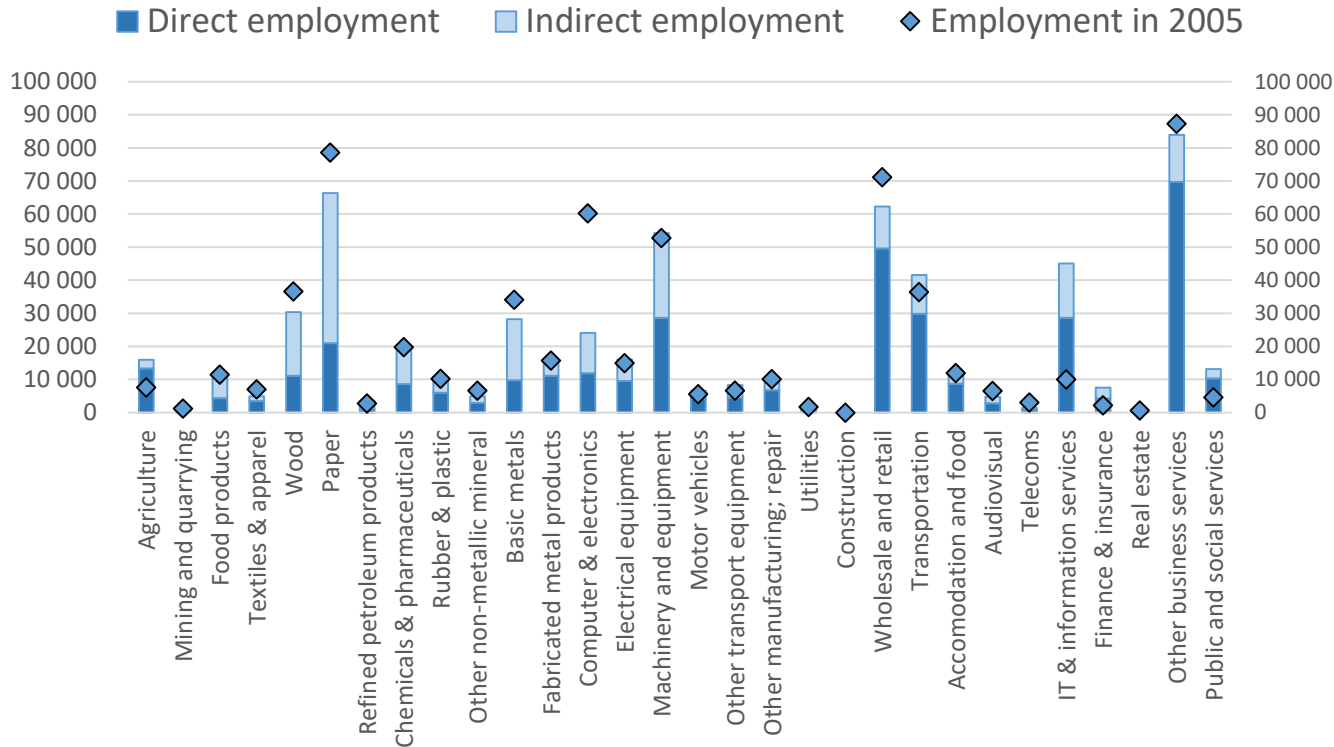


Source: OECD based on data from TiVA, UN COMTRADE, IMF and World Bank.



Still, a significant share of employment is sustained by gross exports

Domestic employment (number of persons) in Finnish gross exports, by industry, 2015

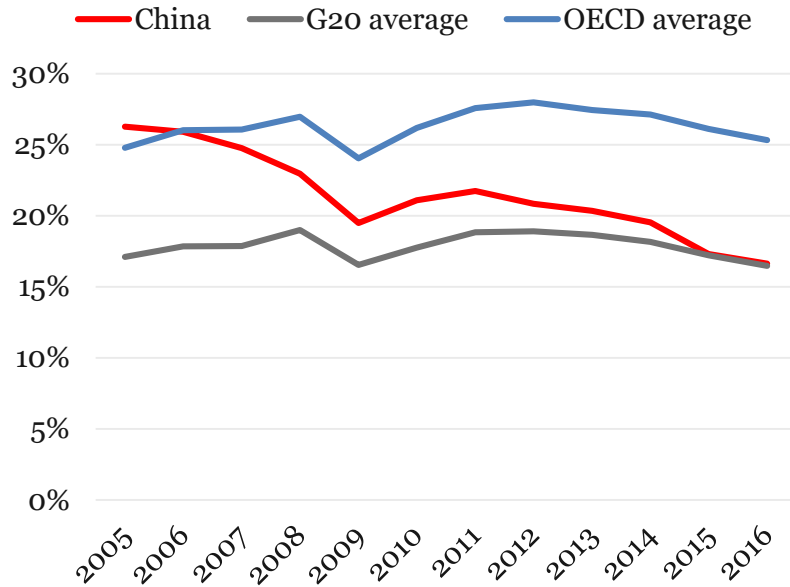


In Finland, the share of employment sustained by gross exports was 24.1% in 2015, corresponding to about 600,000 jobs. The same share was 25.6% in 2005. TiVA data allow to take into account indirect employment.



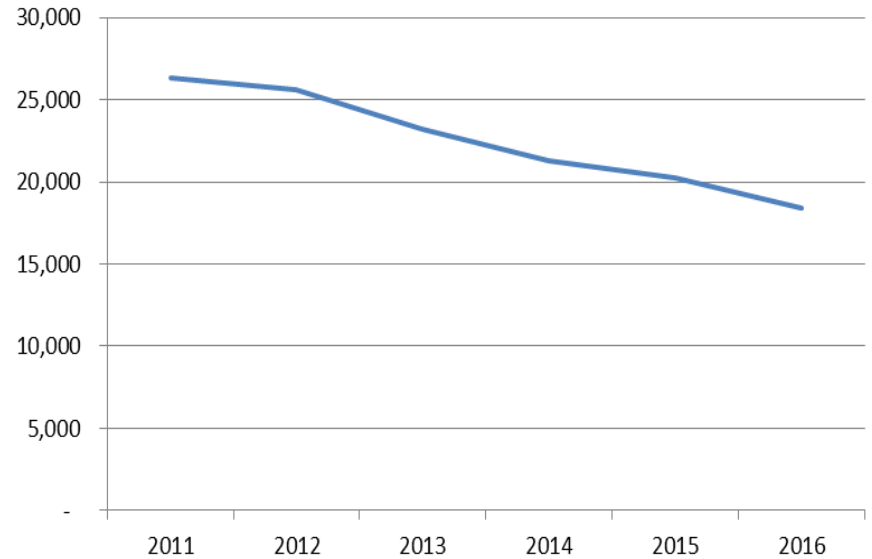
Changes in the Chinese economy explain only part of the recent developments in GVCs

Foreign value-added content of gross exports, %, 2005-2016



Source: OECD TiVA database.

Chinese net exports of manufacturing services, USD million, 2011-2016



Source: IMF balance of payments statistics (BPM6).

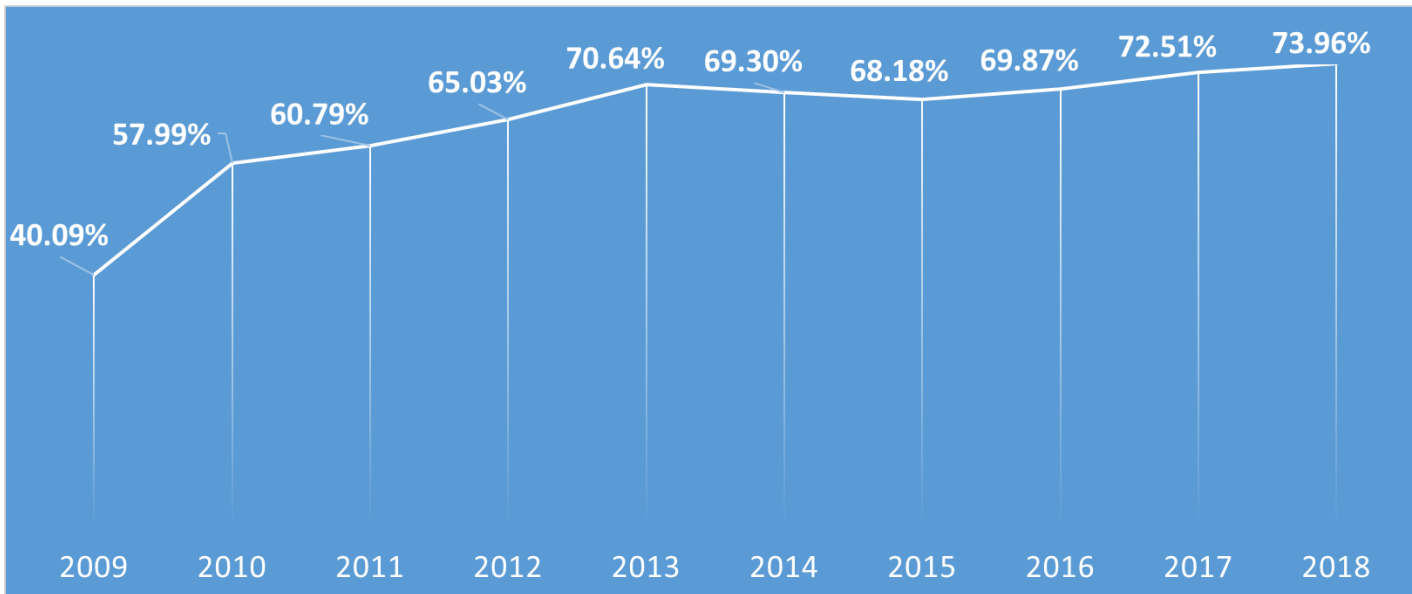


MEGATRENDS



New protectionism and trade tensions

Share of world trade subject to trade discriminations (%)

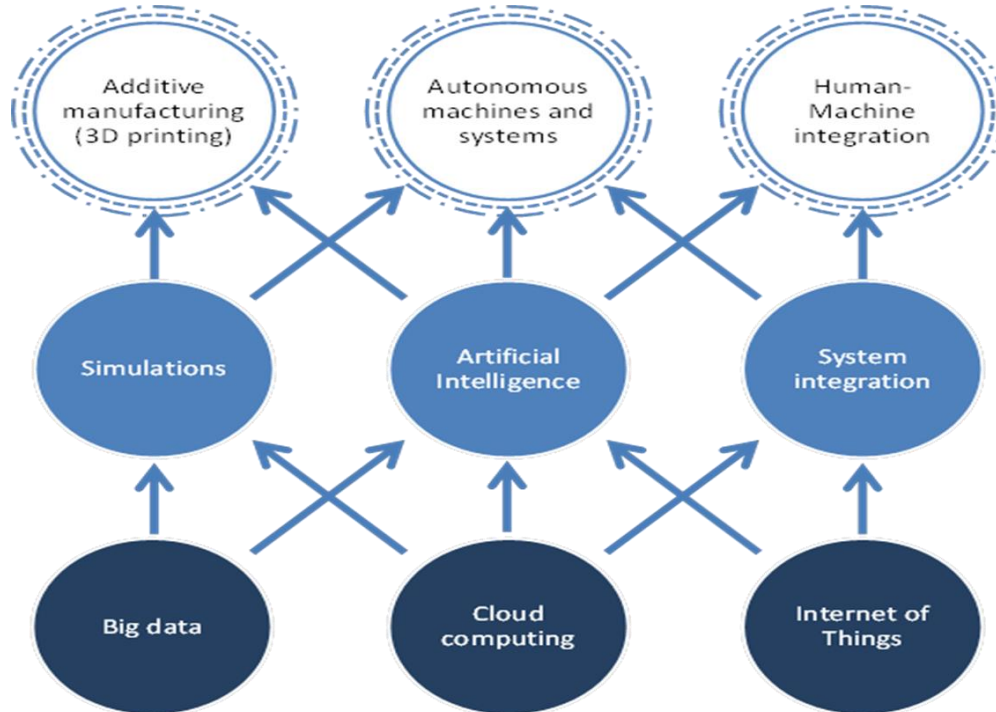


Source: Global Trade Alert



The digital transformation

Different technologies underpinning the digital revolution

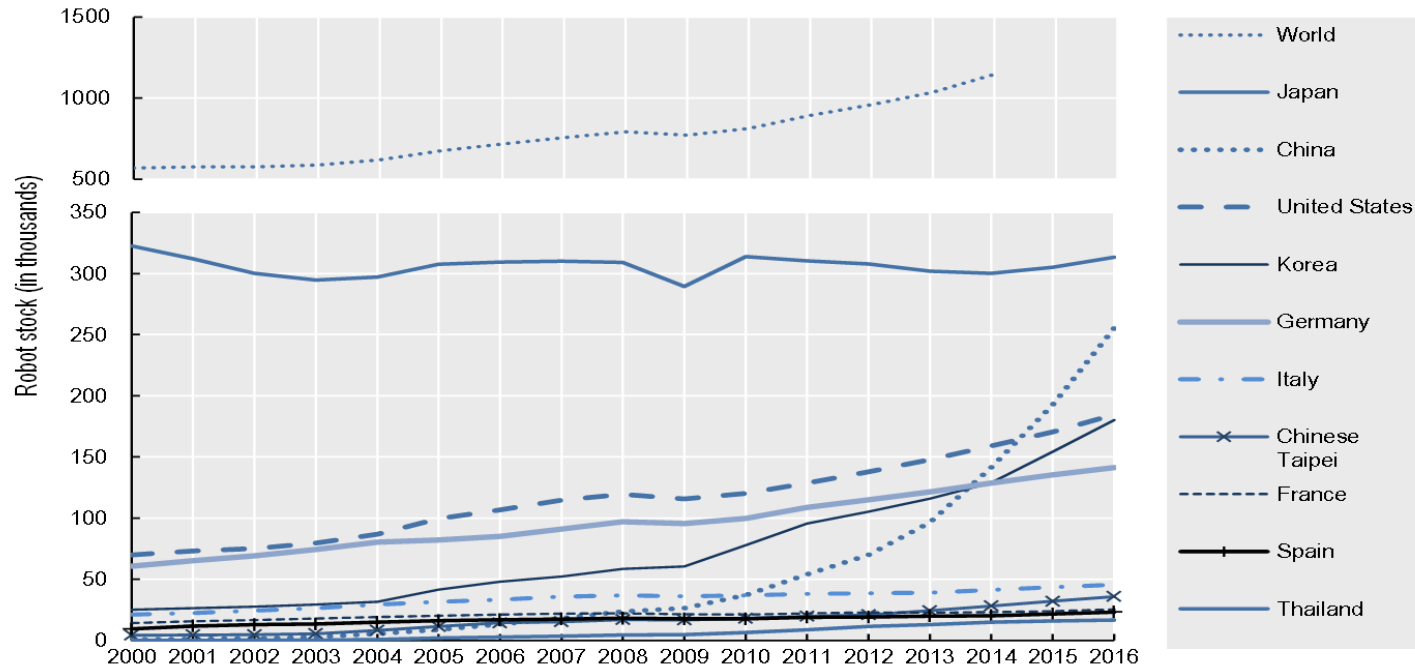


Source: OECD



Rise of the robots

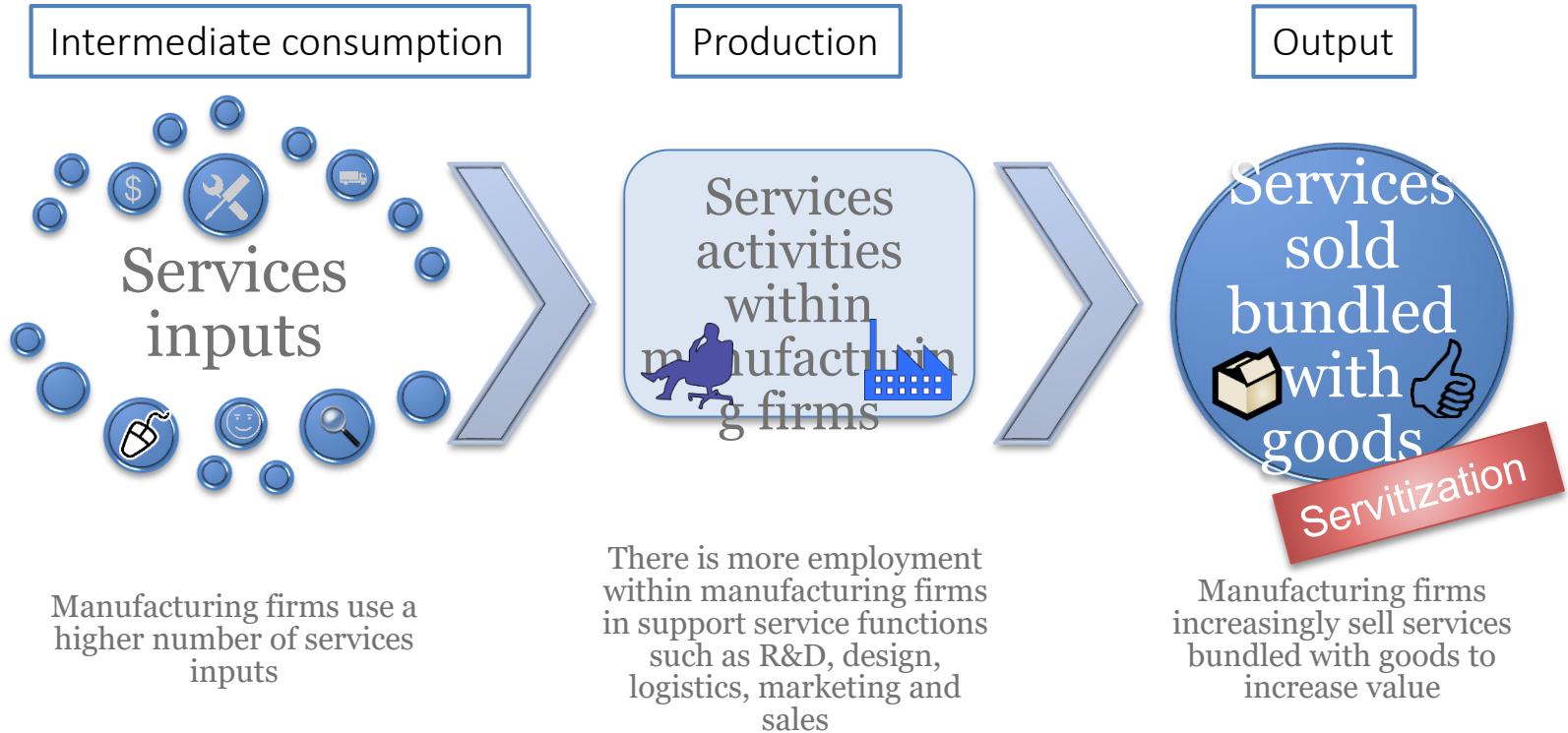
Robot stock among top 10 using economies, 2000-2016



Source: International Federation of Robotics in OECD (2018)



Servicification: using, producing and selling services



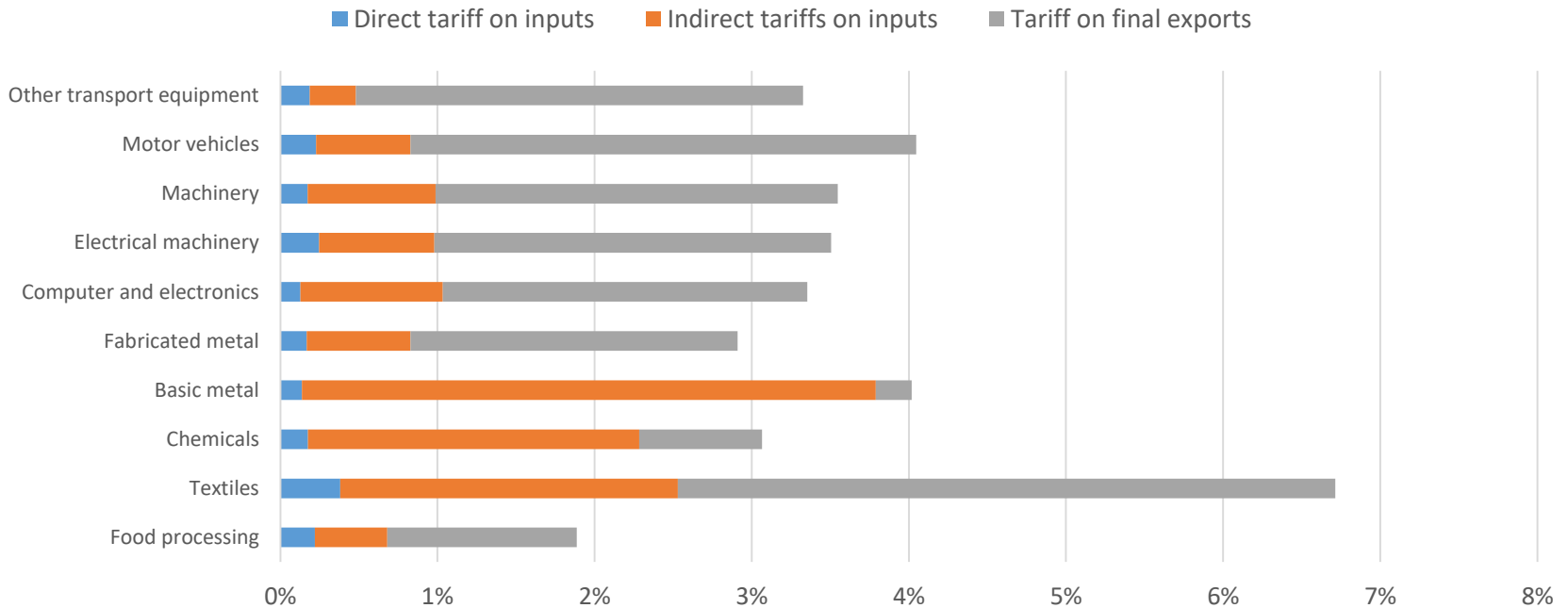


POLICY ANSWERS



Tariffs are cumulative in the value chain

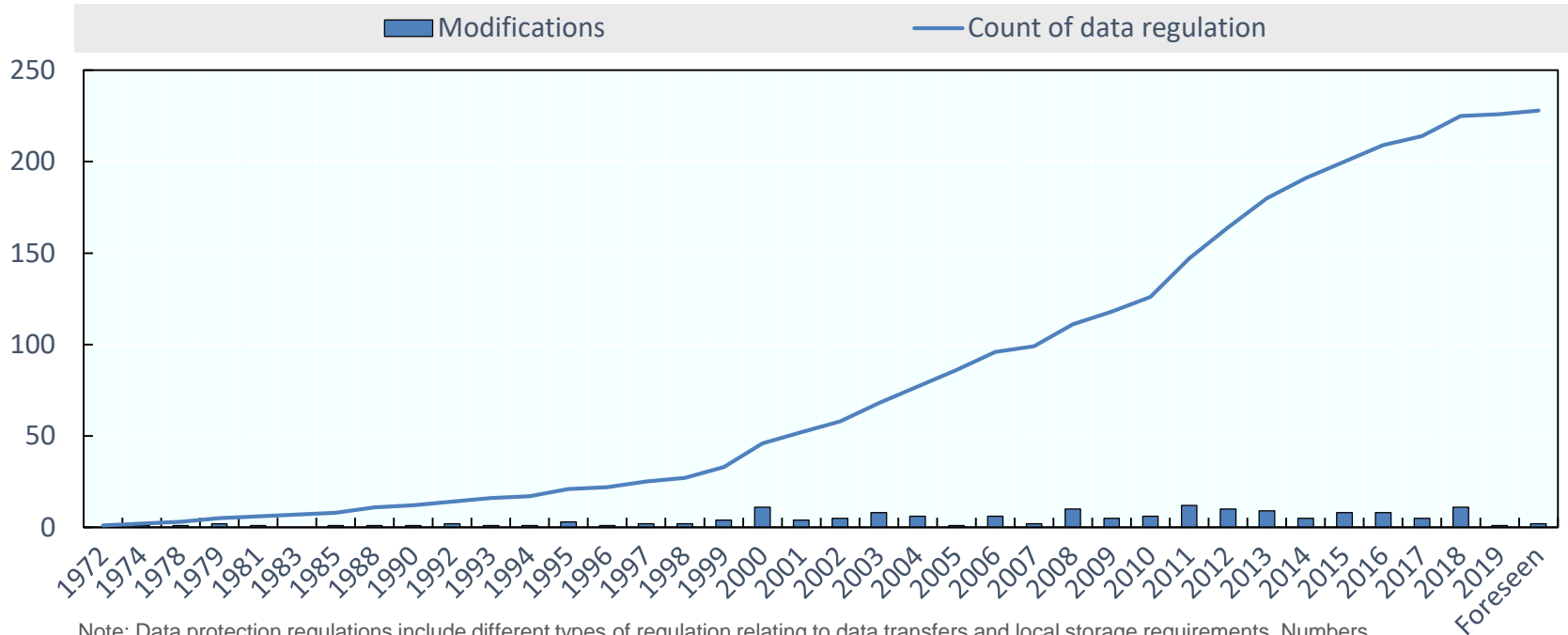
Average ad valorem tariffs along the value chain, selected industries, 2016



Source: TiVA database 2018 and TRAINS.



Data regulation is increasing



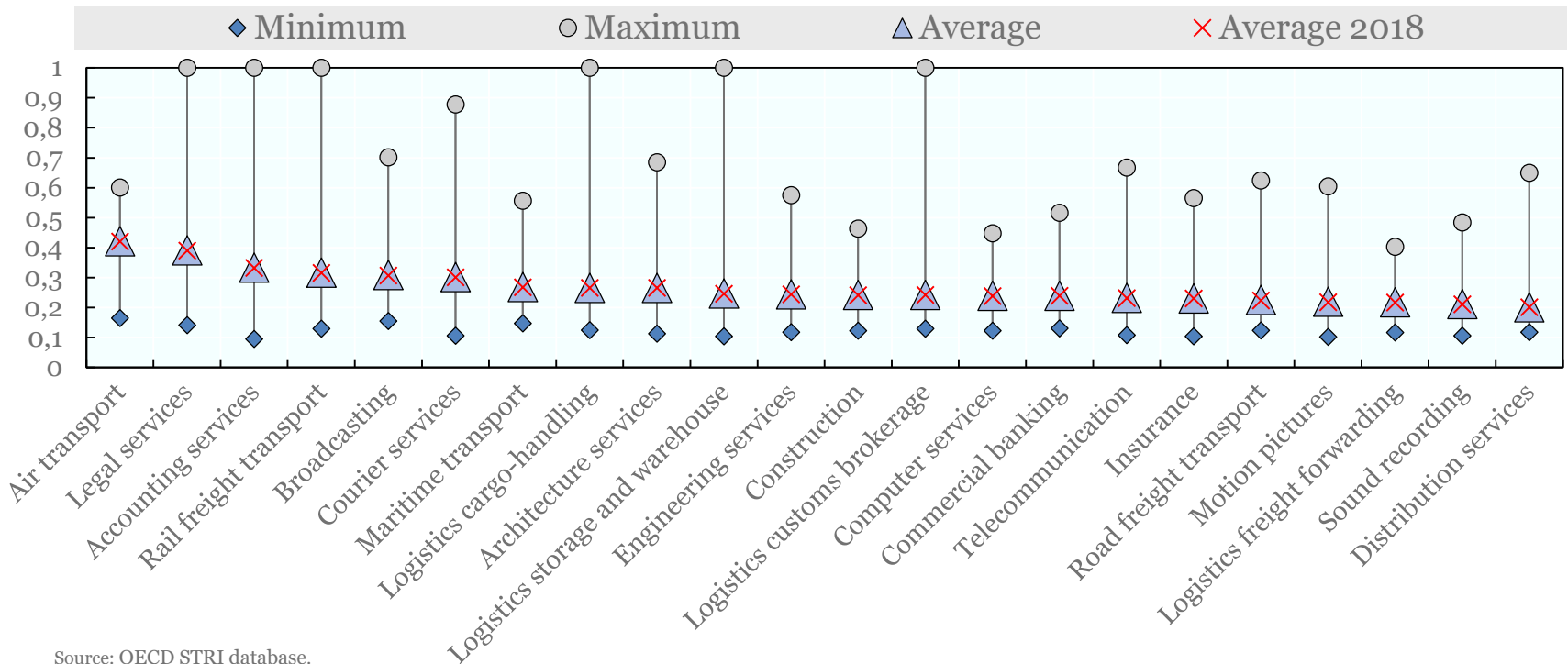
Note: Data protection regulations include different types of regulation relating to data transfers and local storage requirements. Numbers are affected by the way in which regulations are structured, as this varies by country; some countries may have a single regulation covering a wide range of measures; others will have several different regulations covering, for example, restrictions on data flows for different types of data, and local storage requirements.

Source: Casalini and Lopez-Gonzalez (2019)



Trade in services is generally more restricted than trade in goods

OECD Services Trade Restrictiveness Indices (STRI), by sector, 2019



Source: OECD STRI database.



The environmental challenge: embodied CO₂ emissions in trade

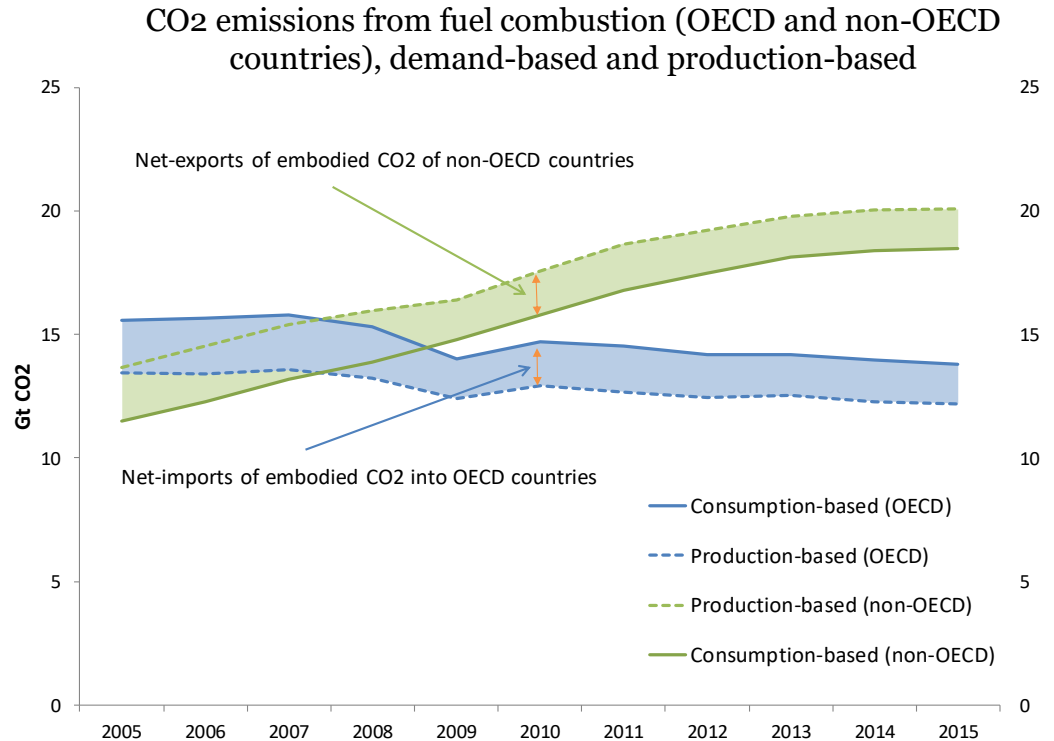
<http://oe.cd/io-co2>

Updated indicators released: April 2019

The OECD ICIO tables are used to provide insights into environmental impacts of global production networks; e.g. going beyond the origin of CO₂ emissions to estimate emissions embodied in final demand

The difference between production-based and demand-based carbon emissions is highlighted by comparing the OECD and non-OECD groups.

In total, the OECD is a net-importer of embodied carbon while non-OECD economies, as a whole, are net-exporters. Net-imports by the OECD countries have gradually been falling since 2005.



Source: Estimation based on OECD's Inter-Country Input-Output (ICIO) Database (2018) and IEA (2018)

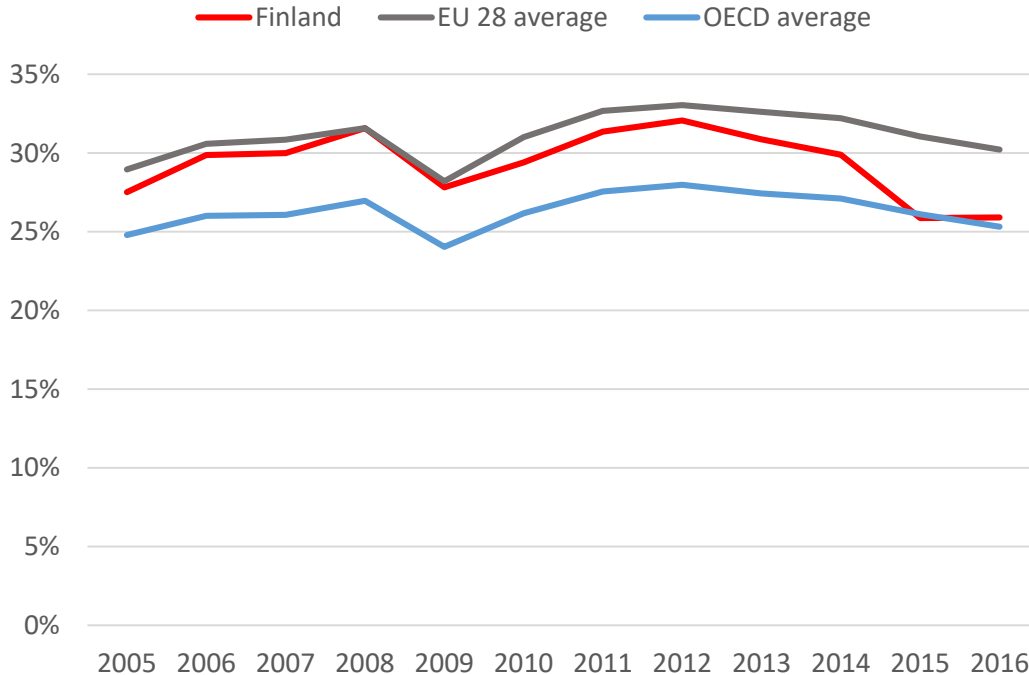


FINNISH INTEGRATION INTO GLOBAL VALUE CHAINS



Background

Foreign value-added content of gross exports, %, 2005-2016



Source: OECD TiVA database.

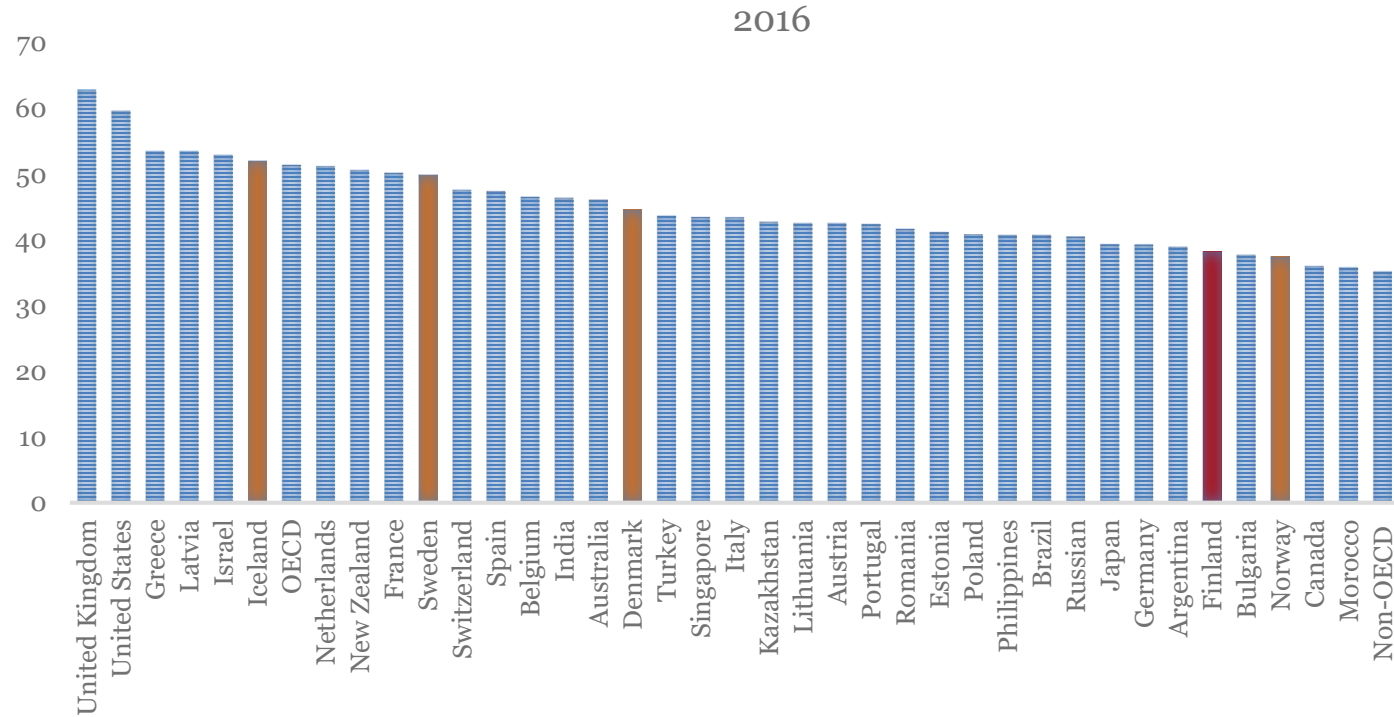
- The total value of merchandise **exports** and **imports** were **75 billion** and **78 billion**, respectively.
- Finland **exports** and **imports** of goods and services as percentage of GDP are **38.56%** and **39.29%** in 2018, respectively.

Finland top-5 exported goods are:

1. Petroleum oils (excl. crude)
2. Semi-bleached or bleached coniferous chemical
3. Coniferous wood sawn
4. Automobiles
5. Multi-ply paper and paperboard



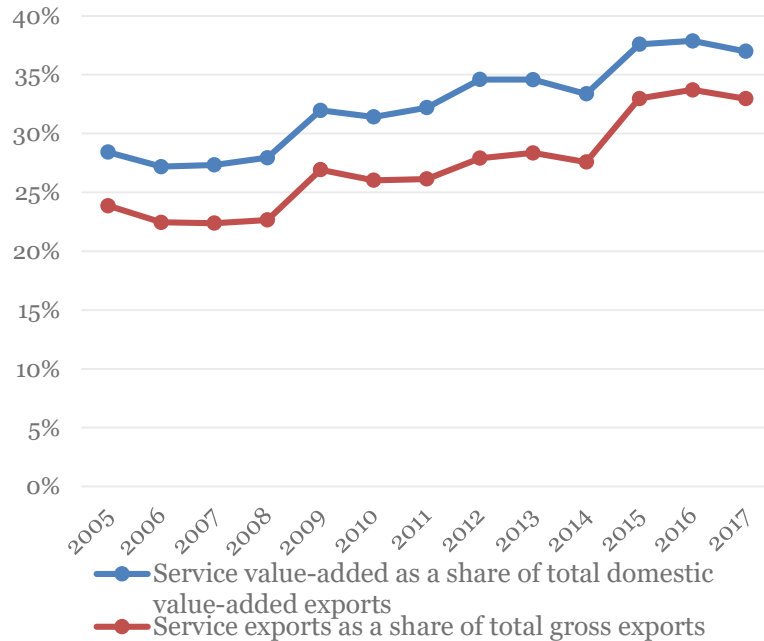
High petroleum exports result in relatively low shares of domestic services content in total exports



Source: OECD TiVA database.



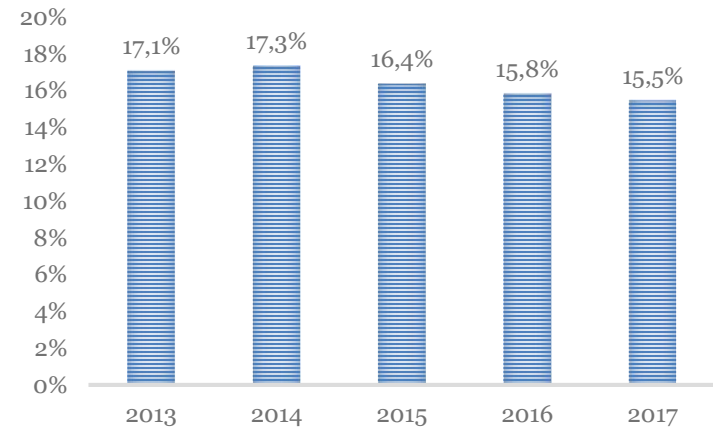
But services exports are growing



OECD TiVA release for 2005-2015 and projection for 2016-17

...and domestic services account for one-sixth of manufacturing exports

Domestic services content of manufacturing exports



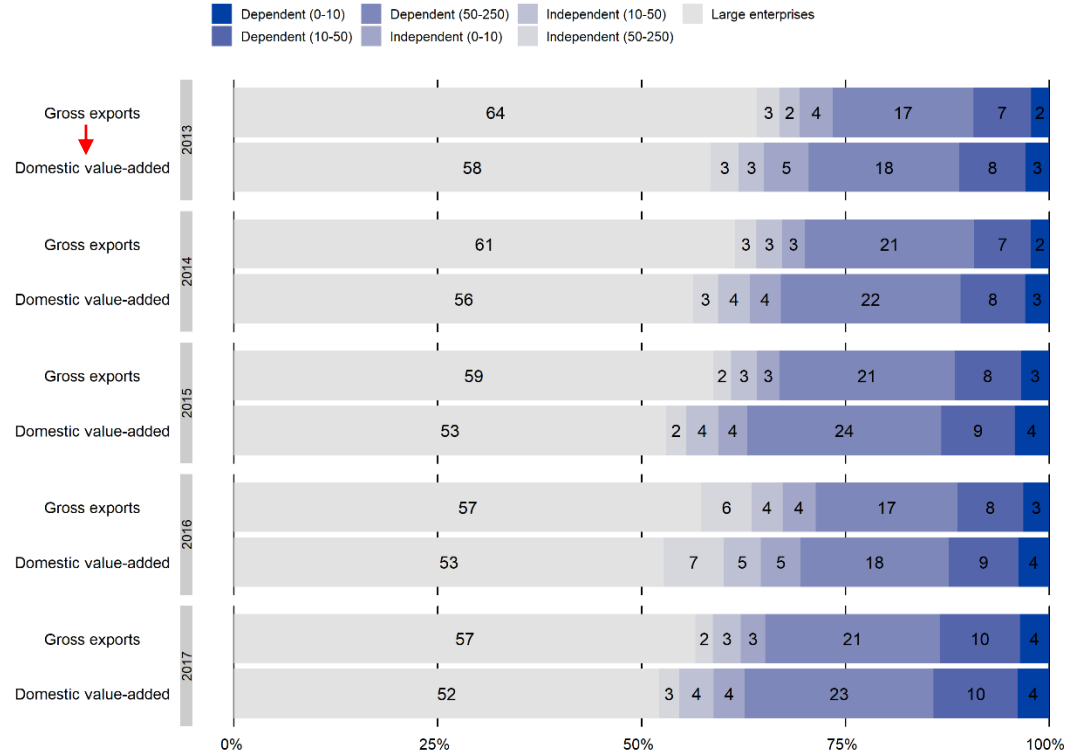
Preliminary results based on the joint OECD-Statistics Finland Study



SMEs are highly engaged in international trade – and more so in value-added terms

SMEs' share of exports is 6 pp higher

Total Economy



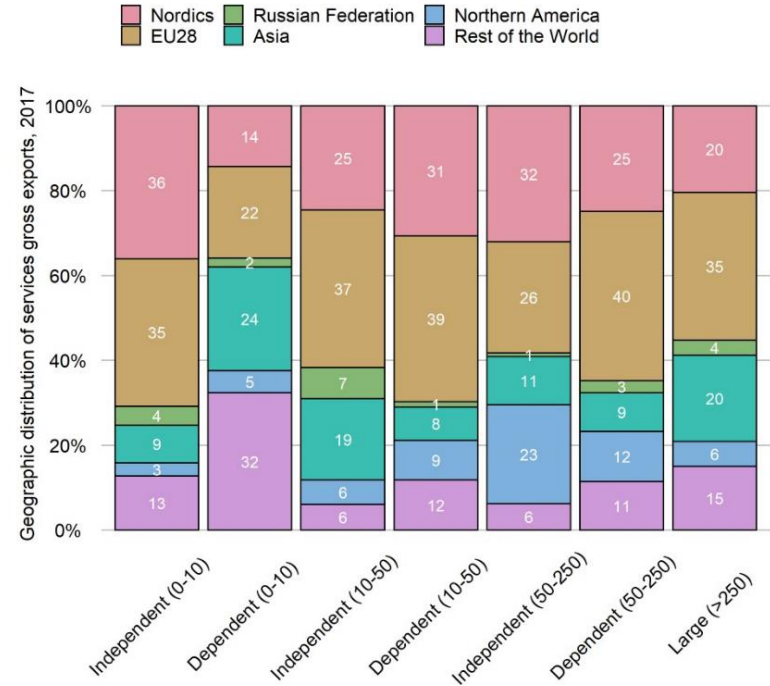
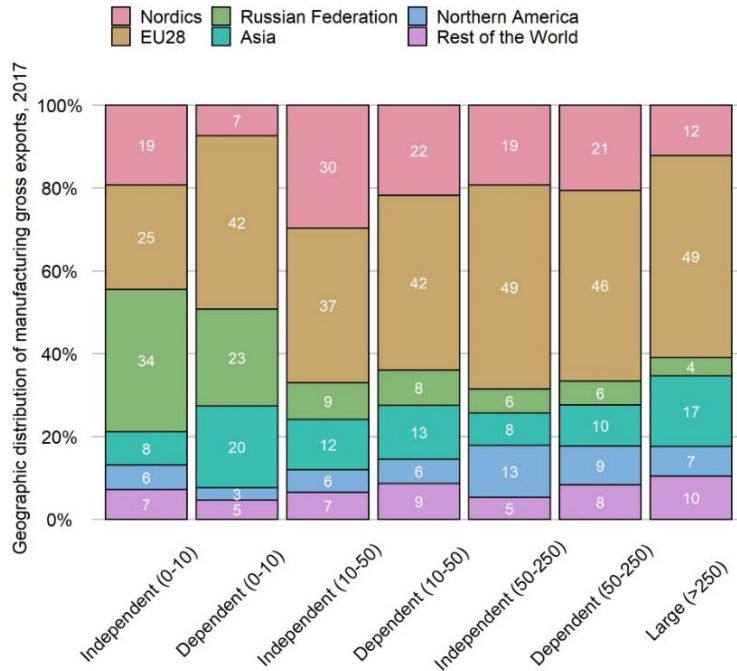
Preliminary results based on the joint OECD-Statistics Finland Study



But size also impacts on who you trade with

SMEs manufacturers typically stay close to home

Gravity also weighs on services based SMEs



Preliminary results based on the joint OECD-Statistics Finland Study



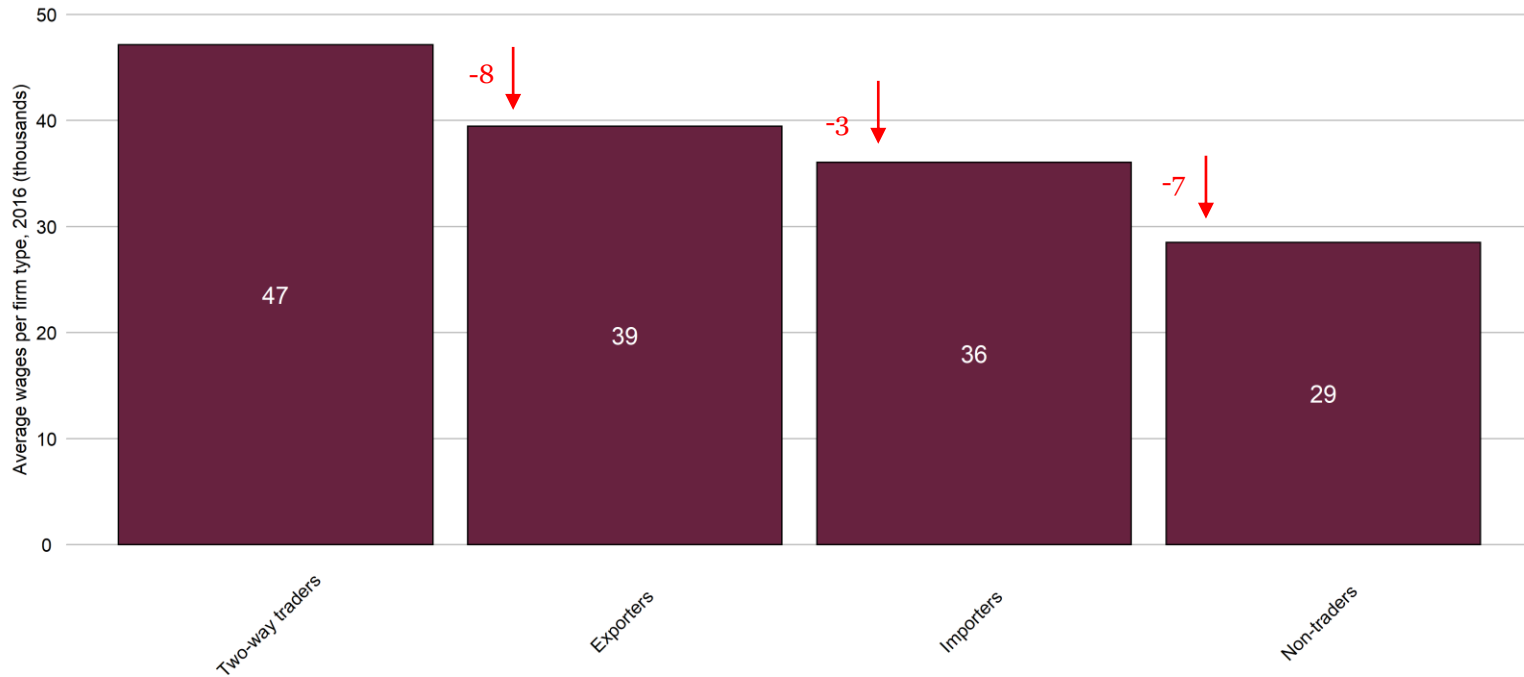
Higher skills foster export growth



Preliminary results based on the joint OECD-Statistics Finland Study



And higher exports can boost salaries...

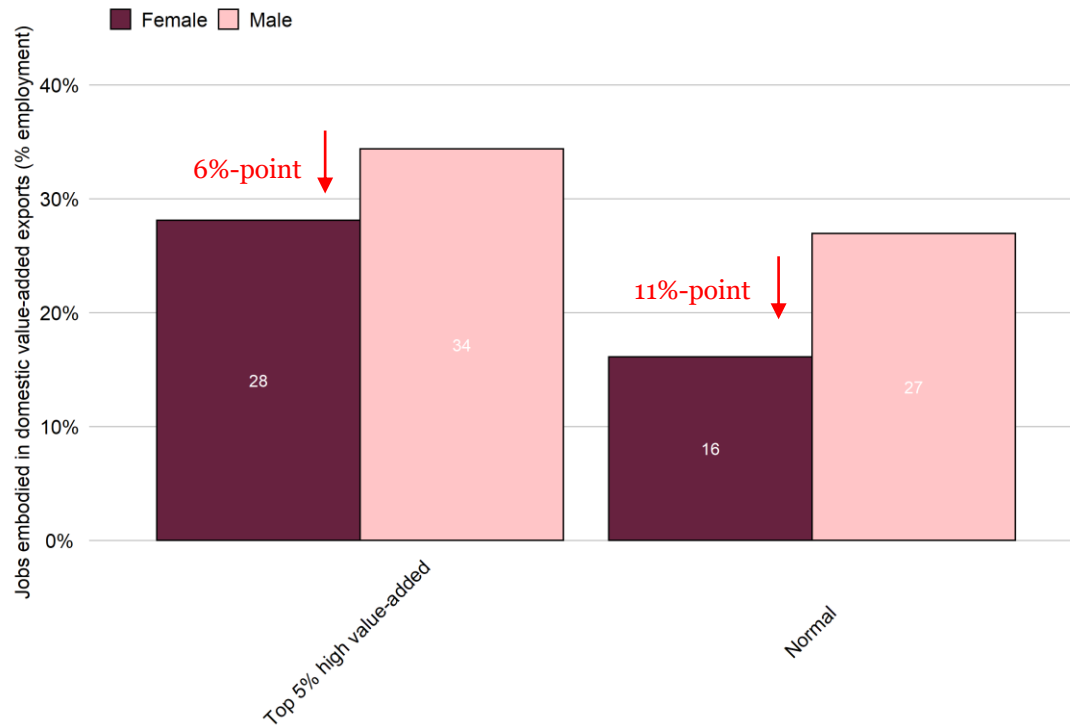


Preliminary results based on the joint OECD-Statistics Finland Study



... and play a role in reducing gender gaps

Exports by the most productive firms have smaller gender employment gaps





Concluding remarks: How to navigate the uncertain trade and investment environment?

- Short term: be ready for some turbulences
 - Trade tensions can disappear as fast as they have appeared
 - But if they translate into a new wave of protectionism, the disruption of value chains will be important
 - Incentives for companies to localise will lead to a consolidation and re-organisation of value chains
 - Regional integration will be key to not lose the benefits from global production
 - Services are more resilient to macroeconomic shocks and trade tensions
- Long term: the digital transformation is there
 - The digitalisation of manufacturing is the biggest game changer
 - Activities previously offshored can to some extent move back to OECD countries (a negative link between robotics and offshoring)
 - The servicification and mass customisation also lead to production closer to the consumer (which can still be international through foreign affiliates)
 - But domestic production should not be driven by new barriers to digital trade
 - There are still gains from international integration (comparative advantage based on differences in skills rather than costs)



OECD-Statistics Finland project team

OECD

- Guannan Miao Guannan.Miao@oecd.org
- Fons Strik Fons.Strik@oecd.org
- Youngho Jung Youngho.Jung@oecd.org

Statistics Finland

- Henri Luomaranta henri.luomaranta@stat.fi
- Pontus Lindroos pontus.lindroos@stat.fi

Contact us

We look forward to hearing from you!



Access all of the OECD's research and analysis on trade at:

www.oecd.org/trade



You can reach us via e-mail by sending your message to the following address:

tad.contact@oecd.org



We invite you to connect with us on Twitter by following:

[@OECDtrade](https://twitter.com/OECDtrade)