ADVANCE UNEDITED VERSION

EVOLUTION OF NON-TARIFF MEASURES: EMERGING CASES FROM SELECTED DEVELOPING COUNTRIES

by

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NOTE

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ABSTRACT

The objective of the paper is to provide a brief account of the international efforts in understanding non-tariff measures (NTMs) related trade policies. The research and analysis activities began in UNCTAD way back in the 1980s to define, classify and measure the impact of NTMs on developing countries exports and economic growth. Due to changes in trade policies over the past decade, policymakers required a new set of approaches to define, classify and codify NTMs as UNCTAD undertook a leading role in bringing several international agencies and eminent persons to build consensus on these issues since 2005. The paper uses the NTMs classification system, which includes several new subcategories for SPS and TBT to appropriately reflect the increasing use and importance of these policy measures. In particular, the paper analyses NTMs-related information from over 2000 small and medium size firms from seven developing countries (Brazil, Chile, India, Philippines, Thailand, Tunisia and Uganda) to gauge how firms in those countries were affected by NTMs, both at home and abroad. The results clearly indicate high shares of SPS and TBT measures in all countries. The shares ranged from about 65 per cent in the surveys for India to about 93 per cent for Thailand. The paper also includes the concept of procedural obstacles, which refers to issues related to the process of applying an NTM, rather than the measure itself. About 57 per cent of the procedural barriers faced by exporters are classified as “inefficiency or obstruction,” and 20 per cent as "arbitrariness or inefficiency", while 60 per cent of the procedural barriers faced by importers are concerned with “inefficiency or obstruction” and 23 per cent with "arbitrariness or inefficiency". Another interesting result was that the main sectors particularly affected were vegetable products, textiles and clothing, electrical and machinery products and chemical and allied industries. The study concludes that current research and analysis on NTMs will better help policy-makers in producing impact assessment analysis of trade-related reforms and will critically act as a vehicle for promoting trade and investment integration processes to expand the depth and opportunities for global cooperation.

Keywords: Non-tariff measures, developing countries, sanitary and phytosanitary measures, technical barriers to trade

JEL Classification: F13, O 57
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The views expressed in this paper are those of the authors and do not necessarily reflect the views of the United Nations Secretariat or its members. Any mistakes and errors in this paper are those of the authors’ own.
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1. Introduction

Over the years, multilateral trade negotiations have helped to substantially reduce tariff rates. According to the UNCTAD-TRAIMS database, the tariff averages on both agricultural goods and on non-agricultural products declined steadily from 19.9% and 6.7% in 1995 to reach 7.4% and 2.4% in 2008, respectively. This decline in the global tariff barrier is due to eight rounds of multilateral trade negotiations under the auspices of the GATT/WTO, as well as under bilateral and regional arrangements. However, this decline has also raised the relative importance of non-tariff measures (NTMs), which are used now more than ever as both protectionist and regulatory trade instruments in controlling and hampering the free flow of international trade.

This notion is getting even further attention due to the potential trade and currency war stemming from the global financial and economic crisis in 2009. It is quite evident that both developed and developing countries have started to use trade policy instruments as a response to the present global economic and financial crisis, mainly in the form of NTMs to protect domestic producers. The ongoing global economic crisis has once again highlighted the need to urgently address subtle and not-so-subtle NTMs, which have been used under various legitimate pretexts (such as protection of health and the environment). Economists often argue that these measures affect trade much more ambiguously than tariffs, which are price-based and transparent policy measures. For example, while the majority of NTMs that were introduced lasting the couple of years since the onset of current global crisis were largely WTO-consistent, they were considered as policy measures to restrict the free flow of goods and services across borders.

It is well regarded that the term NTM covers a wide variety of policy tools, both traditional and new, including sanitary and phytosanitary measures (SPS), technical barriers to trade (TBT), quotas, import and export licenses, export restrictions, customs surcharges, and anti-dumping and safeguard measures. In times of economic crises and in view of national policy challenges, a danger of NTMs is that they can be abused for protectionist purposes as political emotions outweigh past experiences and the intellectual foundations of trade policy measures. Over the past few years, the leaders of G-20 countries have repeatedly discussed the issue of refraining from using NTMs because of their potential for slowing down the positive outcomes of trade expansion and integration.

It is noteworthy that UNCTAD has always underscored the mismatch between, on one hand, the reduction of tariffs arising from GATT/WTO multilateral agreements and the

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1 Import-weighted applied tariff rates, including preferences. see: WITS/TRAIMS
http://www.unctad.org/trains

2 See Reports on G20 Trade and Investment Measures, UNCTAD-OECD-WTO:
http://www.unctad.org/en/docs/wto_oecd_unctad2009_en.pdf and

3 See the G20 Seoul Summit Leaders' Declaration, November 11 – 12, 2010: "Trade and Development Policies: We reaffirm our commitment to free trade and investment recognizing its central importance for the global recovery. We will refrain from introducing, and oppose protectionist trade actions in all forms and recognize the importance of a prompt conclusion of the Doha negotiations", http://www.g20.org/Documents2010/11/seoulsummit_declaration.pdf
numerous regional and bilateral level preferential trade agreements (PTAs)\(^4\) that were concluded over the past decades, and on the other the proliferation of NTMs. So, as tariff levels fell over the years, NTMs increasingly took centre-stage in market-access concerns.\(^5\)

With the growing number of trade policy measures under discussion globally, it becomes clear that the existing rules under the relevant WTO agreements are not adequate to regulate a massive flow of SPS regulations, TBT regulations, and standards (international, national and private), and yet these agreements are not a subject of negotiation in the ongoing Doha Development Round. Moreover, in spite of their importance, there is little understanding of the exact implications of NTMs on trade flows, export-led growth national development goals and social welfare in general.

This paper has drawn substantially from a recent UNCTAD publication (2010) that showcased several aspects of UNCTAD activities on NTMs as well as firm-level surveys on NTMs in selected developing countries. The research indicates that in recent years, there have emerged visible forms of NTMs, such as through SPS and TBT measures, as well other forms of NTMs. Typically they take the form of intentional misuse or abuse of otherwise non-discriminatory, inside-the-border measures, which are originally intended to protect the well-being of consumers or the environment in the importing countries (rather than protecting the producers).\(^6\)

With the rise of trade dynamism in developing countries, there are growing concerns of protectionist's fears among trades and entrepreneurs to carry out international trade. Under such background, NTMs need to be collected, classified and stored in a manner which will make it easy for all types of users to extract, evaluate and/or access them for increasing their lawfully use in support of growth and job creation.

While it is a difficult and complex activity to identify hidden measures and other NTMs, it is an essential task if developing countries are to participate fully in the process of refining the rules, regulations and disciplines in the SPS and TBT Agreements, as well as in other negotiating forums that deal with other forms non-tariff barriers (NTBs), such as those included in WTO's Doha Round of Negotiations. In this context, there is an urgent need to

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\(^4\) Preferential Trade Agreements (PTAs) include free trade agreements, customs unions, common markets, and single markets. Latest statistics show that there are now about 300 PTAs in force worldwide as compared to 37 in 1994, of which half have come into effect since 2000.

\(^5\) The Global Trade Alert, \(www.globaltradealert.org\), report estimates show that the number of measures (official) implemented in 2008 at roughly 70 per quarter, and fewer than 5 percent of product categories have escaped being hit by some type of protectionist measure. The report also points that many governments are already planning another 134 protectionist measures - the equivalent to half a year's protectionism at current rates. Moreover, G20 governments, according to the report, have been implemented 121 beggar-thy-neighbour measures (as on October 2009). G20 countries account for 101 of the 141 protectionist measures that have harmed the commercial interests of the most vulnerable nations, namely, the Least Developed Countries. ...Most of that harm is done by the developing country members of the G20. (as on November 2010). The 9\(^{th}\) Global Trade Alert (GTA) report in July 2011 noted that 'since November 2010 194 protectionist measures have been implemented.G20 governments were responsible for 80% – 155 – of the protectionist measures taken since the Seoul summit. Moreover, the four BRICs countries are responsible for implementing a third of protection worldwide'.

develop a much broader understanding of NTMs and their economic impacts in developing countries.

It was against this background that UNCTAD launched the new initiative to reach a common understanding of the relative importance of the different types of NTMs and their impact on trading activities, especially for developing countries.

The paper is organized as follows: Section 2 provides a brief historical account leading to new UNCTAD initiatives on NTMs that started in 2005. Section 3 briefly documents UNCTAD activities on NTMs related work, during 2005 and 2009, in collaboration with international, regional and national stakeholders. Section 4 presents the newly endorsed definition and classification of NTMs by the Group of Eminent Persons on non-tariff barriers (GNTB), which was constituted by the Secretary-General of UNCTAD in 2006. Section 5 illustrates some descriptive statistics which was conducted during the pilot project in seven developing countries, namely, Brazil, Chile, India, Philippines, Thailand, Tunisia and Uganda. Section 6 concludes the paper.

2. A brief account of NTMs-related research

There have been several key studies over the years to illustrate the importance of NTMs in international trade policy research and their economic effects through quantification and modeling methodologies. Many studies over the past decades have been based on the UNCTAD Coding System of Trade Control Measures (TCMCS) to identify the measures across countries and products. Apart from the theoretical arguments about the pitfalls against these trade-barrier measures on economic outcomes, there are also several attempts to appropriately convert non-tariffs into ad valorem equivalents (AVEs), which can be comparable across countries and sectors at the aggregate level.

The initial sets of studies on the definitions and issues related to impact of NTMs are based on the pioneering research work of Baldwin (1970) and Corden (1971). According to Baldwin (1970), NTMs are regarded as “any measure (public or private) that causes internationally traded goods and services to be allocated in such a way as to reduce potential real world income”. Subsequently, the definition also included other distortionary policy measures, such as production subsidies and export subsidies, which could in a way impact imports, (see Laird and Yeats, 1990; Bora, Kuwahara & Laird, 2002).

On the other hand, since 1967, the GATT/WTO developed and maintained another set of NTMs inventory based on notifications with a view to undertake negotiation activities among member states. The GATT/WTO preserves information of notification of countries own measures under individual agreements such SPS and TBT. Several authors have used these datasets by introducing methodologies to quantify the impact of these measures on trade through price, quantity and elasticity of demand for imports. Later on many research documents provided a comprehensive overview of the issues related to non-tariff measures and their economic impacts, including Feenstra (1988), Deardorff and Stern (1985, 1998).

The above studies have identified three approaches to measure the NTMs: i) frequency-type measures are based on counts of observed NTMs that apply to particular countries, sectors, or types of goods trade, ii) price-comparison measures are computed as tariff
equivalents, and iii) *quantity-impact measures* are based on econometric estimates of goods trade flows.

In line with these approaches, researchers have made attempts to quantify the overall trade policy through development of the Trade Restrictiveness Index, with notable contributions from Anderson and Neary (1996, 2005); Beghin and Bureau (2001) and Kee, Nicita & Olarreaga (2009). There are some studies to identify price and welfare impacts of NTMs by using UNCTAD’s old NTMs classifications (see and Ferrantino 2006, Fugazza & Maur 2008).  

2.1 Overview of Coding System of Trade Control Measures (TCMCS):

At the international level, UNCTAD has been actively involved in research and programmatic activities on issues related to non-tariff measures since the early 1980s. In 1994, it began to collect and classify NTMs according to a customized Coding System of Trade Control Measures (TCMCS) from official sources. This coding system classified tariffs, para-tariffs and non-tariff measures (NTMs) into over 100 subcategories. Concurrently, a TRAINS database was developed by UNCTAD, which subsequently grew into the most complete collection of publicly available information on NTMs. In 2002, in collaboration with the World Bank, TRAINS was made accessible to researchers through the World Integrated Trade Solution (WITS) software application.

The old UNCTAD NTMs classification had six core categories according to the nature of the measure: (a) price control measures; (b) finance measures; (c) automatic licensing measures; (d) quantity control measures; (e) monopolistic measure; and (f) technical measures. These were further subcategorized in accordance with the types of measures under consideration. Measures were listed in accordance with the Harmonized Coding classification. In general, only "sensitive product categories" and "technical regulations" were further subcategorized according to the objectives of the measure (for example, protection of safety, human health, animal health and life, plant health, environment and wildlife). NTMs classification was divided into *core-measures* and *non-core measures*, where core measures included measures intended to protect local producers; and non-core measures included measures intended to protect local consumers (Figure 1). The TRAINS database contains a brief description of each NTM, the affected or excluded countries and footnotes on the exact product coverage, where available. 

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9 UNCTAD-TRAINS database was also a result of close collaboration effort with a number of regional organizations, including the Associação Latino-Americana de Integração (ALADI), the Secretaría de Integración Económica Centroamericana (SIECA) and the South Asian Association for Regional Cooperation (SAARC), as well as with the Inter-American Development Bank (IADB). Among these partner organizations, ALADI developed a comprehensive NTM database of its member countries, and these data were included in the TRAINS database. UNCTAD-TRAINS does not, however, provide any measurement of the restrictiveness of any specific measure, and needed further improvements, notably with respect to coverage, updatedness and data quality.
The objective of the TRAINS database has been to increase transparency in trade policy across the board. The database also provides information to help the following: (i) analysis of market access conditions; (ii) analytical support for trade negotiations; (iii) analysis of national trade policies; and (iv) general research on trade policies.

**Figure 1:** The measures and chapters of the old UNCTAD-NTMs classification

Source: UNCTAD Secretariat

While the UNCTAD-TRAINS database remains the most comprehensive database on NTMs, the process of updating the database with the existing classification system had slowed down significantly by the beginning of the 2000s. This was mainly due to key issues including: (i) difficulties in identifying NTMs; (ii) a growing perception that the TCM coding system did not adequately reflect new measures in certain subcategories; and (iii) a shortage of resources.

### 2.2 Shortcoming of Coding System of Trade Control Measures (TCMCS):

The need to update the UNCTAD Coding System of Trade Control Measures (TCMCS) to reflect new practices became all the more necessary in the light of the growing relative importance of non-core NTMs as an instrument of trade policy, as shown in Table 1a.

**Table 1a:** Changing Nature of NTMs Trend through TCMCS

<table>
<thead>
<tr>
<th></th>
<th>1994 (%)</th>
<th>2005 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core measures</td>
<td>45</td>
<td>15</td>
</tr>
<tr>
<td>Non-core measures</td>
<td>55</td>
<td>85</td>
</tr>
</tbody>
</table>

Source: UNCTAD Secretariat calculations based on UNCTAD-TRAINS database

To be more precise, the TRAINS database illustrates that globally, over the past decade, the technical measures (within the non-core measures category) have become a key component of trade policies in countries (see Table 1b).
Table 1b: Evolution of NTMs use by broad category through TCMCS

<table>
<thead>
<tr>
<th>TCM description</th>
<th>1994 (%)</th>
<th>2005 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-core measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatic Licensing Measures</td>
<td>2.8</td>
<td>1.7</td>
</tr>
<tr>
<td>Monopolistic Measures</td>
<td>1.3</td>
<td>1.5</td>
</tr>
<tr>
<td>Technical Measures</td>
<td><strong>31.9</strong></td>
<td><strong>58.5</strong></td>
</tr>
<tr>
<td>Core measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price Control Measures</td>
<td>7.1</td>
<td>1.8</td>
</tr>
<tr>
<td>Finance Measures</td>
<td>2.0</td>
<td>1.5</td>
</tr>
<tr>
<td>Quantity Control Measures</td>
<td>49.2</td>
<td>34.8</td>
</tr>
</tbody>
</table>

Source: UNCTAD Secretariat calculations based on UNCTAD-TRAINS database

This result holds true at the regional level as well. The ASEAN database on NTMs measures clearly indicates that non-core measures are predominant (about 75 percent in 2005) and technical measures are on the top of the list (see Table 1c).

Table 1c: Types of NTMs applied in ASEAN region through TCMCS

<table>
<thead>
<tr>
<th>TCM description</th>
<th>1994 (%)</th>
<th>2005 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-core measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatic Licensing Measures</td>
<td>2.0</td>
<td>2.4</td>
</tr>
<tr>
<td>Monopolistic Measures</td>
<td>1.5</td>
<td>2.7</td>
</tr>
<tr>
<td>Technical Measures</td>
<td><strong>39.2</strong></td>
<td><strong>49.0</strong></td>
</tr>
<tr>
<td>Core measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price Control Measures</td>
<td></td>
<td>2.8</td>
</tr>
<tr>
<td>Finance Measures</td>
<td></td>
<td>0.1</td>
</tr>
<tr>
<td>Quantity Control Measures</td>
<td>57.3</td>
<td>43.1</td>
</tr>
</tbody>
</table>

Source: UNCTAD Secretariat calculations based on UNCTAD-TRAINS database

This has given rise to a renewed interest in the UNCTAD Secretariat to develop a relevant classification system that better reflects the complex nature of today’s international trading arrangements and mechanisms, and to update its TRAINS database accordingly and make it publicly available.

3. Launching of UNCTAD's New Initiative on NTMs

UNCTAD's new initiatives on NTMs started with the Ninth Session of the Commission on Trade in Goods and Services, and Commodities, held in Geneva on 14-18 March 2005. In accordance with the São Paulo Consensus, UNCTAD convened the Expert Meeting on Methodologies, Classifications, Quantification and Development Impacts of Non-Tariff Barriers, which was held in Geneva from 5 to 7 September 2005.

The focus of the Expert Meeting was primarily on technical and research issues (such as classification and quantification of NTMs) and on strengthening/forming partnerships with relevant international organizations and other stakeholders, with the goal of dealing with NTMs on a comprehensive and long-term basis. In sum, the key objectives of the Expert Meeting were:

(i) To identify ways to improve, both in terms of country coverage and data quality, the NTM database contained in the UNCTAD TRAINS database;
(ii) To clarify methodologies for defining and classifying NTMs according to their nature and source, including clusters of NTMs that are already subject to WTO disciplines;
(iii) To review econometric approaches to quantify NTMs that could be applied to improve understanding of NTMs' role in the world trade;
(iv) To look at experiences of other international organizations in dealing with NTMs, including the WTO, World Bank, IMF, OECD and others; and
(v) To assist developing countries, including LDCs, in building their analytical and statistical capacities in assessing NTMs affecting their exports.

The Secretary-General of UNCTAD at the Expert Meeting expressed his intention to set up a Group of Eminent Persons on NTMs. This group was to be drawn from governments, international organizations, academia and civil society. In 2006, the Secretary-General of UNCTAD established the Group of Eminent Persons on Non Tariff Barriers (GNTB). The main purpose of GNTB was to discuss the definition, classification, collection and quantification of non-tariff barriers so as to identify data requirements, and consequently to facilitate our understanding of the implications of NTMs. The GNTB met for the first time in UNCTAD Geneva on 12 July 2006, and adopted the following terms of reference:

(i) To make recommendations on the definition, classification and quantification of NTMs;
(ii) To define elements of and draw up a substantive work programme relating to the collection and dissemination of NTM data, with a special focus on issues and problems faced by developing countries;
(iii) To provide guidance on the further strengthening of UNCTAD’s Trade Analysis and Information System (TRAINS) database;
(iv) To review and make recommendations on capacity-building and technical cooperation activities in favour of developing countries in the area of NTMs;
(v) To provide policy advice on inter-agency collaboration and coordination on activities relating to NTMs;
(vi) To promote cooperation with the donor community; and
(vii) To prepare comprehensive recommendations on follow-up to its work.

To carry out the technical work of the GNTB, a Multi-Agency Support Team (MAST) was also set up by the GNTB. In addition to UNCTAD, the MAST is composed of the following organizations: the Food and Agriculture Organization of the United Nations (FAO), International Monetary Fund (IMF), International Trade Centre UNCTAD/WTO (ITC), Organization for Economic Cooperation and Development (OECD), United Nations Industrial Development Organization (UNIDO), World Bank and World Trade Organization (WTO). It was also represented by observers from the United States Department of Agriculture (USDA), the United States International Trade Commission (USITC) and the European Commission. The team is composed of experts drawn from the above international organizations dealing with substantive analysis of NTMs.

Under the general guidance of UNCTAD, MAST had the following objectives:

(i) to provide a clear and concise definition of NTMs;
(ii) to develop a classification system of NTMs to facilitate data collection process and analysis;

Supachai Panitchpakdi launched the activities of the non-tariff measures and he set up the group that was composed of the following eminent persons: Alan V. Deardorff, Professor of Economics and Public Policy, University of Michigan; Anne O. Krueger, Former First Deputy Managing Director, International Monetary Fund (IMF); present Professor of International Economics, Johns Hopkins School of Advanced International Studies; Amit Mitra, Secretary-General, Indian Federation of Chambers of Commerce and Industry; Marcelo de Paiva Abreu, Professor of Economics, Pontifical Catholic University of Rio de Janeiro; L. Alan Winters, Former Director, Development Research Group, World Bank; Chief Economist, Department of International Development (DFID), UK; and Rufus H. Yerxa, Deputy Director-General, World Trade Organization (WTO).
(iii) to devise ways to collect efficiently the information on NTMs, taking into account existing mechanism of collecting specific elements of NTMs by each member agency; and
(iv) to provide guidelines for the use of data, including their quantification methodology.

Since 2006, MAST has held five meetings to discuss the NTMs classification\(^{11}\), and to identify data sources and data collection mechanisms. A pilot project was designed in order to test the updated NTM classification and the data collection procedures. Seven developing countries – Brazil, Chile, India, Philippines, Thailand, Tunisia and Uganda – were identified as pilot countries.

Meanwhile, the Accra Accord resulting from the UNCTAD XII conference (Accra, Ghana, 20–25 April 2008) emphasized that “meaningful trade liberalization will also require addressing non-tariff measures…where they may act as unnecessary trade barriers…International efforts should be made to address non-tariff measures and reduce or eliminate arbitrary or unjustified non-tariff barriers” (para. 73). In this regard, UNCTAD was requested to “address the trade and development impact of non-tariff barriers…and as well as further improve and disseminate its analytical tools, such as databases and software, including TRAINS/WITS”.\(^{12}\)

All of these international events have provided UNCTAD with a solid footing to convince other international partners to converge to provide global market access information in order to foster common prosperity through international trade and through an equitable and rule-based multilateral system.

4. Definition and New Classification of NTMs

This section describes the work on proposing a workable definition and new system of classification of NTMs. During the MAST meetings, the technical group had come up with the broad definition and classification of NTMs. It was discussed at the meetings that the NTMs in a broad sense refer to all type of policy instruments that are not tariffs, and are applied to imported products. Such instruments may or may not affect trade flows. Most importantly, not all measures affecting trade are implemented with discriminatory or protectionist purposes.

It seems that the majority of NTMs fall into two categories: those that are technical barriers to trade and those that are sanitary/phytosanitary measures. Also, such measures may affect trade of only a group of exporters. Some exporters may perceive certain SPS and/or TBT requirements as being too stringent and as market access barriers. On the other hand, some of these requirements may provide policy signals which can be adopted to fulfill requirements.

After a series of MAST meetings and consultations, this technical group proposed the following definition of NTMs:

\(\text{11}\) The first meeting of MAST was hosted by the World Bank on 18 October 2006 in Washington, DC. This meeting was followed by further meetings hosted by FAO on 5 April 2007 in Rome; UNIDO on 28 September 2007 in Vienna; OECD on 5 May 2008 in Paris; and ITC on 27 January 2009 in Geneva.

\(\text{12}\) Available at www.unctad.org/en/docs/iaos20082_en.pdf
Non-tariff measures (NTMs) are policy measures, other than ordinary customs tariffs, that can potentially have an economic effect on international trade in goods, changing quantities traded, or prices or both.

Figure 2: The measures and chapters of the NTMs classification (as of December 2009)

MAST recognized that a precise and balanced definition of NTBs posed substantial difficulties, and that a distinction between NTBs and NTMs should not be attempted. At the same time, MAST agreed that NTMs cannot be simply qualified as NTBs on the basis of a single piece of regulation and can only be unequivocally identified as such following analysis of detailed data (Figure 2). Later, the group also agreed that a comprehensive database should be built to only collect data on NTMs. This would leave open the judgment of whether a given measure constitutes a trade barrier and whether the measure has protectionist or discriminatory intent.

MAST concluded that an updated and modified version of the old UNCTAD-TCMCS classification on NTMs was needed to take into account both the economic significance of an NTM, as well as the difficulty in collecting and properly classifying the data. The group also recognized that since information on NTMs needed to be collected from various (and often heterogeneous) sources, there was a trade-off between the cost of collecting data and the degree of detail provided by the classification.

The classification of NTMs proposed by MAST and several external experts on NTMs is therefore suited for collecting information at a different level of detail, to reflect the increasing recourse to the use of NTMs in international trade. It must be emphasized that with respect to the TCMCS, the updated classification includes a substantial number of new subcategories on SPS and TBT measures, and introduced a few new categories of NTMs, such as “export measures”, “trade-related investment measures”, “distribution restrictions”, “restrictions on post-sales services”, “subsidies”, “measures related to intellectual property rights” and “rules of origin”.

A detailed list of new NTMs classification is available at http://ntb.unctad.org
Another innovative part of the new classification is that it has introduced the concept of “procedural obstacles”, which refers to issues related to the process of application of an NTM, rather than the measure itself. MAST agreed that in a number of cases, it is not the NTM per se that is discriminatory or creates an obstacle to trade, but the actual implementation of the NTM. It was decided that information on problems or other excessive burdens related to implementation of NTMs were to be collected through survey data under the broad term of procedural obstacles (Figure 3).

**Figure 3:** The measures and types of new NTMs-"Procedural Obstacles” classification

<table>
<thead>
<tr>
<th>Procedural Obstacles</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Arbitrariness or Inconsistency</td>
<td>Behaviour of public officials</td>
</tr>
<tr>
<td>B Discriminatory behaviour</td>
<td>Favouring local suppliers</td>
</tr>
<tr>
<td>C Inefficiency or obstructions</td>
<td>Excessive documentation requirement</td>
</tr>
<tr>
<td>D Non-transparency</td>
<td>Inadequate information on laws regulations/registrations</td>
</tr>
<tr>
<td>E Legal issues</td>
<td>Lack of enforcement</td>
</tr>
<tr>
<td>F Unusually high fees or charges</td>
<td>Stamps, testing or other services</td>
</tr>
</tbody>
</table>

Source: UNCTAD Secretariat

On 5 November 2009, the Secretary-General of UNCTAD convened the meeting in Geneva of the GNTB to finalize the work on the definition and classification system. At the meeting, the GNTB members endorsed the definition and new classification system proposed by UNCTAD in conjunction with MAST members. The November 2009 GNTB meeting represents a landmark in the work on NTMs conducted by UNCTAD since the 1980s. Under UNCTAD’s umbrella MAST agencies, pilot project governments, regional organizations, national research institutions and private sectors, paved the way for global consensus-building on the definition, classification and collection of NTMs, and helped to facilitate understanding and awareness of NTMs among the developing countries.

### 5. Framework and Results of Firm-level NTMs Surveys

After the initial set of work on creating a new NTMs classification, UNCTAD led a project for data collection on NTMs in selected developing countries. It was recognised that assembling a comprehensive NTMs dataset creates numerous challenges at both the national and international level. In general, the MAST agreed to collect data and

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14 A detailed list of new NTMs classification is available at [http://ntb.unctad.org](http://ntb.unctad.org)
information on non-tariff measures through two different channels: collecting data from official sources, and collecting from exporters in the private/business sectors. Moreover, it was also decided to use a web based (http://ntb.unctad.org) platform to facilitate reporting of information related to NTMs. Figure 4 summarizes the data collection framework.

**Figure 4: NTMs Data Collection Framework**

![Non-Tariff Measures (NTMs) Data Collection Framework](image)

Source: UNCTAD Secretariat

### 5.1 NTMs data collection framework:

UNCTAD started in January 2008 the "Pilot Project on Collection and Quantification of Non-Tariff Measures (NTMs) Database" in five developing countries: Brazil, Chile, India, the Philippines and Thailand.\(^{15}\) Subsequently, the International Trade Centre UNCTAD/WTO (ITC) joined in this initiative, and extended the project activities to Tunisia and Uganda.\(^{16}\) In this paper, we provide results from seven countries in the pilot project.

The data collection activities of the pilot project in each of these developing countries were carried out by a Country Reporting Officer (CRO) and a specialized survey agency, in collaboration with the UNCTAD technical experts. The CRO acted as the national focal point in the pilot country and was responsible for country-related activities including the identification, collection and monitoring of official and firm-level data.

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\(^{15}\) The project has been financed by the generous contribution by the Government of Switzerland (Project number INT0T7BA) and by the DFID (UNCTAD India Project).

\(^{16}\) Two United Nations regional commissions, the Economic Commission for Latin America and the Caribbean (ECLAC) and the Economic and Social Commission for Asia and the Pacific (ESCAP), supported the pilot project, as did several other national research institutions such as Philippines Institute of Development Studies (PIDS), National Institute of Development Administration (NIDA), and University of Chile and Centro de Estudos de Integração e Desenvolvimento (CINDES).
To obtain the official information, there are various national sources that can be consulted including Ministry of Trade, Ministry of Agriculture, and National Standard Bodies. On the other hand, for the firm-level survey, face-to-face interviews were conducted to obtain information from both exporters and importers as they reported their experiences in any export and import-related problem they faced. The reported cases from both the official sources and private firm-level surveys were then classified into the proper category of non-tariff measures according to the new NTMs classification.

This paper provides some initial results from the firm-level surveys which were conducted in seven developing countries. It must be noted that the sample size of firm-level surveys varied across countries, which are diverse in terms of geographical location and economic size. On average, however, 300 firms per country surveyed were interviewed, including exporting and importing firms, during the period May 2008 to January 2009 (Table 2).

The sampling was targeted toward sectors that were recognized a-priori as facing more stringent NTMs, or sectors that are considered as significant export (or import) sectors based on their shares in a country’s total exports (or imports). The preliminary results from the firm-level survey indicate some interesting policy issues related to both the NTMs and procedural obstacles measures.

After obtaining information from pilot project countries, the total number of cases was counted in all the countries, except for Brazil. The number of cases varied across countries due to the sample size of the firm-level survey as well as the number of complainants registered. The reported number of cases was categorised based on the firm’s export or import activities.

The conceptual framework on NTMs has been designed to collect and store the data in a way that helps quantify the measures and their potential impact on trade. To that end, the firm-level survey database is categorized into two dimensions which are based on types of measures: Import measures and Export measures. However, both the exporting firms and importing firms can face either of these two measures while in the process of engaging in trade.

17 In addition to collecting data, the pilot project aimed at support developing countries in building technical capacity to collect and analyze information on non-tariff measures that are affecting their own exporters. Under the project, initial training sessions were organized for the Country Reporting Officer, national partner institutions, officials of relevant Ministries, Chamber of Commerce and other stakeholders, who were all closely involved in the implementation of the pilot project.

18 See UNCTAD (2010) report for a detailed discussion of the sampling methodology in each of these countries.

19 In addition to firm-level surveys, the MAST agreed that information on trade-affecting non-tariff measures can be also collected online through internet. A prototype of a web-based portal for collecting non-tariff barrier data, the Trade Barriers Reporter, was developed by UNCTAD. The Trade Barrier Reporter (http://ntb.unctad.org) is a global online reporting system for firms involved in international trade, where private-sector firms can report non-tariff measures they face. The online portal is also designed as a dissemination tool. Interested users can access data stored in the database through the portal and compare their experiences with other reports.
As shown in Figure 5, the exporting and importing firms could face two types of measures: import measures and export-measures. The import measures can be computed if the exporting firm in Country A complains against Country B for their exports. So, importing country imposes trade policy measures that can potentially have an economic impact (C1 cell in Figure 5). In the database as well as in the analysis, we refer to these as import measures. The import measures for exporting firms (C1) are mainly a set of complaints against trading partners.

Table 2: Firm-level NTMs survey in seven developing countries (sample size)

<table>
<thead>
<tr>
<th>Country</th>
<th>Survey reference period</th>
<th>Number of firms</th>
<th>Number of exporting firms</th>
<th>Number of importing firms</th>
<th>Number of firms doing both exporting and importing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>June to September 2008</td>
<td>80</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Chile</td>
<td>October 2008 to January 2009</td>
<td>216</td>
<td>184</td>
<td>54</td>
<td>22</td>
</tr>
<tr>
<td>India</td>
<td>June to September 2008</td>
<td>422</td>
<td>345</td>
<td>77</td>
<td>-</td>
</tr>
<tr>
<td>Philippines</td>
<td>May to August 2008</td>
<td>303</td>
<td>299</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Thailand</td>
<td>June 2008 to January 2009</td>
<td>435</td>
<td>430</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Tunisia</td>
<td>July to September 2008</td>
<td>395</td>
<td>238</td>
<td>276</td>
<td>119</td>
</tr>
<tr>
<td>Uganda</td>
<td>June to September 2009</td>
<td>269</td>
<td>204</td>
<td>81</td>
<td>16</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>2120</strong></td>
<td><strong>1700</strong></td>
<td><strong>500</strong></td>
<td><strong>160</strong></td>
</tr>
</tbody>
</table>

Note: Brazilian survey was conducted in about 80 firms. However, the survey was not completed in due course, so we are not describing much of the information on NTMs for the private/business sector sources.

Source: UNCTAD Secretariat calculations based on NTMs Pilot project database

Another consideration is that of importing firm in Country A complaints against its own country for imposing trade policy measures (C3 cell in Figure 5). These measures are often regarded as complaints by importers against their domestic trade policy rules which can eventually be categorized as barriers to their trade. There are also two other cases where firms can face possible trade policy measures which can be considered to be a part of non-tariff measures (see C2 and C4 cell in Figure 5).

Figure 5: Conceptual framework of identifying number of reported cases in NTMs firm-level surveys

Source: UNCTAD Secretariat
5.2 Identifying reported cases by NTMs:

The above framework helps to quantify the total number of cases pertaining to technical measures and non-technical measures as well as that of export-measures. The final data from firm surveys in six countries indicate the total number of cases calculated from the national databases. For the exporting firms, the survey analysis shows that 85.5 per cent of measures are related to Technical measures and about 10.5 per cent accounts non-Technical measures.

**Figure 6:** Frequency of measures by NTMs chapters (Percentage of total measures)

![Graph showing the frequency of measures by NTMs chapters](image)

Note: These results are computed from exporting firms in the sample survey in six developing countries
Source: UNCTAD Secretariat calculations based on NTMs Pilot project database

As shown in Figure 6, NTM chapters with the 51 per cent of measures are related to technical barriers to trade (TBTs) and 34 per cent of measures are related to Sanitary and Phytosanitary Measures (SPS).

As indicated above, pre-shipment, price-control, quantity control, finance and other measures account for about 10.5 per cent of NTMs reported in these six countries. It is worth noting that similar results were found for importing firms in the survey analysis.

**Table 3:** Number of reported NTMs cases, by firms

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of NTMs cases</th>
<th>Number of NTMs cases related to exporting firms</th>
<th>Number of NTMs cases related to importing firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>807</td>
<td>671</td>
<td>136</td>
</tr>
<tr>
<td>India</td>
<td>1129</td>
<td>840</td>
<td>289</td>
</tr>
<tr>
<td>Philippines</td>
<td>815</td>
<td>808</td>
<td>7</td>
</tr>
<tr>
<td>Thailand</td>
<td>1195</td>
<td>1183</td>
<td>12</td>
</tr>
<tr>
<td>Tunisia</td>
<td>1316</td>
<td>601</td>
<td>715</td>
</tr>
<tr>
<td>Uganda</td>
<td>963</td>
<td>611</td>
<td>352</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6225</strong></td>
<td><strong>4714</strong></td>
<td><strong>1511</strong></td>
</tr>
</tbody>
</table>

Source: UNCTAD Secretariat calculations based on NTMs Pilot project database
The national firm-level data indicates that Tunisia, Thailand and India reported more than 1000 cases, while Uganda, Philippines and Chile reported under 1000, which is also directly linked to number of firms in the respective surveys. However, due to sample selection, most of the cases are related to complaints by exporting firms of the surveyed country. (see Table 3)

The analysis is then based on the import and export measures of these exporting and importing firms. Table 4 clearly shows that due to the reliance on exporting firms in the pilot project, majority of the reported cases were found to be import measures, i.e., exporting firm in \textit{Country A} complaints against \textit{Country B} for their exports. So, importing country imposes trade policy measures that can potentially have an economic impact (\textit{C1} cell in Table 4) and followed by import measures of the importing firms (\textit{C3} cell in Table 4). Thailand reported maximum proportion of cases (98.6\%) against its trading partner and followed by Philippines (87.2\%) and Chile (81.8\%). On the other hand, Tunisia (54.3\%) and Uganda (36.6\%) reported most of their complaints against their own government trade policies.

\textbf{Table 4: Number of reported NTMs cases (\%), by firms and measures}

<table>
<thead>
<tr>
<th>Country</th>
<th>Exporting (%)</th>
<th>Importing (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Import measures</td>
<td>Export Measures</td>
</tr>
<tr>
<td>Chile</td>
<td>81.78 1.36</td>
<td>16.36 0.50</td>
</tr>
<tr>
<td>India</td>
<td>71.30 3.10</td>
<td>24.80 0.80</td>
</tr>
<tr>
<td>Philippines</td>
<td>87.24 1.90</td>
<td>0.86 0.00</td>
</tr>
<tr>
<td>Thailand</td>
<td>98.58 0.42</td>
<td>1.00 0.00</td>
</tr>
<tr>
<td>Tunisia</td>
<td>45.59 0.08</td>
<td>54.33 0.00</td>
</tr>
<tr>
<td>Uganda</td>
<td>63.34 0.10</td>
<td>36.55 0.00</td>
</tr>
<tr>
<td>Total</td>
<td>73.32 2.41</td>
<td>24.06 0.21</td>
</tr>
</tbody>
</table>

Source: UNCTAD Secretariat calculations based on NTMs Pilot project database

Therefore, the firm-level survey database on NTMs indicates clearly the cases related to measures imposed by trading partners and by home-country. So another way to represent the information in Table 4 is to categorize these measures into these groups as in Table 5. On average, 75 per cent of cases are directed by these firms against their trading partners, while about 25 per cent were against their own country trade policies.

\textbf{Table 5: Number of NTM cases related to survey country enforcing (\%) against partner country enforcing (\%)}

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of cases</th>
<th>Country enforcing (%)</th>
<th>Partner country enforcing (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>807</td>
<td>18</td>
<td>82</td>
</tr>
<tr>
<td>India</td>
<td>1129</td>
<td>28</td>
<td>72</td>
</tr>
<tr>
<td>Philippines</td>
<td>815</td>
<td>13</td>
<td>87</td>
</tr>
<tr>
<td>Thailand</td>
<td>1195</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>Tunisia</td>
<td>1316</td>
<td>54</td>
<td>46</td>
</tr>
<tr>
<td>Uganda</td>
<td>963</td>
<td>37</td>
<td>63</td>
</tr>
<tr>
<td>Total/average</td>
<td>6225</td>
<td>25*</td>
<td>\textbf{75*}</td>
</tr>
</tbody>
</table>

Note:* Simple average of these categories over the six countries in the final list of firms
Source: UNCTAD Secretariat calculations based on NTMs Pilot project database
The types of measures that were reported as particularly problematic within SPS and TBT measures were those related to the labeling and packaging requirements, and requirements on conformity assessment (e.g. certification, testing and inspection requirements). Other types included those relatively new measures, such as cases pertaining to traceability and the cases related to requirements under the aim of environmental protection in many cases (Table 6).

Table 6: Number of reported NTM cases, by exporting firms (% of total cases)

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of reported SPS cases</th>
<th>Number of reported TBT cases</th>
<th>Number of reported Other cases</th>
<th>Number of reported Export related cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>43.96</td>
<td>42.92</td>
<td>11.48</td>
<td>1.64</td>
</tr>
<tr>
<td>India</td>
<td>27.26</td>
<td>44.76</td>
<td>23.81</td>
<td>4.17</td>
</tr>
<tr>
<td>Philippines</td>
<td>31.31</td>
<td>48.02</td>
<td>8.67</td>
<td>12.0</td>
</tr>
<tr>
<td>Thailand</td>
<td>44.04</td>
<td>51.56</td>
<td>3.98</td>
<td>0.42</td>
</tr>
<tr>
<td>Tunisia</td>
<td>4.20</td>
<td>74.13</td>
<td>21.67</td>
<td>0.17</td>
</tr>
<tr>
<td>Uganda</td>
<td>42.05</td>
<td>23.58</td>
<td>34.37</td>
<td>0.16</td>
</tr>
<tr>
<td>Average*</td>
<td>32.14</td>
<td>47.50</td>
<td>17.33</td>
<td>3.10</td>
</tr>
</tbody>
</table>

Note: *Simple average of these categories over the six countries in the final list of firms
Source: UNCTAD Secretariat calculations based on Pilot project database

For import-related measures, on average, 32 per cent of cases were related to SPS while 47 per cent cases were related to TBT. Chile, Thailand and Uganda reported maximum number of SPS cases where as Tunisia, Thailand and Philippines reported most number of TBT cases.

5.3 Identifying reported cases by Procedural Obstacle:

The firm-level surveys also suggest that procedural obstacles are very often associated with SPS or TBT measures as they involve procedures of certification, inspection, labeling and clearance. And also, the majority of the procedural obstacles cases are related to the measure called, "inefficiency or obstructions”. In total, 1376 firms in these developing countries reported 6435 cases related to procedural obstacles. Of which, 4881 cases were reported by the exporting firms and the number was 1554 for importing firms, (see Figure 7).
Figure 7: Number of reported procedural obstacles, by exporting and importing firms

![Graph showing number of reported procedural obstacles by exporting and importing firms]

Note: These results are computed from exporting firms in the sample survey in sex developing countries
Source: UNCTAD Secretariat calculations based on NTMs Pilot project database

At the country level, "inefficiency or obstructions" is the most important aspect of the procedural obstacles and followed by Arbitrariness or Inconsistency related cases for majority of the exporting firms. Tunisian firms complained mostly about "inefficiency or obstructions" and followed by Uganda, Chile and Thailand.

For 'Arbitrariness or Inconsistency' related cases, Indian firms complained the most and followed by Philippines and Chile. In the case of 'non-transparency', firms in Uganda reported more 10 per of the cases and, then firms in Philippines and Thailand reported lot of procedural obstacles related to ' Unusually high fees or charges', (see Table 7a).

Table 7a: Number of reported procedural obstacles, by exporting firms (% of total cases)

<table>
<thead>
<tr>
<th>Procedural obstacles classification</th>
<th>Chile</th>
<th>India</th>
<th>Philippines</th>
<th>Thailand</th>
<th>Tunisia</th>
<th>Uganda</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Arbitrariness or Inconsistency</td>
<td>22.1</td>
<td>40.7</td>
<td>27.4</td>
<td>12.7</td>
<td>9.1</td>
<td>5.6</td>
</tr>
<tr>
<td>(B) Discriminatory behaviour</td>
<td>7.4</td>
<td>13.8</td>
<td>2.8</td>
<td>3.8</td>
<td>-</td>
<td>1.3</td>
</tr>
<tr>
<td>favouring specific producers or suppliers</td>
<td>64.9</td>
<td>33.7</td>
<td>42.9</td>
<td>63.2</td>
<td>82.6</td>
<td>68.0</td>
</tr>
<tr>
<td>(C) Inefficiency or obstructions</td>
<td>3.9</td>
<td>8.8</td>
<td>6.8</td>
<td>4.4</td>
<td>4.0</td>
<td>10.1</td>
</tr>
<tr>
<td>(D) Non-transparency</td>
<td>0.1</td>
<td>1.5</td>
<td>1.8</td>
<td>0.3</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>(E) Legal issues</td>
<td>0.3</td>
<td>0.9</td>
<td>16.9</td>
<td>13.5</td>
<td>3.6</td>
<td>10.0</td>
</tr>
<tr>
<td>Unusually high fees or charges</td>
<td>1.2</td>
<td>0.5</td>
<td>1.4</td>
<td>2.1</td>
<td>-</td>
<td>4.9</td>
</tr>
</tbody>
</table>

Source: UNCTAD Secretariat calculations based on NTMs Pilot project database

By exploring the behavior of importing firms in these countries, the results is very similar for the categories as in the case of exporting firms. In most of the surveyed countries, firms complained about 'Arbitrariness or Inconsistency'. And, "inefficiency or obstructions" related cases were also very prominent (see Table 7b)
Table 7b: Number of reported procedural obstacles, importing firms (% of total cases)

<table>
<thead>
<tr>
<th>Procedural obstacles classification</th>
<th>Chile</th>
<th>India</th>
<th>Philippines</th>
<th>Thailand</th>
<th>Tunisia</th>
<th>Uganda</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Arbitrariness or Inconsistency</td>
<td>20.3</td>
<td>62.3</td>
<td>33.3</td>
<td>14.1</td>
<td>10.6</td>
<td></td>
</tr>
<tr>
<td>(B) Discriminatory behaviour</td>
<td>5.8</td>
<td>5.7</td>
<td>0.7</td>
<td>0.7</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>favouring specific producers or suppliers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(C) Inefficiency or obstructions</td>
<td>68.1</td>
<td>21.5</td>
<td>85.7</td>
<td>41.7</td>
<td>71.9</td>
<td>66.0</td>
</tr>
<tr>
<td>(D) Non-transparency</td>
<td>4.3</td>
<td>10.4</td>
<td>8.3</td>
<td>1.6</td>
<td>5.2</td>
<td></td>
</tr>
<tr>
<td>(E) Legal issues</td>
<td>0.7</td>
<td>14.3</td>
<td>16.7</td>
<td>0.7</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>(F) Unusually high fees or charges</td>
<td></td>
<td></td>
<td>10.8</td>
<td></td>
<td>11.4</td>
<td></td>
</tr>
<tr>
<td>None/Uncategorised</td>
<td>0.7</td>
<td>-</td>
<td>-</td>
<td>0.3</td>
<td>5.7</td>
<td></td>
</tr>
</tbody>
</table>

Source: UNCTAD Secretariat calculations based on NTMs Pilot project database

5.4 Identifying reported cases by Product Groups:

The NTMs project database was analysed to look into their impact on product groups by using Harmonized System 2 (HS 2) classification. By categorizing the product groups into two broad sectors: agricultural products and non-agricultural. The results indicated that about 33 per cent of agricultural products faced import measures, while 67 per cent non-agricultural products faced the same type of NTMs in six developing countries.

Figure 6. Frequency of import measures by product groups (Percentage of total cases)

Note: These results are computed from the sample survey in six developing countries
Source: UNCTAD Secretariat calculations based on NTMs Pilot project database.

However, the magnitude varies across countries given their production and export base. In the case of agricultural products, 62 per cent of agricultural products in Chile faced NTMs, while only 8.6 per cent in the case of Tunisia. Thailand, Uganda and Philippines also reported above average proportion of cases for agricultural products. Indian exporting firms faced NTMs of only about 16.5 per cent of their agricultural products.
One can also look into the breakdown of the agricultural products and it shows that several groups vary in terms of facing NTMs across countries (see Table 6).

**Table 6:** Product groups affected in origin country, by import measures: (% of total cases)

<table>
<thead>
<tr>
<th>Product groups</th>
<th>Chile</th>
<th>India</th>
<th>Philippines</th>
<th>Thailand</th>
<th>Tunisia</th>
<th>Uganda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal &amp; Animal Products</td>
<td>10.67</td>
<td>1.25</td>
<td>6.15</td>
<td>10.05</td>
<td>2.33</td>
<td>5.67</td>
</tr>
<tr>
<td>Vegetable Products</td>
<td>39.93</td>
<td>11.97</td>
<td>13.03</td>
<td>22.80</td>
<td>1.88</td>
<td>28.35</td>
</tr>
<tr>
<td>Foodstuffs</td>
<td>11.66</td>
<td>3.20</td>
<td>13.34</td>
<td>16.98</td>
<td>4.38</td>
<td>6.89</td>
</tr>
<tr>
<td><strong>Agricultural products</strong></td>
<td><strong>62.26</strong></td>
<td><strong>16.42</strong></td>
<td><strong>32.52</strong></td>
<td><strong>49.83</strong></td>
<td><strong>8.59</strong></td>
<td><strong>40.91</strong></td>
</tr>
<tr>
<td>Mineral Products</td>
<td>0.55</td>
<td>5.39</td>
<td>0.52</td>
<td>2.08</td>
<td>2.38</td>
<td>1.76</td>
</tr>
<tr>
<td>Chemicals &amp; Allied Industries</td>
<td>1.76</td>
<td>11.01</td>
<td>3.44</td>
<td>4.16</td>
<td>10.49</td>
<td>13.09</td>
</tr>
<tr>
<td>Plastics / Rubbers</td>
<td>2.97</td>
<td>3.28</td>
<td>2.09</td>
<td>6.37</td>
<td>5.63</td>
<td>4.65</td>
</tr>
<tr>
<td>Raw Hides, Skins, Leather, &amp; Furs</td>
<td>0.44</td>
<td>4.84</td>
<td>1.76</td>
<td>0.49</td>
<td>2.11</td>
<td>2.23</td>
</tr>
<tr>
<td>Wood &amp; Wood Products</td>
<td>8.80</td>
<td>3.36</td>
<td>11.46</td>
<td>1.64</td>
<td>5.04</td>
<td>4.09</td>
</tr>
<tr>
<td>Textiles</td>
<td>7.48</td>
<td>20.22</td>
<td>10.31</td>
<td>4.34</td>
<td>16.39</td>
<td>4.19</td>
</tr>
<tr>
<td>Footwear / Headgear</td>
<td>0.66</td>
<td>1.96</td>
<td>0.42</td>
<td>0.77</td>
<td>1.13</td>
<td>2.88</td>
</tr>
<tr>
<td>Stone / Glass</td>
<td>0.88</td>
<td>5.08</td>
<td>11.04</td>
<td>6.54</td>
<td>4.77</td>
<td>2.60</td>
</tr>
<tr>
<td>Metals</td>
<td>4.40</td>
<td>7.27</td>
<td>1.88</td>
<td>3.94</td>
<td>8.71</td>
<td>4.08</td>
</tr>
<tr>
<td>Machinery / Electrical</td>
<td>6.49</td>
<td>11.02</td>
<td>2.40</td>
<td>9.67</td>
<td>18.95</td>
<td>11.25</td>
</tr>
<tr>
<td>Transportation</td>
<td>1.10</td>
<td>0.55</td>
<td>0.94</td>
<td>5.33</td>
<td>5.58</td>
<td>2.32</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>2.20</td>
<td>9.61</td>
<td>21.25</td>
<td>4.78</td>
<td>10.17</td>
<td>5.95</td>
</tr>
<tr>
<td><strong>Non-agricultural products</strong></td>
<td><strong>37.73</strong></td>
<td><strong>83.59</strong></td>
<td><strong>67.51</strong></td>
<td><strong>50.11</strong></td>
<td><strong>91.35</strong></td>
<td><strong>59.09</strong></td>
</tr>
</tbody>
</table>

Source: UNCTAD Secretariat calculations based on NTMs Pilot project database
Note: Import-related measure (destination country is enforcing / origin country is affected, Figure 5)

A majority of the NTMs complaints reported by the exporting firms were related to non-agricultural products in all these surveyed countries. For example, Tunisian exporters complained that more than 91 per cent of their non-agricultural products faced NTMs, while it was about 83.6 per cent in India, 67.5 per cent in Philippines, 59.1 per cent in Uganda and 50.1 per cent in Thailand. Chile reported least percentage of cases in terms of their NTMs for non-agricultural products of exporting firms.

Again, within the non-agricultural products, some of the sectors have faced higher proportion of measures as compared to the other in these countries. So, for the Chemicals & Allied Industries sectors, Ugandan exporters faced most number of measures. While for the Wood & Wood Products sector, Philippines exporters faced most number of NTMs. Textiles sector faced most number of NTMs in India and Tunisia. And, then for Machinery / Electrical sector, the exporters in Tunisia, Uganda and India faced a good proportion of NTMs.

In summary, the firm-level surveys indicate the following results:

- Total number of firms surveyed: 2120 firms in 7 countries
- Total number of reported cases of NTMs was 6225, and of which exporting and import measures were 4880 (73.3 %), while importing and import measures were 1554 (24.1 %).

The firm-level surveys also showed that majority of the NTMs cases were reported as follows:

- Exporting and importing measures: SPS, TBT, Other technical
Importing and import measures: SPS, TBT, other technical, para-tariff measures

In the case of measures related to procedural obstacles, the survey results pointed out that a total of 6034 measures were collected and classified, and of which there were 4880 exporting cases and 1554 importing cases related to procedural obstacles. Furthermore, it was found that the majority of the cases were due to inefficiency or obstructions related measures of procedural obstacles.

The results also indicate that majority of the NTMs cases related to 'import measures' were reported for sectors as follows in six countries:

- Agricultural products: 35 per cent, on average, faced measures; of which sectoral different remain high across countries.
- Non-agricultural products: 65 per cent, on average, faced measures.

One of the key objectives of the pilot project NTMs surveys were to test the new NTMs classification and also to understand the measures and procedural obstacles which are being used regularly and complained by (exporting or importing) firms as problems for their trade activities. The firm-level surveys definitely helps to better understand the policy measures of major export destinations of the developing countries such as the US, EU, Japan and major emerging developing countries, as well as a good reflection of domestic policies on trade regulations and that of the product which are affected in these countries.

6. Conclusions

The future work on NTMs has now being discussed so as to expand the coverage of data collection and also to find some methodological framework for impact assessment. The future data collection will mostly depend on official sources of NTMs information and to be validated through some focused questionnaire-based firm-level surveys, which should be conducted after a closer assessment of official-NTMs information set at the national level, at least for big-trading partners from developed and developing countries.

UNCTAD is now proposing, along with other multilateral institutions, to launch a multi-year programme on NTMs with the scope of building, updating and disseminating free of charge NTMs database based on the new NTMs classification and covering a large number of countries.

This proposed project on NTMs is expected to include the following:

(i) to improve collaboration with national, regional and international agencies so as to increase awareness on NTMs related issues and to facilitate data gathering and updating,
(ii) to conduct research and policy analysis on the effect of NTMs on trade and economic development, and
(iii) to offer technical assistance and advisory/training services to developing countries by providing information and analysis on NTMs faced by exporters (and importers).
UNCTAD recognizes that the availability of the NTMs global database will serve the following key objectives including:

(a) Global database on NTMs:
- Efforts to create a cross-country time series database in UNCTAD-TRAiNS on NTMs to evaluate impact of changes in NTMS on traded goods, and
- Harmonization of new NTMs classification and procedural obstacles to codify official NTMs information for specific sectors/products and to determine their sources such as links to national laws and regulations number, footnotes, and references.

(b) Monitoring of NTMs:
- Types of NTMS applied and their product coverage to identify the level of protection in different goods sectors, and
- Point out timing of NTMS application by countries and subsequently underscore the nature of their usage.

(c) Analysis and quantification of NTMs:
- Quantification and impact assessment of NTMs on trade and economic welfare by incorporating new NTMs classification in simulation-based model framework by such as in computable general equilibrium (CGE) and Gravity model,
- Explore cross country comparison of NTMs incidence through calculations of ad valorem equivalent (AVE) of NTMs at the product and sector level,
- Use NTMs and procedural obstacles information for trade facilitations activities, and
- Seek to understand questions related to impact assessment of NTMs on vulnerable economies, Least Developed Countries and Landlocked Developing Countries.

The latest UNCTAD-led initiative on NTMs in collaboration with several international, regional and national stakeholders that has so far resulted in globally accepted definition and new classification of NTMs has set the ground for a global effort to develop and maintain a comprehensive data base of NTMs, which will eventually make research and analysis of NTMs much more timely and reliable.

It is expected that the NTMs related research and analysis will better help policymakers in producing impact assessment analysis of trade related reforms by providing reliable and up-to-date information on trade barriers and trade related measures. Moreover, NTMs activities at the global level would directly and indirectly affect export supply capacity building, competitiveness and market access and entry, especially for developing countries. This process will also help provide private sector with a better access to rules and regulations in their own country and about trading partners, including developed countries and trading blocks.
Finally, further advancement of research and analysis tools for trade policymaking will critically act as a vehicle for promoting trade and investment integration process to expand the depth and opportunities for global cooperation.
Annex: A cross-country NTMs firm-level summary results

The results of seven countries are described briefly on the basis of firm-level NTMs surveys: 20

(1) Brazil: The preliminary look at the firm-level survey (thin-sample size) carried out in Brazil found that export firms had more complaints about domestic administrative measures than foreign measures. 21

(2) Chile: Chile had a sample of 216 firms, including 54 importers, active in all sectors, except services, mining and chemicals. Small firms (Exports < US$ 200K) were excluded from the survey. The response rate was 0.33 per cent and export-oriented firms accounted for 60 per cent of Chile’s exports.

Chilean firms reported a total of 807 NTMs, where 136 related to importing firms. The average number of NTMs per firm was 3.7. Twenty-seven per cent of firms experienced no NTMs, and 40.7 per cent were affected by 2 to 5 cases of NTMs. Six firms (2 per cent) had more than 10 cases, five were food exporters, one was a construction firm (all large firms) and one went out of business. Of total import related NTMs, 44 per cent of NTMs are SPS, 43 per cent are TBT’s, and 11.50 per cent are other NTMs. The remaining 1.6 per cent is related to export-related measures.

It may be noted that Chile faces few barriers, this was perhaps because many of the firms that were interviewed had a long experience in dealing with them, 60 per cent of the firms were export-oriented, and had learnt to cope with obstacles. There are more NTMs in Latin American countries, perhaps because of the type of goods that were exported or imported. There is no doubt that the existence of FTAs helps in reducing obstacles to trade. Only a few firms found it too expensive to comply.

(3) India: The Indian survey focused on relevant export and import sectors and on obtaining information on NTMs directly from respondents. It sampled the top 400 products in terms of export value, which represented 83.6 per cent (at HS 6 digit level) from 68 different HS chapters. The focus was also on products with a reported history or sensitivity to NTMs, and firms were chosen from three separate sectors: manufacturing, agricultural and primary goods. In terms of importers, the survey sampled the top 100 products in terms of import value, representing 72.2 per cent of imports.

In India, the project succeeded in identifying NTMs and the procedural obstacles which may affect the ability to trade. Of the 1129 reported cases of NTMs reported, the large majority were related to SPS (27%) and TBT (45 %). These measures were largely imposed by the United States, the United Arab Emirates, United Kingdom and Germany.

20 The results from official sources are not discussed in this paper. However, majority of the NTMs from the official sources could be grouped into SPS and TBT as well,

21 A more detailed analysis of the Brazilian firm-level survey was not possible as the survey was launched during the economic crisis, at a time when Brazilian firms were more concerned about domestic issues than dealings with foreign markets. This lead to a certain amount of resistance on the part of surveyed firms and response rates were low. Efforts were made to improve the response but the results were unsatisfactory.
The top four sectors facing the largest numbers of NTMs were the textile, leather, electrical and electronic goods and food industries. The most important procedural obstacles faced by exporters consisted of arbitrary and inconsistent behaviour (62.3%) and inefficiency or cases of obstructions (21.5%).

(4) Philippines: A total of 303 firms completed the questionnaires and the majority of firms reported at least one NTM case. In the Philippines, 90 per cent of the firms reported one to five NTMs, and nine per cent reported between 6 to 10 cases of NTMs. The majority of cases were export-related measures, such as SPS and TBT; arbitrary or inconsistent measures were among the most represented procedural obstacles. Of the total number of measures reported, 31 per cent were related to SPS measures and 48 per cent of reported NTMs concerned TBTs. The third highest category (12 per cent of cases) fell within the category of export-related measures.

A detailed breakdown of NTMs showed that the largest number of TBT cases concerned conformity assessment, and that voluntary standards and technical regulations accounted for 8.4 and 11 per cent, respectively, of NTMs. The largest number of procedural obstacles was related to inefficiency or cases of obstruction (42.9 %), followed by cases of arbitrary or inconsistent behaviour (27.4%) for exporting firms. The largest reported number of NTMs concerned exports to the United States (28 per cent), followed by Japan (9.2 per cent).

(5) Thailand: A total of 435 firms were interviewed and completed the surveys in Thailand. More than half of these firms were involved in manufacturing and about 20.69 per cent, or 90 firms, were both manufacturing and trading firm. Thirty-one firms, or 7.13 per cent, were classified as both multinational and trading firms. The 435 interviewed firms reported 1,195 cases of NTMs, an average of 2.74 cases per firm. About 93.79 per cent of interviewed firms reported 1-4 cases, 5.98 per cent reported 5-9 cases and one firm reported 10 cases. In general, the firms that reported the largest number of cases were trading and multinational firms handling a wide variety of products with different trading partners in several countries.

As a major exporter of agricultural products, Thailand has experienced an increasing number of NTMs applied on its exports, notably SPS. Exporters have lodged a number of complaints with the Ministry of Commerce accusing some importing countries of violating SPS measures. An increasing number of cases of TBT have also been imposed on non-agricultural products imported into Thailand and a rising number of complaints about TBT, particularly in relation to trade with China.

In Thailand, 44 per cent of reported NTMs concerned SPS and 51 per cent were related to TBTs. The largest number of cases involved rice, followed by crustaceans and fruits. The European Union, the United States and Japan account for half of the countries for which cases have been reported. The majority of cases of NTMs applied by Thailand are SPS and TBT measures.

Only a small proportion of firms are aware of the significance of NTMs. Original equipment manufacturing producers are less concerned about NTMs. Larger firms face more varieties of NTM due to products and customers (destination countries). Some of the NTMs can be explained by the absence of trade facilitation, i.e. insufficient inspection equipment available to handle increasing numbers of shipments, particularly for perishable
products, inadequate certified lab etc. The largest number of procedural obstacles was related to inefficiency or cases of obstruction (63.2 %), followed by cases of unusually high fees or charges (13.5%) for exporting firms.

(6) Tunisia: A total of 395 firms completed the questionnaires and each firm declared that, on average, they faced five NTMs. Of the 1316 reported cases of NTMs reported, the large majority were related to SPS (4 %) and TBT (74 %). The majority of these (54 per cent) concerned importing firms. Over 75 per cent of cases of NTMs on exports reported by firms arose from their trading activity with five partners (France, Libyan Arab Jamahiriya, Italy, Algeria and Germany); the largest category of products affected by NTMs was textiles (16.39%).

The largest number of NTMs facing Tunisian importers concerned TBTs (77.6 per cent) and para-tariff measures (11.7 per cent). Among the most important procedural obstacles were problems of inefficiency or cases of obstruction (82.6 %), arbitrary conduct and taxes and charges that were considered abnormally high. Over 75 per cent of cases of NTMs on imports reported by firms arose from their trading activity with five partners (France, Italy, Germany, Spain and China); the largest categories of products affected by NTMs were capital goods and electrical machinery, plastics and paint products.

NTMs applied by Tunisia are essentially consumer protection measures (product safety) and are not really TBTs. The standards are the major NTMs applied by Tunisia and are generally the same or equivalent to international standards. The problem lies not in the NTMs but in their application. Tunisia does not apply any discrimination between partner countries, and implements effective price controls (anti-dumping, countervailing and safeguard measures). In line with its WTO commitments Tunisia does not apply variable charges.

(7) Uganda: Uganda had a sample of 269 firms, including 81 importers and 16 firms engaged in exports and imports. These firms reported 963 cases of NTMs, an average of 3.6 cases per firm. Among these import-related measures reported, the large majority were related to SPS (42 %) and TBT (23.6 %) for the exporting firms. Nearly all firms reported having experienced obstacles related to administrative procedures. So, among the most important procedural obstacles were problems of inefficiency or cases of obstruction (68 %), non-transparency (10.1%) and fees or charges that were considered abnormally high (10%).

For example, the SPS measures set by the importing countries, especially the EU are too strict; the requirements to attain these standards cannot be met by Ugandan farmers. As a landlocked country, Uganda critically depends on its neighbours, Kenya and the United Republic of Tanzania, to provide it access to the sea and trade facilitation services, which include rail, road, sea freight, port, clearing and forwarding services. Survey results indicated that there were too many roadblocks along the major road transport routes, which greatly disrupts efficient movement of goods to the markets as well as increases the incidences of non-transparency. There were also a number of cumbersome business registration and licensing procedures. The largest categories of products affected by NTMs were sectors include fresh fruits and vegetables, natural ingredients (honey) and fish.
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