

The Determinants of Non-Tariff Barriers in Malaysia's Manufacturing Sector

Azlina Hanif

Department of Economics, Faculty of Business Management

Universiti Teknologi MARA

Shah Alam, Selangor, Malaysia

E-mail: azlinahan@salam.uitm.edu.my

Rokiah Alavi, Gairuzazmi Mat Ghani, and Jarita Duasa

Department of Economics, Kuliyyah of Economics and Management Sciences

International Islamic University Malaysia

Gombak, Selangor, Malaysia

E-mail: rokiah@iium.edu.my, gairuzazm@iium.edu.my, jarita@iium.edu.my

Abstract. The successive rounds of multilateral trade negotiations have resulted in significant tariff reductions in many countries. Malaysia is no exception as its trade weighted average tariff rate in 2008 is relatively low at 6.3 percent. Despite the reduction in tariff barrier, the incidence of non-tariff barriers (NTBs) in the country's manufacturing sector is still prevalent especially in certain sub-sectors even though efforts at dismantling these barriers have long been initiated. Thus, the paper seeks to identify factors that influence the level of NTBs in the manufacturing sector. Using the autoregressive distributed lag (ARDL) approach to cointegration, we find sectoral competitiveness level to be the only significant determinant of NTBs in the long run. In the short run, tariff and sectoral competitiveness both influence the level of NTBs. The findings provide a greater understanding of the reasons behind trade protectionism in the country's manufacturing sector.

Keywords: non-tariff barriers; manufacturing sector; trade protectionism; developing country

1. INTRODUCTION

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, 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 [1]. More recently, between March and June 2009 itself, 119 new trade-related measures were notified to the World Trade Organization (WTO), causing the measures for trade restricting and distorting policies to surpass the measures for trade liberalization by a factor of 2 [2].

Despite being recognized as one of the remarkably open economies in the world with a merchandise trade to GDP ratio of 2 in 2005 [3], Malaysia is found to have relatively high Ad Valorem Equivalent of core NTBs [4]. Core NTBs, such as price and quantity control measures, technical regulations, and monopolistic

¹ Hillman (as cited in [8]: 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.

measures are typically imposed specifically to restrict imports. Being a developing country, it may be possible for NTBs to be imposed for various protectionist and non-protectionist reasons.

Various non-tariff measures (NTMs) which could be trade inhibiting are indeed prevalent in Malaysia. One of these measures is the non-automatic import-licensing requirement. These non-automatic licenses mostly affect the country's non-agricultural imports [5]. Among the imports are those from the automotive, telecommunications, organic chemicals, iron and steel as well as the machinery and mechanical appliances categories. Moreover, 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 [6]. This licensing system may in itself impede trade as the administrative processes involved in determining license recipients would easily distort market access opportunities. In fact, [6] 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. [7] attributes this increase to the need to reduce the country's current account deficit or to protect local industries.

The presence of NTMs or NTBs 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. 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 [9]. NTBs also increase the operating costs of firms and hamper firms' access to markets.

Thus, given that Malaysia is an open economy but the presence of NTMs or NTBs are still prevalent, the purpose of the present study is to determine the factors that influence the level of NTBs in the country's manufacturing sector. As the country depends on manufacturing exports to generate economic growth, it is feared that the imposition of NTBs on imports may adversely affect the country's manufacturing exports sector due to the rise in the production costs as a result of higher import prices.

The paper is organized as follows. The next section briefly describes the various NTMs and NTBs that are imposed on the country's manufacturing imports. The subsequent section elaborates on the theoretical model for the determinants of NTBs. This is followed by the empirical analysis and findings from the study. The last section concludes the study.

2. NTBS IN THE MANUFACTURING SECTOR

NTMs were introduced for manufacturing products in the early stage of industrialization period to support the first phase of import substitution (IS1) policy. These measures were imposed mainly to protect domestic producers and to allow newly established domestic industries to grow. The level of protection was not high as the objective of IS1 was to supply the domestic market [10]. The second round of import-substitution period, IS2, was launched in the early 1980s. The aim of IS2 policy was to develop indigenous heavy manufacturing industries that generate linkages with the rest of the domestic economy and to correct the country's trade balance. Iron and steel, automotive and cement industries became the focus to develop local technology. According to [10], high protection levels in the form of tariffs and quotas characterized the period.

As mentioned in the preceding section, a large proportion of non-agricultural NTMs in Malaysia are in the form of non-automatic licenses [5], which raised the concern that they are imposed for protectionist purposes. Among the manufacturing imports that are subject to these licenses are heavy and construction equipments, iron and steel products, industrial chemicals, and electrical household equipments [11]. Nevertheless, NTMs in Malaysia's manufacturing sector did not seem to significantly affect exporters from the U.S. According to [12], the measures seemed to apply to a relatively small number of sectors and products. Furthermore, measures such as import license, technical license, standards and labeling requirements were implemented fairly. Recent reports however suggest that the country's import regulation measures are non-transparent and ambiguous [13].

The details of imports imposed with at least one type of NTMs are listed in the country's Royal Malaysian Customs' Customs (Prohibition of Import) Order [14]. There are four schedules that classify imports based on

the purpose of the NTMs. We focus only on manufacturing imports² listed in the second to fourth schedules as the first schedule lists goods whose imports are totally prohibited. The second schedule lists imports that are allowed only with import licenses for protection of health, sanitary, security, environmental, and intellectual property. The third schedule records imports imposed with licenses to protect local industries while the fourth schedule records goods whose imports are only allowed according to the manner of importation specified.

In the second schedule, coins and disc-operated amusement machines, diamonds and diamond set jewellery, explosives, fireworks, several types of communication apparatus, safety headgear, mosquito coils, various types of motor vehicles and their parts, several types of machinery, iron and steel sheets, and arms and ammunitions other than those imported by bona fide travellers were imposed with import licensing requirement in 1978. In the 1980s, several product reviews were made resulting in more products being included in the schedule. These are those from the electrical machinery and telecommunications equipment group, boilers, machinery and mechanical appliances group and organic chemical group. Other products from the optical, photographic, cinematographic, medical or surgical instruments group and articles of plastics group were also listed. According to [12], import license imposed on plastic resins had limited the sales of U.S. plastic resins exporters to Malaysia due to the increase in the product's price, thus raising the concern of U.S' firms operating in Malaysia.

More reviews were made in the 1990s in which new products were listed while several existing products were removed from the schedule. By 2007, remaining imports were mainly from the automobiles and parts, organic chemicals, electrical machinery and telecommunications equipment, sound and television recorders, and machinery and mechanical appliances product groups. Over the years non-tariff protection on automobiles and parts have been maintained or even increased. [15] highlighted that the industry is protected by high import duties and by the import licensing system. The issuance of import permits (APs) to *Bumiputera* businesses are also perceived as discriminatory [13].

In the third schedule, temporary protection from imported goods was granted to domestic producers through import licenses. Several reviews in the number of products listed in this schedule were made throughout the period of analysis, which resulted in more products being included. In the fourth schedule, only safety seat belts, several electrical apparatus and electrical luminaries for fluorescent lamps were found listed in 1979 and 1981. The majority of products in the schedule were only included since the late 1980s³. Throughout the years, reviews of the schedule saw new products being added to or existing ones being withdrawn from the list. In addition, during the Asian financial crisis, there was a marked increase in the number of product groups being listed. The crisis may have fuelled a more stringent import policy for manufacturing related products. Nevertheless, after 2000, the number of products imposed with NTMs from the fourth schedule has declined.

The above description indicates that NTMs or NTBs are generally prevalent in the country's manufacturing sector. [16] also found that the portion of import licenses in the country's manufacturing industry had increased from 8 percent to 14 percent. Given that there is evidence of import protection, factors that influence the level of protection in the country's manufacturing sector should be discussed. Nevertheless, studies in this realm for Malaysia are almost non-existent except for that of Lee (as cited in [17]).

3. THEORETICAL MODEL

[18] recently discussed some of the hypotheses regarding the determinants of trade policy. These hypotheses can be categorized into different models among which are the interest group model, the adding machine model, the status quo model, the social justice or equity model, the comparative cost model, and the foreign policy model. Caves (as cited by [17]) also described the national-policy model as a basic model of trade policy determination. These hypotheses did not have strong links to the theory of endogenous trade policy. Nevertheless, [19] developed a model that is able to link existing empirical work and the underlying

² We classified manufactured goods in the schedules based on the WTO HS code classification. According to the WTO, industrial goods are those that fall within HS25 to HS98 product groups.

³ Details of the products listed in the third and fourth schedules, types of restrictions and year of the policy measure can be obtained by contacting the author.

theory⁴. [20] explained the model by [19] in a slightly simpler version but resulting in similar predictions. They suggest that import elasticity, import penetration ratio and whether or not the industry concerned is politically organized are important determinants of trade protection.

In their model, NTB coverage ratio is used as the dependent variable representing trade protection. They however noted that import elasticity estimates from existing studies are unreliable especially when higher import disaggregations are involved. Given that theory and existing studies ([21], [22], [23]) treat import-penetration ratio as endogenous, [20] specified a reduced-form equation where the import penetration ratio is modelled as a function of factor shares in each sector.

[20] further extended the model by introducing additional regressors to improve its fit. The regressors are various measures of employment conditions of the industry, growth, concentration indices, and changes in import penetration ratio. Employment related regressors such as unemployment rates and employment size are found to improve the fit of the model. This implies that the model by [19] can be extended to allow for the role of other regressors in determining the protection level. The model is also extended given that past studies on endogenous protection such as Baldwin (as cited by [18]), Caves (as cited by [17]), [21], [22], and [23] have shown the importance of various regressors in explaining the level of trade protection. [24] also empirically tested the sparse specification according to the model by [19] against a larger specification based on the determinants used in previous empirical work.

Given the explanation above, the model depicted by [20] is used in this study as a basis for the determinants of NTBs in the manufacturing sector. Data constraints however limit the exact model from being fully applied. Instead, other regressors used previously by [21], [22], [23], and [25] among several others are included, without deviating much from the initial model. For example, employment size variable is considered as a potential determinant as it examines the role of the adding machine and interest group models of endogenous trade protection theory in explaining Malaysia's trade policy formulation. The sectoral share of value added as used in [25] is also included as a proxy for the sector's political importance. In addition, labour productivity in the sector is chosen as a proxy for industry competitiveness position based on the interest group model of the endogenous trade protection theory. The variables in the interest group and adding machine models are empirically tested in the present study as [17] have found the models to be relevant for developing economies.

To examine whether tariff and NTBs are substitutes or complements, the tariff variable is included in the NTB function. Meanwhile, as the reliability of the import elasticity estimates in the manufacturing sector cannot be confirmed, the variable is dropped from the model. [26] also left out the import elasticity variable from the theoretical equation used in their estimation of the trade protection model. Moreover, [20] mentioned that import elasticity estimates are 'noisy' data. The NTB function in this study is formulated as follows:

$$NTB = f(T, I, LP, VA, E) \quad (1)$$

where NTB is NTB coverage ratio, LP is labour productivity, VA is sectoral share of value added, I is import penetration ratio, E is employment and T is average tariff rate. Before (1) is estimated, the level of NTB coverage ratio has to be calculated throughout the duration of the study, i.e. 1978 to 2008. To this end, we used the NTB coverage ratio⁵ formula to measure the level of NTB protection in the manufacturing sector.

4. EMPIRICAL ANALYSIS

The underlying model is formulated as a log-linear equation as in (2):

$$\log(N_i) = \beta_0 + \beta_1 \log(T_i) + \beta_2 \log(CI_i) + \beta_3 \log(LP_i) + \beta_4 \log(VA_i) + \beta_5 \log(E_i) + \varepsilon_i \quad (2)$$

⁴ The strength of the model actually lies in the fact that the econometric model has been proven to resemble the theoretical model very closely.

⁵ $NTB_i = \sum_{j=1}^n n_j \left(\frac{m_j}{\sum_j m_j} \right)$

where, $j = 1, 2, \dots, l$ represents the disaggregated products in the sector and i represents the manufacturing sector. n is the binary indicator for the presence ($n = 1$) or absence ($n = 0$) of NTBs and m refers to the value of gross imports of each disaggregated product. The disaggregated products imposed with NTBs are listed in the second, third and fourth schedules mentioned in the preceding section.

In (2), N is NTB coverage ratios in the manufacturing sector, T is the simple average ad valorem manufacturing tariff rate, CI is change in manufacturing import penetration ratio⁶, LP is labour productivity in the manufacturing sector, VA is manufacturing sector's share of value added, E is employment in manufacturing sector, ε is residual and β is coefficient of elasticity of NTBs with respect to each independent variable. Annual data for the period 1978 to 2007 are used.

As is the norm in time series regression, we test for the presence of unit root in each series. Results of the Augmented Dickey-Fuller and Phillip-Perron unit root tests indicate that the variables are stationary in their first differences i.e. I(1) except for change in import penetration ratio, which is stationary at level i.e. I(0). Thus, the ARDL approach to cointegration, which allows the regressors to be a mixture of I(1) and I(0) series, is used to estimate the long-run relationship among the variables.

Before estimating the long-run relationship, the Hausman test for endogeneity between the change in import penetration ratio and NTBs is conducted to ascertain whether or not the variables are endogenous. The result from the test indicates that there is no endogeneity between these variables. Therefore, the single equation technique such as the ARDL technique to cointegration can be used to estimate the relationship among the variables.

The bounds test procedure ([27]; [28]) is then used to determine whether there is a long-run relationship between NTBs in the manufacturing sector and its potential determinants. Results show that the presence of cointegration among the variables in the model cannot be ascertained as the F-statistic, 2.7931 lies between the upper and lower bound critical values at 10 percent significance level for case II (restricted intercept and no trend) i.e. 2.407 and 3.517 based on the critical values calculated by [29]. Thus, the alternative technique to determine cointegration by way of a negative and significant error correction term suggested by [30] is performed. The error correction term for the model is indeed negative and significant, confirming the presence of a long run relationship amongst the variables in the NTB function.

Our estimation of the conditional ARDL long run model for NTBs in the manufacturing sector yields the following:

$$\begin{aligned} \log N_t = & 10.776 - 0.123 \log T_t + 0.001 CI_t - 1.557 \log LP_t + \\ & (1.887)^* \quad (-0.273) \quad (0.198) \quad (-2.180)** \\ & 2.154 \log VA_t + 0.064 \log E_t - 0.109 D8_t - 0.024 D9_t \quad (3) \\ & (1.238) \quad (0.152) \quad (-0.432) \quad (-0.061) \end{aligned}$$

Notes. The dummy variables i.e. $D8_t$ and $D9_t$ are included to depict the economic crisis periods in the 1980s (i.e. 1985 and 1986) and 1990s (i.e. 1998 and 1999), respectively. Since change in import penetration is not in log form due to the presence of several negative values, its estimated effect on NTBs is obtained by multiplying the variable's coefficient estimate with its respective mean value. Numbers in parentheses are the t-statistics associated with the coefficients. * indicates significance at 10 percent level and ** shows significance at 5 percent level.

Results in (3) indicate that among the potential determinants in the model, only labour productivity is significant. As labour productivity is the proxy for the sector's competitive position, this means that the manufacturing sector's competitiveness is an important factor determining NTB protection. The negative sign of the coefficient indicates that an improvement in the sector's competitiveness induces a fall in NTB protection. The coefficient estimate of labour productivity shows that NTBs is elastic towards changes in sectoral competitiveness in that a 1 percent rise in the competitive position induces a 1.6 percent fall in NTB protection. The finding is consistent with the expectations of the political economy of trade protection theory. It reflects that a more resilient sector entails lower NTB protection since there is little benefit for trade protection to be maintained.

The coefficient estimates of other determinants such as change in import penetration ratio, tariff, sectoral share of value added, and employment are not significant. This means that they do not significantly contribute to the level change in manufacturing NTBs. The insignificance of import competition may be due to several reasons. As Malaysia's manufacturing sector is highly export-oriented, firms in the sector are already exposed

⁶ [23] had used the change in import penetration ratio variable as one of the determinants of NTBs in the U.S. manufacturing industries. Unlike the coefficient of import penetration ratio, he found the coefficient of the change in import penetration to be positive and significant.

to extensive competition in foreign markets. Additionally, if import protection were granted, the increase in the producer rent in export-oriented industries would be relatively small as compared to the profit they would earn from exporting activities. Thus, firms in the sector would be less keen on seeking trade protection from the government even if there is higher growth in import competition. The finding is similar to Lee (as cited in [17]) who found the import share of total demand to be insignificant in determining Malaysia's nominal rate of protection in the manufacturing sector. The coefficients for the economic crisis dummy variables are also found to be insignificant, which implies that there is no significant change in the level of NTBs in the manufacturing sector during crisis and non-crisis time periods.

We also estimate the short-run elasticity measurements for NTBs with respect to each independent variable. The estimates in (4) show that tariff and lagged labour productivity variables influence the level of NTBs as the model reverts to its long run equilibrium. In the short-run, a 1 percent increase in the average tariff rate leads to approximately 0.6 percent decrease in NTBs. The negative coefficient for tariff implies that in the short run, tariff and NTBs are substitutes. A 1 percent rise in lagged labour productivity meanwhile causes a 1.3 percent rise in NTB level.

$$\begin{aligned} \Delta \log N_t = & -0.043 - 0.005 \Delta \log N_{t-1} - 0.0002 \Delta C I_t - 0.587 \Delta \log T_t + \\ & (-0.608) \quad (-0.034) \quad (-0.135) \quad (-2.294)** \\ & 0.524 \Delta \log LP_t + 1.283 \Delta \log LP_{t-1} + 1.042 \Delta \log VA_t + \\ & (0.633) \quad (2.565)** \quad (0.968) \\ & 0.185 \Delta \log E_t + 0.112 D8_t + 0.104 D9_t - 0.997 ECT_{t-1} \quad (4) \\ & (0.211) \quad (1.072) \quad (0.742) \quad (-4.980)*** \end{aligned}$$

Diagnostics:

Adjusted R ²	0.6159		
AR(2)	0.1732 [0.8427]	RESET(2)	0.8625 [0.3677]
Heteroscedasticity(1)	1.2788 [0.3189]	Normality(2)	1.5835 [0.4530]

Notes. () parentheses denote the t-statistics while p-values are in [] parentheses. Breusch-Godfrey, White, Ramsey RESET and Jarque Bera tests are used to test for the presence of serial correlation, heteroscedasticity, model mis-specification and residual non-normality in all models. ** and *** denote significance at 5 percent and 1 percent respectively.

While sectoral competitiveness as proxied by labour productivity is negatively related to NTBs in the long run, in the short run, it is positively related. The insignificance of change in import penetration ratio, sectoral political importance, and employment in the model indicates that they do not significantly contribute to the change in NTBs in the manufacturing sector even in the short run. The negative and significant error correction term (ECT) in the model confirms the presence of a long run relationship among the variables. Based on the coefficients, the disequilibrium in NTBs is rectified almost instantaneously in a year.

The goodness of fit of the model is satisfactory as approximately 62 percent of the variations in NTBs are explained by variations in the regressors. In addition, there is no autocorrelation, no heteroscedasticity, no residual non-normality and no misspecification problems associated with the model. Graphical results of the CUSUM and CUSUM-SQ tests show that the model's parameters and residual variance are stable throughout the period of study (see figure 1).

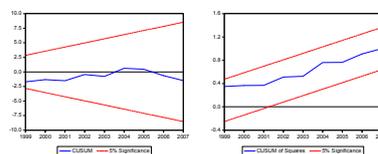


Fig. 1: CUSUM AND CUSUM-SQ graphs

5. CONCLUSION

Analysis of Malaysia's manufacturing sector reveals that numerous NTBs have been imposed on its imports since the 1970s for reasons such as the protection of health, sanitary, security, environment, and intellectual property. Nonetheless, some manufacturing imports are also imposed with NTBs to protect domestic producers from import competition. Findings from the study suggest that the sector's competitiveness is important in influencing NTBs in the long run. Improvements in competitiveness,

reflecting a more resilient sector, would lead to a fall in trade protection. However, in the short run, the imposition of NTBs increases even when the sector's competitiveness level improves, possibly for infant industry reasons. The situation is reversed over time and the level of NTBs decreases as firms become more competitive. Tariff is also important in influencing the level of NTBs in the short run. An increase in the average manufacturing tariff rate would entail less need for NTBs to serve as an alternative or additional form of protection.

Regardless of why NTMs or NTBs are imposed, advocates of free trade have urged for the barriers to be removed due to the perceived market distortion and inefficiencies associated with NTBs. Since imports and exports in the manufacturing sector are interconnected, protecting import-competing sub-sectors could cause export-oriented sub-sectors to bear the inefficiencies associated with protectionism. Moreover, if NTBs on imported inputs are restrictive, the reduction in the volume of imports may eventually hurt export production in sub-sectors that rely on them.

Removal of NTBs on the other hand may harm import-competing industries that would have to compete with cheaper imports but may benefit export-oriented industries as the cheaper imports entail lower production costs. Thus, export-oriented industries will profit at the expense of potential unemployment and marginalization faced by import-competing industries. Since there are both gainers and losers from any policy action taken, the government has to be cautious in formulating and implementing its trade policies. More importantly, the government must not be hasty in completely removing existing trade barriers. These barriers may have been initially instituted for socio-economic, political, development, food security, and safety reasons. Thus, removing NTB protection from such industries could be injurious if there were no appropriate adjustment mechanisms implemented. Correct timing and sequence of the removal is critical. Only when the specific sub-sectors are ready to face import competition should the NTBs be lifted and foreign competition be introduced in the market. Ultimately, a cautious and gradual approach to trade liberalization is paramount for a developing country such as Malaysia.

6. References

- [1] Fugazza, M., & Maur, J-C. (2006). Non-tariff barriers in a non-tariff world. Retrieved April 20, 2008. <http://www.etsg.org/ETSG2006/papers/Fugazza.PDF>.
- [2] ICTSD (2009). Protectionism is growing, world trade to slow. International Center for Trade and Sustainable Development News and Analysis, 13 (3), Sept 2009.
- [3] IMP3. (2006). Third Industrial Master Plan 2006-2020: Malaysia – Towards Global Competitiveness. Kuala Lumpur: Ministry of International Trade and Industry Malaysia.
- [4] Kee, H.L., Nicita, A., & Olarreaga, M. (2006). Estimating trade restrictiveness indices. World Bank Policy Research Working Paper 3840. Retrieved October 30, 2007. <http://www.worldbank.org>.
- [5] ASEAN. (2007). NTMs by ASEAN countries. Retrieved December 2, 2007. <http://www.aseansec.org>.
- [6] OECD (2002). Analysis of non-tariff measures: The case of non-automatic import licensing. Working Paper of the Trade Committee, TD/TC/WP(2002)39/FINAL. Retrieved October 12, 2007. <http://www.oecd.org/trade>.
- [7] Athukorala, P. (2005). Trade policy in Malaysia: Liberalization process, structure of protection, and reform agenda. ASEAN Economic Bulletin, 22 (1), 19-34.
- [8] Beghin, J.C., & Bureau, J-C. (2001) Quantitative policy analysis of sanitary, phytosanitary and technical barriers to trade. In Henson, S. and Wilson, John S. (eds.), *The WTO and technical barriers to trade: Critical perspectives on the global trading system and the WTO* (pp. 107 - 130). Cheltenham: Edward Elgar Publishing Limited.
- [9] Ching, S., Wong, C. Y-P., & Zhang, A. (2004). Non-tariff barriers to trade in the Pacific Rim. *Pacific Economic Review*, 9 (1), 65-73.
- [10] Rasiah, Rajah. (2002). Manufactured exports, employment, skills, and wages in Malaysia. Employment Paper 2002/35, International Labor Organization, 2002.
- [11] Athukorala, P. (2002). Malaysian trade policy and the 2001 WTO trade policy review. *The World Economy*, 25 (9), 1297-1317, Blackwell Publishing.

- [12] U.S. Department of State (1994). Malaysia: 1994 country report on economic policy and trade practices. Bureau of Economic and Business Affairs. Retrieved February 4, 2009.
http://dosfan.lib.uic.edu/ERC/economics/trade_reports/1994/Malaysia.html
- [13] METI. (2007). Report on Compliance by Major Trading Partners. Retrieved March 15, 2009.
<http://www.meti.go.jp/english/report/index.html>.
- [14] Customs (Prohibition of Imports) Order. (1978, 1981, 1987, 1988, 1998). Royal Malaysian Customs. Kuala Lumpur: Percetakan Nasional Malaysia Berhad.
- [15] WTO (2006). Trade policy review: Malaysia. WT/TPR/S/156, Retrieved January 12, 2008.
http://www.wto.org/english/tratop_e/tpr_e/tp_rep_e.htm.
- [16] Devadason, Evelyn. (2006). Trade protection and employment in manufacturing: The case of Malaysia. *Malaysian Journal of Economic Studies*, Vol XXXXIII, Nos. 1- 2, 69-84.
- [17] Amelung, T. (1989). The determinants of protection in developing countries: An extended interest-group approach. *KYKLOS*, 42 (4), 515-532.
- [18] Gawande, K., & Krishna, P. (2003). The political economy of trade policy: Empirical approaches. In E. Kwan Choi and Harrigan, J. (eds.), *Handbook of International Trade* (pp 213 - 250). USA, UK, Australia: Blackwell Publishing Ltd.
- [19] Grossman, G.M., & Helpman, E. (1994). Protection for sale. *The American Economic Review*, 84 (4), 833-850.
- [20] Goldberg, P.K., & Maggi, G. (1999). Protection for sale: An empirical investigation. *American Economic Review*, 89 (5), 1135-1155.
- [21] Ray, E.J. (1981a). Tariff and nontariff barriers to trade in the United States and abroad. *The Review of Economics and Statistics*, LXIII, 2, 161-168.
- [22] Ray, E.J. (1981b). The determinants of tariff and nontariff trade restrictions in the United States. *Journal of Political Economy*, 89 (1), 105-121.
- [23] Trefler, D. (1993). Trade liberalization and the theory of endogenous protection: An econometric study of U.S. import policy. *Journal of Political Economy*, 101 (1), 138-159.
- [24] Gawande, K., & Bandyopadhyay, U. (2000). Is protection for sale? Evidence on the Grossman–Helpman theory of endogenous protection. *The Review of Economics and Statistics*, 82 (1), 139-152, February, MIT Press.
- [25] Lee, Jong-Wha, & Swagel, P. (1997). Trade barriers and trade flows across countries and industries. *The Review of Economics and Statistics*, 74 (3), 372-382.
- [26] Holden, M., & Casale, D. (2002). Endogenous protection in a trade liberalizing economy: The case of South Africa. *Contemporary Economic Policy*, 20 (4), 479-489.
- [27] Pesaran, M.H., & Pesaran, B. (1997). *Working with Microfit 4.0: Interactive Econometric Analysis*. Oxford: Oxford University Press.
- [28] Pesaran, M.H., Shin, Y., & Smith, R.J (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics*, 16, 289-326, doi:10.1002/jae.616.
- [29] Narayan, P.K. (2004). Reformulating critical values for the bounds F-statistics approach to cointegration: An application to the tourism demand model for Fiji. Department of Economics Discussion Papers No. 02/04, Monash University, Australia.
- [30] Kremers, J.J.M., Ericsson, N.R., & Dolado, J.J. (1992). The power of cointegration tests. *Oxford Bulletin of Economics and Statistics*, 54 (3), Department of Economics, University of Oxford, 325-348, August.