Transparency in Non-tariff Measures:
An International Comparison*

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Key Issues:

- *Transparency in NTMs is key to providing market access.*

- *High-income OECD countries lead in transparency but ASEAN countries are not far behind.*

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The growing literature on trade has proven that transparency has positive effects on trade and investment. This is particularly important in non-tariff measures, which are often criticized for their lack of transparency and their hidden protectionism. Through a combination of off-the-shelf data and an experiment, a new index of transparency shows that the Association of Southeast Asian Nations (ASEAN) score well compared to other developing countries. Singapore is ranked the highest among ASEAN countries and 12th in the world. The other ASEAN countries – Indonesia, Lao PDR, Thailand, and Brunei Darussalam – are among the top 50 in the world.

The growing literature on trade has proven that transparency positively affects trade and investment. In fact, improved transparency can generate substantial gains in trade and investment flows (Francois, 2001; Wolfe, 2003; Kerr, 2008; Helble, Shepherd, and Wilson, 2009; Lejárraga and Shepherd, 2013). As a result, transparency has been promoted in the multilateral trading system and regional trade agreements as a policy option for its trade creation effects. The advocacy particularly applies to smaller countries, which are rarely, if ever, challenged by the dispute resolution system of the World Trade Organization (WTO) to live up to their commitments (Bown and Hoekman, 2007).

GATT Article X, para. 1 provides for the publication of laws, regulations, judicial decisions, and administrative rulings of general application, made effective by any contracting party, pertaining to (i) the classification or the valuation of products for customs purposes; (ii) rates of duty, taxes, or other charges; (iii) requirements, restrictions, or prohibitions on imports or exports or on the transfer of payments therefor, or affecting their sale, distribution, transportation, insurance, warehousing inspection, exhibition, processing, mixing,w or other use. These shall be published promptly in such a manner as to enable governments and traders to become acquainted with them.

Transparency Is Key

The WTO's primary monitoring and surveillance mechanism is based on periodic trade policy reviews, which provide detailed assessments of member countries'

trade policies over a wide range of issues. For regulatory issues, another important monitoring and surveillance mechanism is provided by the 'specific trade concerns' (STC) clauses of the sanitary and phytosanitary (SPS) and technical barriers to trade (TBT) agreements. Both espouse a 'reverse' notification procedure, which means that the notification is made not by the country issuing the regulation, but by its aggrieved partners.

Reporting and engagement requirements have developed over time, starting with the obligation to create enquiry points for SPS and TBT measures, the development of databases (e.g. the WTO's Integrated Trade Intelligence Portal (I-TIP) and the recently developed universal NTM database by the United Nations Conference on Trade and Development or UNCTAD), and the requirement to set up trade portals under the WTO's Trade Facilitation Agreement (TFA).

Transparency is particularly expected of NTMs which – unlike tariff regulation – often took the form of complex policy measures that can affect trade in goods by changing the quantities traded, prices, or both. The first challenge when dealing with NTMs is how to measure it. In spite of the growing interest in measuring transparency in trade policies, most proxies used in literature are broad in scope, often relating to general perceptions of government transparency or to 'WTO+' provisions in regional trade agreements.

Measuring Transparency

The recent study by Ing et al. (2017) suggests a new approach on measuring transparency by constructing an index that consists of (i) statistical data availability; (ii) compliance with WTO transparency requirements; and (iii) the results of an original experiment. As all indices require indicators, the first set of indicators used in the study consists of four types of information extracted from two databases.

The first database is from the WTO, where the study sourced data on three types of notifications regarding compliance with WTO transparency requirements: the TBT notifications, SPS notifications, and the creation of a functional trade portal. All WTO members are obliged to notify the WTO on any potentially trade-restricting measures, which currently could run up to 157 different notification obligations. Meanwhile, the requirement to notify the WTO on the creation of a functional trade portal is found under the recent TFA. The completeness and quality of notifications vary across countries and seem to correlate with income levels (Figure 1).

Figure 1. Notification Count and Income

Sanitary and Phytosanitary
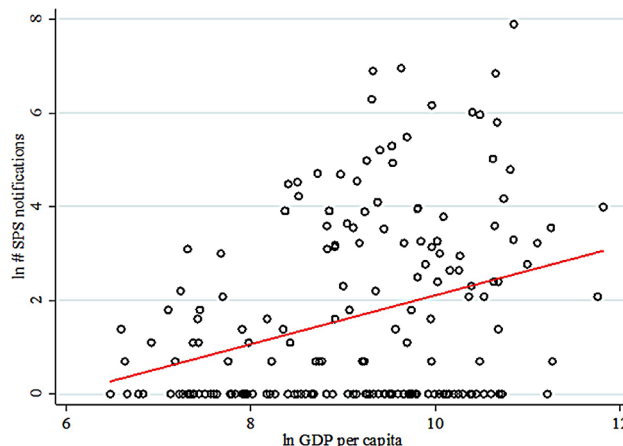

Technical Barriers to Trade
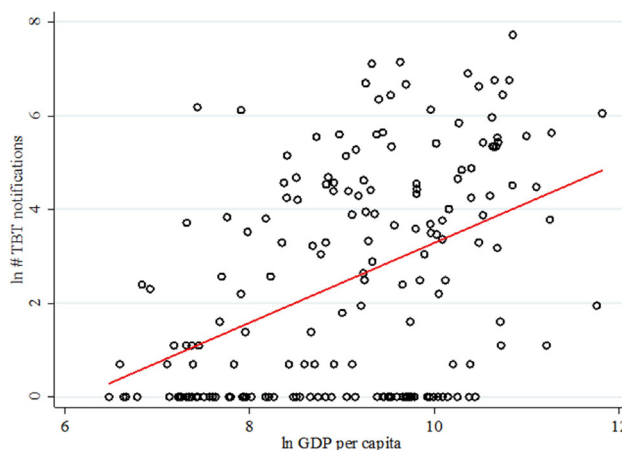
Note: Both the number of notifications (on the vertical axis) and the value of gross domestic product (GDP) per capita (on the horizontal axis) are in logs. Notifications are cumulated over 1995–2013.
Source: Authors' calculations using the World Trade Organization's Integrated Trade Intelligence Portal (I-TIP) database for notifications and World Bank's World Development Indicators (WDI) for GDP per capita (2013).

Most low-income countries rarely send notifications on measures taken. Moreover, some notifications are vague and not informative enough. As a consequence, this study could not use the quality of notifications as an indicator and instead focused on the cumulative count of notifications since 1995.

To eliminate heavy dependence on income, the total number of notifications since 1995 was scaled by using the average value of imports in 1995–2013 as a proxy for the complexity of the notifying country's economy. The resulting number, therefore, no longer bears any

Figure 2. Normalized Notification Count (TBT and SPS Combined) and Income
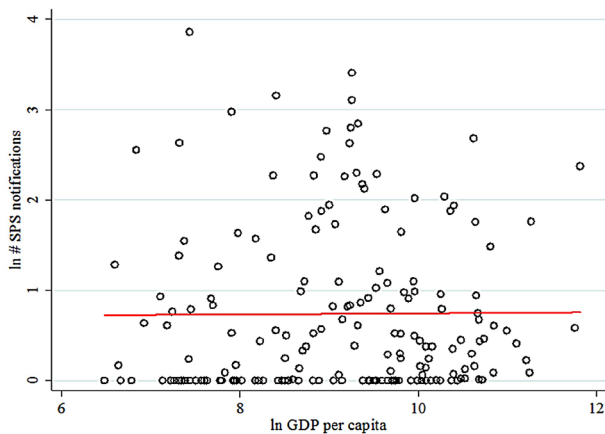
Source: Authors' calculations using the World Trade Organization's Integrated Trade Intelligence Portal (I-TIP) database for notifications and World Bank's World Development Indicators (WDI) for GDP per capita (2013).

clear relationship with the country's level of income (Figure 2).

To measure the transparency in NTMs, the study scores countries on whether they set up a 'trade portal' (i.e. a website) that provides information on regulations on imported products.

In addition to coding the existence of a portal in binary form, the quality of information was also rated on a 1–3 scale, with 3 representing the highest quality. Earning a 3 requires that the site gives either direct access to regulations (in the form of PDF files or summary tables) or to email addresses, telephone numbers, or names of contact persons. Empty shells and sites giving merely tariff rates were not considered as containing 'meaningful information' on NTMs and were given a score of 1. Sites giving limited information – e.g. notifications to the WTO in vague form – were scored a 2.

Although both notifications and the creation of trade portals are WTO obligations, the groups of non-compliers under both agreements are weakly correlated, as shown in Table 1.

About 63% of all countries have sent notifications on SPS or TBT measures at least once and have created a meaningful trade portal. However, only 23% have a working portal (which may be because the TFA is just a recent agreement).

Table 1. Compliance with TFA and Notification Requirements (%)

	No Portal	Portal	Total
Never notified	32.5	4.5	37.0
Notified	44.5	18.5	63.0
Total	77.0	23.0	100.0

Note: TFA = Trade Facilitation Agreement.
Source: World Trade Organization's Integrated Trade Intelligence Portal (I-TIP), web search for portals.

The second database, the new UNCTAD database, is the study's source for information on the availability of NTM inventories under the Multi-Agency Support Team (MAST) classification. Over the last 2 decades, data have been collected on NTMs in various waves and forms. These new data are classified consistently by type of measure using MAST, a common classification proposed by UNCTAD in collaboration (in its 2012 version) with the WTO.

Data collection is, in most cases, carried out by outside consultants and financed by development partners rather than by countries themselves. Thus, data availability does not necessarily reflect a proactive transparency effort of the government. However, data collection requires the collaboration of various government agencies and cannot proceed without, at the minimum, tacit government approval. In that sense, it is also a sign of transparency, albeit a weak one. Accordingly, the study grades countries in binary form (0 or 1) on whether NTM data were collected as part of this multilateral or regional effort.

The next data used is the result of an unintended experiment conducted by MCC-TEC AG, a Swiss company that produces and exports containers and integrated logistics solutions for food and pharmaceutical products. From the company's email account, an exact same request was sent to relevant agencies, including ministries of trade, health, or agriculture, and SPS inquiry points in 192 countries, asking for regulatory information. The first email was sent on 1 July 2015.

As only 85 responses were received in the first attempt, two other attempts were made. One email was sent a month later and another was sent in July 2015, until information from almost all countries was received. Responses were then rated by their quality (i.e. in terms of detail, technicality).

In total, there are 187 countries with all dimensions of the data. A review of all these data reveals that transparency data appear to have weak correlation coefficients with each other. The lowest correlation coefficients are for the availability of NTM data in the 2001 TRAINS database, reflecting the fact that industrial countries were not included in that database (Table 2).

Table 2. Correlation between NTM Transparency Variables

	TRAINS 2001	TRAINS MAST	Normalized notfications	Portal quality	Experiment score
TRAINS 2001	1.00.				
TRAINS data, MAST class	0.41	1.00			
Normalized notifications	-0.01	-0.13	1.00		
Portal quality	-0.17	0.42	-0.06	1.00	
Experiment score*	-0.08	0.26	0.03	0.31	1.00

MAST = Multi-Agency Support Team; NTM = non-tariff measure; TRAINS = Trade Analysis Information System.
Note: * Best score of the two survey waves.
Source: Authors' calculations.

Transparency data also vary substantially across regions although the extent of variation differs between variables. For instance, while the proportion of countries notifying anything to the WTO varies from a low of 50% (South Asia) to a high of 85% (Latin America and the Caribbean), the number of notifications, normalized by import value, varies more. For instance, Sub-Saharan Africa has a high score not so much because countries in the region send a lot of notifications but because of their low average import values.

The proportion of trade portals already set up also varies substantially, from a low of 6% in Latin America to a high of 55% in Europe and Central Asia. It should be noted that the European Union, for example, has had a working trade portal even before the TFA (Table 3).

The NTM Transparency Index

As a final step, the study then aggregated all transparency variables using weights derived from factor analyses and then ranked countries by decreasing order of index values.

Scores have a limited range of integer values; there are multiple countries with the same index. Countries that have tied in scores are then ranked by decreasing order of gross domestic product (GDP) per capita. The index takes on values between 0 and 2.061, with the median at 0.62.

Table 3. Average NTM Transparency Across Regions

	EAP	ECA	LAC	MENA	SA	SSA
WTO SPS/TBT notification						
Propotion of notifiers	0.64	0.72	0.85	0.55	0.50	0.57
Average normalized notifications*	1.01	1.41	8.21	4.23	1.12	4.44
TFA trade portal						
Proportion of existing portals	0.11	0.55	0.06	0.10	0.25	0.19
Average portal quality	2.33	3.00	2.00	3.00	1.00	2.22
TRAINS NTM data						
2001 version	0.14	0.04	0.41	0.20	0.63	0.40
MAST version	0.54	0.64	0.44	0.20	0.63	0.21
Experiment						
Average score (0-3)	0.57	1.17	0.25	0.13	0.13	0.28
Observations	28	47	34	20	8	47

EAP = East Asia and the Pacific, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, MENA = Middle East and North Africa, NTM = non-tariff measure, SA = South Asia, SPS = sanitary and phytosanitary, SSA = Sub-Saharan Africa, TBT = technical barriers to trade, TFA = Trade Facilitation Agreement, TRAINS = Trade Analysis Information System, WTO = World Trade Organization.
Note: Regions are defined according to World Bank classifications except that ECA includes high-income, non–World Bank client European countries.
* Number of notifications per million dollar of imports, on average, over 1995–2013.
Source: Authors' calculations.

It comes as no surprise that high-income OECD countries have the highest scores (Figure 3), followed by most of the European countries, Australia, Singapore, which are in the second category, together with the United States and New Zealand.

Among the developing countries, members of the Association of Southeast Asian Nations (ASEAN) garnered the highest average scores, followed by European and Central Asian countries (Figure 4). The lowest scores are observed in countries in the Middle East, North Africa, and Sub-Saharan Africa.
The index correlates fairly well with the of the Global Competitiveness Index (GCI)[1] overall government transparency componen. Both Ing et al.'s NTM Transparency Index and the GCI's government transparency sub-index have 134 countries whose data overlap in these two databases. The correlation is clearly positive (Figure 5), with significance at the 1% level.

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[1] The GCI's 'transparency of government policy' component scores countries based on the question: 'In your country, how easy is it for businesses to obtain information about changes, in 'government policies and regulations affecting their activities?'

Figure 3. Distribution of Index Values By Income Category
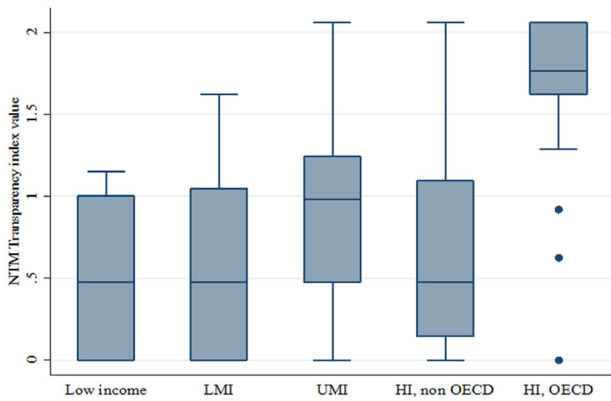
HI = high income, LMI = lower middle-income, UMI = upper middle income, OECD = Organisation for Economic Co-operation and Development.
Note: Income groups are defined according to World Bank classification. Each box marks the interval between the 25th and 75th percentiles of the conditional distribution of Global Competitiveness Index (GCI) transparency scores for each value of the experiment's score; the 'whiskers' mark the upper and lower limit of the conditional distribution without outliers; and the outliers, if any, appear as dots above or below the whiskers. The horizontal bar is the median.
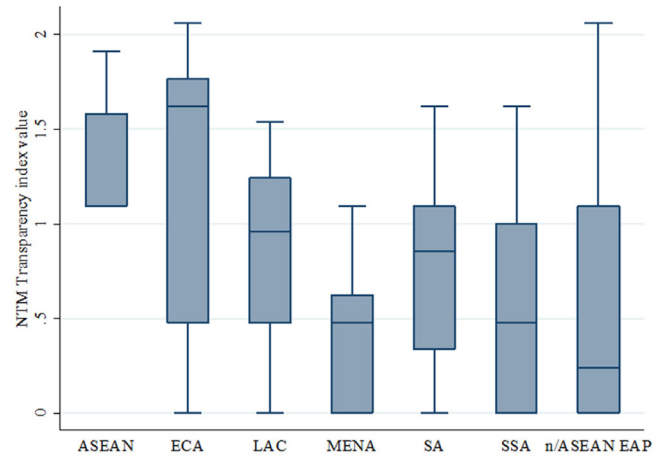Source: Authors' calculations.

Lessons From Country Rankings

Two main findings emerge from the country rankings:

First, industrial countries generally lead the pack, which is not a surprise. Second, ASEAN efforts towards NTM transparency seem to have produced results, as ASEAN countries score higher in this study's data collection and experimental results than in compliance with WTO transparency requirements. However, those efforts are largely unnoticed by the business community, as survey-based measures of government transparency still produce poor ratings for ASEAN member states.

Transparency alone may not be enough to encourage the spread of best practices; that is, coercion mechanisms may be necessary as well. Such coercion mechanisms, however, do not exist currently in the ASEAN.

The contrasting ratings of ASEAN member states suggest that the need for improved NTM transparency should be better communicated. Also, such transparency in regulations ought to be broadened and simplified. This could be achieved by giving NTM committees (in countries that have set up such committees) a broader mandate to supervise and simplify regulations, including domestic rules.

Figure 4. Distribution of Index Values By Region

ASEAN = Association of Southeast Asian Nations, EAP = East Asia and the Pacific, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, MENA = Middle East and North Africa, SA = South Asia, SSA = Sub-Saharan Africa.
Source: Authors' calculations.

Figure 5. Correlation Between the NTM Transparency Index and the GCI's Government Transparency Sub-index
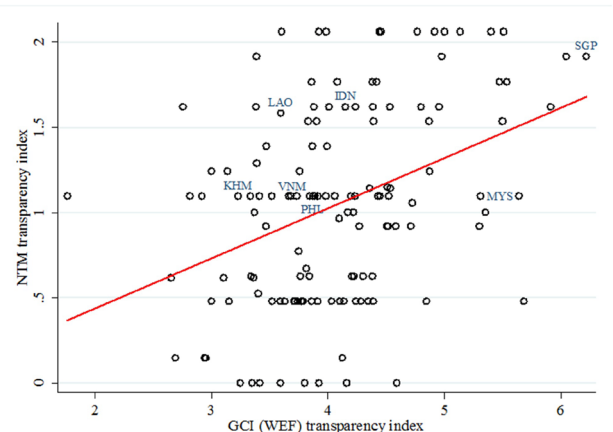
GCI = Global Competitiveness Index, NTM = non-tariff measures, WEF = World Economic Forum.
Source: Authors' calculations using data from the World Economic Forum database (http://reports.weforum.org/global-competitiveness-report-2015-2016).

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