



CENTRE FOR ECONOMIC AND POLICY RESEARCH

CEPR Working Paper
WP-02/2008

The Static Costs of Trade Protection in Vietnam

Dao Nguyen Thang

Centre for Economic and Policy Research
College of Economics, Vietnam National University, Hanoi

CEPR Working Paper

The Static Costs of Trade Protection in Vietnam

Dao Nguyen Thang*

Email: dao.nguyenthang@cepr.org.vn

Abstracts

This study aims to evaluate the costs of trade protection in Vietnam and simulate the changes in consumption structure, labor market as well as changes in social welfare under the context of WTO membership. For these purposes, this research measure the costs of protection in 2003 for three highly-protected industries of Vietnam such as steel, automobile and motorcycle. By deploying the Computable Partial Equilibrium Model (CPEM) and the elasticity approach, the costs of protection for these industries in 2003 were calculated of USD 1,093 million. The dead-weight loss was around USD 30 million, the domestic producer's gain was USD 390 million and the Government's gain in terms of tax revenue was USD 673.7 million. The paper also shows that trade liberalization, under different assumptions, would reduce employment in the steel, automobile and motorcycle industries by 5.3%, 6% and 3.5%, respectively.

Key words: Trade protection, trade liberalization, static cost, consumer surplus, producer surplus, dead-weight loss, ad valorem, tariff barrier, non-tariff barrier.

JEL Classification Numbers: F13, F17

This working paper should not be reported as representing the views of the CEPR. The views expressed in this working paper are those of the author(s) and do not necessarily represent those of the CEPR.

* I would like to thank Prof. Nguyen Khac Minh (Vietnam – Netherlands Center for Development Economics and Public Policy (CDEPP), National Economics University) for his valuable suggestions. I am grateful to Dr Tu Thuy Anh (Foreign Trade University) for her carefully reading and comments. Any shortcoming or error is of mine.

Content

1. Introduction.....	4
2. Theoretical Framework.....	5
2.1. The Computable Partial Equilibrium Model (CPEM).....	5
2.2. The welfare effects of trade barriers.....	6
2.3. Supply and demand functions.....	7
2.4. Estimate Demand and Supply Elasticities.....	9
3. The static costs of trade protection.....	9
3.1. Selected goods.....	9
3.2. The elasticities of selected goods.....	10
3.3. Changes in of domestic and imported quantities and prices following liberalization.....	10
3.4. The Static Costs of Trade protection.....	11
3.4.1. <i>Steel industry</i>	11
3.4.2. <i>Automobile industry</i>	12
3.4.3. <i>Motorcycle industry</i>	13
3.6. Brief on dynamic effects of trade protection.....	14
4. Brief on Vietnamese foreign trade during two past decades and structure of protection.....	15
4.1. Vietnamese foreign trade during two past decades.....	15
4.2. Structure of protection.....	16
4.2.1. <i>Import tariffs</i>	16
4.2.2. <i>Non-tariff barriers</i>	17
4.3. Protection for the Steel, Automobile and Motorcycle industries after 2003.....	18
4.3.1. <i>The steel industry</i>	18
4.3.2. <i>The Automobile industry</i>	19
4.3.3. <i>The Motorcycle industry</i>	20
5. Policy Recommendations and conclusion remarks.....	20
5.1. Policy Recommendations.....	20
5.1.1. <i>Steel industry</i>	20
5.1.2. <i>Automobile and Motorcycle industries</i>	21
5.2. Conclusion remarks.....	22
References.....	23

1. Introduction

In the economic literature, many theories from classics such as Ricardian theory of comparative advantage, to modern ones, such as Hecher – Ohlin – Samuelson model, as well as empirical studies have proved the existence of benefits gained from free trade. Furthermore, countries with a high level of trade distortions have lower productivity than those with fewer trade distortions. For many different purposes, however, free trade does not absolutely exist in fact; and instead of this, trade barriers have been set up to prevent the trade flow, distorting the free trade.

Generally, for a country, whenever protection is established, domestic consumers suffer a loss, government and domestic producers gain. Hufbauer and Elliott (1994) employed CPEM and elasticity approach to measure the costs of productions for 21 highly protected sectors, which covered a domestic market worth almost USD 200 billion or 5% of total private consumption of the United States (US) in 1990. The authors concluded that potential consumers gain if the US relaxed all tariffs and quantitative restrictions on imports are in neighborhood of USD 70 billion (or equivalent to 1.3% of US gross domestic product GDP) in 1990. Using the similar methodology, Yansheng *et al.* (1998) measured the costs of protection for 25 highly protected sectors in China and found that the short-term costs of trade liberalization would be substantial both in terms of lost domestic output (a drop about USD 40 billion, or 32% of pre-liberalization output in the protected sectors) and lost jobs (about 11.2 million workers). Static benefits to consumers from fully liberalizing the protected sectors would amount to USD 35 billion annually, and the annual pure efficiency gains would be USD 5 billion.

Vietnam applied to be WTO membership in 1995 considered important step toward economic integration into the world economy, enhancing economic growth as well as increasing the social welfare. In this process, an examination and establishing an effective protection structure are very essential. So measuring the costs and benefits from trade protection in Vietnam would be necessary from which policy makers will have better looks to situation of protection in Vietnam. Concerning the cost of trade protection in Vietnam, there have been some studies by International Monetary Fund (IMF), World Bank, Centre for International Economics, and researchers. However, most of them were qualitative analyzed.

Self-evidently, measuring costs of protection quantitatively is a significant work. Basing on the very rich background in the literature, this research measures the costs of protection in Vietnam in 2003 for three highly protected industries as steel, automobile and motorcycle industries. Beside the purpose of calculating the costs and benefits from protection, the paper also provides policy

recommendations for WTO-based protection for Vietnam in the context of international economic integration.

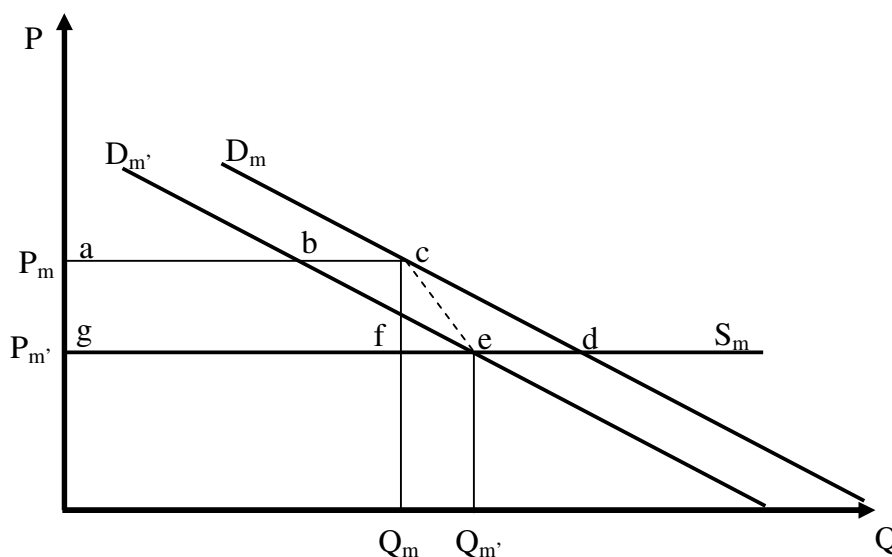
2. Theoretical Framework

2.1. The Computable Partial Equilibrium Model (CPEM)

The CPEM, which is used for measuring the costs of protection and social welfare, bases on four relevant assumptions for a small and relative open economy like the Vietnam's economy:

- (i) Domestic goods and imported goods are not perfect substitutes;
- (ii) The supply for imported goods is perfectly elastic;
- (iii) The supply schedule for domestic goods slope upward (less than perfect elastic);
- (iv) All markets are considered perfect competitive.

Figure 2.1: Effects in the import market of removing a trade barrier



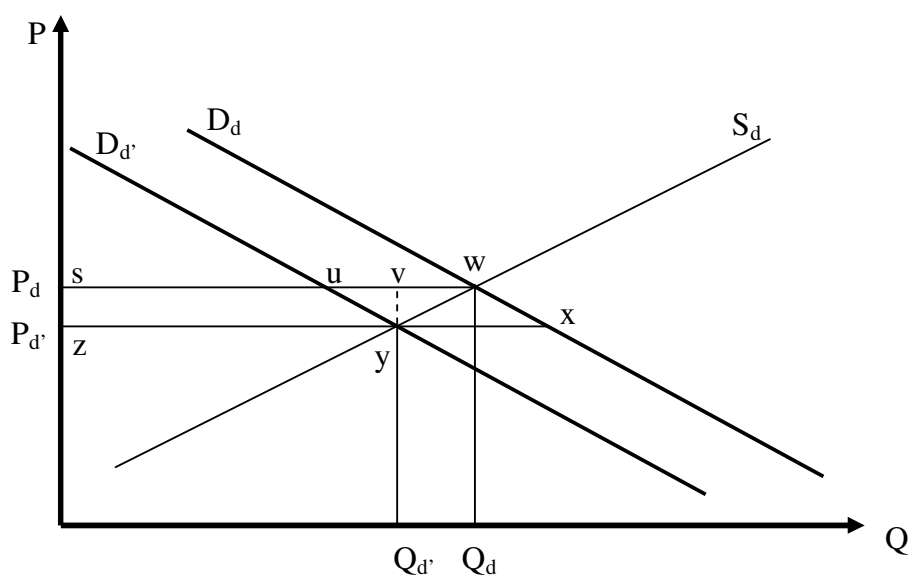
With the trade barrier in place, the price of the imported good in the protected market is P_m , and the quantity imported is Q_m . Following liberalization, the price falls to $P_{m'}$ (the world price). Then, responding to a lower price in the domestic market (see Figure 2.2), the demand curve for the imported good shifts from D_m to $D_{m'}$, and quantity imported settles at $Q_{m'}$.

The static effects of relaxing a trade barrier are illustrated in Figures 2.1 and 2.2. In Figure 2.1, the supply curve for import (S_m) is flat implying an open economy as a “price taker” in the world market. $P_{m'}$ is world price; with trade barrier in place, the landed price of imported good in home market is P_m .

$$P_m = P_{m'} \times (1 + t + n) \quad (2.1)$$

Where t is tariff rate (percent ad valorem), and n is tariff equivalent of non-tariff barriers. After trade liberalization, the landed price falls to P_m' (the world price). Then, responding to the lower price in the domestic market (see Figure 2.2), the demand curve for import shifts inward from D_m to D_m' , and quantity imported settles at Q_m' , which is higher than the initial quantity imported, Q_m .

Figure 2.2: Effects in the domestic market of removing a trade barrier



With the trade barrier in place, the price of the import-competing domestic good is P_d , and the quantity demanded is Q_d . Following liberalization and the decline in import price (see Figure 2.1), demand for the domestic substitute falls, shifting the demand curve from D_d to D_d' , the quantity consumed falls to Q_d' , and the price falls to P_d' .

2.2. The welfare effects of trade barriers

Trade liberalization has a series of welfare effects. In the import market, due to trade liberalization, the consumer surplus gain from liberalization is the area **aceg** (see Figure 2.2). The area **acfg** is the transfers from government to consumer in the form of lost tariff. The efficient gain is presented by the area **cef**. The rectangular area **acfg** represents a transfer from government to consumers can be estimated as:

$$\text{Area } \mathbf{acfg} = (P_m - P_m') \times Q_m \quad (2.2)$$

The area **cef** which presents efficient gain following trade liberalization is:

$$\text{Area } \mathbf{cef} = \frac{1}{2} \times (P_m - P_m') \times (Q_m' - Q_m) \quad (2.3)$$

In Figure 2.2, the domestic supply curve for the import-competing domestic good (S_d) slopes upward. With the trade barrier in place, the price of the domestic good is P_d , the quantity demanded is Q_d . Following liberalization and the decline in the import price (see Figure 2.1), the demand curve for the domestic substitute shifts inward from D_d to $D_{d'}$, the quantity consumed falls to $Q_{d'}$, and the price drops to $P_{d'}$. The consumer surplus gain from lower domestic price is the area **swyz**, which is offset by the producer surplus loss. The area **swyz** can be estimated as:

$$\text{Area swyz} = \frac{1}{2} \times (P_d - P_{d'}) \times (Q_d + Q_{d'}) \quad (2.4)$$

Table 2.1: The welfare effects on the two markets following liberalization

	Import market	Domestic market	Total gains
Consumer surplus	+ aceg	+ swyz	+ aceg + swyz
Producer surplus		- swyz	- swyz
Government	- acfg		- acfg
Efficiency gain	+ cef	0	+ cef

2.3. Supply and demand functions

The model assumes that supply and demand relationships are nonlinear in absolute terms, but rather are linear in logarithmic terms (Hufbauer and Elliott 1994; Yansheng *et. al.*, 1998; Messerlin 2000).

The domestic supply and demand functions are specified according to the following equations:

$$Q_d = aP_d^{E_{dd}} P_m^{E_{dm}} \quad (2.5)$$

And $Q_s = bP_d^{E_s} \quad (2.6)$

In equation 2.5, E_{dd} is the own-price elasticity of demand for the domestic good. E_{dm} is the cross-price elasticity of demand for the domestic good with respect to the price of the imported good. In 2.6, E_s is the own-price elasticity of the supply of the domestic good. Equilibrium in the domestic market requires ($Q_d = Q_s$).

The demand and supply functions in the import market are:

$$Q_m = cP_d^{E_{md}} P_m^{E_{mm}} \quad (2.7)$$

$$P_m = P_{m'} \times (1 + t + n) \quad (2.8)$$

In equation 2.7, E_{md} is cross-price elasticity of demand for the imported good with respect to price of the domestic good, while E_{mm} is the own-price elasticity of demand for the imported good. Equation 2.8 represents the assumption (ii), the world market CIF price, P_m , is the same regardless of import quantity. This system of demand and supply functions can be converted into a system of linear relationships by taking the logarithms to base e of equation 2.5, 2.6, 2.7, 2.8.

$$\ln Q_d = \ln a + E_{dd} \cdot \ln P_d + E_{dm} \cdot \ln P_m \quad (2.9)$$

$$\ln Q_s = \ln b + E_s \cdot \ln P_d \quad (2.10)$$

$$\ln Q_m = \ln c + E_{md} \cdot \ln P_d + E_{mm} \cdot \ln P_m \quad (2.11)$$

$$\ln P_m = \ln[P_m \cdot (1 + t + n)] \quad (2.12)$$

Equations 2.9, 2.10, 2.11, 2.12 are used to calculate the welfare effects of trade liberalization. The calculation involves three steps: (i) estimate the elasticity parameters; (ii) estimate the protective price premium (t + n) and substitute all values of the parameters and data into equations 2.9 through 2.12, together with the equilibrium condition $Q_d = Q_s$, to find the protection quantities and welfare effects; and (iii) we analyze the model's results and derive realistic conclusions on impact of trade protection.

Tariff elimination

We examine the case when a tariff is eliminated. By equalizing the right-hand sides of equation 2.6 and 2.7, we yield the new price of the domestic commodity as a function of the new import price:

$$\ln P_d = \frac{\ln a - \ln b}{E_s - E_{dd}} + \frac{E_{dm}}{E_s - E_{dd}} \times \ln P_m \quad (2.13)$$

The new import and domestic prices can be substituted into equations 2.9, 2.10 and 2.11 to yield the new equilibrium quantities of import and domestic outputs.

Quota removal

If the new quantity of import, Q_m , can be estimated, then from equation 2.8, we can find the new import price as a function of both the new quantity imported and the new domestic price:

$$\ln P_m = \frac{\ln Q_m - \ln c - E_{md} \ln P_d}{E_{mm}} \quad (2.14)$$

Equations 2.13 and 2.14 can be solved together to yield the new prices: P_m , P_d .

2.4. Estimate Demand and Supply Elasticities

The five elasticities incorporated into the CPEM are fundamental parameters. To arrive at these calculations, we can assume that the demand structure is of the “constant elasticity of substitution” (CES) form. In the case the elasticity of substitution between the two commodities is available or can be estimated, we can derive the estimates of the own-price elasticities of demand as:

$$E_{dd} = -[(1 - S_d) \cdot \sigma + S_d \cdot E_{dt}] \quad (2.15)$$

$$E_{mm} = -[(1 - S_m) \cdot \sigma + S_m \cdot E_{dt}] \quad (2.16)$$

E_{dt} is price elasticity of total demand, σ is elasticity of substitution between domestic and imported goods; S_d , S_m are shares by value of the domestic and imported products in consumption, respectively. Hufbauer and Elliott (1994) used the methodology developed by Tarr (1990) to calculate cross-price elasticities in the case the own-price elasticities of demand and aggregate demand are known:

$$E_{md} = \frac{-S_d \cdot (E_{dt} + E_{dd})}{S_m} \quad (2.17)$$

$$E_{dm} = \frac{-S_m \cdot (E_{dt} + E_{mm})}{S_d} \quad (2.18)$$

Finally, the elasticity of supply for the domestic goods can be estimated by:

$$E_s = E_{dd} + \frac{E_{dm}}{\theta} \quad (2.19)$$

Where $\theta = \frac{P_d - P_{d'}}{P_m - P_{m'}}$ is the coefficient of price response.

3. The static costs of trade protection

3.1. Selected goods

The criteria of selecting goods for measuring costs of protection bases on the import volume, protection level, data availability and the purposes of protection. Protection level must considerably affect consumer’s behavior. So these products below are selected to measure the costs of protection:

Table 3.1: Import turnover and share of steel, automobile and motorcycle in 2003

Items	Turnover (USD million)	Share per total import (%)
Total import	25,255.8	100.00
Steel	1,695.3	6.71
Automobile	738.2	2.51
Motorcycle	328.7	1.30

Source: MOT (2006), GSO (2006).

The purposes of trade protection are to encourage consuming domestic products to help domestic producers compete external ones and government gets a source of revenue to cover government expenditure.

3.2. The elasticities of selected goods

In order to facilitate computation to elasticities, it is assumed that the demand structure is of the CES form. The elasticity of substitution between domestic and imported goods (σ) and the price elasticity of total demand (E_{dt}), which are needed to calculate elasticities, were estimated by Phan HUU Nhat Minh (2002) for two industries as Steel and Automobile. For the Motorcycle, with availability level of data of domestic production and import, interval elasticities of own-price demands are used as the best approximates.

Table 3.2: The elasticities of selected goods

	E_{dd}	E_{mm}	E_{md}	E_{dm}	E_s
Steel	- 3.04	- 1.56	1.56	3.04	0.57 [*]
Automobile	- 0.20	- 0.22	0.22	0.20	0.71 [*]
Motorcycle	- 0.12	- 4.20	4.20	0.12	0.26

Source: Calculation of Author; figures with (*) are from Phan HUU Nhat Minh (2002).

3.3. Changes in of domestic and imported quantities and prices following liberalization

In 2003, Steel industry was protected by computed average ad valorem tariff rates imposed on imported steel of 17.6%, Automobile was imposed an average tariff of 90% on imports. Motorcycle was imposed an average tariff of 50% on imports. Suppose a rationale scenario of trade liberalization to calculate cost of protection in Vietnam for selected goods as presented in Table 3.3:

Table 3.3: Hypothesis of trade liberalization

Goods	Actual restriction	Hypothesis
Steel	Average tariff of 17.6 %	Tariff of 5 %
Automobile	Tariff of 90 %	Tariff of 30 %
Motorcycle	Tariff of 50 %	Tariff of 5 %

These hypotheses are referenced from the AFTA and WTO commitments. Beside that, the competitiveness and substitution between domestic and imported goods are also considered. In the process of applying the regulations of AFTA and WTO, Vietnamese government cannot completely

eliminate all tariff imposed on imported goods. Because, if doing that, the imported goods will be predominant compare to domestic ones, resulting to suffer domestic industries. By following these assumptions, we are able to calculate the changes in quantities and prices due to protection reduction:

Table 3.4: The changes in quantities and prices due to protection reduction

Prices/Quantities	Unit	Steel*	Automobile	Motorcycle
P_d	1000 USD	0.289	29.614	1.530
$P_{d'}$	1000 USD	0.263	27.164	1.330
$P_d - P_{d'}$	1000 USD	0.026	2.450	0.200
Q_d	Pieces	3,545.00	47,701	957,107
$Q_{d'}$	Pieces	3357.40	44,864	923,370
$Q_d - Q_{d'}$	Pieces	187.60	2,837	33,737
P_m	1000 USD	0.431	43.732	2.610
$P_{m'}$	1000 USD	0.385	29.922	1.830
$P_m - P_{m'}$	1000 USD	0.046	13.810	0.780
Q_m	Pieces	4,622.80	32,072	21,950
$Q_{m'}$	Pieces	4,754.04	34,116	54,962
$Q_m - Q_{m'}$	Pieces	- 131.24	- 1,856	- 33,012

Source: GSO (2006), and author's calculation;

Note: (*) The quantity unit of steel is thousand tons

3.4. The Static Costs of Trade protection

3.4.1. Steel industry

In 2003, Steel industry was protected by four lines of tariff rate 5%, 20%, 30% and 35% (GRIPS Development Forum 2003). Basing the import data of each kind of steel in 2003, the average ad valorem tariff rate of steel was estimated as 17.6%.

According to the AFTA commitments all tariff rates are scheduled to reduce to 0-5% by 2006, and the final tariff rate will come down to zero by 2015. Suppose that the average tariff rate would reduce to 5%, trade liberalization would bring to the domestic consumer a surplus of USD 307.5 million, meanwhile the domestic producers and government would lose producer surplus and tax revenue as USD 90.86 million and USD 211.6 million, respectively (Table 3.5). The efficiency gain of the economy would be USD 3.03 million. By assuming number of workers proportional to domestic quantity produced, the reduction in employment due to the effect of the trade liberalization can be estimated:

$$\text{Reduction in employment due to the trade liberalization (\%)} = \left(1 - \frac{Q_{d'}}{Q_d}\right) \times 100\% \quad (3.1)$$

Table 3.5: Effects of trade liberalization on Steel industry (Millions of dollars unless noted)

Consumer surplus gain		307.500	
Producer surplus loss		90.857	
Tariff revenue loss		213.611	
Efficiency gain		3.032	
Reduction in employment (%)		5.3%	
Base-year data (2003)		Post-liberalization estimates	
Import price (P _m)	0.431	Import price (P _m)	0.385
<i>(Thousand dollars/ton)</i>		<i>(Thousand dollars/ton)</i>	
Import volume (Q _m)	4,622.8	Import volume (Q _m)	4,754
<i>(Thousand tones)</i>		<i>(Thousand tones)</i>	
Domestic price (P _d)	0.289	Domestic price (P _d)	0.263
<i>(Thousand dollars/ton)</i>		<i>(Thousand dollars/ton)</i>	
Domestic output (Q _d)	3,545	Domestic output (Q _d)	3,357
<i>(Thousand tones)</i>		<i>(Thousand tones)</i>	
PARAMETERS			
Elasticities		Constants	
E _{dd}	- 3.04	Lna	6.96
E _{mm}	- 1.56	Lnb	8.88
E _{md}	1.56	Lnc	9.06
E _{dm}	3.04		
E _s	0.57		
		Price effects of barrier	
		Average ad valorem tariff (%)	17.6
		Total tariff assumed eliminated (%)	12.6

Source: GSO (2006) and author's calculation

3.4.2. Automobile industry

Automobile industry has been protected by a very high tariff rate (in 2003, it was of 90%). Assume that the tariff rate of imported automobile was reduced by 60%. Compare to the fact of protection, trade liberalization would bring to the domestic consumer a surplus of USD 570.4 million, the domestic producers and government would lose producer surplus and tax revenue as USD 113.4 million and USD 442.9 million, respectively. The efficiency gain of the economy would be USD 14.1 million. By also assuming the number of workers is proportional to quantity of domestic production, the reduction in employment of the Automobile industry due to the trade liberalization would be 6%.

Table 3.6: Effects of trade liberalization on Automobile industry (Millions of dollars unless noted)

Consumer surplus gain				570.449
Producer surplus loss				113.420
Tariff revenue loss				442.912
Efficiency gain				14.117
Reduction in employment (%)				6%
<hr/>				
Base-year data (2003)		Post-liberalization estimates		
Import price (P_m)	43.732	Import price (P_m)		29.922
<i>(Thousand dollars/unit)</i>		<i>(Thousand dollars/unit)</i>		
Import volume (Q_m)	32,072	Import volume (Q_m)		34,116
<i>(Pieces)</i>		<i>(Pieces)</i>		
Domestic price (P_d)	29.614	Domestic price (P_d)		27.164
<i>(Thousand dollars/unit)</i>		<i>(Thousand dollars/unit)</i>		
Domestic output (Q_d)	47,701	Domestic output (Q_d)		44,864
<i>(Pieces)</i>		<i>(Pieces)</i>		
<hr/>				
PARAMETERS				
Elasticities		Constants		Price effects of barrier
E_{dd}	- 0.20	Lna	10.69	Average ad valorem tariff (%)
E_{mm}	- 0.22	Lnb	8.37	
E_{md}	0.22	Lnc	10.46	Total tariff assumed eliminated
E_{dm}	0.20			(%)
E_s	0.71			60

Source: GSO (2006) and author's calculation.

3.4.3. Motorcycle industry

Motorcycle industry is one of key industries promoted in the industrialization process of Vietnam. Up to 2003, it had been highly protected with tariff rate of 50%. According to the tariff reduction schedule, Vietnam has to gradually reduce the tariff rate imposed on imported motorcycle. The import tariff rate of motorcycle in terms of AFTA regulations is 0-5%. So, in this case, suppose that Vietnam reduced tariff rate of imported motorcycle down to 5% from 50%. This would bring to the domestic consumer a surplus of USD 215.7 million, meanwhile the domestic producers and government would lose producer surplus and tax revenue as USD 185.6 million and USD 17.2 million, respectively. The efficiency gain of the economy as a whole would be USD 14.1 million. The reduction in employment due to the trade liberalization would be 3.6%.

Table 3.7: Effects of trade liberalization on Motorcycle industry (Millions of dollars unless noted)

Consumer surplus gain				215.720
Producer surplus loss				185.603
Tariff revenue loss				17.190
Efficiency gain				12.927
Reduction in employment (%)				3.6%
<hr/>				
Base-year data (2003)		Post-liberalization estimates		
Import price (P_m)	2.61	Import price (P_m)		1.83
<i>(Thousand dollars/unit)</i>		<i>(Thousand dollars/unit)</i>		
Import volume (Q_m)	21,950	Import volume (Q_m)		54,962
<i>(Pieces)</i>		<i>(Pieces)</i>		
Domestic price (P_d)	1.53	Domestic price (P_d)		1.33
<i>(Thousand dollars/unit)</i>		<i>(Thousand dollars/unit)</i>		
Domestic output (Q_d)	957,107	Domestic output (Q_d)		923,370
<i>(Pieces)</i>		<i>(Pieces)</i>		
<hr/>				
PARAMETERS				
Elasticities		Constants		Price effects of barrier
E_{dd}	- 0.16	Lna	13.68	Average ad valorem tariff (%)
E_{mm}	- 4.20	Lnb	13.66	
E_{md}	4.20	Lnc	12.24	Total tariff assumed eliminated
E_{dm}	0.16			(%)
E_s	0.26			

Source: GSO (2006) and author's calculation.

3.6. Brief on dynamic effects of trade protection

Findings in the preceding sections are just static effects of trade protection. This section briefly refers some dynamic effects of trade liberalization based on the static findings. One of computable dynamic effects of trade liberalization is the effect on employment. Basing on the change in domestic production, the reduction on employment of the automobile, motorcycle and steel industries were estimated as around 6%, 3.6% and 5.3%, respectively. These effects may be not good for the economy. However, following trade liberalization, the competitiveness of domestic products could be improved thank to changing in management toward better situation and increasing in research as well as applying advanced technologies to enhance productivity. This is very important, particularly in the long run and in the context of speeding up industrialization and modernization, to make domestic products stronger in competing as Vietnam integrates into the world economy. High protection might not create motivations for domestic producers to increase their

productivities in some cases. This is also considered as a cost of protection that is difficult to measure.

What have been mentioned so far are just the effects of protection occurring within a given industry. The trade protection does not only have simply intra-industrial effects but also inter-industrial ones. For instance, steel is primary input for other industries such as construction, ship building, automobile, motorcycle and so on. If the imported steel is imposed with a high tariff, the costs of production of some related industries would increase, which in turn would hamper competitiveness of domestic products and have adverse impacts on their export as well as domestic consumption. These adverse impacts are surely taken into account as costs of protection that are also difficult to measure. One of the adverse effects of high trade protection is that it always withstand with smuggling as well as possible illegal trade activities and entail additional costs to combat these problems. This has been big problem, particularly in the context of rampant corruption in Vietnam and governance system, the execution and administration of the nation's law of Vietnam is still weak in enforcement. This should be considered the dynamic costs of protection.

4. Brief on Vietnamese foreign trade during two past decades and structure of protection

4.1. Vietnamese foreign trade during two past decades

In 1986, Vietnam initially launched its transition from centrally - planned economy to market economy. The innovation of “private production and business” was generally a break-through for private sector development since 2000. With the application of “market price structure” economic sectors or “Vietnam would like to be friend of all nations and territories in the world” in foreign policy, Vietnam has gradually established and expanded import – export markets in the direction of multilateral relationships. The average of total merchandise trade during 1986 – 2005 was USD 20.7 billion (a seven-fold increase over 1985). The annual average growth rate of exports was 21.2%. Export value increased near forty-fold, from USD 789 million in 1986 to USD 32.4 billion in 2005. The share of exports in total trade increased steadily from 35.7% in the 1986 – 2000 up to 46% in the 2001 – 2005. The annual average growth rate of import was 16.1%. The import value in 2005 (USD37 billion) was sixteen-fold increase compared to one in 1986 (GSO, 2006).

Table 4.1: Total merchandise trade and the annual average growth rate

	1986 – 90	1991 – 95	1996 – 2000	2001 – 05
Total merchandise trade (Million USD)	19,717	39,940	113,440	240,981
<i>Five-year growth index (%)</i>	<i>115.1</i>	<i>123.4</i>	<i>117.9</i>	<i>118.5</i>
<i>Annual growth rate (%)</i>	<i>15.1</i>	<i>21.4</i>	<i>17.2</i>	<i>18.2</i>
Exports (Million USD)	7,032	17,156	51,825	110,830
<i>Five-year growth index (%)</i>	<i>130.7</i>	<i>119.3</i>	<i>122.1</i>	<i>117.9</i>
<i>Annual growth rate (%)</i>	<i>28</i>	<i>17.8</i>	<i>21.6</i>	<i>17.5</i>
Imports (Million USD)	12,685	22,784	61,615	130,151
<i>Five-year growth index (%)</i>	<i>108.5</i>	<i>127.3</i>	<i>115</i>	<i>119.1</i>
<i>Annual growth rate (%)</i>	<i>8.2</i>	<i>24.3</i>	<i>13.9</i>	<i>18.8</i>
Balance of Trade (Million USD)	- 5,653	- 5,628	- 9,789	-19,321

Source: GSO (2006).

4.2. Structure of protection

4.2.1. Import tariffs

Table 4.2: Import tariff structure in Vietnam – 1995, 1997, 2001, 2003, 2004 and 2006

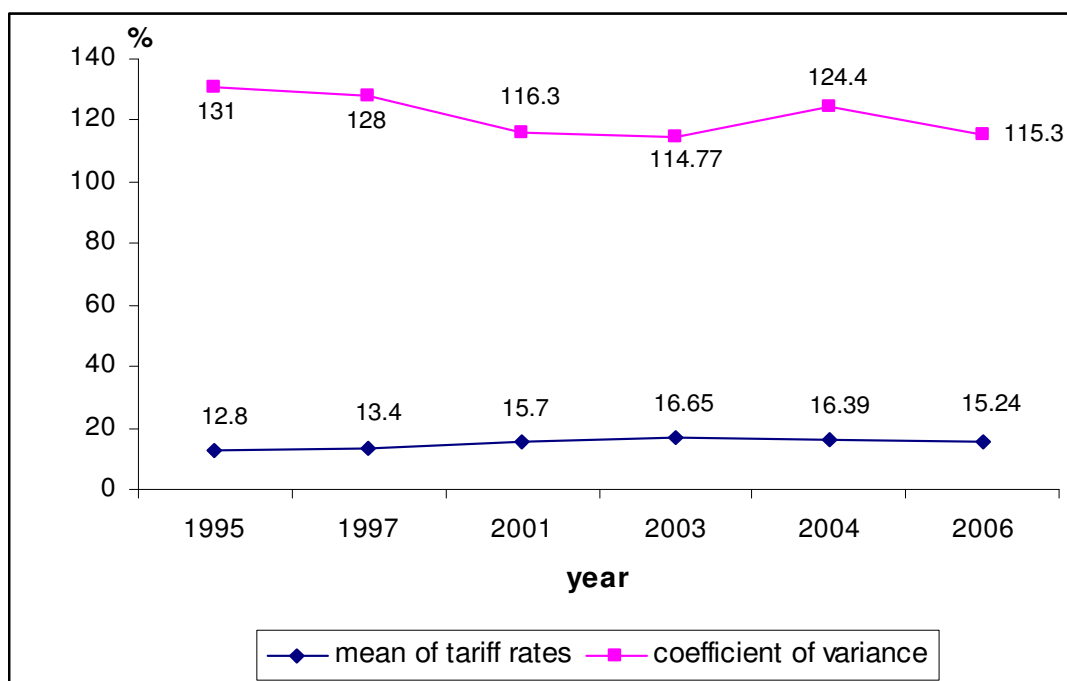
Year	1995		1997		2001		2003		2004*		2006*	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
0	976	31.1	978	31.3	2,049	32.5	1,620	31.7	3,087	28.8	1,349	12.9
1 – 5	645	20.5	697	22.3	1,170	18.7	878	17	1,919	18	2,197	21.1
5 – 10	299	9.6	301	9.6	540	8.6	412	7.9	1,054	9.9	1,869	17.9
10 – 15	66	2.1	96	3.1	0	0	103	2	176	1.6	922	8.8
15 – 20	572	18.2	317	10.2	0	0	418	8.2	857	8	1457	14
20 – 25	40	1.3	46	1.4	3	0	43	0.8	122	1.1	169	1.6
25 – 30	215	6.9	244	7.8	649	10.3	487	9.5	1,164	10.9	1,108	10.6
30 – 40	193	6.1	279	8.9	667	10.6	601	11.8	986	9.2	836	8
40 – 60	104	3.2	152	4.8	586	9.3	513	10	1,001	9.3	183	17.5
60 – 80	10	0.3	7	0.3	2	0	9	0.1	28	0.3	66	0.63
80 – 100	1	0	2	0.1	50	0.8	16	0.3	292	2.7	268	2.62
> 100	14	0.5	6	0.2	8	0.1	7	0.1	12	0.1	5	0.05
Total tariff line	3,135	100	3,126	100	5,724	90.9	5,170	100	10,689	100	10,429	100
Total tariff bands	36		35		15		60		17		33	
Range	0 to 200%		0 to 200%		0 to 120%		0 to 113%		0 – 150 %		0 – 150 %	
Mean tariff rate	12.8		13.4		15.7		16.65		16.39 %		15.24 %	
Coefficient of Variation (CV)	131		128		116.3		114.77		124.4		115.3	

Note: Coefficient of Variation = (standard deviation/mean) × 100%.

Sources: Athukorala (2005), figures with (*) are calculated by the author from the tariffs reduction schedules provided by MOF (2004, 2006).

The non-weighted average tariff has remained unchanged much since 2001 (in the range 15.2% – 16.65%). The dispersion of tariff rates (measured by coefficient of variance) fluctuated over time, after declining persistently from 1995 to 2003, it increased again to 124.4% by 2004, then declined at 115.3% by 2006. Thus, compared to previous years, the level of trade protection of Vietnam after 2003, in general, there have been virtually no reductions in terms of tariffs.

Figure 4.1: Evolution of tariff structure in Vietnam during the past decade



According to WTO accession commitments, Vietnam has to reduce tariff rates by from 5% to 40%, and time for implementation will be mainly taken from 2008 to 2015. For the automobile industry, the implementation dates will be by 2017 and 2019. Thus, for some products, there is still a long time of high protection.

4.2.2. Non-tariff barriers

By 2006, protection by quotas was mainly applicable to agriculture products such as sugarcane, eggs, salt, and so on. According to WTO commitment, most of them will be eliminated by 2009. Compared to products subject to Quantitative Restriction (QR) before 2003, which were manufactured and processed products, products subject to QR by 2006 are agriculture ones with low value added. So, the objects to be protected after 2003 were producers in agriculture sector.

Table 3.4: Products subject to Quantitative Restriction (QR)

1998	1999	2000	2001	2002	2003
Petroleum	Petroleum	Petroleum	Petroleum	Petroleum	Petroleum
Sugar	Sugar	Sugar	Sugar	Sugar	Sugar
Fertilizer	Fertilizer	Steel	Steel	Cement	
Steel	Steel	Cement/Clinker	Cement/Clinker	Motorcycles	
Cement/Clinker	Cement/Clinker	Glass	Motorcycles		
Glass	Glass	Motorcycles	Cars		
Motorcycles	Motorcycles	Cars	Vegetable oil		
Cars	Cars	Paper			
Paper	Paper	Vegetable oil			
	Electric fan				
	Ceramic tiles				
	Porcelain				
	Caustic soda				
	Bicycles				
	Vegetable oil				
	Plastics				
	Plastic packaging				

Source: Parker and Riedel (2002); Athukorala (2005).

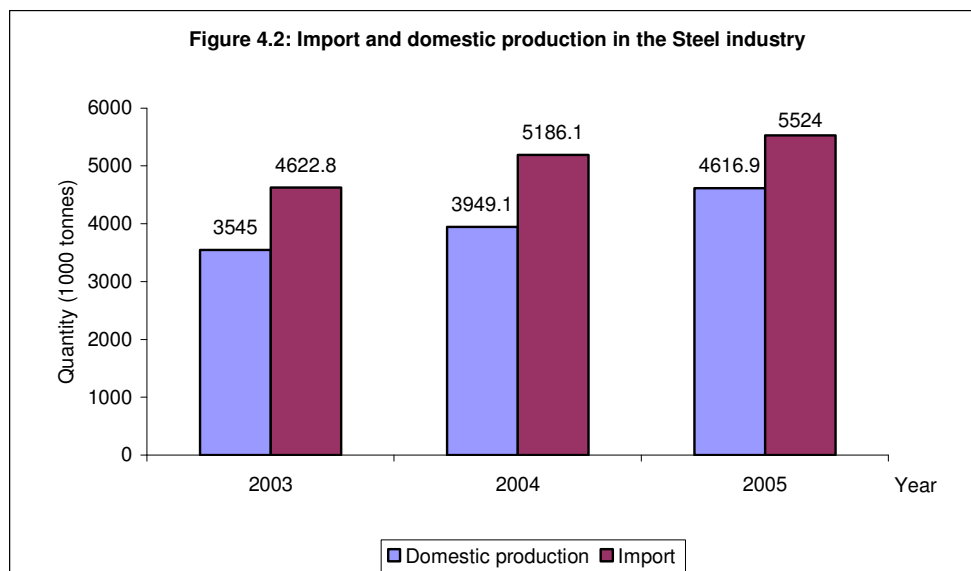
4.3. Protection for the Steel, Automobile and Motorcycle industries after 2003

4.3.1. The steel industry

In fact, in 2004, 2005 and 2006 the tariff imposed on the steel products did not change much compared to 2003. The tariff ranges were from 0 to 35%. The changes in the tariff rates were accordant with the scenario of tariff reduction which was recommended by GRIPS Development Forum (2003). According to this scenario, there were some steel to be reduced tariff rate by 5% to 10% beginning in 2004 and to be kept constant until year 2009. Some products even will be reduced tariff rate by 2013. There will have been long period of protection for this industry.

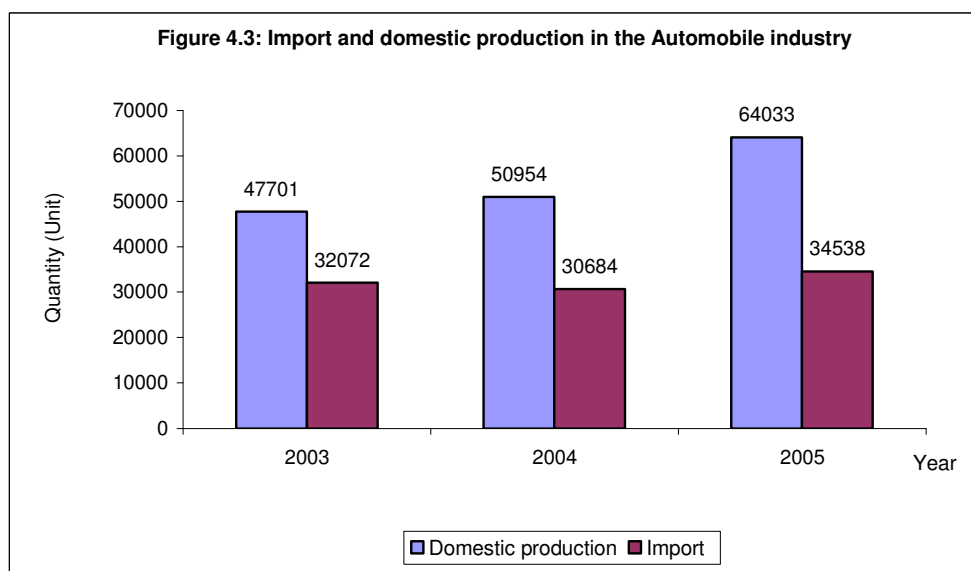
The quantity and value of both domestic production and import increased over year since 2003. The growth rates of import values are greater than ones of import quantities implying the average price of steel increased. Meanwhile the tariff rate lines imposed on the Steel unchanged much in 2004, 2005 and 2006 compared to 2003. So, it can be predicted that the cost of protection for the Steel industry after 2003 were even greater than in year 2003. Under the

commitment to WTO, most of tariff rates imposed on steel will be reduced by 5 to 15% mainly implemented by 2014. So, the protection policy for this industry should be reconsidered.



Source: GSO (2006)

4.3.2. The Automobile industry

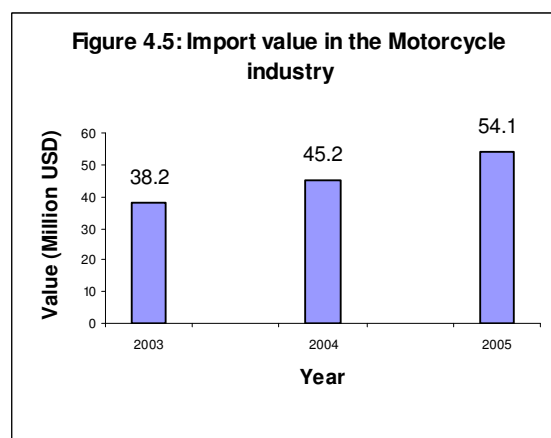
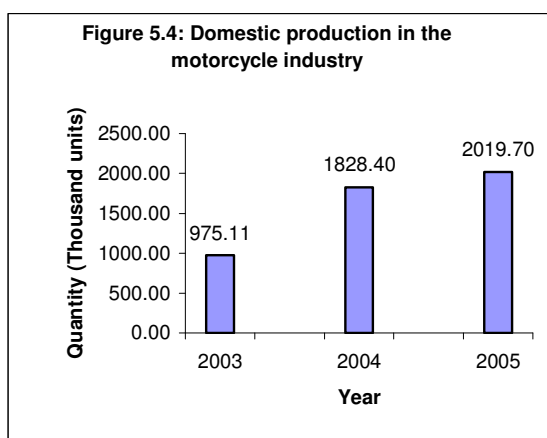


Source: GSO (2006)

So far, the tariff imposed on the Automobiles has been still 90% (MFN rate). The tariff on the Automobile will be reduced at the rate of 52% implementing by 2017 and 2019. By 2006, the imported automobile, besides imposing on high import tax and VAT, it also be imposed special sale tax. Also since 2006, Vietnamese Government has permitted to import used car. To protect the domestic producers, the imported used cars have been imposed a fixed amount before

imposing other taxes. There have been three levels as USD 7,000, USD 10,000 and USD 15,000 (applicable to different kinds of cars). These levels of protection are considered rather high. In early year 2007, the MOF approves to reduce these fixed amounts. The levels of reduction are 10%, 15% and 20% applicable to cars with engine cylinder capacity of 1000 – 1500cc, over 1500 – 2,000cc and over 2000 – 3000cc, respectively. The used automobiles with engine cylinder capacity of over 3000cc will be not reduced the tariff rate. For ones with cylinder capacity of over 5,000 even will be more strictly protected by increasing the fixed amount by 5% (MOF, 2007).

4.3.3. The Motorcycle industry



The domestic production in this industry sharply increased over years, particularly in year 2004. Meanwhile the import volume did not increase much in terms of absolute value. This shows that the protection in this industry was rather efficient in the context the motorcycle demand sharply increased. Since the domestic production increased sharply compared to import value, it can be predicted from the findings of year 2003 that the domestic producers would gain the most from protection after 2003. According to the commitment to be a member of the WTO, Vietnam will reduce the tariff rate imposed on imported motorcycle at 35% implemented by 2012. So, after 2003, there has been a long period of high protection for this industry. The cost of protection for this industry in 2003 was rather high (USD 215.720 million), and it would still high by years after 2003. This requires a re-consideration for the protection policy for this industry.

5. Policy Recommendations and conclusion remarks

5.1. Policy Recommendations

5.1.1. Steel industry

- *Keep on the plan of reduction in tariff*

The capacity of domestic production of this industry is not strong enough to meet the demand. Some steel products even have not been able to be produced in local areas. Importing steel definitely increase along with economic development. The figures presented in the previous sections show that gradual elimination of tariff would not affect unemployment. Trade liberalization should not be so fast as to destroy potential domestic producers and also not be so slow to allow inefficient producers surviving. So, reducing tariff along with the plan of the requirement of AFTA to expand import and limit the dead-weight loss is very necessary.

- ***Strengthen the productivities and improve the economic of scale***

In order to improve the competitiveness of domestic steel and increase the capacity of domestic production, the government should initiatively organize large scales of production to get the economies of scale. So, the structure of production should be revised, reconstructed and reinvested to increase productivity. In addition, the domestic distribution system should be developed to reduce the costs of distribution, which will contribute to increase the competitiveness of domestic products. Simultaneously, while we are doing that, a large number of jobs will be created, solving the problem of unemployment in the trade liberalization process.

5.1.2. Automobile and Motorcycle industries

- ***Gradually eliminate the protection***

So far, the Automobile and Motorcycle industries have brought large amount of tax from import. So the immediate complete elimination of all tariff imposed on these importables would not be relevant. In addition, complete elimination of tariff will certainly increase unemployment causing bad effects on the society such as poverty and social problems. So, elimination of tariff in these industries should be carried out gradually and should be planned in detail.

- ***Develop supportive industries and post-sale service activities***

Under the effects of the trade liberalization, unemployment in these industries is likely to increase since domestic production would decrease due to the stronger competition from imported products. To offset this effect, the government should initiatively develop the supportive industries and enhance post-sale service activities. Furthermore, this will possibly makes the domestic products become more competitive.

- ***Strengthen the alliance among domestic enterprises***

It is very important that domestic enterprises share their experience and technology so that productivity will go up and the quality of the products will be improved. In the process of trade liberalization, protection of selected goods will no longer exist; these industries will face with stronger competition with high quality products from international enterprises. So, strengthening

the cooperation among domestic enterprises including the assemblers and supportive enterprises is an urgent mission to ensure the development of these industries.

5.2. Conclusion remarks

The findings of this research, considered as empirical results, as well as the theory both come to the conclusion that trade liberalization is an indispensable mission and deterministic trend in Vietnam in terms of the aspects of the costs and benefits analysis of trade protection. However, keep in mind that the trade liberalization process should be carried out gradually and be planned in detail to limit possible negative effects from liberalization. This process is also required to be combined and coordinated with other detail actions and policies to solve problems due to trade liberalization such as the unemployment, the competitiveness of domestic products, etc.

References

1. **Athukorala, P. (2005)**, *Trade Policy Reforms and the Structure of Protection in Vietnam*, Research School of Pacific and Asian Studies, Australian National University.
2. **Auffret, P. (2003)**, *Trade Reform in Vietnam: Opportunities with Emerging Challenges*, The World Bank, East Asia and Pacific Region, Poverty Reduction and Economic Management Sector Unit.
3. **Bhagwati, J.N. and Panagaria, A. and Srinivasan, T.N. (1998)**, *Lectures on International Trade – Second edition*, Massachusetts Institute of Technology.
4. **Department General of Vietnam Customs (2003)**, *The 2003 Customs Yearbook on Foreign Merchandise Trade*, Nam Hai Publisher - Department General of Vietnam Customs, Hanoi.
5. **Elena I. and Will M. and Wood C. (2001)**, *Economic Effects of the Vietnam – US Bilateral Trade Agreement*, The World Bank.
6. **Goulder, L.H et al. (1998)**, *The Cost-effectiveness of Alternative instruments for environmental protection in a second-best setting*, [www.rff.org/Documents/RFF-DP-98-22.pdf], accessed 25th April, 2006].
7. **GRIPS Development Forum (2003)**, *A Proposal for the Steel Industry in Vietnam Realistic Policy Options for an Import-Substitution Industry*, [http://www.grips.ac.jp/module/vietnam/steel_en.html], accessed 25th August 2006].
8. **GSO. (2006)**, *The Vietnamese International merchandise Trade for twenty years Renovation 1986 – 2005*, Statistical Publishing House, Hanoi.
9. **Hufbauer, G.C. and Elliott, K.A. (1994)**, *Measuring the Costs of Protection in the United States*, Institute for International Economics, Washington DC.
10. **IMF (2001)**, *Vietnam: Selected issues and Statistical Appendix*, IMF Staff Country Report No SM/01/334.
11. **John, C.W. (2001)**, *The Mineral Industry of Vietnam*, [<http://minerals.usgs.gov/minerals/pubs/country/2003/vmmyb03.pdf>], accessed 1st September 2006]
12. **Messerlin, P.A. (2001)**, *Measuring the Costs of Protection in Europe: European Commercial Policy in the 2000s*, Institute for International Economics, Washington DC.
13. **Mishima, K. (2005)**, *The Supplier System of Motorcycle Industry in Vietnam, Thailand and Indonesia – Localization, Procurement and Cost Reduction Processes*, [www.vdf.org.vn/IndustrialBook05/10-MISHIMA-Motorbike%20Suppliers.pdf], accessed 25th August 2006]

14. **MOI. (2006)**, *Six Weaknesses of Vietnamese Automobile industry*,
[<http://www.moi.gov.vn/EN/News/detail.asp?Sub=146&id=23882>, accessed 6th September, 2006]
15. **MPI. (2004)**, *Vietnam – Japan Joint Initiative to improve Business Environment with a view to strengthen Vietnam’s Competitiveness*,
[http://www.mpi.gov.vn/Bangbieu/Z495A_Chapter4.doc, accessed 6th September 2006]
16. **Panagariya, A. (2002)**, *Alternative approaches to Measuring the Costs of Protection*,
[<http://econwpa.wustl.edu:8089/eps/it/papers/0308/0308002.pdf>, accessed 25th April, 2006]
17. **Phan Huu Nhat Minh. (2002)**, *Measuring the Costs of Protection in Vietnam*, National Economics University, Hanoi.
18. **Riedel, J. and Parker, S. (2002)**, *An Assessment of the Economic Impact of the United States – Vietnam Bilateral Trade Agreement*, The National Political Publishing House, Hanoi.
19. **Sazanami, Y. and Urata, S. and Kawai, H. (1995)**, *Measuring the Costs of Protection in Japan*, Institute for International Economics, Washington DC.
20. **Tarr, D.G. and Morkre M. (1984)**, *Aggregate Costs to the United States of Tariffs and Quotas on Imports: General Tariffs Cut and Removal of Quotas on Automobile, Steel, Sugar, and Textiles*, Bureau of Economics Staff Report, Washington DC.
21. **The International Customs Journal (2005)**, *Bulletin International Des Douanes – Vietnam*, Journal No.185 (1st Edition), ISSN 1378 – 4048.
22. **Vietnam Economic News Online (2005)**, *Cracking down on Smuggling*,
[http://www.ven.org.vn/view_news.php?id=3825, accessed 7th September 2006]
23. **Vousden, N. (1990)**, *The Economics of Trade Protection*, Cambridge University Press.
24. **Wall, H.J. (1999)**, *Using the Gravity Model to estimate the Costs of Protection*, Review – February 1999, Federal Reserve Bank of St. Louis.
25. **Yansheng, Z. and Zhongxin, W. and Shuguang, Z. (1998)**, *Measuring the Costs of Protection in China*, Institute for International Economics, Washington DC.