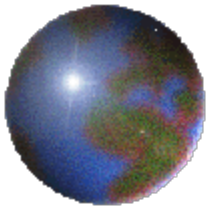

THE BENEFITS OF IMPROVEMENTS IN TRADE FACILITATION

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IEI

Trade facilitation: What is Involved

- Simplification and harmonization of trade procedures through:

-improved port handling of goods

-faster/more transparent customs procedures

-faster/more transparent standards inspection

-streamlined/cheaper document requirements

-reduced transportation costs

-improved communication/information technologies
→ '*Single window*', risk management

Trade Transaction Costs: Types

- Direct costs

  -expenses related to providing information and documentation to authorities
- Indirect costs

  -arising from delays in procedures, including unloading and warehousing at port, customs clearance, and inspection for compliance with standards
- Aid for trade facilitation: OECD 500 M USD/year

Trade Facilitation: Macro-Estimates

- Estimates of trade transaction costs range from 2% to 15% of value of shipments, OECD (2002)
- Studies usually not comparable in scope and content and so it is difficult to use them to directly compare across countries and over time. METI and JETRO (Japan): 1-15%

Diversity in Estimates by Country

- Still, we know that trade facilitation efforts vary greatly across countries and so do trade transaction costs
- APEC Trade Facilitation Plan has 60 measures: implementation across countries ranges from 0-50 measures
- Border process quality indicator is typically higher for countries with higher per capita incomes

Diversity in Estimates by Sector

- Trade transaction costs are typically higher for agricultural and food products as these are subject to greater border scrutiny for compliance with SPS standards (involving more steps, time and fees)
- Trade transaction costs for agro-food products 50% higher than for manufactured products (JETRO study)

Diversity in Estimates by Trader Type

- SME's face higher trade transaction costs than larger firms due to lower volume and lesser frequency of trade, leading to:

  -lack of track record with customs leading to higher probability of physical cargo checks and inability to participate in "simplified procedures" where they exist

  -fewer in-house specialists in customs and port procedures

  -firms with less than 250 staff had 30-45% higher transaction costs

Potential Benefits of Trade Facilitation

- Fact that trade transaction costs can be as much as 15% of value of shipment suggests that reducing such costs can raise trade volume and GDP (much like effect of reducing tariffs)
- Estimates of impact on trade and welfare vary widely; we will discuss some recent attempts to quantify the potential benefits

Quantitative Estimates of Benefits (I)

- **CGE models** (various authors):

-1% reduction in trade transaction costs is found to lead to 0.25% increase in GDP (and 0.13% of GDP if losses of revenues to goverment – fees and charges- are included

-however, this does not distinguish among countries/sectors; those with highly inefficient trade facilitation systems can gain much more as shown by more recent work by OECD

Quantitative Estimates of Benefits (I)

OECD report(2003)

Gains from 1% point reduction in trade transaction costs (% of GDP):

- OECD: 0.07%
- Non-OECD: 0.44% among which:
- Africa: 0.85%
- MENA: 0.64%
- Asia-Pacific: 0.40%
- Latin America: 0.33%

Quantitative Estimates of Benefits (II)

- **Gravity model approach**: (Wilson et al.)

-uses indicators of customs, port, regulatory and e-business environment

-simulates impact of raising indicators to half-way of sample average→ For Total trade:

-results for APEC sample: intra-APEC trade rises by 21% or $254 billion per year

-*results for 75 country sample*: trade rises by 9.7% or $377 billion per year

Quantitative Estimates of Benefits (II)

- Martínez-Zarzoso and Márquez-Ramos (2008) The effects of trade facilitation on sectoral trade
- Márquez-Ramos et al (2012) Trade policy versus trade facilitation
- Baghdai and Martínez-Zarzoso (2017) Aid for trade facilitation
- Martínez-Zarzoso (2017) Impact evaluation of aid for trade facilitation

Quantitative Estimates of Benefits (II)

Martínez-Zarzoso and Márquez-Ramos (2008)

- Effect of trade facilitation on trade volumes at a disaggregated level
- 13 exporters, 163 importers, year 2000
- Focus on the simplification of "at the border procedures":
  - number of documents,
  - time involved in border crossings
  - transaction costs incurred

Table 1. Trade facilitation, descriptive statistics

Variable	Number of observations	Mean	Standard Deviation	Minimum	Maximum
Costs to export (US$ per container)	226029	712.2124	188.2899	335 (China)	1110 (Bolivia)
Costs to import (US$ per container)	199741	1066.436	582.36	333 (Singapore)	4565 (Zimbabwe)
Time for export (days)	199576	18.37	12.39	6 (Germany)	31 (South Africa)
Time for import (days)	199741	22.54	16.53	3 (Singapore)	139 (Uzbekistan)
Documents for export (number)	199576	6.069	2.11	4 (France, Germany, Spain)	12 (Bolivia)
Documents for import (number)	199741	8.14	3.62	2 (Honk Kong, Kiribati)	20 (Rwanda)

Classification Matrix

	Differentiated	Reference-priced	Homogeneous
High-income	Austria Belgium, Luxembourg Finland France, Monaco **Germany** Hong Kong Ireland Italy **Japan** Sweden Switzerland, Liechtenstein	**Australia** Belgium, Luxembourg Canada Denmark Finland Iceland Ireland Netherlands Norway **United Kingdom** United States	France, Monaco Singapore **United States**
Medium-income	Bulgaria Colombia Costa Rica **Czech Republic** Dominican Republic Greece Mexico Panama Paraguay Portugal El Salvador Slovak Republic South Korea **Spain** Turkey	**Chile** Costa Rica Croatia Cyprus Israel Peru Poland **South Africa** Spain Syrian Arab Republic Trinidad and Tobago Turkey Venezuela	Algeria Argentina **Brazil** Bulgaria Uruguay
Low-income	**China** Honduras India Jamaica Kenya Nepal Nicaragua Pakistan Tanzania	Ecuador **Ghana** Nicaragua Senegal	**Bolivia** Egypt Mozambique Nicaragua Sudan

The effect of trade facilitation on trade flows

	OLS		**PPML**		***HARVEY***	
Specification 1	**Traditional**	**New**	**Traditional**	**New**	**Traditional**	***New***
Cost to export	-0.27***	-0.25***	-0.58***	-0.56***	-0.24***	*-0.29***
Cost to import	-0.09***	-0.10***	-0.25***	-0.22***	-0.04***	*-0.04***
Time for export	-0.11***	-0.04***	0.32***	0.40***	-0.07***	*-0.04***
Time for import	-0.14***	-0.13***	-0.32***	-0.30***	-0.15***	*-0.15***

These elasticities can be translated in monetary terms by evaluating the marginal effect at the average values of transaction costs (C) and sectoral exports (X),

Estimation Results

- The magnitude of the elasticities varies between:
  - -0.22 and -0.70 for exports
  - between -0.04 and -0.37 for imports, taking the more conservative estimates.
  - These elasticities can be translated in monetary terms by evaluating the marginal effect at the average values of transaction costs (C) and sectoral exports (X),

$$\frac{\partial X}{\partial C_{i(j)}} = \alpha_{13(14)} * \frac{\overline{X}}{\overline{C}_{i(j)}}$$

- where X and C bar denote average values and α_{13} and α_{14} denote respectively the estimated coefficients in equation (3) above using the Harvey model.

Estimation Results

- In terms of **reducing cost** and considering the more conservative estimates:
  - A **1$ decrease in the cost to export** a 20-foot container yields an **increase in exports of almost 11 thousand $** (0.29*25100T$/712).
  - From the importer side: **1$ decrease in the cost to import a** 20-foot container yields an **increase in exports of almost 1 thousand $**(0.04*25100T$/ 1066).
- In terms of **reducing time**
  - **one day reduction** on the average days needed to **import** a good is an **increases of exports** (imports) **by 0.83%** (22%)

Quantitative Estimates of Benefits (II)

Márquez-Ramos et al (2012) Trade policy versus trade facilitation (TF)

- Comparing the effects of reductions in tariffs with improvements in TF
  - TF variables are, in relative terms, more important than tariffs, and this result is also obtained for specific countries and sectors
  - TF improvements increase trade in differentiated and high-technology sectors more than trade in homogeneous goods

Beta coefficients

a) By exporting country	Australia	Brazil	China	Germany	Japan	Spain	United Kingdom
Income	0.13	0.25	0.28	0.3	0.25	0.23	0.27
Distance	-0.11	-0.16	-0.06	-0.11	-0.22	-0.2	-0.18
Tariffs	-0.09	0.01	0.02	-0.13	-0.08	-0.001	-0.09
Techno Innovation	0.11	0.09	0.2	0.13	0.19	0.07	0.13
Transport costs	-0.04	0.01	-0.1	-0.06	-0.09	-0.002	-0.06
Time	-0.1	-0.08	-0.22	-0.11	-0.16	-0.06	-0.11
Documents	-0.07	-0.05	-0.2	-0.07	-0.09	-0.01	-0.08

b) By sector	Diff	Ref	Hom	H.Tech
Income	0.33	0.27	0.21	0.38
Distance	-0.15	-0.15	-0.07	-0.18
Tariffs	-0.02	-0.04	-0.09	-0.01
Techn. Innov.	0.17	0.15	0.01	0.25
Transport costs	-0.02	0.01	-0.001	-0.04
Time	-0.19	-0.16	-0.04	-0.24
Documents	-0.16	-0.12	0.001	-0.19

Quantitative Estimates of Benefits (II)

Baghdai and Martínez-Zarzoso (2017)
Aid for trade facilitation

- GM Bilateral trade data from 1973 to 2013 for aggregated and disaggregated exports (1 digit level SITC)
- TF variables: cost, days, documents, LPI
  - Costs to export elast (-0.22**)
  - Days to export elast (-0.17**)
  - LPI (0.11*)

Quantitative estimates of benefits: Impact Evaluation (IE)

- Ex-post IE is possible requiring:
  - To identify the timing of the reforms:
    - e.g. single window used by some firms, not by others at different periods
  - Use transaction data or firm-level data:
    - Data from Customs or administrative data
  - Matched with treated and untreated units
    - Natural experiment using data on untreated units as comparison or 'counterfactual'
  - Exploit time-series and cross-sectional variation
    - Availability of panel data

Quantitative estimates of benefits: Impact Evaluation

- Case studies that identify time of the reforms:
- South America (IADB):
  - Costa Rica: 'single window'
  - Peru: Border delays, it is the measure
  - Uruguay: Red channel, inspections
- Southeastern Europe (WB):
  - Albania: Risk management reforms
  - Macedonia: handling SPS regulations
  - Serbia: Customs' in-house clearance program

Benefits: Country Diversity Scenario

- South America:
  - Costa Rica: 'single window'→ increased n of exporters
  - Peru: Border delays→ significant effect on firms' imports
  - Uruguay: Red channel, inspections → delays affect exports (+6% X inspection time=1 day), + number of shipments
- Southeastern Europe:
  - Albania: Risk management reforms → reduce clearance time, increase exports (1.4 pcp tariff cut)
  - Macedonia: handling SPS regulations → lack of automated data collection process impedes proper evaluation
  - Serbia: Customs' in-house clearance program → reduce unpredictability in customs clearance times, few short-term trade benefits

Data Needs

- Transaction level data on import and exports transactions (value, volume) over time
  - Importer/firm's ID, origin, product code H6/8,
- Time of entry into and release from customs by transaction and origin/destination, customs office
- Target variable: indicator=1 if 'single window' was used at time t by a firm-HS6-country, zero otherwise
- Outcome variables: number of products exported by firm, frequency of the transactions, value exported/ imported

Questions

- How long does it really take to import/ export?
- How does this time affect firms?
- How much can this time be reduced by implementing the TF measure
  - Single window
  - Risk management
  - Others: Postal exports (*export fácil* in Peru)

Measures and Outcomes

	Measure	**Expected outcome**	**Impact Eval Requirements**
IT solutions	Single window	Reduced n of documents→ Reduced time +transactions	Ex-ante randomization → select the sectors in which it is applied
	Risk management	Decrease in number of inspections→ Reduced time +transactions	Differential Treatment: e.g. gradually applied at different borders

Countries in Central Asia

- **Kyrgyzstan**, 9 of the 11 agencies responsible for dealing with foreign trade are already integrated into the national single window mechanism.
- In 2011 Crown Agents began to develop an integrated Single Window Information System for the government:
- It allowed the receipt and delivery of the required licencing documents for foreign trade in one place
- It is in accordance with the Kyrgyz republic legislation
- Objectives:
  - Reduce the burden of administrative procedures
  - Reduce the cost of compliance

Kyrgyzstan

- SWC=State Enterprise under the Ministry of Economy
- Website: trade.kg, not in English

- In 2013 they processed over 7,400 permits, and already in 2014 they issued over 28,000 e-certificates.
  - Dialogue between the public and private sectors made it possible to reduce the number of export documents required from 8 to 3

Current Challenges, Kyrgyzstan

- Meat exports are restricted in Russia and Kazakhstan
- Local laboratory not accredited in EU countries
- Instability of exchange rate
- Inappropriate packaging
- Weak skills in marketing, searching foreign markets
- Prices are not competitive

Kazakhstan

- Virtual Warehouse project in October 2017
- Postfactum to use goods immediately after crossing the border in 2018
- There is a *single window* for investors since 2015 and for transport logistics KAZLOGISTICS
- The *single window* for export-import operations is planed to be launched in 2017/9?(State-base E-licensing, E-government: payment gateway, drug supply management system)

Tajikistan

- EU provide 1.2 M€ for the implementation of the SW with INTRASOFT
- The *Single Window Center* was established in 2010 by a Government's Resolution
- 26 specialist work in the SWC and has representations in 4 regions
- 11 state agencies and one public organization involved in issuing permits for X,M and transit are connected to the center

Uzbekistan

- November 2011, resolution No 305 of the Cabinet of ministers about gradual implementation of SW for exports:
  - Simultaneous issuance of certificates or origin, veterinary, phytosanitary,
  - Responsible authority: State Customs Committee
  - 14 FEA customs posts
  - Give permissions decreased from 15 to 3 days
  - Process of customs after submitting the documents form 10 days to 1 day

Summary 4 Countries SW

- Kazakhstan:
  - SW planed to be launched in 2017 or 2019?
- Kyrgyzstan:
  - ISWMS in 2011 Crown Systems and state agency
- Tajikistan:
  - SWC established in 2010, points in 4 regions, EU+Intrasoft
- Uzbekistan:
  - Since 2011 gradual implementation of SW
  - Customs time reductions from 10 to 1 day

Benefits: Some conclusions

- Measures which improve communication/ information technologies are expected to boost exports, but, how much do they reduce cost?
- Measures which reduce cost to export/import and border waiting times are expected to have a more clear impact on trade volumes (economic welfare) than measures which reduce documentary requirements;

Benefits: Some conclusions

- Trade facilitation improvements have a greater impact on developing countries than on developed ones.

This is because, in the former:

- trade is a larger fraction of GDP
- levels of existing inefficiencies are higher
- share of trade in agro-food products is larger (those products are more time-sensitive)

Benefits: Some conclusions

- Reported estimates of welfare gains need to be adjusted for investment costs of trade facilitation measures

-for example, such costs could be associated with the introduction of automation in customs; new cargo handling machines and terminals in ports; and so on.

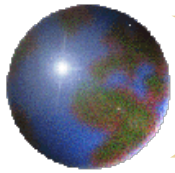
The way forward

- In addition to endow border agencies with proper personnel and technological means to accomplish their mission and, among other things, countries have to:
- ▪ upgrade their transit regimes; and
  ▪ strengthen and connect their AEO programs with those of peers through MRAs.

The way forward

- Not only to endow border agencies with proper personnel and technological means, countries also have to:
  - provide the necessary conditions for comprehensive single windows as well as for integrated border controls → ensure better coordination between agencies, enhanced design of their procedures, Create effective mechanisms to process permits and certificates, etc;
  - further improve their risk management systems → adoption of an integral risk approach linking all border agencies and exploiting data from relevant non-border agencies;

➢ Trade gains from these measures are likely to be substantial and so could also be those coming along in terms of employment and productivity.



Thanks for your attention

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Example Peru

- After Brazil's initiative, Peru launched Exporta Fácil in 2007.
- ➢Exporta Fácil is simplified export regime for postal exports meeting two main conditions: (1) the total value per shipment cannot exceed USD 5,000; (2) it may consist of several packages, but none of them can exceed 30 kilograms.
- ➢it is primarily targeted to MSMEs.
- ➢Firms have to fill in a simplified customs document (DEF), print this document, and
- take it along with the goods to be shipped to the nearest authorized SERPOST office
- ➢SERPOST acts on behalf of the firms before the customs and as the logistic operator.
- ➢Exporta Fácil can be considered to reduce the export entry sunk cost as well as the per- period fixed costs.

Example of Peru

- ➢ Exporta Fácil can be seen as a publicly provided intermediation instance that helps reduce sunk entry and per period fixed export costs.
- ➢ Exporta Fácil thereby affects firms' exports:
  - Experimentation: new firms' exports (i.e., new product-destination combinations for
- a given firm) tend to be associated with program's use.
- Learning from own experience: new regular exports that were first exported through Exporta Fácil tend to be larger and have higher likelihood to survive than their counterparts without a previous Exporta Fácil experience.
- Learning from others: firms other than those using Exporta Fácil seem to benefit from the export knowledge generated by their peer users.