

THE QUANTIFICATION AND IMPACT OF NON-TARIFF MEASURES

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23 June 2003

Prepared for the OECD Global Forum on Trade: "The Market Access Challenge in the Doha Development Agenda", Paris 4-6 June 2003. Published in OECD Tool Kit for Trade Policy Makers II, *The Market Access Challenge in the Doha Development Agenda*, Paris: OECD.

* The views expressed in this paper are personal. They should not in anyway be interpreted as those of the World Trade Organisation or its Member states.

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A. INTRODUCTION

It is now almost *passé* to justify the importance of any non-tariff trade measure by appealing to declining tariff levels. The argument is that non-tariff measures (NTMs)¹ should be addressed because they have become relatively more important as trade policy issues. Such an approach necessarily diminishes the absolute importance of NTMs as an impediment to world trade. National governments have always been able to discover and implement new and sometimes ingenious ways to reduce the volume and value of trade. Not surprisingly, the result is a vast array of measures that fit even the narrowest definition of an NTM. Individually, each measure may not be important. However, when all NTMs are taken together as an aggregate they are a significant deterrent to trade.

Recognising the need to address NTMs is not the issue. The problem is identifying them and developing a tractable taxonomy that allows for a coherent and robust analysis of their effects. Even if these two tasks are accomplished the difficult policy issue of the appropriate forum and framework within which to address NTMs still remains.

The objective of this paper is rather modest - to identify the pitfalls and problems in defining NTMs. It surveys previous work on NTMs and shows that the only common thread running through the literature is the impossibility of establishing a unifying framework for the analysis of NTMs. This creates obvious difficulties since an NTM, by definition, may simply be whatever anyone wants to define it to be as long as it isn't a statutory tariff.

The next section examines the issue of identifying an NTM. The overall conclusion is not particularly optimistic given the complex nature of NTMs. This problem then feeds into the question of examining the incidence of NTMs. Without a proper definition and a statistically robust dataset it is difficult to be precise about the degree of protection afforded by NTMs in a particular market. Section D examines the impact of select NTMs and the issue of NTMs and the Doha Development Agenda is taken up in the concluding section.

B. IDENTIFYING A NON-TARIFF MEASURE

1. Defining an NTM

Before negotiations on NTMs can proceed it would be useful to at least have a working definition of an NTM. Baldwin (1970), in his seminal work on NTMs, defines "non-tariff distortion" as "any measure (public or private) that causes internationally traded goods and services, or resources devoted to the production of these goods and services, to be allocated in such a way as to reduce potential real world income". This is a useful definition, but is problematic in the context of defining 'potential' real world income.

An alternative, yet still complementary, approach would be to focus on the effects of a particular measure. For example, negotiations aimed at eliminating non-tariff measures would necessarily result in a situation where price deviations across trading partners would be due solely to tariffs. If tariffs were then to be eliminated all trading nations would be part of a 'single market'. Lloyd (1996), when writing on regional trade agreements, defines a single market as one in which the law of one price prevails. He further clarifies by stating that

¹ The term measure is used in this paper as opposed to barrier. In the literature both terms are used interchangeably. The rationale for using the term measure is that in some cases policies that increase the volume trade, in the short run, such as export subsidies or cross-border predatory pricing could be the definition of a non-tariff measure. A barrier is something different. It means the prevention of something – in this case trade. Export subsidies could not be considered a barrier to trade.

"This means that in a competitive market, for either a produced commodity or a factor, there is only one price, allowing for transport and other transfer costs which prevent perfect arbitrage. It implies the removal of all border and non-border restrictions on commodity trade, and the harmonisation of commodity taxes and other measures which affect access to markets" (page 44).

Lloyd's insights are used to distinguish between the concepts of regional free trade and regional integration. The removal of border measures will liberalise trade, but may not necessarily result in integration. Hence, he defines the new regional trade agreements (RTAs) which include competition policy and investment as those moving towards regional integration. International integration is, therefore, more than just the removal of tariffs.

Lloyd's definition complements that of Baldwin. Baldwin does not specifically state the "law of one price" argument as succinctly as Lloyd. Nevertheless, the role of prices as a signal to allocate resources and determine the pattern and quantity of goods and services that are traded are implicit in his definition.

Both the Baldwin and Lloyd approaches point to a broad definition of a non-tariff measure. Indeed, the only tangible aspects of both definition is that an NTM can be defined by what it is not, not by what it is. This means the set of NTMs is very large and encompasses a significant range of measures – both public and private.

2. Developing a taxonomy of NTMs

Baldwin (1970) developed the first taxonomy of NTMs. They include:²

- Quotas and restrictive state-trading policies
- Export subsidies and taxes
- Discriminatory government and private procurement policies
- Selective indirect taxes
- Selective domestic subsidies
- Restrictive customs procedures
- Antidumping regulations
- Restrictive administrative and technical regulations
- Restrictive business practices
- Controls over foreign investment
- Restrictive immigration policies
- Selective monetary controls and discriminatory exchange-rate policies

Another approach to examining NTMs is provided by Laird and Vossenaar (1991). They classify, NTMs according to intent or immediate impact of the measures (c.f., the motives or objectives - see below). Five such categories are identified, of which (iv) has been adapted to cover restrictions as well as subsidies:

- (i) *Measures to control the volume of imports.* For example, prohibitions and quantitative restrictions (QRs) on imports as well as export restraint agreements (ERAs). Licenses are often used to administer QRs. ERAs consist of voluntary export restraints (VERs) (covering, inter alia, measures employed for the administration of bilateral agreements under the Multi-Fibre Arrangement) and Orderly Marketing Agreements (OMAs).

² Baldwin (1970) pages 10-12 as cited in PECC (2001).

(ii) *Measures to control the price of imported goods.* These include the use of reference or trigger price mechanisms, variable levies, anti-dumping duties, countervailing measures, etc. Tariff-type measures such as tariff quotas and seasonal tariffs also are usually intended to increase import prices under given circumstances. Voluntary export price restraints fall under this broad category of intent.

(iii) *Monitoring measures include price and volume investigations and surveillance.* Such practices are often associated with charges by domestic interests of unfair trading practices by exporters, e.g., dumping and subsidization. Licenses are sometimes used as a monitoring instrument. Monitoring measures may be a prelude to other actions, and, if seen as such, may lead to export restraints. They may have a harassment effect.

(iv) *Production and export measures.* Subsidies may be directly applied to output or value added, or they may be indirectly applied, i.e., paid to material or other inputs to the production process. They may arise from payments or the non-collection of taxes that would otherwise be due. Restrictions by means of taxes or prohibitions may also be imposed on production or exports.

(v) *Technical barriers* imposed at the frontier are used to apply various standards for health and safety reasons to imported products to ensure that imported products conform to the same standards as those required by law for domestically produced goods. They may lead to the prohibition of non-complying imports or oblige cost-increasing production improvements.

Deardorff and Stern (1997) have authored the most recent systematic work on NTMs. Their study covers the various elements of NTMs including their measurement. An interesting aspect of their study is to approach the issue of defining an NTM³ by using stylised characteristics. The characteristics are:

- *Reduction in quantity of imports.* NTMs are most often imposed with the intent of reducing the quantity of imports.
- *Increase in price of imports.* NTMs succeed in reducing the quantity of imports only to the extent that they raise the actual or shadow price of imports to demanders.
- *Change in the elasticity of demand for imports.* NTMs often alter the slope of the demand curve for imports, and thus they alter the responsiveness of imports in a particular sector to price changes. Finally, the elasticity effect of an NTM is also important in assessing, in a general equilibrium context, the role of NTMs in influencing the outcome of other events such as a change in tariffs. An increase in a tariff on a final good, for example, will have its protective effect reduced if there is an elasticity-reducing NTM in place on an important intermediate input.
- *Variability of NTMs.* Unlike tariffs, NTMs often are defined relative to a benchmark quantity or price independently of market conditions. If this benchmark is held fixed when underlying conditions of supply and demand, exchange rates, and other market conditions change, as they inevitably do, then the effectiveness of the NTM will vary. Such variability may constitute a neglected cost that the NTM imposes on society and thus is very important to measure along with its more obvious average price and/or quantity effects.

³ Deardorff and Stern using the term NTB. This has been changed to NTM in this paper. In doing so, however, it should not prejudice their use of their term NTB.

- *Uncertainty of NTMs.* All government policies are uncertain in their implementation, but this seems to be especially true of some NTMs. Indeed, some practices such as antidumping and countervailing duty investigations have been identified as NTMs almost entirely because of the uncertainties that they impose on international traders. Even those barriers that are clearly restrictive, however, can become more so if their implementation is uncertain.
- *Welfare costs of NTMs.* For this purpose the price and/or quantity measures of the NTM provide sufficient information. Welfare costs are separate because of their importance in the literature on NTMs.
- *Resource Costs of NTMs.* In addition to the traditional welfare costs just noted, there are also certain costs that are associated with the manner in which the NTM is administered. First are the direct administrative costs themselves, that is, the resources used directly in enforcing whatever rules an NTM imposes. It is essential that more careful measurements of them be attempted. Second, and perhaps of much greater importance, are the resources lost to rent seeking and related phenomena. These are the time and other resources that are wasted by individuals and firms in their efforts to secure the profit opportunities and other benefits that are created by an NTM.

While Deardorff and Stern (1997) is predominantly theoretical in nature, the authors provide a number of practical suggestions on how to move towards a better understanding of the implications of NTMs. They propose a classification system, which has at its core price (other than tariffs) and quantity border measures. To these they add the remaining (other) set of measures that may affect trade and then customs and technical barriers as a separate category.

When the proposed framework of Deardorff and Stern (1997) is compared with that of UNCTAD TRAINs some differences emerge (table 1). The most significant difference is the inclusion of a range of measures that affect foreign investment and the environment for trade such as corruption. Another difference is the collapse of all the quantitative measures and what are essentially other duties and charges and trade defence measures into one category. The advantage of this categorisation is that many of the policies included in the two categories are easily identifiable.

Finally, the WTO has an Inventory of Non-Tariff Measures that was first established in 1968 in the context of the work done in the Committee on Trade in Industrial Products. It was based on some 800 notifications which, in the view, of the notifying Contracting Parties constituted non-tariff barriers. Following the Tokyo Round, the Inventory was kept up to date by first the Group on Quantitative Restrictions and Other Non-Tariff Measures (created in 1982) and subsequently the Technical Group on Quantitative Restrictions and Other Non-Tariff Measures (created in 1986).

At the time of the Uruguay Round, and in the context of the work done in the Negotiating Group on Non-Tariff Measures, the classification contained in the Inventory was used to sort out proposals submitted by participants. After the Uruguay Round, a decision by the Council for Trade in Goods taken on 1 December 1995 and entitled "Decision on Reverse Notification of Non-Tariff Measures" (G/L/60) terminated this Inventory of Non-Tariff Measures. A new Inventory of Non-Tariff Measures was open for notification as from the date of the Decision. However, only one reverse notification has been received to date.

C. INCIDENCE OF NTMS

Landscaping the incidence of NTMs depends upon the definition and available data. As indicated in the previous section there is no agreed definition as to what constitutes an NTM. Furthermore, UNCTAD hosts the only database on NTMs for public use. The WTO has a database based on notifications, which includes: licenses, quotas, prohibitions, and voluntary export restraints, plus

information related to customs surcharges, minimum import prices, additional taxes and charges, and approval processes for imports and exports. This database is limited compared to the UNCTAD data, which is collected from national sources restricted by infrequent or incomplete notification.

This section examines two techniques with which to identify NTMs: frequency measures and business surveys.

1. Frequency measures

UNCTAD's NTM data is frequency data and not measures of impact. They show for cross-market and cross-product analysis the extent to which national tariff lines within a Harmonized System 6-digit classification are affected by certain NTMs.

A core NTM includes the following three major categories of non-tariff measures:

- Quantity control measures, excluding tariff quotas and enterprise-specific restrictions;
- Finance measures, excluding regulations concerning terms of payment and transfer delays;
- Price control measures.

By way of illustration, consider the following hypothetical example to better understand the frequency approach to estimation.⁴ Assume an imaginary HS089876 tariff line with four sub-headings that include separate lines for apples and bananas, grapes and melons, oranges and pineapples. An import licence applies to apples and oranges, while an advance import deposit applies to grapes and melons.

In the above example, the NTM incidence is 100 per cent for the orange tariff line, since they are subject to licensing, 50 per cent as only apples are affected by licensing, 0 per cent for pineapples and 100 per cent for grapes and melons. Therefore, the percentage term reflects only the incidence and not the impact of the NTM. Furthermore, given the way the number is calculated it is important to note that it is dependent on the number of lines that are affected, not the number of measures.

In reality, however, many researchers would want to consider the incidence of NTMs at a higher level. In this case, the calculation at the level of an HS6 line is calculated by taking the simple average of the incidence for each national tariff line. In the above example, the NTM incidence for an HS 089876 is 62.5 per cent calculated as the sum of the percentage incidence (250) divided by the number of tariff lines (4).

The above analysis was conducted using simple averages. This gives a good picture, but it also might introduce certain biases in the assessment of the protective effect of an NTM structure. For example, a country could have many tariff lines where imports are zero or negligible and where the tariff rate is also low. An frequency of 100 percent for an NTM in this case could either be meaningless, due to demand conditions, or significant in the sense that it maybe prohibitive. This would typically bias the assessment of protection downwards. Protection, after all, is implemented to reduce competition in a particular sector. In order to account for this, and bearing in mind that any weighting scheme introduces biases, a weighting vector can be applied to the vector of NTMs. This procedure is quite popular and can have an effect on the final assessment of a country's trade regime (Bacchetta and Bora, 2001).

Two possible approaches can be adopted to account for some of the biases that exist in the context of simple averages. The first is to calculate an import coverage ratio – the value of imports in a tariff line that are covered by an NTM. In reality, of course, this may not be the case. A second approach is to reverse the analysis of table 2 and examine the pattern of NTMs (or protection for that matter) from the perspective of the exporter.

⁴ Based on table 1 of Bora et. al (2002).

The results of the second approach are taken from Bacchetta and Bora (2001) and are reported in tables 3 for five groups of exporters: least developed countries, major developing country exporters, petroleum exporters, other developing countries and developed countries. The next step was to define the markets for those exports. Ideally, one would like to have the markets selected using a process similar to the one used for products; that is, the markets should be the key markets for each exporter. However, given the diversity of export structures, a much simpler, yet still policy-friendly approach was used. The world was divided into markets according to the World Bank's geographical classification. They comprise South Asia, the Middle East and North Africa, Latin America and the Caribbean, Europe and Central Asia, South Asia and sub-saharan Africa, plus the developed countries and the Rest of the world.⁵ It is important to point out that not all members of each one of those geographical regions report their import tariff and NTMs, therefore, this limited the scope of our analysis to those countries that actually provide this information.

Table 3 indicates that for all the exporters in each of the markets agricultural products is the sector with the highest incidence of NTMs. This is followed by textiles and clothing. In terms of the geographical dispersion of the incidence of NTMs, very little can be said about the overall numbers in view of the dispersion across the product categories.

2. Survey studies⁶

An alternative to data collected from national sources is the use of business surveys. Such surveys allow the possibility of prioritising the importance of different types of instruments. For example, under the frequency approach the application of a quota would be counted as an NTM. However, through business surveys the fact that the quota maybe under-filled would imply that it is not important to the exporter.

A number of such surveys exist. The OECD (2002a) in a very useful document has collated the results from a number of different surveys and summarised the results. Not surprisingly, due to the large variance in sampling techniques their conclusions are heavily qualified. Nevertheless, there appears to be strong evidence that technical measures and customs rules and procedures are both frequent and also rank as very important. Where internal taxes or charges and competition-related restrictions on market access are reported they are also ranked quite highly.

The surveys that are analysed also provide detail data on specific measures that business find to be most important. With respect to technical measures these are divided into two categories: specifications and standards; and conformity assessment procedures. For both these categories some of the key identified measures and problems are:

- Labeling
- Quality assurance
- Quarantine
- Lack of transparency
- Discrimination in the application of standards

With respect to customs rules and procedures some of the key measures and problems are:

- Excessive documentation
- Slow customs clearance

⁵ The developed countries are also subdivided, generating another region, the Quad (EU, United States, Canada and Japan).

⁶ This section is based on OECD (2002).

- Lack of predictability
- Arbitrary enforcement of rules
- Lack of harmonization and simplification of clearance procedures

D. IMPACT OF NTMS

Studies on the impact of NTMs yields a number of diverse results, which reflect the difficulties in measuring and quantifying NTMs. Not surprisingly the work is more advanced in areas driven by the policy debate. For example, the use of domestic support and export subsidies in agriculture, or trade facilitation measures. This section selectively lists some of the studies that have tried to quantify some NTMs. While tempting, no attempt has been made to sum these estimates and compare them against estimate of tariff liberalisation.

(a) Domestic support and export subsidies

Domestic support and export subsidies are the most prevalent in the agricultural sector and, for good reason, are subject to intense scrutiny.⁷ Although the precise estimates vary, the gains from the elimination of these measures are almost equal to the gains from the complete elimination of tariffs. The pervasive nature of these measures is underscored by the fact that trade in agricultural products account for just a little more than 10 percent of world merchandise trade.

A common theme of all the studies of the gains from agricultural trade liberalisation is the importance of tariff liberalisation. Nevertheless, domestic support and export subsidies are important, not only for their pernicious effects on trade, but also because of the nature of their impact. Tariffs raise the prices of imported products in a market. Domestic support and export subsidies serve to lower the world prices of products making it difficult for producers in non-subsidised countries to compete. The total effect, therefore, is ambiguous. The removal of such measures would benefit producers, but not consumers (IMF, 2003, World Bank, 2002).

(b) Quantitative restrictions

The Uruguay Round achievements did much to eliminate quantitative restrictions. The Agreement on Agriculture mandated the conversion of quantitative restrictions into tariffs, albeit with tariff rate quotas. The Agreement on Textiles and Clothing is a ten-year transition process which was divided into four distinct phases to eliminate quotas in those sectors. To date approximately 80 per cent of quotas remain, although they must be eliminated by end December 2004. These include a total of 239 quotas maintained by Canada, 167 quotas maintained by the European Union and 701 quotas maintained by the United States. Estimates of the gains from moving to a tariff only environment in textiles and clothing range from \$6.5 –324 billion per annum. Furthermore, the provisions of Agreement on Trade Related Investment Measures prohibit the use of local content schemes.

(c) Standards

Regulatory policies designed to achieve social objectives are an important component of the policy environment in all countries. Elimination of such policies would in all likelihood have negative welfare consequences. For example, standard are designed to facilitate information exchange, ensure quality. Therefore, the issue on standards and regulations in the trade context is how to establish a regime that recognises the diversity of countries, their regulations and also their ability to enact and enforce regulation, but at the same time reduce the trade distortive nature of regulations.

⁷ Certain types of export subsidies in non-agricultural products are permitted for countries that meet certain criteria, but only for a limited time.

The trade distortive element of standards does not arise from the standards themselves, since it can be shown that they can benefit producers and consumers. What is of concern is their discriminatory application to imported products. Discriminatory regulations could be designed to provide a strategic advantage for domestic firms. Or, in some cases, their application could in a non-transparent manner that increases the costs of compliance for foreign firms. In both cases the overall result is a prejudice against imported products.

Even if standards are transparent, compliance costs, especially for developing countries can be quite significant as illustrated in OECD (2002a). The landscape for standards is such that developed countries typically have more stringent standards than developing countries. This will have the effect of favouring intra-developed country trade since producers from these countries will have more experience in meeting the standards. Producers from developing countries, on the other hand, will be at a disadvantage.

(d) Trade facilitation

The WTO defines trade facilitation as the "simplification and harmonisation of international trade procedures with trade procedures being the activities, practices and formalities involved in collecting, presenting, communicating and processing data required for the movement of goods in international trade. This definition is narrower than that used by other agencies such as APEC. Nevertheless, there is little doubt that it still provides the opportunity to increase the benefits to developing countries from the multilateral trading system.

Estimates of the gains from trade facilitation initiatives vary depending upon the model and the approach used to quantify the costs of inefficient practices. In some cases, estimates are based on the costs of the value of the savings. These estimates range from 4 to 10 percent of the value of trade (table 4). The overall gains are modelled by applying a cost saving value to the costs of transport (Dee, Geisler and Watts, 1997). In these cases, the relative magnitude of gains is estimated to be as high as a third of the gains from total tariff liberalisation.

(e) Government procurement⁸

The few empirical analyses of the costs and benefits of trade-related procurement reform point to tangible gains. In the case of Korea's accession to the WTO's plurilateral agreement on government procurement in 1994/5, Choi (2001) estimated that the cost savings to the Korean government from goods sourced abroad increased from 18.5 percent to 23.1 percent after accession. The use of limited tending procedures—which tend to reduce the number of potential bidders—fell also (from over 27 percent to 23.1 percent in 1996-1998.) Likewise, Srivastava (2000) estimates that if India joined this WTO agreement the welfare gains would be equivalent of between 0.3 and 1.7 percent of national income.

(f) Export cartels

A recent survey of empirical work on competition policy highlights the relative magnitudes of cartel enforcement and tariff liberalisation. By way of illustration the study shows that, at least for one estimate, agricultural liberalisation would be considerably less than the benefits from deterring international hardcore cartels (WTO, 2003).

E. DOHA DEVELOPMENT AGENDA AND NTMS

The picture of NTMs that has been drawn is not a particularly optimistic one. They can't be defined, nor can they be measured. And, in cases where they can the data is not particularly useful. This, of

⁸ I thank Simon Evennett for his input on this section.

course, makes it difficult to pronounce on the opportunities for improving market access in the context of the Doha Development Agenda (DDA). Nevertheless, a number of comments can be made on the work programme, which focus on the issue of building on past achievements without duplicating the work in other organisations.

The mandate for NTMs in the DDA is in paragraph 16 and is the responsibility of the Negotiating Group on Market Access (Box 1). It provides virtually no guidance as to what negotiators should be considering as NTMs. As a result the tentative first step on how to deal with NTMs can best be described as cautious. Those NTMs that are being dealt with in other bodies should continue to be dealt with in those bodies. Those which are not, can either be dealt within the NGMA, or passed on to other bodies, or ignored completely. The interesting issue will be how to deal with the NTMs that fall in the first category: those that the Group decides should be dealt with.

Given the premature nature of discussions on NTMs and the need to try to look forward, the rest of this section lays down some basic, hopefully common sense, principles with which to focus the discussions. The previous sections highlighted the complexity and diversity of NTMs and the absence of any workable definition. Therefore, the first principle is to focus on what is known.

1. Focus on what is known

While the universe of NTMs cannot be defined concrete evidence exists on specific NTMs and problems that they cause. For example, in the case of quantitative restrictions there is ample evidence of the incidence and impact of quotas in the textile industry and local content schemes in the automotive industries. Both policies, however, are currently under the jurisdiction of the Agreement on Textiles and Clothing (ATC) and the Agreement on Trade Related Investment Measures (TRIMs). Local content schemes are also disciplined in some regional trade agreements such as the North American Free Trade Agreement. These agreements supplement the general provision on the elimination of quotas contained in Article XI of GATT 1994.⁹

Evidence was presented in the previous section on the importance of customs procedures and the difficulties in transporting goods. The negotiations and work on trade facilitation in the WTO focuses on the following areas:

- Excessive documentation
- Lack of automation and inadequate use of information technology;
- Lack of transparency, with unclear and unspecified import and export requirements;
- Inadequate procedures, especially a lack of audit based controls and risk-assessment techniques and
- lack of cooperation among customs and other government agencies, which thwarts efforts to deal effectively with increased trade flows.

Practical guidelines to foster transparency, predictability and uniformity that would be consistent with GATT Articles V (freedom of transit), VIII (fees and formalities connected with importations and exportation) and X (publication and administration of trade regulations) would include:

- Harmonisation of laws and regulations;
- Simplification of administrative and commercial formalities, procedures and documents; and

⁹ Quotas have not been entirely abolished from the multilateral trading system. They can still be used to enforce safeguard measures. For example, Article XII allows the use of quotas to restrain imports during a balance of payments crisis and Article XIII allows them if they are applied in a non-discriminatory fashion. (Castel, et. al, 1997).

- Standardization of transport means: modal infrastructure (related to sea, road, rail and air) including interfaces between different modes of transport loads and handling equipment commercial practices and services and information technology.

**BOX 1 NTMS AND THE DRAFT ELEMENTS OF MODALITIES FOR NEGOTIATIONS
ON NON-AGRICULTURAL PRODUCTS**

13. The following elements are proposed for the modalities on NTBs:
- a) It is understood that the NGMA maintains overall responsibility for addressing non-tariff barriers (NTBs) as part of the Doha Declaration;
 - b) The negotiating group will proceed with the identification and examination of the various types of NTBs;¹⁰
 - c) After completing the identification, participants will aim to categorise the NTBs as well as clarify and seek additional information where necessary, and then proceed in the following manner:
 - Selected NTBs, to be agreed upon by the participants, would be dealt with by the NGMA on the basis of modalities, which could include request/offer, horizontal, or vertical approaches;
 - NTBs that have a specific negotiating mandate in the Doha Declaration in other areas should continue to be addressed in that body but information on the progress or outcome of those negotiations should be reported to this group for transparency;
 - Work on NTBs which relate to other areas of the Doha Declaration which currently do not have a specific negotiating mandate would progress in other fora but information on the progress should be reported to this group for transparency; and
 - NTBs that currently do not have a specific negotiating mandate would, after further clarification and if the group decides there is a need to send them to another WTO body, be reported to the TNC in order to be forwarded to the appropriate WTO body for action and reporting back.

Source: WTO Document TN/MA/35

Two of the most frequently cited NTMs that are also part of the Deardorff and Stern (1997) taxonomy are competition related issues and investment restrictions. Both of these have been under consideration since 1996 when Working Groups¹¹ were established at the First WTO Ministerial. Both are also due for further consideration at the Fifth Ministerial in Mexico. It should be pointed, however, the importance of the use of the term trade in this context. Any initiative in these two areas that would be supported under the umbrella of an NTM work programme will have to focus on the specific link between those issues and trade flows.

Standards and technical barriers to trade highlighted previously as being of great importance to private sector are covered, respectively, under the Agreement on Sanitary and Phytosanitary Measures and the Agreement on Technical Barriers to trade. The extent to which these agreement discipline the

¹⁰ In this respect, it is recalled that work has already been initiated with the notification of non-tariff barriers by participants.

¹¹ They are the Working Group on Trade and Investment and the Working Group on the Interaction between Trade and Competition Policy.

use of measures that are designed to protect markets is an empirical question. However, it should be noted that the transparency principle is an important component of both agreements.

Contingency measures such as anti-dumping, countervail duties and safeguard measures are also part of the Uruguay Round Agreements.

Therefore, in terms of examining the further gains that would accrue from a more aggressive approach to disciplining NTMs it may be useful to obtain a better understanding of how existing multilateral agreements cover the set of NTMs. For those that are known, but not dealt with participants in the negotiations will need to weigh carefully the twin issues of the appropriate response and the appropriate forum. For some issues the WTO and DDA may not necessarily be the best place. Conversely, the DDA provides a genuine opportunity to improve market access.

2. Choose the appropriate response

As the reader will note the text so far has been careful not to stray into the issue of precisely which NTMs are not part of the current WTO debate. So far, only one measure that would fit any definition of an NTM reviewed earlier has been discussed – export taxes.¹² They could, arguably, be considered an NTM (OECD, 2002bc). Similarly, the work programme mandated under the Doha Ministerial Declaration on competition policy, investment, trade facilitation and transparency in government procurement foresees the possibility of negotiations. Each of these four issues has their own strong supporters and some notable developing countries as detractors. Furthermore, the case for their inclusion as part of the set of multilateral trade rules relies to a certain extent on a number of issues beyond those that would be considered as trade restrictions. Therefore, one issue for careful consideration is the appropriate response. Should the response be one of laying down principles that encourage transparency and predictability? Or, is there a case for a higher level of obligation?

The current pattern of rules governing NTMs ranges from disciplines under the TRIMs agreements to transparency obligations under the SPS and TBT agreements. Addressing outstanding NTMs will require similar flexible treatment. Some may not be conducive to rigid binding obligations; indeed transparency and cooperation principles could succeed in achieving a certain degree of liberalisation. Other measures, however, especially those that are directly trade distorting may need to be subject to a set of disciplines.

3. Choose the appropriate forum

The diversity of NTMs requires a flexible response in terms of the level of discipline and correspondingly a flexible response as to the appropriate forum. The policy response to NTMs can be at a number of different levels, of which the multilateral level is one. Lessons that have been learned regarding the costs and difficulties associated with implementing some of the agreements should not be lost. Conversely, a related issue is whether or not addressing NTMs at the regional or bilateral level through RTAs is the optimal response. The value in multilateral cooperation, just as it is in the gains from trade, can be eroded if the set of participants is limited or restricted. This is especially the case with issues where the benefits arise from coordination and cooperation.

¹² Export restrictions are covered under the TRIMs agreement. See Annex paragraph (c).

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Table 1 Comparison of UNCTAD and Deardorff and Stern Taxonomies of NTMs

UNCTAD TRAINS	Deardorff and Stern
<p>Price control measures</p> <ul style="list-style-type: none"> • Administrative pricing • Voluntary export price restraint • Variable charges • Antidumping measures • Countervailing measures <p>Finance control measures</p> <ul style="list-style-type: none"> • Advance payment requirements • Multiple exchange rates • Restrictive official foreign exchange allocation • Regulations concerning terms of payment for imports • Transfer delays <p>Automatic licensing measures</p> <ul style="list-style-type: none"> • Automatic licence • Import monitoring • Surrender requirement <p>Quantity control measures</p> <ul style="list-style-type: none"> • Non-automatic licensing • Quotas • Import prohibitions • Export restraint arrangements • Enterprise specific restrictions <p>Monopolistic measures</p> <ul style="list-style-type: none"> • Single channel for imports • Compulsory national services <p>Technical measures</p> <ul style="list-style-type: none"> • Technical regulations • Pre-shipment formalities • Special customs formalities • Obligation to return used products <p>Miscellaneous measures for sensitive product categories</p> <ul style="list-style-type: none"> • Marketable permits • Public procurement • Voluntary instruments • Product liability • Subsidies 	<p>Quantitative Restrictions and similar Specific Limitations on Imports or Exports</p> <ul style="list-style-type: none"> • Import quotas • Exports limitations • Licensing • Voluntary export restraints • Exchange and other financial controls • Prohibitions • Domestic content and mixing requirements • Discriminatory bilateral agreements • Countertrade <p>Non-tariff Charges and related Policies affecting Imports</p> <ul style="list-style-type: none"> • Variable levies • Advance deposit requirement • Antidumping duties • Countervailing duties • Border tax adjustments <p>Government Participation in Trade; Restrictive Practices; General Policy</p> <ul style="list-style-type: none"> • Subsidies and other aids • Government procurement policies • State trading, government monopolies, and exclusive franchises • Government industrial policy and regional development measures • Government financed research and development; technology policies • National systems of taxation and social insurance • Macroeconomic policies • Competition policies • Foreign investment policies • Foreign corruption policies • Immigration policies <p>Customs procedures and administrative practices</p> <ul style="list-style-type: none"> • Customs valuation procedures • Customs classification procedures • Customs clearance procedures <p>Technical Barriers to Trade</p> <ul style="list-style-type: none"> • Health and sanitary regulations and quality standards • Safety and industrial standards and regulations • Packaging and labelling regulations, including trademarks <p>Advertising and media regulations</p>

Table 2 WTO/GATT Inventory of Non-Tariff Measures

PARTS AND SECTIONS	DESCRIPTION
Part I	<u>Government Participation in Trade and Restrictive Practices Tolerated by Governments</u>
A	Government aids
B	Countervailing duties
C	Government procurement
D	Restrictive practices tolerated by governments
E	State trading, government monopoly practices, etc.
Part II	<u>Customs and Administrative Entry Procedures</u>
A	Anti-dumping duties
B	Valuation
C	Customs classification
D	Consular formalities and documentation
E	Samples
F	Rules of origin
G	Customs formalities
Part III	<u>Technical Barriers to Trade</u>
A	General
B	Technical regulations and standards
C	Testing and certification arrangements
Part IV	<u>Specific Limitations</u>
A	Quantitative restrictions and import licensing
B	Embargoes and other restrictions of similar effect
C	Screen-time quotas and other mixing regulations
D	Exchange control
E	Discrimination resulting from bilateral agreements
F	Discriminatory sourcing
G	Export restraints
H	Measures to regulate domestic prices
I	Tariff quotas
J	Export taxes
K	Requirements concerning marking, labelling and packaging
L	Others
Part V	<u>Charges on Import</u>
A	Prior import deposits
B	Surcharges, port taxes, statistical taxes, etc.
C	Discriminatory film taxes, use taxes, etc.
D	Discriminatory credit restrictions
E	Border tax adjustments
F	Emergency action

Source: WTO document TN/MA/S5, 11 September, 2002.

Table 3 Frequency of NTMs by products of export interest to developing countries, selected markets

Description	Developed countries	South Asia	Middle East& North Africa	Latin America & Caribbean	Europe & Central Asia	East Asia & The Pacific	Sub-Saharan Africa	Quad
Agricultural and fishery products	48.24	14.87	57.69	34.24	32.93	24.42	18.58	41.98
Crustaceans (live)	58.64	8.33	75.00	30.98	43.56	22.22	20.00	50.00
Other fish	64.49	14.07	75.16	30.96	43.85	22.87	20.28	55.43
Edible fruit and nuts	53.95	19.21	54.61	37.09	32.36	24.21	28.20	54.67
Coffee and substitutes with coffee	32.25	17.86	44.64	28.10	20.63	26.19	18.18	21.43
Oil seeds and miscellaneous grain, seeds and fruits	53.93	14.20	68.55	40.75	38.49	28.71	25.12	37.41
Other agricultural and fishery products	43.50	11.11	52.08	35.28	28.59	32.87	17.80	27.50
Minerals and fuels	6.72	3.29	5.73	6.64	6.72	4.52	0.16	6.53
Ores, slag and ash	1.74	0.98	3.31	9.93	10.03	6.05	0.00	1.47
Crude and refined petroleum oil	26.88	22.73	28.13	14.53	38.01	17.75	4.55	12.19
Other minerals and fuels	4.55	0.00	0.00	18.33	0.00	11.11	0.00	0.00
Manufactures	10.67	7.20	10.96	11.68	7.15	5.57	1.74	16.48
Automatic data processing machines	14.94	4.17	8.04	6.90	13.69	0.21	0.00	8.93
Cotton products	9.09	16.67	6.25	36.67	0.00	11.11	4.55	25.00
Diamonds	9.09	11.67	12.50	0.67	31.11	11.11	9.09	12.50
Electronic integrated circuits and microassemblies	15.50	0.00	10.23	2.10	0.00	0.00	0.00	6.26
Footwear	19.83	8.60	18.55	14.18	12.45	0.00	4.25	10.97
Furniture, bedding and lamps	2.01	10.59	8.07	5.92	7.16	0.30	4.30	4.05
Iron and steel	12.95	0.27	1.26	2.51	2.68	9.60	0.00	35.42
Knitted or crocheted articles	30.46	16.59	17.43	17.82	18.27	4.78	7.02	68.64
Motor vehicles for transporting persons	40.91	51.85	25.69	21.94	39.75	45.95	0.00	50.00
Non-knitted or crocheted articles	30.89	16.53	17.96	18.35	19.02	8.26	2.27	66.15
Other electrical equipment	14.50	4.48	19.67	7.07	5.47	4.22	0.39	6.90
Other manufactured articles	14.34	14.74	18.49	13.01	10.43	3.79	5.99	27.66
Other mechanical parts	11.06	2.64	7.46	6.75	4.09	3.32	0.20	3.87
Other motor vehicle and parts	10.83	16.04	9.31	12.69	16.75	15.17	1.56	24.04
Other office machines	10.61	1.39	0.00	2.96	0.46	0.00	0.00	4.17

Table 2 (continued) Frequency of NTMs by products of export interest to developing countries, selected markets

Plastics	1.38	3.36	2.76	5.75	3.76	2.49	0.35	2.08
Reception apparatus	23.46	13.73	25.06	7.57	15.85	13.89	0.80	23.35
Rubber and rubber products	5.67	2.11	3.17	4.59	1.34	2.37	1.12	7.44
Ships, boats and floating structures	9.76	13.73	7.72	8.28	4.58	3.98	1.47	25.37
Synthetic yarns and woven fabrics	13.06	9.33	11.38	17.81	5.47	1.44	0.14	35.72
Wood and wood products	17.33	13.82	8.73	18.94	3.23	8.74	2.69	28.76

Source: Bacchetta and Bora (2001)

Note Compiled from tables 21-24. Other manufactured products from each of the tables were deleted.

Table 3 Summary of some of the major estimates on trade transaction costs and trade facilitation benefits

Study	Scope	Estimates on costs	Estimate on benefits	note
US NCITD (1971)	direct costs: documentation costs required by government; finance & insurance; carrier; and forwarder/ broker or their contractual counterpart	average documentation costs are \$375.77 for exports and \$320.58 for imports. Total costs aggregate represents 7.5% of the value of the total US export and import.	(none)	based on business survey
Ernst and Whimney (1988a,b) for Cecchini et al (1988)	(1) direct costs: customs compliance costs; (2) indirect costs: road hauliers; and business foregone	customs compliance costs (7,500 million ECU), road hauliers (4,15-830 million ECU), and business foregone (4,500-15,000 million ECU). Approximately around 1.5% of total intra-EC trade value for customs compliance; 1-3% for business foregone.	(none)	based on business survey; survey on lost business opportunities and road hauliers had some methodological reservation
SWEPRO (1985)	direct costs: customs compliance costs	customs compliance costs are 4% of the value of import or export; i.e. 8% of the total value of goods traded	(none)	apparently certain figures were obtained from Swedish customs and businesses
EU COST 306 Final Report (1989)	direct costs: documentation costs	documentation costs are 3.5-7% of the value of goods traded; with errors becomes 10-15%	(none)	no information about the methodology
UNCTAD (1994b)	direct and indirect costs - transaction costs include: banking/insurance; business information; telecommunication	transaction costs are US\$400 billion (10% of the total world trade value), trade transaction costs are at 7-10% of the world trade value.	one-quarter of transaction costs (US\$100 billion) can be saved by "efficiency" by the year 2000. (i.e. one-quarter of US\$400 billion); approximately 2-3% of import value	Use NCITD (1971), EU COST 306 Final Report (1989), SITPRO (1991) and some other.
Dee, Geisler and Watts (1996)	APEC trade liberalisation programmes including trade facilitation measures, TBT, competition policy, government procurement, and transparency	used the estimates of Cecchini (1988), and UNCTAD (1994b)	5% of value of goods traded (trade facilitation measures only); 10% (if TBT, competition policy, government procurement, and transparency measures are taken into account)	apparently used a secondary reference
APEC (1997)	APEC trade liberalisation programmes including trade facilitation measures, TBT, competition policy, government procurement, and transparency	general reference to Cecchini (1988); UNCTAD (1994b) and Dee, Geisler and Watts (1996)	While assuming that a consensus estimate on direct savings from trade facilitation is around 2-3% of total import value, corrected to 1-2%	apparently used a secondary reference
Staples (1998), et al	direct costs: customs compliance costs	customs compliance costs are 7-10% of the value of international trade	(none)	apparently used a secondary reference

Source OECD (2002).