DIGITAL CONNECTIVITY AND TRADE LOGISTICS

CHAINS: GETTING IT SHIPPED, ACROSS THE BORDER AND DELIVERED

Marie-Agnès Jouanjean, Trade and Agriculture Directorate, OECD

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Digitization: Getting it shipped, across the border and delivered

Background

- Connectivity and innovations in the digital economy can reduce costs of engaging in trade enabling previously remote areas or marginal buyers and sellers to access markets.

- BUT transforming those opportunities into trade still requires overcoming traditional barrier to the physical delivery of goods and reducing the cost of physically moving goods across (customs efficiency) and behind borders (trade logistic services efficiency).
1 - Traditional connectivity matters for digital trade

2 – New opportunities and challenges from digitalization and digital trade
TRADITIONAL CONNECTIVITY MATTERS FOR DIGITAL TRADE
1.1 The role of international transport.

- Traditional connectivity constraints:

  **Hard infrastructure & efficient trade logistics** and in particular the transport services that move goods from production sites to where they are consumed.

More analysis have tried to understand the determinants of international transport costs, using various indicators.

- Example of freight and insurance costs which on average amounted to approximately 9.7 per cent of the value of imports during the decade 2007-2016.
Traditional connectivity matters.

Figure 1: International transport costs: Freight and insurance costs as per cent of value of imports. Ten-year moving averages within country groups. 1989-2014

Source: UNCTAD. Data represents the cost of international transport and insurance costs, as a percentage of the CIF value (cost, insurance, freight) of the imported goods. Note: Averages within the country groups are unweighted, i.e. each country’s freight ratio is assigned the same weight when calculating the average. Data is for all modes of transport.
1.1 The role of international transport.

Various explanations behind those figures:

- Lower value per unit of the bundle of goods imported.
- Infrastructure
- Cost effectiveness with lack of attractively as a market, make it difficult for logistics services to cover costs of supplying those economies.
  - Geography
  - Small size of markets
1.1 The role of international transport.

Importance of increase efficiency through trade and transport facilitation:

- Some policy options that can reduce costs: this would entail more port investments, trade and transport service liberalisation, and economic reforms to strengthen industry output and trade relations.

But it is also important to draw on relative regional locational comparative advantages:

- Increasing a country’s connectivity does not require making it a regional gateway with immediate connection to main shipping routes and large infrastructure.
  - Isolation can be considerably reduced by relying on a hub-and-spoke model at the regional level
1.1 The role of international transport.

**Maritime:**
- 80 per cent of the volume and 70 per cent of the value of international trade, with, on average, a higher share for developing countries.
- Revolution of containerisation for reduction of trade costs.
- But increased concentration of the sector and overcapacity.

**Air connectivity:**
- Importance for just in time model and high value intermediate
- But has a far stronger bearing on transport costs

Indicators of maritime ([Liner Shipping Connectivity Index LSCI](#)) and air ([Air Connectivity Index ACI](#)) connectivity are tested and highlight that both are strongly associated with trade and [GVC participation](#).
The efficiency of trade logistics requires a holistic approach and to avoid weak links or bottlenecks in the trade logistic chain. For instance, good maritime connectivity does not only require efficient port infrastructure. Also matter:

- The size of the market served by the gateway port, the hinterland
  - Relevance of hub and spoke model at the regional level.
- Competitive shipping lines. (recently decrease in competition)
- Efficient hinterland services.
  - the trade logistics market in the gateway country needs to be competitive. Ideally, shippers should have a choice among different terminals, trucking and shipping companies.
- Efficient customs and transit operations for land-locked countries.

Such complementarities are particularly important to maximise spill-overs and benefits from infrastructure investments.
1.2 Cross border connectivity and the implementation of the TFA

- TFA: Simplification and harmonization of international trade procedure

- OECD Trade Facilitation Indicators: a direct link to the WTO TFA
  - An **evaluation tool** to measure the impact of TF measures on trade costs
    - following the structure of the WTO Trade Facilitation Agreement
  - A **monitoring and benchmarking tool** providing
    - an overview of country performance, strengths and weaknesses
    - a basis for prioritising trade facilitation actions by governments
    - a support for mobilising technical assistance by donors in a targeted way
1.2 Cross border connectivity and the implementation of the TFA

TFI used to highlight the impact of trade facilitation and the importance of implementation of WTO Trade Facilitation Agreement

- For reduction of trade costs. For instance implementation of TFA reduce trade cost by 16.5% for LICs, 17.4% for LMICs, 14.6% UMICs.
- GVC participation
- For global growth and leading to significant welfare gains

Also evidence from WTO Case stories
Figure 1: Partner Countries Aid for Trade Priorities

1.2 Cross border connectivity and the implementation of the TFA

- The TFIs highlight that at the point of entry into force of the WTO TFA (Feb 2017), implementation of the various substantive provisions of the TFA were well under way.

BUT

- Implementation of best-endeavours provisions is more heterogeneous.
  - Many of those provisions are linked to automation and more generally digitalisation and data flows for internal and external border agency cooperation as well as information availability.
  - Progress on these provisions, is closely associated with the income level of the country, emphasising the importance of tackling the digital divide for further trade facilitation.
NEW CONNECTIVITY OPPORTUNITIES AND CHALLENGES FROM DIGITALIZATION AND DIGITAL TRADE
For trade facilitation, digitalisation provides opportunities to:

✓ decrease costs of implementation associated with coordination between authorities as well as with private actors:

  – Measures such as customs automation, electronic documents and Single Windows are all easier to implement today than when trade facilitation negotiations started at WTO a decade ago.

✓ create positive spillovers for both public and private actors:

  – increased transparency decreasing risk management costs for customs authorities,
  – increasing efficiency of customs operations
  – increased reliability for the private sector
  – decrease in corruption opportunities.

2.1 Data flows and digitalisation for trade facilitation
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BUT digitalisation of processes is still lagging behind in many developing countries.

– The main reason is the need for ICT infrastructure which is often lacking.

– When it exists, systems should be able to talk to each other: **streamlining and inter-operability of documents and systems.**
  * From information on certificate to standardisation of data exchange, electronic signature and cybersecurity.
Digital trade changes the “who” and the “how” of trade:

1) Digital trade enables the entry of **new actors into cross border transactions**.

Consumers, but also MSMEs,

- have less knowledge and experience about **regulations** and are less versed in **liability issues**.
- Are less able to negotiate trade logistics, for instance freight forwarding contracts.
2.2 New actors and the evolving nature of consignments: new challenges for customs authorities and trade facilitation

Digital trade changes the “who” and the “how” of trade:

2) The direct interaction between sellers and buyers on platforms, bypassing the need for wholesalers which usually trade in bulk changes the nature of consignments as well as their transportation pathways:

Proliferation of small value shipments and packages, consolidation of containers and crossing the border via postal or express services.

- challenges the capacity of customs authorities to monitor the enforcement of standards and trade in counterfeit products using border risk management strategies.
- challenges the relevance of the de minimis threshold (cost-benefit)
2.3 Information flows throughout the trade logistics chain.

Digitalisation and data flows underpin **coordination of (international) production networks**....

- Reduces cost of coordination small scattered producers
  - Example: enable participation to modern supply chains of smallholders.
- Increasing demand for transparency in supply chains and traceability of products:

  Digitalisation and data flows:
  - Allow information to accompany the product all the way through the trade logistics chain, from the producer to the consumer (data thread).
  - Increase capacity to manage information in quantity which enables the **participation of smaller actors** in the market (example of agriculture)
  - **BUT systems have to be interoperable** for information to flow and to be read throughout the chain.

*However*, despite the increasing amount of information available, traders still observe a **general lack of transparency in the trade logistic chain** with large discrepancies in access to information about the movement of goods between the country or origin and final destination.
... as well as coordination of trade logistics as the physical movement of goods, the trade logistics value chain, also implies coordination of a large range of actors

- Digitalisation and data flows provide information and transparency about the trade logistics process itself.
  - Real time information about the location and status of the shipment is as important for all actors in the trading chain, in particular for transit systems and mandatory transit support services, such as insurance.
    - But, systems have to be interoperable.

Example: Electronic Cargo Tracking System, integrated systems help eliminate off-loading of undeclared goods and the need for physical escort and monitoring of sensitive cargo, such as batteries, fuel and cigarettes.

Cost of physical escort is estimated:
- In Rwanda to increased the transit period from one day to three to four days, and increase in transport costs of about USD 400.
- In Uganda the cost of police escort is estimated at USD 250 per day
  - But, systems have to be interoperable.
Digital trade is an opportunity but still requires addressing traditional physical connectivity constraints to reduce trade costs and to improve physical connectivity.

- Avoid weak links in the trade logistics chain (between logistics modes and countries) and foster co-ordination at the regional scale to maximise returns to investments.

Digitalisation and data flows provide an opportunity to reduce the cost of addressing physical connectivity bottlenecks and increase markets access and creates positive spill-overs for public and private actors.

However,
- Challenges requiring to adapt to new ways of trading for both public and private actors.
- Lack of ICT infrastructure, of interoperability, and of continuity of information flows, can limit the gains available from digitalisation.
Contact us
We look forward to hearing from you!

Access all of the information from the Trade & Agriculture Directorate at:

www.oecd.org/tad

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

tad.contact@oecd.org

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