

Trade facilitation and customs revenue collection: Is that a paradox?

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Abstract

This research examines whether trade facilitation (TF) measures may contribute to a loss of customs control or revenue. A survey was conducted to collect TF practices in the customs context worldwide. Responses were obtained from key stakeholders from 40 countries. We then obtained information related to tax revenues generated by Customs. The results reveal there is no direct relationship between the likelihood of observing TF practices and the extent to which a government depends on revenue generated by Customs. The result identified from this research is that it is possible to implement TF practices without diminishing customs revenues or weakening controls.

Introduction

In many countries, Customs provide a service, which is primarily related to tax collection, that is not aligned with the interests of economic operators. The tax collection service provided by customs agencies also plays a vital role in various countries' economies, which could explain why some countries avoid implementing trade facilitation (TF) measures: a fear of lost revenue. It seems that opening borders to facilitate the international flow of goods must come at the cost of weakening border protections (Bersin, 2012).

In some countries, the customs administration may contribute to increased uncertainties in the international supply chain because of excessive concern about customs controls. According to Sawhney and Sumukadas (2005), the government acts as a supplier of key regulatory services, many of which are not optional. The uncertainty that the government introduces is a critical factor that must be considered in customs analysis. Sawhney and Sumukadas (2005) claim that customs clearance in developing countries continues to generate uncertainty. Liu and Yue (2013) suggest that it may be possible to change a country's trade structure, which thus stimulates international transactions by accelerating customs clearance procedures.

Appeals and Struye de Swielande (1998) developed a model to explain the evolution of each country's customs administration, beginning with controls that emphasise the physical verification of goods. Typically, the information on all incoming goods is checked at this initial stage. During the next stage, the information is checked before the goods arrive. During the third stage, TF involves the internal control of importers and subsequent audits. The evolution from one stage to another will be gradual, following the on-going implementation of customs reforms. TF suggests customs reforms. However, can TF be undesirable from a country's perspective (due to a loss of revenue)?

The aim of this research is to map TF measures in the customs context to identify whether there is a relationship between TF and customs-collected tax revenue. In doing this we answer three questions:

- What TF practices are currently in use, principally after the implementation of the Bali Agreement?
- Which region employs such practices to the greatest extent?
- Do TF practices conflict with revenue collection and weaken countries' controls?

Our survey approach used primary data obtained in the field from participating customs experts from 40 countries to understand the practices in use. Data about the share of customs-collected tax revenue in total revenue were also collected from the World Customs Organization (WCO). We then analysed the practices in place and the tax revenue collected by Customs. We sought evidence to determine if there is a trade-off between TF and taxes collected by Customs.

Section 2 presents concepts related to TF and Customs. Section 3 presents findings concerning TF measures and where they are practiced, and compares the practices in use with secondary data on tax revenue collection. Section 4 presents and discusses the results, and Section 5 offers concluding remarks.

Trade facilitation and the role played by Customs

‘Trade facilitation’ does not have a universally accepted definition (Helble, Shepherd & Wilson, 2007; McLinden, Fanta, Widdowson & Doyle, 2011). It is understood as a set of measures to ease trade between countries and includes a variety of efforts intended to reduce the transaction costs associated with the enforcement, regulation and administration of trade policies across borders (Iwanow & Kirkpatrick, 2009). There are several ways to achieve this goal through TF programs, including strategies and investments that are common among governments or regional economies that receive aid (Sadikov, 2007; Shepherd & Wilson, 2009; Shepherd, 2016). The topic of TF was introduced at World Trade Organization (WTO) meetings in 1996. Among other sources, the parties introducing TF policies borrowed from the text of the 1994 General Agreement on Trade and Tariffs (GATT). In 2013, the 9th WTO Ministerial Conference secured the commitment of participating countries for the Bali Agreement, which primarily concerns FT, which is the subject of this paper.

According to Otsuki, Honda and Wilson (2013), TF is related to changes in the trade environment in terms of reforms, modernisation and requirement simplification. Francois and Manchin (2013) agree with this perspective and add that trade volumes, as well as the propensity of low-income countries to participate in the overall trading system, depend on the quality of regulatory institutions and access to well-developed transport and communication infrastructures.

Facilitation measures are recognised to be essential in helping to develop countries and expand their trade (OECD, 2005; McLinden, et al., 2011; Milner, Morrissey & Zgovu, 2008). At the WTO meeting in Doha in 2001, it was decided that future negotiations on TF would be limited to the clarification, review and improvement of the rules in Article V (freedom of transit), Article VIII (formalities related to imports and exports), and Article X (publication and administration of trade regulations) of the 1994 GATT. Since the WTO’s first meeting, TF has been on its agenda. In 2013, the Bali Agreement reformulated the main points considered previously by the WTO and implemented a set of TF measures (Table 1).

According to Portugal-Perez and Wilson (2012), TF measures encompass two dimensions: a ‘hard’ dimension related to tangible infrastructure (e.g. roads and ports) and a ‘soft’ dimension related to intangible issues (e.g. transparency, customs management and business environment). The Bali Agreement stressed the need for measures related to the soft dimension.

In countries with high degrees of customs controls and bureaucracy, including landlocked countries, soft dimension investments can provide faster TF results (Grainger, 2014)

Table 1: Trade facilitation measures present in the WTO agreement, signed at the ministerial meeting at Bali in December 2013

Trade facilitation major contents

Publication and availability of information
 Opportunity to comment, information before entry into force and consultation
 Advance rulings
 Appeal or review procedures
 Other measures to enhance impartiality, non-discrimination and transparency
 Restrictions on fees and charges imposed on or in connection with importation and exportation
 Release and clearance of goods
 Border agency cooperation
 Movement of goods under customs control intended for import
 Formalities connected with importation and exportation and transit
 Freedom of transit
 Customs cooperation
 Institutional arrangements

Source: adapted from WT/MIN(13)/36/WT/L/911 (WTO, 2013)

The soft dimension is frequently relevant in the customs context. For example, although the requirement for documentation offers the necessary support for international transactions, excessive requirements impose administrative costs on the importers and exporters involved and may cause uncertainties (OECD, 2013; Souza & Burnquist, 2011).

Customs and trade procedures could be simplified by reducing the number of documents required for international trade and by replacing printed forms with electronic ones, which are more easily transmitted. Reforms in the customs environment do more to improve the business context than do tariffs that are negotiated in multilateral negotiations (Mann, 2012). Carrying out more efficient collection of taxes on trade could also simplify these procedures (Hoekman & Shepherd, 2015). Decreasing the time required for physical conferences and the delivery of imported goods could increase the revenue of national governments (Helble, Shepherd & Wilson, 2007; Zaki, 2008; Engman, 2005).

Under an efficient set of TF measures, from the government's perspective, TF should not harm the control and revenue collection processes. Some anecdotes are concerned that there is a direct relation between weakening controls and streamlining processes. This could be a thread through TF initiatives worldwide. The trade-off between TF and countries' customs needs argues for collecting data from different perspectives and for understanding how the TF process operates in practice. Section 3 identifies the practices implemented worldwide.

Sampling method and data collection

The aim of this section is to identify which TF measures have been implemented worldwide and whether there is a relationship between which TF practices are employed and the extent to which a government depends on taxes collected by Customs. We employed a quantitative methodology and the questions we asked arose from the constituent elements of the Ministerial Decision of 7 December 2013 regarding the TF Agreement of the WTO.

The pilot version of the questionnaire was then provided to two TF experts for validation. Thereafter, the three-page questionnaire was administered to a group of professionals at an international conference

on TF in customs in May 2014. Customs experts attended this conference, representing government, the private sector and academia, and hence customs expertise characterised the sample participants. The conference represented a unique opportunity for obtaining answers to our research question.

In total, 145 participants from 64 countries attended this international conference in Baku, Azerbaijan, which was organised by the International Network of Customs Universities (INCU) and national customs administrations. Of these stakeholders, 60 respondents from 40 countries participated in the survey (Table 2). Note that this conference was designed for customs employees, relevant members of the private sector, and experts on customs issues worldwide. Global conferences on customs are uncommon. The questionnaire was distributed and collected during the event. Respondents were characterised by having considerable expertise in customs issues, as they each had more than five years of experience in the customs environment.

Table 2: Respondent profiles per region

Regions	Population (a)		Sample (b)		
	n	%	n	%	% of region (b/a)
Europe	69	47.6	24	40.0	34.8
Africa	25	17.2	16	26.7	64.0
Asia	33	22.8	13	21.7	39.4
North America	12	8.3	5	8.3	41.7
Others*	6	4.1	2	3.3	33.3
Total	145	100.0	60	100.0	41.4
Chi-Square Tests					
		Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square		6,726	4	0.151	
Likelihood Ratio		6,659	4	0.155	
Symmetric Measures (Nominal by Nominal)					
Phi		0.215		0.151	
Cramer's V		0.215		0.151	
Contingency Coefficient		0.211		0.151	

Note: * We aggregated Central and South America, Middle East and Oceania into a group called 'Others.'

In Table 2, we can see that the largest proportions of respondents came from Europe (40%), Asia (21.7%) and Africa (26.7%), with North America (8.3%) placed in the middle, and regions such as Central and South America, Oceania and the Middle East being the least represented (accounting for 3.3% of the total).

We conducted a non-parametric Chi-square test (Hair et al., 1998) to verify that the sample is not biased. The test was run by region. These results validated our sample and allowed us to proceed to analyse the data in terms of TF practices.

Regarding the affiliation of the surveyed participants (Figure 1), 25 per cent reported working in the private sector (with many years of experience), while most participants (over 50%) were associated with the public sector (with Customs or a related public agency). Of those participants associated with the public sector, 68 per cent worked for Customs, and the other 32 per cent worked for organisations directly related to Customs. As shown in Figure 1, the remaining respondents (18%) reported being affiliated with universities.

Figure 1: Affiliation of respondents

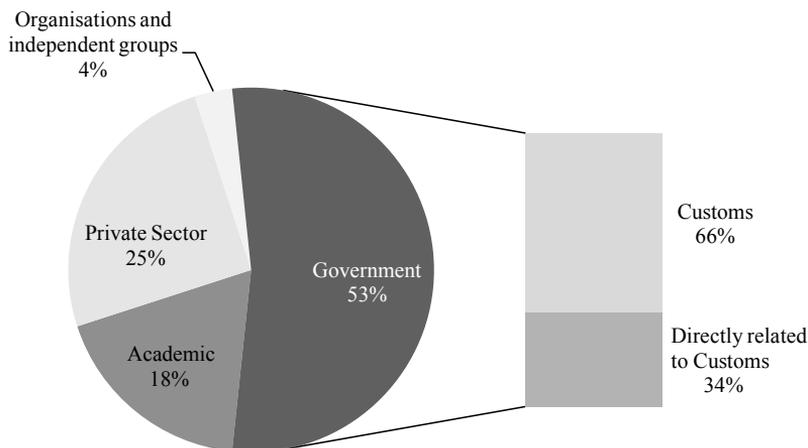


Table 3 presents the results concerning selected TF measures. Approximately 72 per cent of the respondents confirmed that the customs authority establishes a maximum time for the release of the goods in their countries and that 72 per cent of countries have an online support system for economic operators (Table 3 – I).

Table 3: Summary of TF questions asked

Questions	Sample mean	Africa	Asia	Europe	North America	Others
I) Trade facilitation measures provided in country*						
Does Customs establish a maximum allowable time for clearance procedures?	72	81	85	63	60	50
Does Customs have an online support system for external trade operators?	72	69	62	88	60	0
II) Degree of alignment between agencies (%)						
Fully aligned	18	13	15	17	20	0
Substantially aligned	47	25	39	42	80	50
Partially aligned	35	56	46	13	0	0
III) Do you believe trade facilitation measures are directly related to customs reform?*	87	94	100	83	60	50
IV) Has the private sector participated in the single window implementation or monitoring?*	45	56	15	54	60	0
V) Trade facilitation practices*						
1. Paperless policy and data requirements as appropriate	75	63	77	83	80	50
2. Physical inspections and examinations based on risk assessment and use of non-intrusive equipment (e.g., scanners)	83	88	92	75	80	100
3. Deferred payment of duties, taxes, fees and charges	65	63	46	79	80	0
4. Single-window (SW) system	52	63	39	50	80	50
5. Publication of all laws and regulations	85	94	92	83	60	50

Questions	Sample mean	Africa	Asia	Europe	North America	Others
6. Public consultation for legislation changes	62	75	54	58	60	50
7. Binding consultation for harmonised system, origin and valuation	73	81	77	63	60	100
8. Tax refund for goods not entering the country	65	94	54	46	80	100
9. Simplified procedures for international transit	72	94	62	63	80	50
10. Authorised Economic Operator (AEO) program	63	50	54	88	20	50
VI) Main improvements to the single-window system (%)						
Time and cost	45	56	38	46	40	0
Simplification	38	38	62	33	0	50
Time (only)	23	19	31	25	0	50
Cost (only)	13	19	31	4	0	0
VII) Cooperation between Customs and other agents (%)						
Traders		32	31	28	28	33
Logistics operators		28	31	31	28	33
Other border agencies		30	31	24	22	33
Academia		10	6	18	22	0

Note: The grey cells represent the regions with the highest frequency of positive responses.

**Answered 'Yes' as a % of the total. The topics concerned the WTO's Bali Agreement on Trade Facilitation in Customs Issues.*

According to the Bali Agreement, an essential aspect of TF concerns the processing of customs clearance procedures prior to cargo arrival. Professionals from Africa and Asia responded that no more than 70 per cent of imported goods are cleared before arrival. However, respondents from other regions noted that more than 80 per cent of imported goods are cleared before arrival. Regarding cargo manifests, African and Asian respondents stated that no more than 40 per cent were submitted electronically to Customs prior to the arrival of goods, while respondents from other regions reported that more than 80 per cent were submitted electronically pre-arrival.

Most respondents believed that their border agencies had a good degree of alignment (substantial: 47.1% or partial: 35.3%) with one another, which encompassed procedures, formalities, work hours and shared controls. Some even believed that such alignment was complete (17.6%) in their countries. Nevertheless, all mentioned at least some degree of alignment between border agencies, customs authorities, and police authorities (Table 3 – II).

The next question assessed the TF practices that were most commonly applied in the respondents' countries (Table 3 – V). This question consisted of fixed options, reflecting selected practices identified in the WTO TF text.

The following TF measures were the most frequently applied:

- the publication (i.e. disclosure) of laws and regulations (5: 85.0%), which means that decisions are made public to contribute to the predictability of customs procedures
- the physical inspection of goods based on risk analysis and the use of non-intrusive equipment (2: 83.3%)
- a paperless policy (1: 75.0%).

Table 3 – V presents the percentage of respondents in each geographic region who claimed to have a certain facilitation measure in their country. The grey area reflects the most commonly employed measures.

On the African continent, the most used TF measures are the publication of all laws and regulations, tax refunds for goods that do not have final entry in the country in question, and the simplification of procedures for international transit (5, 8 and 9: 94%). The least used measures are payment deferrals for taxes and other customs fees, the single-window (SW) system, and the authorised economic operator (AEO) program (3, 4 and 10, Table 3 – V).

In Asia, the most commonly used measures are physical inspections based on risk analysis and the publication of customs rules and laws (2 and 5: 92%). The least used measures are payment deferrals and the SW system (3 and 4, Table 3 – V).

In Europe, the most commonly used measures are paperless procedures, the publication of laws and regulations, and the AEO program (1, 5 and 10: 84%, Table 3 – V). The least used measure is the SW system (4: 50%, Table 3 – V).

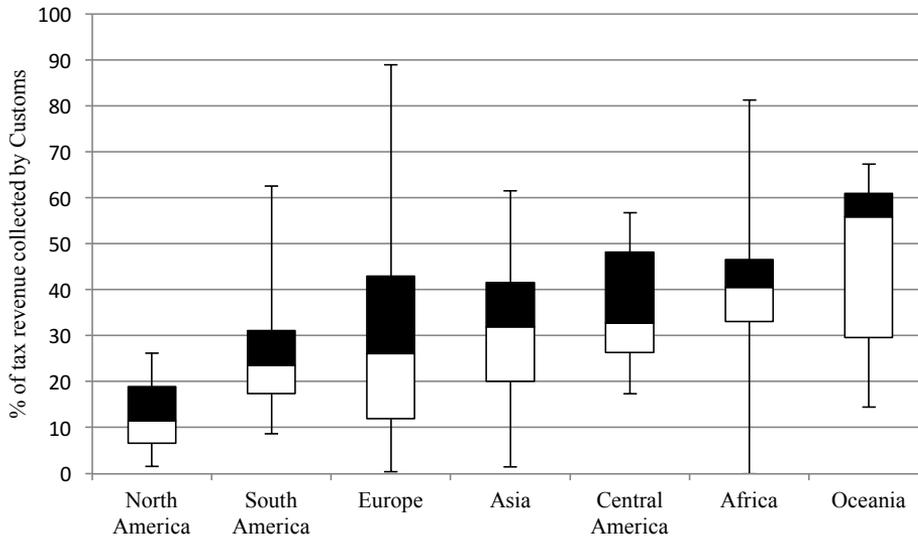
North America and Africa employ the greatest number of TF measures among the regions considered, but North America applies the AEO program on a smaller scale.

After having mapped the most common TF practices in the customs context, we turned to TF measures per region and tax collection. Is there a direct relationship between TF practices and the extent to which a country depends on customs-related tax revenue? How? Secondary data were gathered from the WCO, as issued in the 2014 Annual Report.

North America depends the least on the collection of tax revenue from Customs (12.83% on average). Other regions (e.g. Oceania) show a higher dependency on this source of revenue, as Customs accounts for nearly half of the overall taxes collected (46.18% on average). South America (27.61% on average), the Middle East (28.81% on average) and Europe (31.71% on average) fall within the lower half of the distribution, while Asia (32.07% on average), Central America (36.20% on average) and Africa (39.10% on average) fall within the top half.

Figure 2 shows that each region has top and bottom performers that represent outliers from the region's average value—a problem that demands distribution analysis.

Figure 2: Distribution analysis of tax revenue collected by Customs per region



Source: Authors (from WCO database, 2014)

In Figure 2, the boxes encompass 50 per cent of all countries in each region (i.e. the 2nd and 3rd quartiles), while the top and bottom 'whiskers' represent the upper and lower 25 per cent (i.e. the remaining 50%).

Some new information can be drawn from this analysis. For example, Europe obtained an average of 31.71 per cent of tax revenue collected by Customs, but Figure 2 shows that at least one quarter of its countries have rates of more than 40 per cent (top 'whiskers'). Furthermore, the gap between the highest and lowest values in Europe is wider than in any other region, which is a strong indicator that there is little consistency in this percentage across European countries. In contrast, North American countries are more densely grouped around a lower span of rates, indicating that their dependency on Customs for tax revenue collection is lower and that a stronger common profile can be detected among its members (i.e. their values are closer to one another).

In Figure 2, the small boxes seen for North America, South America and Africa show that 50 per cent of the countries in these regions exhibit the regional average rate, that is, the individual country rates are not too widely dispersed. There is higher dispersion in the remaining regions, among which Europe is the best example.

According to the data collected from the survey, the least recurrent facilitation measure is the Single Window (SW) system, and the region that uses it the least is Asia (39%). However, the most commonly applied measures are paperless policies for data requirements, physical goods inspections based on risk assessment/profiling, and the publication of all laws and regulations. The evidence does not suggest that the implementation of TF practices reduces the tax revenue collected by customs agencies.

According to Table 3 – VI, the perceived improvements from the use of the SW system primarily relate to issues of time and cost (45%) and simplification (38%). Regarding inter-agency cooperation, respondents stated that the customs administrations have greater involvement with logistics operators, traders and other border agencies. Academia has one of the lowest levels of cooperation with customs administration. These results can be verified in Table 3 – VII.

Discussion

The aim of this analysis is to understand how two fundamental aspects of trade—customs-collected tax revenue and TF practices—behave in each region. The goal is to establish a relationship between a region's profile with respect to dependency on customs-collected revenues and its effective application (or lack) of TF measures.

Among the common practices identified, and in line with the measures defined in the Bali TF agreement, we find a designated maximum time for the release of goods (under customs control) and an online support system for economic operators.

The certification of complying economic operators (i.e. the AEO program) may minimise risks, contribute to the agility of control procedures and reduce physical inspections, and such certification has primarily occurred in Asia.

Enhanced levels of interaction among various customs authorities and between Customs and the private sector contribute to TF, which benefits those involved in terms of information exchange, data sharing, and compliance with simpler procedures (thus avoiding double controls).

Table 3 – III indicates that Africa and Asia exhibited the greatest agreement that TF measures lead to customs reforms. This information coincides with studies by the World Bank (The World Bank, 2013), which illustrate that several reforms have been implemented in these regions, in contrast to developments in other regions (e.g. Latin America), which have registered few reforms and low integration into GVCs.

The SW system is one of least-used TF measures. More than an information integrating platform, SW requires the coordination of various national agencies, which requires political will but produces benefits in terms of saving time, reducing costs, mapping processes and simplifying procedures.

Considering the trade flows in Europe and Asia, TF measures would be highly beneficial for these regions, but they do not have the most TF measures. South America represents low integration into GVCs and has implemented few TF measures, with a minimal impact on customs-collected tax revenue. In contrast, Africa has similar trade characteristics, but customs-collected duties and taxes represent a large share of total revenue collection in that region. This finding shows that there is no relationship among trade volume, TF measures and customs-collected tax revenue.

The evidence suggests that it is possible to implement TF practices without diminishing revenues or weakening controls. It is not a paradox. The sample we surveyed was able to show that there are TF practices in regions and countries with high dependence on customs-collected tax revenue (comparing Table 3 with Figure 2). In this sense, there is no paradox between facilitating trade and strengthening the role of Customs in global supply chain management.

Final remarks

This study identified features of TF practices in different global regions, using an intentional and qualified sample. It is uncommon to gather experts in customs considering a variety of origins. Our evidence does not suggest that adopting TF practices entails weakening customs control or losing revenue. Europe and Asia are the most important players in terms of merchandise trade volume, as they represent the largest share of world trade. However, there are no more TF measures in place in these two regions than in the rest of the world. Another factor that has no relationship with trade volume is share of tax revenue collected by Customs. Europe and Asia differ in the extent to which they depend on this type of revenue, even though they handle similar trade volumes each year.

A limitation of this sample is the low participation rate by experts from Latin America, and another is that it is a non-probabilistic sample. This limited participation may be an indicator of the limited number of customs reforms in place in this region and the region's remoteness in terms of GVC integration and matters related to TF.

Identifying specific TF measures implemented in various regions of the globe and collecting data from WCO allowed us to compare TF and tax revenue dependence. This approach allowed us to answer original questions on the TF practices in use, which region uses them most, and whether TF practices are detrimental to revenue collection. Having mapped TF practices, we demystified the relationship between revenue collection and TF through our examination of taxes collected through Customs as a share of total tax collection. Our findings indicate that TF neither weakens the controls provided by countries nor reduces revenue. It is possible to simultaneously have a high degree of dependence on customs-collected tax revenue and to implement TF measures.

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