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QUANTIFICATION OF NON-TARIFF MEASURES

by

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ABSTRACT

The increase in the relative importance of non-tariff measures has increased awareness of the various deficiencies in existing NTM data collections. This paper reviews various approaches to measure and quantify NTMs within the context of the existing data collections. It provides a landscape of NTM incidence for selected countries and for selected product categories.

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I. INTRODUCTION

This paper is concerned with the measurement of non-tariff measures (NTMs) for use in the formulation of trade policy. First, NTMs are defined and classified. Second, we look at the effects of NTMs and how to compute those effects. This includes a review of the inventory approach, under which NTMs are catalogued, modelling approaches, tariff equivalents, subsidy equivalents, the Trade Restrictiveness Index (TRI) and effective protection. Third, there is a brief discussion on sources of data on NTMs, which is followed by some results on the landscape of NTMs in the Asia-Pacific region. The paper concludes with a discussion on how to proceed with the issue of enhancing the collection and measurement of NTM data.

This is a brief introduction to the subject

and is not meant to be a comprehensive literature survey; however, the reference list should be of assistance to those who wish to delve further into the science (or art!) of commercial policy measurement. To steer readers, the most useful starting place would be Baldwin (1970a) and Corden (1971). Other useful studies are Laird and Yeats (1990), Feenstra (1988a), Vousden (1990) and Helpman and Krugman (1989). Agriculture has an NTM measurement industry of its own: starting places are Krueger, Schiff and Valdes (1988), Goldin and Knudsen (1990), OECD (1994), and Webb, Lopez and Penn (1990). A new body of literature, in the nascent stage, concerns the Trade Restrictiveness Index, developed by Anderson and Neary (1994a), mainly designed to measure changes in welfare resulting from policy changes over time.

II. NON-TARIFF MEASURES

The term “non-tariff measures” is defined to include export restraints and production and export subsidies, or measures with similar effect, not just import restraints. This is the term most widely used in GATT and UNCTAD, although textbooks generally prefer the terms “barriers” or “distortions”.¹ Perhaps the most theoretically satisfying definition is that of Baldwin (1970a), who 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”. Practically, the introduction of the concept of potential real world income means that very often it is difficult to be sure what is a distortion without undertaking complex, even impossible, calculations. However, it sets the correct framework in which to judge the relative importance of NTMs.

There are a wide variety of non-tariff measures. UNCTAD (1994) uses a classification of over 100 trade measures, including tariffs with a discretionary or variable component. It is reproduced in annex I. This classification does not include any measures applied to production or to exports.

Following Laird and Vossenaar (1991), NTMs may be broadly classified according to the intent or immediate impact of the measures (c.f. the motives or objectives – see below). They identify five such categories, of which (iv) has been adapted to cover restrictions as well as subsidies:

(i) **Measures to control the volume of imports.** These include prohibitions and quantitative restrictions (QRs) on

imports as well as export restraint agreements (ERAs). Licences 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 (MFA) and, now, the WTO Agreement on Textiles and Clothing) and Orderly Marketing Agreements (OMAs).

(ii) **Measures to control the price of imported goods.** These include the use of reference or trigger price mechanisms, variable levies, anti-dumping duties and countervailing measures. 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, for example 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. Licences 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 into 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, these 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 necessitate cost-increasing production improvements.

It is inevitable that there is a certain arbitrariness in such a classification. For example, most measures, including technical barriers, have price and quantity effects, as discussed in the next section. A glossary of individual non-tariff measures, derived from Laird and Yeats (1990), and based on the above five broad categories of NTMs, is to be found in annex II.

OECD (1994), dealing only with agriculture, lists some 150 measures or bodies administering country-specific schemes. In the UNCTAD classification these would fall within the more limited, but more general, list of individual measures, since many are simply national descriptions for a widely used basic measure.

Typically, the objectives or motives for using NTMs range from the long-term desire to promote certain social and economic objectives, including broad economic, industrial or regional development, to shorter-term purposes such as balance of payments (BOP) support or action to protect a specific sector from import surges or from dumped or subsidized imports. Price or volume control measures or subsidies have been used

extensively in the past for industrial development reasons by developed and developing countries.

In any type of liberalization simulation, it may be important to look realistically at the likelihood of such measures being removed. It is unlikely that Governments will remove permanent controls on technical barriers to trade or on trade in arms, drugs, pornography and so forth, although technical barriers may become more harmonized. However, support for industrial development can be achieved in more open economies supported by improved macroeconomic management and realistic exchange rates. Furthermore, Governments seem attached to support for specific sectors (sometimes in key political constituencies) by means of hidden subsidies through government procurement and technology development (e.g. aircraft), but so far international disciplines on the use of such measures remain relatively weak. As a consequence, even after the Uruguay Round, there are still important peaks in sectoral protection in most countries, sometimes in the same sector, for example textiles and clothing.

It is important to realize that GATT (including GATT 1994, negotiated in the Uruguay Round) does not ban the use of all NTMs. Laird and Vossenaar (1991) argue that after the Preamble and the first three articles of the GATT, which deal with the overall objectives of GATT, most-favoured-nation (MFN) treatment, tariff reductions and national treatment, one enters the realm of exceptions and sets of rules which deal at least as much with how and when protection may be imposed, especially by means of non-tariff measures, as they do with liberalization. The Tokyo Round and Uruguay Round Agreements are a further extension of this idea, although the Uruguay Round results should see a reduction in the use of some important NTMs – for example, ERAs, the MFA, export subsidies and farm production support.

III. QUANTIFYING THE EFFECTS OF NON-TARIFF MEASURES

The main focus of this section is on the identification of the effects of non-tariff measures and the question of how these effects can be measured. There is an extensive literature in that field.² Three recent studies focusing specifically on NTMs are Deardorff and Stern (1998), the UNESCAP (2000) and PECC (2001). Here, we concentrate on some of the key effects, with a view to identifying some of the political and economic factors regarding the use of trade measures, and then go on to examine the measurement question only in relation to these effects.

A. Some complications

It should be noted that analysing NTMs is not quite the same as analysing tariffs (Bhagwati, 1965). For example, with identical goods a domestic monopolist will behave as a perfect competitor under a non-prohibitive tariff, albeit at a higher price. However, a quota allows the domestic firm to act as a monopolist within the limits of the quota. It can also be shown that a quota which restricts imports by the same amount as a tariff will raise the domestic price by more than the tariff.

quota can be expanded gradually until the tariff becomes the binding constraint, at which point the quota can be eliminated without any further effects.)

Most NTMs are discriminatory, having differential effects as between foreign trading partners. Examples of these include the MFA, VERs, quotas, minimum prices, anti-dumping duties and countervailing duty measures. This means that there may be a considerable variation in the effects of NTMs on different overseas suppliers. To identify these effects, it is necessary to look beyond the effects in the importing market alone (the main focus of many NTM studies).

In respect of the MFA, computations are also complicated by the fact that not all MFA quotas are filled. For example, Erzan and Holmes (1990) show that in the period 1986–1988 the utilization rates of United States quotas for major exporters such as Hong Kong was above 90 per cent, while quota utilization was much lower for Latin American and Caribbean countries, albeit with wide variations between countries and sectors. Thus, while MFA quotas may constitute the binding constraint for major exports to the United

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