trade
policy brief

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Empirical Evidence on Trade in the Digital Era

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While it is clear that digitalisation is important for trade, and trade is important for the diffusion of digital technologies, measuring the nature of the links and therefore the scale of the policy challenges is difficult. Even if traditional trade statistics for goods record many digitally-enabled trade transactions, they do not differentiate goods transactions according to whether they have been digitally enabled or not. Similarly, in services, measurement of cross-border transactions has always been more difficult but for digital trade, the challenge is compounded by the need to identify those services which are *digitally enabled* as well as those which are *digitally delivered*. The rise of 3D printing is set to raise similar challenges in capturing digital delivery for goods.

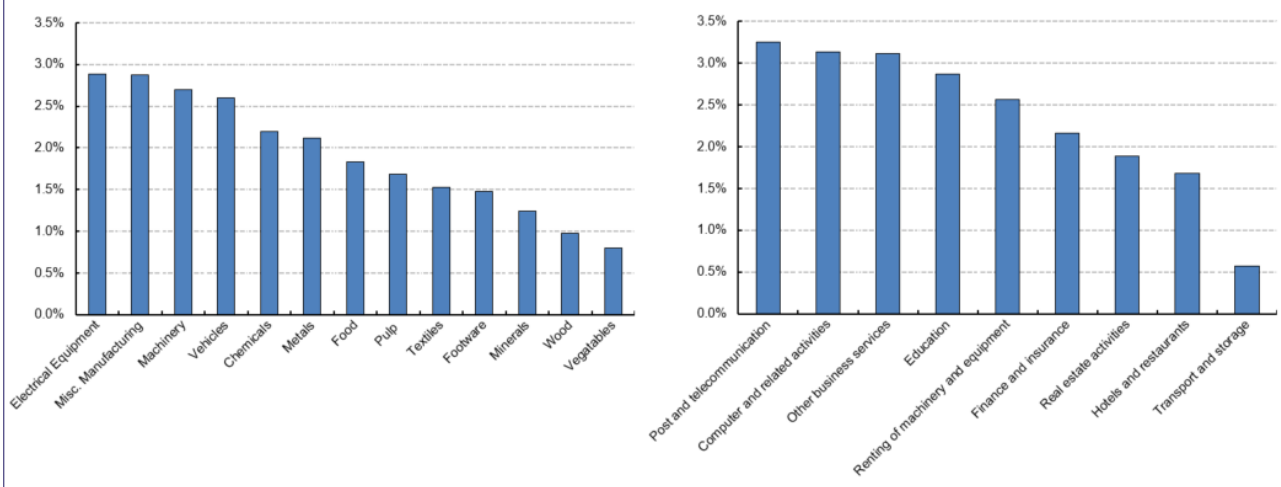
Although efforts are underway to better capture digital trade in official trade statistics (OECD, 2017a), it will be some time before robust measures are identified. At the same time, measuring the nature and spread of digitalisation is also difficult. Here too, efforts are underway, as seen from the latest *OECD Science, Technology and Industry Scoreboard 2017*, but there is no single measure that captures all facets of this phenomenon. This implies that, until better measures are available, analysis of digital trade has to proceed carefully, drawing upon existing statistics to shed light on particular aspects of trade in the digital era.

Digital trade is about more trade in more sectors

Digital trade is often associated with trade in ICT goods and services, and while this is an important element of the evolving environment, the overall share of ICT goods and services trade in total trade has been declining. While this masks relative increases in the share of ICT services and also reflects declining prices for ICT goods, it also highlights an important feature of digitalisation: digital trade is about *all* sectors in the economy.

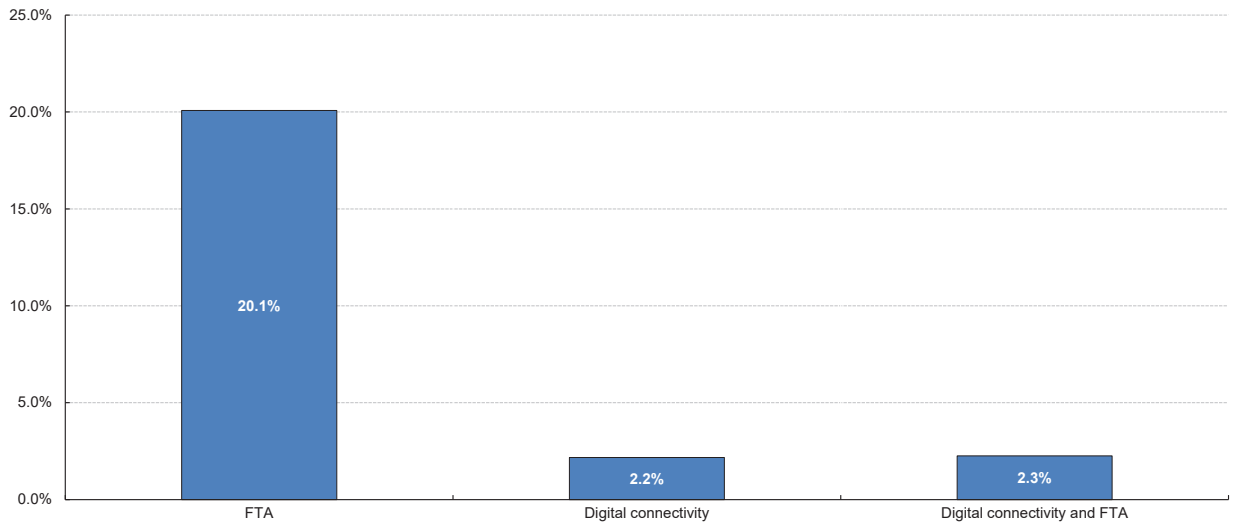
A fuller picture of the role of digitalisation on trade emerges once we take account of the growing role of digitalisation in enabling trade in a whole range of sectors. Estimating the effects on exports from a 10% increase in bilateral connectivity shows that digitalisation increases trade in all sectors, but it is most important for exports in more sophisticated manufactures and digitally deliverable services (see Figure 1).

Figure 1. Digitalisation has a positive impact on trade in goods and services



Note: Figure shows percentage increase in exports as a result of a 10% increase in bilateral digital connectivity derived from a gravity model.
Source: Lopez-Gonzalez and Ferencz (2018)

Figure 2. Digitalisation, RTAs and goods trade



Note: Figure shows the coefficients from a gravity model which incorporates internet use, RTAs and an interaction term between these showing individual effects as well as combined effects (i.e. the impact of internet use conditional on sharing an RTA).

Source: Lopez-Gonzalez and Ferencz (2018)

But digitalisation also affects trade more indirectly. OECD analysis shows that, in addition to these direct effects, digitalisation also increases the benefits that can be drawn from RTAs (Figure 2). When combined with an RTA, a 10% increase in digital connectivity increases exports by an additional 2.3%. Finally, there is a statistically significant relationship between ICT goods imports, digitalisation and services exports. This suggests that digitalisation is also indirectly linked to services through goods.

References

- Lopez-Gonzalez, J. and J. Ferencz (2018), "Digital Trade and Market Openness", OECD Trade Policy Papers, No. 217, OECD Publishing, Paris. http://dx.doi.org/10.1787/1bd89c9a-en