An in-depth look at the World Trade Report 2018

20 November 2018
Structure

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Section B – Towards a new digital era

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Section C

The economics of how digital technologies impact trade
Key findings

Digital technologies have the potential to:

- Further reduce trade costs
- Affect what products are traded across borders
- Reshape trade patterns
- Change the nature of GVCs
Trade costs

We measure trade costs and we find:

- Trade costs have decreased over time

- Transport costs and information and transaction costs account for the largest share of the cross-country variation in overall trade
How digital technologies affect trade costs?

- Significantly reduce transportation and logistic costs
  - GPS and self-driving capabilities or real time itinerary mapping reduce costs, enable real-time adjustments and make delivery more secure.
  - 3D printing reduces the need for transportation

- The cost of crossing the border falls with digitalisation
How digital technologies affect trade costs?

- Digital technologies reduce information and transaction costs.
  - Online platforms help overcome the lack of information.
  - Machine translation brings down language barriers.
  - Mobile banking facilitate cross-border payments.
  - Blockchain reduce the cost of cross-border financial services, including trade finance.
Digital solutions may also facilitate inclusion.

Trade cost reduction would be especially beneficial for
- Small enterprises
- Remote countries and remote areas
- Women
Challenges

- Many dimensions of digital divide (infrastructure and human capital)
  - Access to ICT
  - Digital gender divide
  - Digital divide between small and big firms
  - Digital divide between high and low skilled workers

- Inadequate regulatory framework (eg. IP)

- Concerns about: market concentration (winners-take-it-all dynamics), loss of privacy, security threats
What we trade will change

- The sectoral composition of trade will be affected
  - Services trade will grow in importance, especially digitally enabled services
  - Trade in digitizable goods is likely to continue to fall.
  - Trade in time-sensitive, certification-intensive and contract-intensive goods will increase.
  - Mass customization.
Patterns of trade may change

- The importance of skills and capital endowment is likely to be reinforced

- So will energy infrastructure (power supply) and digital infrastructure

- IP regulatory environment

- ... Geographical factors may matter less
AI and 3D printing may lead to
- Shorter supply chains (production closer to innovation centers or large customer base)
- Less exchange of goods and more exchange of data, software and blueprints
- But hard to say whether we will have more or less GVCs
  - To date, there is no evidence of a significant reshoring trend.
Quantitative impact of digital technologies on trade

- WTO Global Trade Model

- Look at 3 channels:
  - Fall in trade costs
  - Servicification of production
  - Reallocation of tasks from labour to capital (robotization)
Results

- International trade will grow around 2 percentage points more than the baseline scenario.
- Developing countries share of global trade raises to 57%.
Trade costs fell over time

Trade costs breakdown

Source: WTO calculations using World Input-Output Database (WIOD) data and methodology from Chen and Novy (2011).
Gains from digitalization of customs documentation

Source: Doing Business database.

Note: The relationship is significant at the 1% level after controlling for income per capita. The three categories are: only paper submission of customs declaration is possible; both paper and electronic submissions are in use; and only electronic submission is possible. The sample includes 165 economies.
Digital divide – access to ICT

Sources: UNCTAD (2017b), based on ITU data.
Services trade will grow...

Source: Author's calculation based on data from the WTO Trade in Services Database (BPM6).
Trade in digitizable goods are likely to continue to fall.

Source: WTO Secretariat calculations based on UN COMTRADE data.