



NON-TARIFF BARRIERS IN MALAYSIA'S
AGRICULTURAL AND MANUFACTURING
SECTORS: THEIR DETERMINANTS AND IMPACTS
ON IMPORTS

BY

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ABSTRACT

The successive General Agreement on Tariffs and Trade (GATT) rounds of multilateral trade negotiations have generally led to significant tariff reductions in many countries. Given the relatively low tariff environment, focus is now directed onto the rising importance of non-tariff barriers (NTBs) as a protectionist and regulatory trade policy tool. However, studies pertaining to NTBs are relatively scarce. Thus, the present study seeks to identify the incidence and determinants of NTBs in Malaysia's agricultural and manufacturing sectors. The impact of NTBs on import in each sector is also examined. The level of NTBs measured in these sectors reveal that agricultural NTBs has increased over the years while that of manufacturing is relatively lower and has remained somewhat stable. Findings from the ARDL cointegration analysis suggest that the level of NTBs in the agriculture sector appears to be influenced by the sector's import penetration ratio, average tariff rate, competitiveness and employment growth. Meanwhile, the level of NTBs in the manufacturing sector is influenced only by sectoral competitiveness. Despite the imposition of NTBs on imports, aggregate imports in both the agricultural and manufacturing sectors over the 1978 and 2007 period are not affected by their presence. Instead, agricultural import is influenced by other factors such as real income in the long run and relative price in the short run. The VAR analysis conducted also reveals that real income is the only significant factor which influences aggregate manufacturing import albeit briefly. At a disaggregated level, results from OLS in first differences show that an increase in the growth of NTBs does in fact reduce the import growths of most of the HS-9 digit products examined. Based on the outcome of the study, trade policies with regard to the imposition or removal of NTBs should be formulated on a product-by-product or industry-by-industry basis.

ملخص البحث

وقد أدت الجولات الاتفاق العام بشأن التعريفات الجمركية والتجارة (GATT) المتعاقبة من المفاوضات التجارية المتعددة الأطراف عموماً لتخفيضات جمركية هامة في العديد من البلدان. ونظراً للبيئة الجمركية المنخفضة نسبياً، يتجه التركيز الآن على أهمية ارتفاع الحواجز غير الجمركية باعتبارها أداة تنظيمية لحماية والسياسة التجارية. ولكن الدراسات التي أجريت لبحث الأمور الغير جمركية قليلة جداً. نظراً لهذا تهدف هذه الدراسة لتعريف العوامل المسببة للحواجز غير الجمركية ووقوعها في القطاع الزراعي و الصناعي في ماليزيا. معرفة مدى تأثير الحواجز الغير جمركية على الاستيراد في كل من القطاعين الخاضعين للدراسة. أظهر مستوى الحواجز الغير جمركية في تلك القطاعات بأن الحواجز الغير جمركية الزراعية قد ازدادت على مدى السنوات مقارنة بالحواجز الغير جمركية الصناعية التي قلت نسبياً وبقيت متوازنة بعض الشيء. وقد اوضحت نتائج البحث لتحليل التكامل ARDL بأن مستوى الحواجز الغير جمركية في القطاع الزراعي قد تأثر نسبة لتغلغل الأستيراد في القطاع المشترك ومتوسط معدل التعريفات المنافسة ونمو العمالة. في الوقت نفسه، فقد تأثرت الحواجز الغير جمركية في القطاع الصناعي بالمنافسة القطاعية فقط. بالرغم من تأثير الحواجز الغير جمركية على الأستيراد، فإن اجمالي الأستيراد في كل من القطاعين الزراعي و الصناعي في الفترة ما بين 1978 و 2007 أظهر عدم تأثيره بتلك الحواجز. بدلا عن ذلك، فقد تم التأثير على الأستيراد الزراعي من قبل عوامل أخرى مثل الدخل الحقيقي على المدى البعيد والأسعار النسبية على المدى القصير. أظهرت نتائج تحليل VAR بأن الدخل الحقيقي هو العامل الدال الذي يؤثر على حجم استيراد في قطاع الصناعة وان كان ذلك قصير الأمد. على المستوى التفصيلي، أظهرت نتائج OLS في الأختلاف الأول بأن الزيادة في الحواجز الغير جمركية هي في الواقع سبب التفصيلي لتقليل استيراد أغلب المنتجات ذات الفئة HS-9 التي تم دراستها. استنادا على نتائج هذه الدراسة فإنه يجب صياغة السياسات التجارية المتعلقة بفرض أو ازالة الحواجز الغير جمركية حسب المنتج و النشاط الصناعي.

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MANUFACTURING SECTORS: THEIR DETERMINANTS AND IMPACTS
ON IMPORTS**

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DECLARATION

I hereby declare that this dissertation is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

The successive General Agreement on Tariffs and Trade (GATT) rounds of multilateral trade negotiations have generally lowered the tariff rates faced by both the developed and developing countries. With this low tariff environment, there is a concern that the role of non-tariff barriers¹, henceforth NTBs, as a protectionist and regulatory trade policy instrument will become prevalent. Several studies have found that many countries have in fact increasingly used NTBs. For example, the average number of tariff lines per country affected by any type of NTB in 1994 was approximately 1,880 but in 2004, this has increased to 5,620 (Fugazza and Maur, 2006). More recently, between March and June 2009 itself, 119 new trade-related measures were notified to the World Trade Organization (WTO). The notification has caused the measures for trade restricting and distorting policies to surpass the measures for trade liberalization by a factor of 2 (International Center for Trade and Sustainable Development [ICTSD], 2009).

Many low income and several middle-income countries, which include Malaysia, are also found to have relatively high Ad Valorem Equivalent of core NTBs² (Kee, Nicita and Olarreaga, 2006). Michalopoulos (1999) also claims that

¹ Hillman (as cited in Beghin and Bureau, 2001: 132), defines NTBs as restrictions other than the traditional customs duties that represent distortions to international trade. Specifically, they are any measures other than tariff that hampers the importation of goods directly into a country and are considered discriminatory as they do not apply equally to domestic production or distribution.

² Core NTBs are measures specifically imposed to restrict import. Even if there is a different reason for the imposition of NTBs, the restriction of import still becomes the secondary objective (Grimwade, 2000: 89). A few examples of core NTBs according to Kee, Nicita and Olarreaga (2006) are price and

NTBs appear to be more pervasive in developing than in developed country markets. In addition, the number of NTB cases initiated by non-OECD countries against other non-OECD and OECD³ countries has increased over the ten-year period since the existence of the WTO Dispute Settlement Understanding (DSU)⁴, as shown in table 1.1.

Table 1.1
Number of NTB cases initiated by non-OECD countries

Respondent	DSU First Period (1995-1999)	DSU Second Period (2000-2004)	Percentage Increase
Non-OECD countries	8	23	188
OECD countries	27	32	19
Total	35	55	57

Source: OECD (2005).

While lower tariffs can lead to increased trading opportunities among countries and greater gains from trade, this gain may be curtailed by the presence of NTBs. Not only do NTBs become the main obstacles to international trade and investments, they also lead to a greater welfare loss and terms-of-trade deterioration effect compared to tariffs (Ching, Wong, and Zhang, 2004). The imposition of NTBs is known to

quantity control measures, technical regulations, and monopolistic measures. Meanwhile, ad valorem equivalent (AVE) of core NTBs is the quantity impact of core NTBs on import that is converted into a price equivalent by moving along the import demand curve using import demand elasticities. It is the impact of NTBs on the domestic price of imported goods. The purpose of calculating the AVE of NTBs is to make NTBs comparable with ad valorem tariffs.

³ OECD stands for Organization for Economic Co-operation and Development. It is established primarily to contribute to growth in world trade, raise living standards, boost employment and support sustainable economic growth. It currently has 30 member countries, among which are the United States, the United Kingdom, Japan, Korea, Mexico, Finland, Italy, France, Germany, Spain, New Zealand, Canada, Australia and Austria <<http://www.oecd.org>>.

⁴ The DSU or the Understanding on Rules and Procedures Governing the Settlement of Disputes is established in 1994 to solve trade disputes between WTO members so that trade flows smoothly. It contains legal rules and procedures akin to a domestic court of law. Trade disputes are preferably resolved by way of consultations among member states. If this fails, resolutions are made through hearing of the case by a WTO panel <<http://www.wto.org>>.

introduce price, quantity and allocative distortions in the market. The 2007 Economic Report of the United States' President even highlighted that "unjustified non-tariff barriers can distort the prices and quantities of goods and services traded internationally, restrict international investment, and reduce economic welfare in exporting and importing countries" (Puri, 2006).

NTBs also increase the operating costs of firms and hamper firms' access to markets. They impose additional costs in terms of the opportunity cost of the importer's time, interest costs due to the time delay and uncertainty costs about whether or not the import requirements are met as well as additional bureaucratic costs. In addition, the presence of NTBs often leads to discriminatory practices in granting market access. The issue of market access has again made NTBs the subject of multilateral negotiations. The OECD (2005) reported that in the 2001 Doha Development Agenda, the WTO Ministers have agreed:

to reduce or as appropriate eliminate tariffs, including the reduction or elimination of tariff peaks, high tariffs, and tariff escalation, as well as non-tariff barriers, in particular on products of export interest to developing countries. Product coverage will be comprehensive and without a priori exclusions (10).

Similar concerns about NTBs have also been raised in trade negotiations among countries in the many regional trading arrangements as the presence of NTBs may provide setbacks in the regional integration processes. In the case of ASEAN Free Trade Area (AFTA), several member countries have introduced a number of new regulations and measures that could be construed as NTBs. These measures could hinder trade and investment activities in the preferential trade area (Ministry of International Trade and Industry Malaysia [MITI], 2003: 240). As the objective of such establishments is to liberalize trade among member countries, the prevalence of NTBs and their adverse effects would counterbalance any trade liberalization gains

that have been achieved via earlier tariff reductions. To make further progress in liberalizing trade, focus is now given towards the reduction or elimination of NTBs. Among the many regional trading arrangements, only the European Union (EU) has made a significant progress in harmonizing some of the standards regarded as NTBs while others are in the early stage of doing so. AFTA member countries have also recently made firmer commitments to eliminate NTBs by the year 2010 for the ASEAN-six and by 2013 for the newer ASEAN members.

Despite the increasing efforts to reduce NTBs, knowledge about such barriers faces several limitations. First, there is a lack of common definition of NTBs. This is compounded by the presence of a myriad of non-tariff related measures that may or may not be an impediment to freer trade⁵. Second, there is insufficient data that records the presence of NTBs. Thus, empirical studies in examining the effects of NTBs on economic variables have been relatively scarce. Third, there is also a deficiency in the current methodology used to measure the level of NTB protection. Due to this, the quantification of NTBs and consequently, the efforts to eliminate NTBs pose a major challenge to policy-makers and trade negotiators. It is not surprising therefore, that there is increasing interest in non-tariff issues in trade policy discussions.

1.2 PROBLEM STATEMENT

As stated earlier, Malaysia appears to be one of the middle-income countries that have a relatively high Ad Valorem Equivalent of core NTBs. This implies that despite

⁵ It is difficult to discern whether the non-tariff measure (NTM) constitutes an NTB which impedes foreign trade or whether the NTM is genuinely imposed to ensure that the quality and safety of the foreign products are not compromised. Even if the latter holds true, these NTMs usually raise the cost of compliance for exporters or importers and are potentially trade inhibiting. In the realm of economics however, the term NTBs have been applied to all types of NTMs (Deardorff and Stern, 1998).

being recognized as one of the remarkably open economies in the world with a merchandise trade to GDP ratio of 2 in 2005 (Third Industrial Master Plan [IMP3], 2006), the presence of non-tariff measures (NTMs) as a policy instrument could pose a hindrance to freer flow of trade between Malaysia and her trading partners. This could effectively deny the country from realizing the true gains from free trade.

Various NTMs which could be trade inhibiting are prevalent in Malaysia. One of these measures is the non-automatic import-licensing requirement. Malaysia is one of a few Asia Pacific countries that are still using non-automatic licenses to control import even though substantial trade policy reforms have been carried out (OECD, 2002). According to the OECD, this licensing system may itself act as a barrier to trade as the administrative processes involved in determining license recipients would easily distort market access opportunities. In fact, the OECD study found that in 2001, Malaysia was the sole country in the region whose number of tariff lines imposed with non-automatic licenses increased from 17 percent to 27 percent after the Asian Financial Crisis. Athukorala (2005) attributes this increase to the need to reduce the country's current account deficit or to protect local industries.

Non-automatic licenses mostly affect Malaysia's non-agricultural imports (ASEAN, 2007). Among the imports are those from the automotive, telecommunications, organic chemicals, iron and steel as well as the machinery and mechanical appliances categories. Several agricultural imports are also subjected to non-automatic licenses or quotas for socio-economic and security reasons. Among the products are round cabbages, un-manufactured tobaccos and sugar imports.

Malaysia also relies on automatic licenses as an NTM. This measure generally affects agricultural imports, primarily to comply with the sanitary and phytosanitary

(SPS) requirements⁶. Meanwhile, a single channel for rice import as a monopolistic NTM is used to stabilize rice supply and its price. In this instance, only BERNAS⁷ is given the authority to import rice. Price control NTMs are also implemented such as countervailing and antidumping duties. So far, Malaysia has initiated and implemented 17 antidumping investigations against Indonesia, Korea and Chinese Taipei (WTO, 2006). The government has also openly announced the intention to institute safeguard legislations that temporarily restricts import if a domestic industry is injured by an increase in imports.

Another form of NTM is restrictions on government procurement. Foreign firms are only allowed to supply goods and services to the government if the required products are not available locally. However, this requirement could be used to favor domestic firms against foreign firms. The country had also once imposed the local content requirement policy requiring multinational firms to purchase and use local products in their manufacturing activities. This policy was considered as a trade-related investment restriction, which violates GATT Article III and XI. Thus, the policy has been abolished since 2003.

Goods that are subject to various NTMs are explicitly listed in the Customs (Prohibition of Import) Order of the Royal Malaysian Customs. There are four schedules in the Customs Order. The first schedule contains a list of goods whose imports are absolutely prohibited due to national, religious, security, and health reasons. The second schedule contains goods whose imports are allowed only under import licenses. The import of these goods is controlled mainly for health, sanitary,

⁶ These licenses are granted in order to protect animal, plant and human life and health. Other reasons for the licensing requirement include the need to prevent and eradicate agricultural pests and plant diseases as well as to ensure food safety.

⁷ PadiBeras Nasional Berhad (BERNAS) is the regulator of the rice industry and distributor of rice in the country.

security, and environment protection or intellectual property reasons. The third schedule contains goods that may not be imported into Malaysia except under an import license due to protective reasons. In practice, the objectives in the second and third schedule may sometimes overlap (Alavi, 1996: 60). Thus, even though the second schedule appears to be designated for non-protective purposes, in some cases, the import of goods may also be controlled for protective reasons. The fourth schedule on the other hand is specific for products whose imports are permitted only according to the manner of importation allowed⁸. According to Alavi, the objectives of the first and fourth schedules are non-protective whereas those of the second and third are protective.

The preceding discussion indicates that some of the import flows into the country have been subjected to various import control measures. Many of these measures are imposed on imports from the manufacturing and agricultural sectors. Thus, it would be interesting and useful to examine how the presence of NTBs affects imports from these two sectors. Focus on NTBs and imports are also directed towards these two sectors for several reasons. First, the tariff rates on imports in these two sectors have declined over the years. As such, there is a perception that the incidence of NTBs in these sectors has since risen. Second, both sectors are important to the economy. The manufacturing sector itself contributes a significant share in the country's GDP amounting to 32 percent in 2006. The imported components of manufacturing products also constitute a significant portion of the country's imports. Meanwhile, the agricultural sector is important for socio-economic reasons as it mostly employs the country's rural population.

⁸ For example, imports are only permitted if import permits issued by certain departments, such as the Wildlife Department, the Department of Agriculture etc, accompany them.

Thus, a systematic analysis of the country's trade policy structure, particularly in relation to NTBs, is essential. For such analysis to be made, the level of NTBs in each sector has to be first quantified. To the best of the researcher's knowledge, there has not been much attempt in measuring the level of NTBs in the country, let alone the levels in different economic sectors. Existing studies have generally focused on measuring NTBs over a limited time period. Measuring the level of NTBs more extensively is crucial as doing so allows the impact of NTBs on trade flows and other economic variables to be consequently gauged. The estimates may then be used for long-term policy-making purposes.

The ability to measure the level of NTBs allows a comparison of the extent of protection between various economic sectors. At present, such comparison has mainly been made in developed economies such as the EU and the U.S. In these economies, there is a tendency for high levels of protection to be given to the agricultural sector compared to the manufacturing industries (Marjit, Kar and Beladi, 2007). Thus, such comparison would determine whether the same occurs in Malaysia.

It is also important to understand the reasons why NTBs continue to exist even though efforts to dismantle them have been initiated. Thus, factors that influence the level of NTBs need to be identified. In relation to this, it would be necessary to know whether the increase in import competition is the only factor that causes a higher protection level or whether other factors are also important in influencing the level of NTBs. Knowledge of how these factors affect NTBs is useful for policy-making purposes especially when NTBs are to be reduced or eliminated. Existing studies that have identified the determinants of trade policy or trade protection found the factors to be both economic and political in nature. Despite the prevalence of such studies,

those that examine the case for Malaysia is severely lacking except for that of Lee (as cited in Amelung, 1989).

Since NTBs are potentially import reducing, it is imperative that the extent of the reduction in import is empirically estimated. To date, the impact of NTBs on Malaysia's imports has never been estimated. Doing so will enable the authorities concerned to determine whether the NTBs are effective in controlling imports⁹. Accounting for the influence of NTBs on imports may also result in more accurate estimates of price and income elasticity of imports. So far, import elasticities for Malaysia have only been estimated from the regression of the traditional import demand function, which does not specifically account for the role of NTBs. These elasticity measures can be used to predict the effects of monetary and fiscal policies as well as the exchange rate and trade policies on the country's trade balance. Knowledge of the elasticity estimates is also crucial for policy-makers to better predict the behavior of imports when NTBs are eliminated especially since Malaysia and other ASEAN member countries are set to liberalize trade further by removing NTBs on imports from ASEAN countries by 2010.

Ultimately, it is important to examine whether NTBs provide an alternative means to protect imports given that much of the country's trade has been liberalized through reductions in tariffs. If the presence of NTBs does reduce imports, then the tariff liberalization efforts to increase the value or volume of trade would not be entirely successful. Nevertheless, given that NTBs could be imposed for various socio-economic, food security, and safety reasons, total elimination of NTBs may not be achievable.

⁹ This refers to cases where the NTBs affect imports indirectly through the increase in prices of imported goods, which consequently lowers the demand for the products.