A CASE FOR ENHANCING CUSTOMS RISK MANAGEMENT SYSTEMS BY MAKING USE OF TAX ADMINISTRATION DATA: The Trade Effects of Customs Processing Times

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* The views and opinions expressed in this presentation are those of the author and should not be attributed to the IDB, its Executive Directors or its member countries.
CUSTOMS RISK MANAGEMENT SYSTEMS

New Firms and New Trade Flows are Targeted

<p>| Selected Latin American Countries: Are New Firms and New Flows Targeted by Customs Agencies’ Risk Management Systems? |
| Likelihood to be Assigned to Physical Inspection |</p>
<table>
<thead>
<tr>
<th>Country</th>
<th>Exports</th>
<th>New Firm</th>
<th>New Firm-Product-Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costa Rica</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Ecuador</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>El Salvador</td>
<td>No</td>
<td>Yes</td>
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<td>Guatemala</td>
<td>Yes</td>
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<tr>
<td>Mexico</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Peru</td>
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<tr>
<td>Uruguay</td>
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<p>| Imports |
|-----------------|---------|----------|</p>
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Source: Author’s calculations based on data from DGA-Costa Rica, DGA-El Salvador, SAT-Guatemala, SAT-Mexico, SUNAT-Peru, and DNA-Uruguay.
CUSTOMS RISK MANAGEMENT SYSTEMS

The Different Systems

- How shipments are channeled is determined based on risk management systems with varying degree of sophistication.

- In the most basic version, selectivity criteria primarily consist of fixed rules, i.e., “blacklists” of firms, goods, and countries as established using information from customs declarations and prior infractions, plus a random component.

- The most advanced variants apply more sophisticated techniques involving intensive use of multivariate econometric tools on a broader set of the data generated by customs and other agencies’ information systems.
CUSTOMS RISK MANAGEMENT SYSTEMS
The Different Systems and the Risk Factors

- These data can cover:
  - Importing/exporting firm
  - Transportation mode
  - Transport company
  - Customs broker
  - Goods
  - Origin/destination countries

- and can include recorded infractions and intelligence activities.

- This more thorough approach is generally associated with increased effectiveness without negatively affecting tax revenues or security.
CUSTOMS RISK MANAGEMENT SYSTEMS

What Information Is Used on New Exporting/Importing Firms to Assign their Shipments?

- Assignments to intrusive examination fall more heavily on shipments from firms that started to operate internationally over the last three years (shipments that correspond to firm-product-country trade relationships initiated within this period or both).

- This is primarily determined based on customs only records.

- However, not all new trading firms are the same.

- Among new exporters or importers, there may be many firms established several years ago with a perfectly clean tax and social security record.

- If customs agencies only use data in their systems and do not use of this additional information from other public entities, these companies will be seen as being as risky as those entirely new and accordingly will be subject to the same treatment.
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Why Do We Care?

- Assignment to physical inspection is non-neutral for trade, since the associated longer customs clearance times are harmful for trade relationships, particularly those at their early stages of development.
CUSTOMS RISK MANAGEMENT SYSTEMS
CASE STUDY: URUGUAY

Customs Processing of Exports

Source: URUGUAY XXI and DNA.
CUSTOMS RISK MANAGEMENT SYSTEMS
CASE STUDY: URUGUAY
Assignment to Red Channel in Uruguay

➢ Risk Factors:

- Exporting firm
- Transportation mode
- Transport company
- Customs broker
- Goods
- Destination countries
CUSTOMS RISK MANAGEMENT SYSTEMS
CASE STUDY: URUGUAY
Assignment to Red Channel is Random after Conditioning on Firms and Product-Destinations

Uruguay: Correlation between Assignment to Verification Channels and Exports and over Time

Source: Author’s calculations based on data from DNA.
CUSTOMS RISK MANAGEMENT SYSTEMS
CASE STUDY: URUGUAY

Shipments Assigned to the Red Channel Take Longer to Clear Customs

Uruguay: Customs Processing Times, 2003 and 2011

Source: Author’s calculations based on data from DNA.
CUSTOMS RISK MANAGEMENT SYSTEMS

CASE STUDY: URUGUAY

Longer Customs Times are Associated with Lower Firms’ Exports

Source: Author’s calculations based on data from DNA.
CUSTOMS RISK MANAGEMENT SYSTEMS

CASE STUDY: URUGUAY

Shipping Frequency is the Main Channel through which Customs Times Affect Exports

Source: Author's calculations based on data from DNA.
CUSTOMS RISK MANAGEMENT SYSTEMS

CASE STUDY: URUGUAY

New Trade Relationships are Particularly Affected by Longer Customs Times

Source: Author’s calculations based on data from DNA.
CUSTOMS RISK MANAGEMENT SYSTEMS
CASE STUDY: URUGUAY

Longer customs times can countervail the effects of activities by other agencies such as those tasked with trade promotion that seek to expand and diversify exports through the establishment of new commercial links...

On average 16% (57%) of new (all) exporting firms supported by URUGUAY XXI had transactions physically inspected over 2010–2015.

Uruguay: Impact of Trade Promotion on Firms’ Exports with and without Red Channel

Source: Author’s calculations based on data from DNA and URUGUAY XXI.
CUSTOMS RISK MANAGEMENT SYSTEMS
IT IS NOT JUST ABOUT URUGUAY: EVIDENCE FROM OTHER COUNTRIES

Exports

Selected Latin American Countries: Impact of Assignment to the Red Channel on Customs Processing Times and Impact of Customs Processing Times on Firms’ Exports, Various Years

Source: Author’s calculations based on data from DGA-Costa Rica, DGA-El Salvador, SAT-Guatemala, SAT-Mexico, SUNAT-Peru, and DNA-Uruguay.
CUSTOMS RISK MANAGEMENT SYSTEMS
IT IS NOT JUST ABOUT URUGUAY: EVIDENCE FROM OTHER COUNTRIES

Imports

Source: Author’s calculations based on data from DGA-Costa Rica, DGA-El Salvador, SAT-Guatemala, SAT-Mexico, SUNAT-Peru, and DNA-Uruguay.
CUSTOMS RISK MANAGEMENT SYSTEMS
TOWARDS A MORE COMPREHENSIVE APPROACH

The Need to Effectively Use Data from Internal Revenue Services

- Customs risk management systems may mechanically have an anti-new trade bias.

- This bias can be substantially reduced if proper actions are taken.

- Customs risk management systems should make use of appropriate econometric techniques to exploit all available relevant information to improve the effectiveness of targeting and further facilitate trade by reducing intrusive examinations.

- In particular, this implies going beyond the information generated by customs information systems through the processing of past declarations and incorporating data from other agencies such as internal revenue and social security services.
THANK YOU

Out of the Border Labyrinth