

# **The Effects of the United States Granting MFN Status to Vietnam**

by

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## **I. Introduction**

Since the lifting of the U.S. embargo in 1994, trade between Vietnam and the United States has grown rapidly. The large U.S. market offers substantial potential for Vietnam to expand its exports, following the lead of the export-oriented economies of its region. However, Vietnam remains one of a handful countries to which the United States has not yet granted Most-Favored-Nation (MFN) status, and on which it imposes its general tariffs rather than the more widely used MFN tariffs.

The general tariff schedule involves much higher tariff rates than the MFN schedule on most commodities. Use of these tariffs clearly imposes costs on both Vietnam and the United States. Vietnamese exporters are unable to access the best markets for some of their products. U.S. imports are diverted from lower cost suppliers in Vietnam to higher cost sources elsewhere.

The objective of this paper is to assess the economic effects of the U.S. granting MFN status to Vietnam. We first assess the size of the trade distortions involved, and then analyze their consequences. Section II deals with the pattern of exports from Vietnam to the United States and the nature of the barriers imposed by use of the general tariffs. Section III describes the analytical framework and presents results and interpretation. Section IV presents the main conclusions.

## II. Recent Trends in Vietnam's Exports to the United States

### *Composition of Vietnam's Exports to the United States*

Since 1994, Vietnam's merchandise exports to the United States have increased rapidly, from \$54.0 million in 1994, to \$207.8 million in 1995, and \$337.5 million in 1996. In 1997 and in 1998, Vietnam's exports to the U.S. were \$407.1 million and \$588.7 million respectively (U.N. Comtrade System, 1994-1998). In 1996,<sup>1</sup> 4.8 percent of Vietnam's exports were shipped to the U.S., and accounted for 0.04 percent of total U.S. imports (World Bank, 1998a). Table 1 shows the evolution of Vietnam's exports to the U.S. by commodities for the years 1994 to 1998.<sup>2</sup>

Table 1 - *Vietnam's Exports to the U.S., 1994-1998 (millions of U.S. dollars)*

	1994	1995	1996	1997	1998
Agriculture and forestry	33.6	157.9	130.8	139.7	194.8
Processed agriculture	13.2	21.5	46.1	88.3	104
Beverage and tobacco	0.3	0.4	0.6	0.3	0.6
Coal, oil, gas	1.6	0.1	85.9	40.4	122.3
Textiles	0	0	0.2	0.3	0.4
Clothing	2.8	18.3	25.6	27.9	30.9
Light manufacturing	1.4	5.4	14.4	41.2	52.3
Basic manufacturing	0.5	1.6	1.5	2.7	6.7
Chemical, rubber, plastics	0.3	2.4	31.9	65.6	75
Electronics and machinery	0.3	0.1	0.5	0.7	1.6
Total	54.0	207.8	337.5	407.1	588.7

Source: U.N. Comtrade System

<sup>1</sup> The data for 1996 are analyzed in some detail in this paper since our simulation results are based on the 1996 data.

<sup>2</sup> The Global Trade Analysis (GTAP) model database was aggregated from the original 50 sectors to the thirteen sectors detailed in Appendix Table A1, which were chosen to provide a reasonable representation of Vietnam's trade patterns. This aggregation contains nonzero values for all exports to the United States except refined petroleum and coal products, and transportation equipment. Neither of these products seems likely to become a major export from Vietnam to the United States in the near future, so setting them to zero seems unlikely to be a serious problem.

In 1994 and 1995, agriculture and forestry, processed agriculture, and clothing dominated Vietnam's exports to the United States. In 1996, exports of petroleum, chemical, rubber, plastic products,<sup>3</sup> and light manufacturing emerged, giving Vietnam a much more diversified pattern of exports to the United States. Further increases in exports of chemical, rubber and plastic products and of light manufactures in 1997 and 1998 were mainly attributable to growth in footwear exports.

Appendix Table A2 presents the top 10 export commodities from Vietnam to U.S. according to 6-digit Harmonized System (HS) categories for the years 1994-1998. The top 10 commodities accounted for 91.3 percent of Vietnam's exports to the U.S. in 1994, 92.7 percent in 1995, 87.0 percent in 1996, 73.8 percent in 1997, and 84.3 percent in 1998. Coffee has been the leading export throughout the period. In 1996, exports of petroleum emerged, accounting for a quarter of Vietnam's total exports. The other leading export commodities included shrimps, rice, cashew nuts, clothing, footwear, and rubber products.

### ***MFN and General Tariff Analyses***

The United States applies the MFN rate in the U.S. tariff schedule to almost all of its WTO and non-WTO trading partners.<sup>4</sup> Countries not receiving U.S. MFN status are subject to the higher general rates. These rates are for the most part the statutory rates that were applied to U.S. imports under the Tariff Act of 1930 (also known as the Smoot-

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<sup>3</sup> Vietnam's main export item to the U.S. in this category is casual footwear using rubber.

<sup>4</sup> As of 1999, all countries except Afghanistan, Cuba, the Lao PDR, North Korea, Serbia/Montenegro, and Vietnam had MFN status. Albania, Armenia, Belarus, China, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan all have their MFN status reviewed annually.

Hawley Act). The United States retained the general rates primarily against Communist countries not participating in GATT.

Table 2 presents the MFN and general tariff rates for 42 traded commodities.

Table 2 - U.S. Tariffs against Vietnam's Exports MFN vs General Rates (percent)

GTAP	Description	Simple Average		Weighted Average					
		MFN	General	1994 Import Weights		1995 Import Weights		1996 Import Weights	
				MFN	General	MFN	General	MFN	General
1	Paddy rice	1.7	6.5	na	Na	na	na	na	na
2	Wheat	3.5	10.0	na	Na	na	na	na	na
3	Cereal grains	0.6	4.0	na	Na	na	na	1.4	3.6
4	Vegetables, fruits, nuts	5.4	20.8	0.2	1.8	0.3	2.9	0.1	1.2
5	Oil seeds	8.2	35.4	0.0	1.6	na	na	0.0	0.0
6	Sugar cane, sugar beet	2.1	na*	na	Na	na	na	2.5	na*
7	Plant-based fibers	0.3	1.6	na	Na	na	na	0.0	0.0
8	Crops n.e.c.	2.8	18.2	0.0	0.0	0.0	0.0	0.0	0.0
9	Bovine cattle, sheep, goats, horses	0.7	7.8	na	Na	na	na	na	na
10	Animal products n.e.c.	1.2	5.6	3.1	12.4	2.5	14.2	1.5	11.1
12	Wool, silk-worm cocoons	0.6	0.0	na	Na	na	na	na	na
13	Forestry	0.0	1.7	na	Na	na	na	0.0	0.0
14	Fishing	0.4	3.9	0.0	0.0	0.2	4.2	0.0	0.0
15	Coal	0.0	0.0	0.0	0.0	na	na	na	na
16	Oil	0.2	0.6	na	Na	na	na	0.4	1.3
17	Gas	0.0	0.0	na	Na	na	na	na	na
18	Minerals n.e.c.	0.7	10.0	3.4	7.5	1.1	10.0	1.3	10.3
19	Bovine cattle, sheep, goat, horse meat	3.4	23.9	na	Na	na	na	na	na
20	Meat products n.e.c.	4.7	23.1	na	na	na	na	na	na
21	Vegetable oils and fats	3.7	12.8	0.0	na*	na	na	na	na
22	Dairy products	27.8	29.9	na	na	na	na	na	na
23	Processed rice	5.8	23.6	8.8	35.0	8.8	35.0	8.8	35.0
24	Sugar	10.3	20.0	na	na	na	na	na	na
25	Food products n.e.c.	5.5	19.2	0.3	1.1	0.3	1.3	0.5	1.9
26	Beverage and tobacco products	16.8	92.0	2.8	18.1	4.5	22.1	2.2	17.4
27	Textiles	10.3	55.1	6.7	63.8	9.6	58.2	4.4	38.5
28	Wearing apparel	13.4	68.9	13.5	56.4	13.1	52.5	14.3	58.0
29	Leather products	5.6	33.0	11.9	46.3	9.2	28.4	8.4	22.8
30	Wood products	2.1	29.4	3.3	38.7	3.5	38.9	3.5	37.3
31	Paper products, publishing	1.3	22.7	0.9	21.9	0.3	4.1	1.6	25.4
32	Petroleum, coal products	1.3	8.6	na	na	0.0	4.3	na	na
33	Chemical, rubber, plastic, products	4.3	30.3	5.3	24.5	6.4	25.1	30.8	49.6
34	Mineral products n.e.c.	4.3	41.6	4.1	42.4	3.6	40.2	3.8	40.4
35	Ferrous metals	3.7	21.5	na	na	na	na	na	na
36	Metals n.e.c.	3.0	28.0	0.0	0.0	0.0	0.1	0.0	1.1
37	Metal products	3.6	38.9	na	na	3.3	43.4	4.5	45.0
38	Motor vehicles and parts	5.2	18.9	na	na	na	na	na	na
39	Transport equipment n.e.c.	3.0	28.4	na	na	na	na	2.8	28.3
40	Electronic equipment	2.8	34.0	2.1	35.0	na	na	4.1	36.8
41	Machinery and equipment n.e.c.	2.9	37.6	3.0	35.7	1.8	46.1	2.4	30.1
42	Manufactures n.e.c.	3.8	46.7	5.0	47.7	5.6	39.7	13.1	40.9
	Total	4.9	35.0	1.9	8.7	1.5	6.2	4.7	11.8

Note: In most cases, 'na' in the weighted averages means the absence of trade. 'na\*' reflects 'specific' tariffs for which *ad valorem* equivalent tariff rates are not available in Arce and Taylor's dataset.

Source: Authors' calculations, UN Comtrade System, UNCTAD TRAINS Database

The U.S. Tariff Schedule for 1997 was obtained from the UNCTAD TRAINS Database. Obtaining complete indicators of tariffs was hampered by the presence of ‘specific’ tariff rates. At the 8-digit level, 2,277 tariff lines out of 10,102 (or 22.5 percent of total tariff lines) are specific tariffs, or combinations of specific and *ad valorem* rates, whose protective effect cannot be determined without information on commodity prices. When specific tariffs apply, the *ad valorem* tariff equivalents that were computed by Arce and Taylor (1997) for U.S. imports from China were used to estimate *the ad valorem* impact on Vietnamese exports.<sup>5</sup> Simple averages at the 6-digit level were estimated and then the trade-weighted averages reported in Table 2 were then computed using data on U.S. imports from Vietnam obtained from the UN COMTRADE System. The aggregation was undertaken from the 6-digit level which is the most disaggregated available in the COMTRADE System. The *ad valorem* tariff equivalents of MFN and general rates cover almost the entire list (99.9 percent) of U.S. imports from Vietnam in 1996. A serious problem evident from Table 2 is the absence of trade in a number of commodities, particularly where the unweighted average tariff rates are relatively high. This suggests that Vietnam faces prohibitive tariffs on certain commodities. In this situation, the weighted average tariff may be very misleading—indicating zero protection when the protection rate is effectively infinite.

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<sup>5</sup> Arce and Taylor (1997) estimated the effects of the U.S. not renewing MFN status for imports from China. They constructed the *ad valorem* equivalents of specific or combination rates of the U.S. tariff schedule at the 10-digit level using the U.S. customs data on the value and quantity of imports. Their dataset covers 99.4 percent of U.S. imports from China. In 1995, the average trade-weighted MFN duty rate applied to U.S. imports from China was approximately 6 percent. Under the non-MFN rates, the trade-weighted tariff rate would rise to 44 percent. If China’s MFN status were rescinded, their simulation result revealed that Chinese exports to the U.S. would drop by approximately \$11 billion, or over 50 percent.

The average tariff rates weighted by U.S. imports from Vietnam differ substantially between years. The trade-weighted averages were 8.7 percent in 1994 and 6.2 percent in 1995 or 6.8 point and 4.7 point higher than MFN rates respectively. In 1996, however, the weighted average had risen to 11.8 percent implying that Vietnam's composition of exports had shifted towards commodities with higher tariffs. The difference between the MFN and general rates was 7.1 percentage points in 1996. The simple-average MFN duty rate of the 1997 U.S. Tariff Schedule was 4.9 percent, as against 35.0 percent for the general rate suggesting that the differences in the weighted average tariff rates may significantly understate the effects of the general tariffs on Vietnam's exports.

Table 3 compares Vietnam's exports to the EU15, Japan, and the U.S. by GTAP4 categories. Despite the recent increases in Vietnam's exports to the U.S., the U.S. share of 4.8 percent is clearly low relative to the EU15's share of 24.0 percent and Japan's share of 28.7 percent. While Vietnam's exports of 'crops n.e.c.' (category 8) of \$119 million were significant, this was attributable mainly to coffee for which the tariff rate was already zero. In contrast, Vietnam's exports of 'wearing apparel' (category 28) to the United States were very small. While Vietnam's exports of 'wearing apparel' to the EU15<sup>6</sup> and Japan were \$456 million and \$489 million respectively, exports to the U.S. accounted for only \$26 million in 1996.

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<sup>6</sup> Vietnam signed a preferential trade agreement with the EU in 1992. This involved the granting of quotas to export textiles and clothing to Europe and the granting of a 2 percentage point preference on imports of selected items under over 200 tariff lines falling chapters 51-63 of the HS tariff schedule (Centre for International Economics, 1998).

Table 3 - Vietnam's exports to the EU15, U.S. and Japan in 1996

	EU15	Share	Japan	Share	U.S.	Share
	(US\$1,000)	(%)	(US\$1,000)	(%)	(US\$1,000)	(%)
1 Paddy rice	752	0.0	89	0.0	0	0.0
2 Wheat	0	0.0	0	0.0	0	0.0
3 Cereal grains	1	0.0	230	0.0	51	0.0
4 Vegetables, fruits, nuts	4809	0.3	2026	0.1	8276	2.5
5 Oil seeds	102	0.0	1301	0.1	2	0.0
6 Sugar cane, sugar beet	1	0.0	0	0.0	14	0.0
7 Plant-based fibers	176	0.0	0	0.0	7	0.0
8 Crops n.e.c.	171038	10.1	40941	2.0	119436	35.4
9 Bovine cattle, sheep, goats, horses	0	0.0	0	0.0	0	0.0
10 Animal products n.e.c.	4500	0.3	6802	0.3	2782	0.8
12 Wool, silk-worm cocoons	0	0.0	54	0.0	0	0.0
13 Forestry	1704	0.1	3503	0.2	42	0.0
14 Fishing	430	0.0	7252	0.4	213	0.1
15 Coal	19215	1.1	69041	3.4	0	0.0
16 Oil	0	0.0	635430	31.6	85834	25.4
18 Minerals n.e.c.	19886	1.2	6094	0.3	36	0.0
19 Bovine cattle, sheep and goat, horse meat	1	0.0	0	0.0	0	0.0
20 Meat products n.e.c.	2	0.0	1004	0.0	0	0.0
21 Vegetable oils and fats	60	0.0	2077	0.1	0	0.0
22 Dairy products	0	0.0	0	0.0	0	0.0
23 Processed rice	9	0.0	47	0.0	6568	1.9
24 Sugar	0	0.0	0	0.0	0	0.0
25 Food products n.e.c.	40933	2.4	393598	19.6	39574	11.7
26 Beverage and tobacco products	175	0.0	4150	0.2	591	0.2
27 Textiles	14760	0.9	94429	4.7	182	0.1
28 Wearing apparel	456693	27.1	488580	24.3	25567	7.6
29 Leather products	310299	18.4	72367	3.6	11746	3.5
30 Wood products	76998	4.6	81493	4.1	1081	0.3
31 Paper products, publishing	929	0.1	4962	0.2	11	0.0
32 Petroleum, coal products	1	0.0	0	0.0	0	0.0
33 Chemical, rubber, plastic, products	339162	20.1	43148	2.1	31863	9.4
34 Mineral products n.e.c.	39842	2.4	6981	0.3	1319	0.4
35 Ferrous metals	34	0.0	1185	0.1	0	0.0
36 Metals n.e.c.	1598	0.1	2132	0.1	61	0.0
37 Metal products	3115	0.2	4674	0.2	97	0.0
38 Motor vehicles and parts	75	0.0	342	0.0	0	0.0
39 Transport equipment n.e.c.	3060	0.2	590	0.0	19	0.0
40 Electronic equipment	5336	0.3	7086	0.4	154	0.0
41 Machinery and equipment n.e.c.	8037	0.5	18052	0.9	325	0.1
42 Manufactures n.e.c.	162582	9.6	11611	0.6	1602	0.5
Total	1686316	100.0	2011272	100.0	337451	100.0
Share (%)	24.0		28.7		4.8	

Source: UN Comtrade System 1996, World Development Indicators 1988.

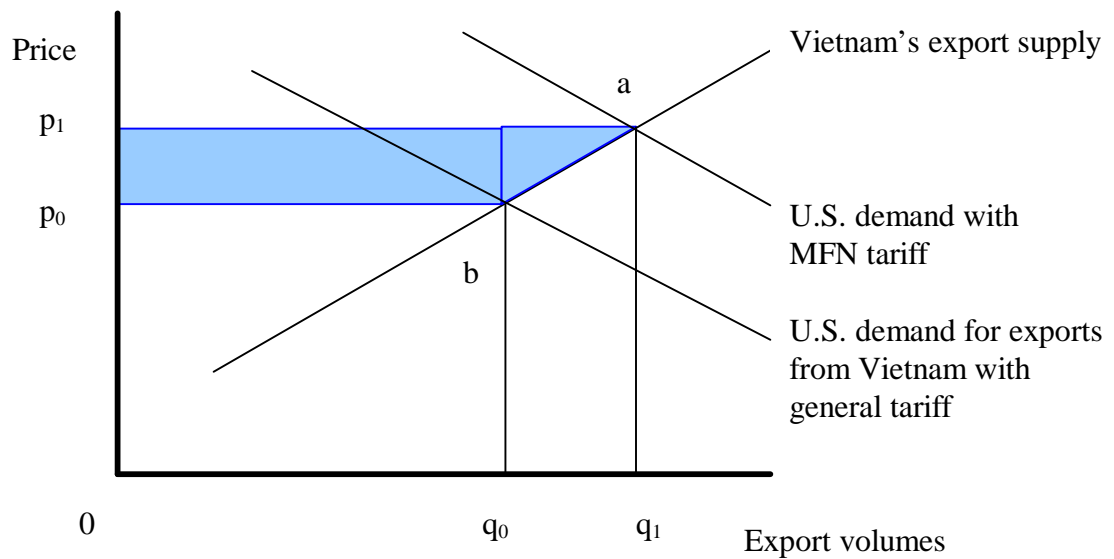


### III. Analysis and Results

#### *Theory of tariff liberalization by a trading partner*

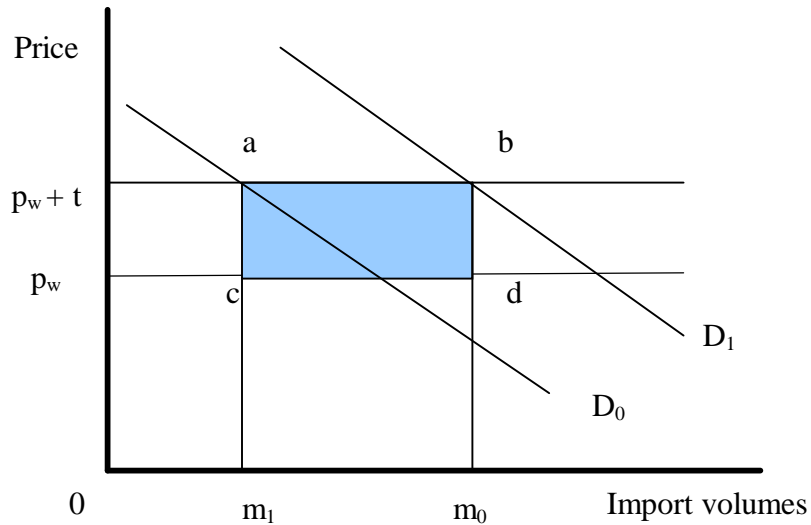
The key features of the analysis and result can be understood in terms of a relatively simple set of partial equilibrium diagrams, of the type used by Martin (1997). The reduction in the U.S. tariff on exports from Vietnam shifts the demand curve for exports from Vietnam to the right, as is shown in Figure 1. The result is an increase in both the volume of exports from Vietnam to the United States, and an increase in the price received for these exports from  $p_0$  to  $p_1$ . The resulting increase in the price of exports to the United States creates welfare benefits to Vietnam, measured in Figure 1 by area  $p_1abp_0$ .

Figure 1 - Impacts of a reduction in the tariff on Vietnam's exports to the USA



Because of the extensive distortions inherent in Vietnam's current trade regime, there are likely to be some other welfare changes resulting from changes in the volumes of Vietnam's imports subject to distortions. If the change in export market opportunities causes a rise in the volume of imports subject to tariffs, there will be an increase in welfare because each unit of imports costs less on world markets than its value to users behind the tariff wall. In Figure 2, this effect is represented by the shift in the import demand curve for imports from partner countries from  $D_0$  to  $D_1$ , and the consequent gain in welfare is shown by the shaded area  $abdc$ .

Figure 2 - Impacts on import volumes passing across tariff barriers



When access to the U.S. market increases, there are likely to be increases in Vietnam's import demands for several reasons. First, the rise in domestic prices resulting from the increases in prices for exports to the USA is likely to switch demand towards imported goods. Second, there will be changes in the volumes of imports resulting from changes in real incomes. While there is some controversy in the literature as to whether these should be included in measurements of welfare (Anderson and Martin 1996), they are included in money-metric measures of the type used in the GTAP model.

To capture all of these impacts requires a fully specified general equilibrium model and we use the GTAP global general equilibrium model to capture the needed interactions between actors and sectors.

### ***Model Structure and Data***

The Global Trade Analysis (GTAP) model used in the analysis is a comprehensive multi-region, multi-commodity general equilibrium model incorporating global production, consumption, trade and policy distortions. The model is documented comprehensively in

Hertel (1997), with updated information on the GTAP web site.<sup>7</sup> The model assumes that firms use constant returns to scale technology in perfectly competitive product markets. Household consumption behavior is represented by a constant demand elasticity (CDE) expenditure function, while consumption and government demand are characterized by constant value shares. The equilibrium levels of production and consumption are determined by global demand and supply of the product and zero economic profit for firms. Traded goods are linked through international trade and classified by country of origin using the standard Armington assumption.

The version of the model used in this analysis is based on the Version 4 GTAP database. The base year of this data set is 1995. However, because of the rapid changes in Vietnam's exports to the United States following the removal of the trade embargo, the database was modified to reflect the value and the composition of Vietnam's exports to the United States in 1996. This is particularly important because it reduces the number of zero entries for Vietnam's exports to the United States.<sup>8</sup> On Vietnam's import side, we used the protection data in the Version 4 GTAP database. Table 4 summarizes the weighted-average tariff rates for the United States against Vietnam and Vietnam's MFN tariff rates.

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<sup>7</sup> [www.agecon.purdue.edu/gtap](http://www.agecon.purdue.edu/gtap)

<sup>8</sup> Models of this type are unable to move from zero levels of trade to non-zero levels.

Table 4 – *Weighted Average Tariff Rate, the United States and Vietnam (percent)*

	United States		Vietnam
	<u>MFN</u>	<u>General</u>	<u>MFN</u>
Agriculture and forestry	0.0	0.3	9.1
Processed agriculture	1.6	6.6	23.5
Beverage and tobacco	2.2	17.4	121.0
Coal, oil, gas	0.4	1.3	1.2
Textiles	4.4	38.5	28.6
Clothing	14.3	58.0	45.7
Light manufacturing	8.5	25.9	15.0
Basic manufacturing	3.7	39.0	10.8
Chemical, rubber, plastics	30.8	49.6	4.9
Electronics and machinery	3.1	32.2	5.3
<b>Total</b>	<b>4.7</b>	<b>11.8</b>	<b>16.9</b>

*Source:* UN Comtrade System, UNCTAD Trains Database, GTAP4 Database

The simulation was conducted by reducing U.S. tariffs against imports from Vietnam from their 1996 general rate levels to their MFN levels. The U.S. tariff cuts are substantial especially in such sectors as clothing and basic manufacturing. Vietnam's current protection at on average 17 percent is likely to be important enough to induce substantial second-best welfare benefits.

### ***Results of the Experiment***

Table 5 shows the changes in Vietnam's exports to the United States and to the world as well as the changes in Vietnam's imports.

Table 5 - *Changes in Vietnam's Exports and Imports (percent)*

	Export Changes		Import Changes
	<u>To the U.S.</u>	<u>To the World</u>	<u>From the World</u>
Agriculture and forestry	-1 (-2)	-3 (-31)	2.4 (3)
Processed agriculture	19 (10)	-2 (-21)	1.1 (4)
Beverage and tobacco	125 (1)	18 (1)	1.8 (6)
Coal, oil, gas	4 (3)	0 (-5)	-0.2 (0)
Textiles	241 (0.4)	-2 (-4)	13.2 (103)
Clothing	1512 (384)	38 (332)	15.9 (6)
Light manufacturing	147 (23)	-3 (-28)	1.7 (4)
Basic manufacturing	329 (4)	-1 (-1)	0.3 (3)
Chemical, rubber, plastics	64 (12)	14 (11)	0.5 (7)
Electronics and machinery	284 (1)	-3 (-2)	0.7 (14)
Total	227 (430)	3.6 (250)	2.0 (163)

Note: Figures in parentheses are value changes in millions of dollars. The totals don't strictly add up due to the 'other' categories.

The results suggest that Vietnam's exports to the United States would more than double following the granting of MFN status, increasing from the 1996 baseline level of \$338 million to \$768 million.<sup>9</sup> The increase in exports of clothing is particularly significant, with almost a fifteen-fold increase relative to the baseline.<sup>10</sup> The increase in exports to the U.S. of beverages and tobacco, textiles, basic manufacturing, and electronics and machinery are significant in percentage changes, but negligible in value

<sup>9</sup> In an earlier version of this paper and in *Vietnam: Rising to the challenge* (World Bank, 1998b), the effects of granting MFN status were estimated to be even larger than in the current paper. This is because we did not have estimates of the tariff equivalent of 'specific' tariffs when preparing the first paper, and excluded these commodities from the calculation of the average tariff. When these tariff equivalents became available, we found that the tariffs on these commodities (e.g. oil) were relatively low. Their inclusion therefore reduced our estimates of the average tariffs applied, and hence the trade-expanding effects of liberalization.

<sup>10</sup> This result is consistent with the recent experience of Cambodia. The United States granted MFN status to Cambodia on September 25, 1996. Since then, Cambodia's merchandise exports to the United States have increased rapidly, from \$4.2 million in 1996 to \$102.9 million in 1997 and \$134.3 million in 1998. The substantial increase in Cambodia's exports is mostly attributed to the clothing sector. In 1998, Cambodia's exports of this category accounted for \$130.2 million or 97 percent of its total exports to the United States. While the United States represented only 4 percent in Cambodia's total exports in 1996, its share increased to 21 percent in 1998.

terms, reflecting the very low initial levels of these exports (Table 1). Exports of agriculture and forestry decrease by 1 percent from the baseline. This is because the general tariff rates of major agricultural exports such as coffee and shrimps are zero (Appendix Table 2) implying that these industries do not benefit from the move to MFN status and the labor-intensive manufacturing sectors that do benefit are able to compete labor away from the agricultural sector. The overall increases in Vietnam's exports of \$250 million are less than the increase in exports to the U.S., because of a shift in exports from other markets to the United States. The third column shows that Vietnam's imports from the world increase by 2.0 percent. About two thirds of the increase in imports are attributed to textile sector, reflecting the increase in demand for textiles as inputs into the clothing sector. From the point of view of the United States, this experiment involves an unwinding of the trade diversion away from Vietnamese imports that results from the currently higher tariffs against imports from Vietnam.<sup>11</sup>

Table 6 reports the changes in output by sector in Vietnam and in the United States. The increase in production of clothing by 31 percent is a direct consequence of the increase in exports from this industry. The increase in production of textiles follows from the increase in demand for textiles as inputs into the clothing industry. The increase in production of chemical, rubber and plastics products appears to reflect an increase in the production of casual footwear. The production in other sectors decreases slightly since the domestic resources have been diverted into now more profitable sectors such as

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<sup>11</sup> The increase in U.S. imports of clothing from Vietnam would reduce its imports from other countries by about 0.7 percent.

clothing. The output of clothing in the United States decreases by only 0.1 percent, and the overall impact on U.S. production patterns is negligible relative to the U.S. size of the economy.

Table 6 - Changes in Output (percent)

	Vietnam	USA
Agriculture and forestry	-0.7	0
Processed agriculture	-2	0
Beverage and tobacco	-1.2	0
Coal, oil, gas	-0.5	0
Textiles	7	-0.03
Clothing	31	-0.1
Light manufacturing	-3	0
Basic manufacturing	-2	0
Chemical, rubber, plastics	2	0
Electronics and machinery	-2	0

Table 7 shows the key results for a range of economy-wide variables.

Table 7 - Key Results of the U.S. Granting MFN Status for Vietnam

	Elasticity Standard		Elasticity Minus 50%		Elasticity Plus 50%	
	Vietnam	United States	Vietnam	United States	Vietnam	United States
Export Value (percent)	3.6	0.01	0.9	0.002	12.1	0.04
Export Price	1.5	-0.002	0.6	-0.001	3.3	-0.005
Export Volume	2.1	0.01	0.3	0.003	8.8	0.04
Price Index (percent)	0.8	-0.00	1.7	-0.01	0.4	-0.00
Real Income per Capita (percent)	0.9	0.001	0.4	0.000	2.4	0.003
Decomposition of Equivalent Variation						
Total EV (millions of dollars)	118	56	51	9	315	175
of which						
Allocative Component	45	77	12	20	151	231
Terms of Trade Component	73	-21	39	-11	164	-56
Tariff Revenues (millions of dollars)	44	3	10	-16	150	60

The first pair of columns show the results using the standard values of Armington parameters. With the MFN status, Vietnam's export price and export volume increase by



1.5 percent and 2.1 percent respectively. This in turn increases the total value of Vietnamese exports by 3.6 percent. As goods are redirected from the domestic market to export markets, the domestic consumer price index rises by 0.8 percent. However, higher foreign exchange earnings from increased exports enable Vietnam to import more, and this in turn leads to an increase in tariff revenues of \$44 million. This increase in tariff revenues provides a rough indication of the second-best welfare gains from liberalization. It measures the difference between the value of the goods in the country and their value at the border, times the change in the quantity imported, and indicates both the second-best change in tariff revenues and in welfare.

Overall, Vietnam's welfare measured by Equivalent Variation (EV) rises by \$118 million. Vietnam benefits both from improved efficiency of resource allocation (\$45 million) and from terms of trade gains (\$73 million). This is about a 0.9 percent increase in real expenditure per capita.

The effects of granting MFN treatment to Vietnam on the U.S. economy are relatively small. Overall, the welfare of the United States increases by \$56 million. While the U.S. is positively affected by the improved resource allocation of \$77 million, the gains are partially offset by a deterioration in its terms of trade of \$21 million as the USA increases its demand for imports from Vietnam. While the specific monetary estimates of welfare gains are sensitive to the elasticities of substitution used, the qualitative results are invariant, showing worthwhile gains to both Vietnam and the United States in all cases.

Results of the type discussed above are known to be sensitive to the Armington elasticities—parameters which reflect the ease of substitution between commodities by source, and for which the available econometric evidence is weak. In order to test the

robustness of the results by aggregated commodities, experiments were conducted decreasing the parameters by 50 percent (the second pair of columns), and increasing them by 50 percent (the third pair of columns).<sup>12</sup> Table 7 shows that the results are sensitive to the values of these parameters. With the increase (decrease) in the Armington parameters, the change in EV increases (decreases) more than 50 percent.

Since the large portion of welfare change is attributable to the increase in exports of clothing, a sectoral sensitivity analyses was conducted on the change in Vietnam's exports to the United States. The first column of Table 8 shows the results using the standard values of Armington parameters (from Table 5), the second column decreasing the parameters by 50 percent, and the third column increasing them by 50 percent.

Table 8 – *Changes in Vietnam's Exports to the U.S., Sectoral Sensitivity Analyses (percent)*

	<u>Elasticity</u> <u>Standard</u>	<u>Elasticity Minus</u> <u>50%</u>	<u>Elasticity</u> <u>Plus 50%</u>
Agriculture and forestry	-1	-0.6	-7
Processed agriculture	19	10	19
Beverage and tobacco	125	52	201
Coal, oil, gas	4	2	6
Textiles	241	84	469
Clothing	1512	308	5329
Light manufacturing	147	59	237
Basic manufacturing	329	108	682
Chemical, rubber, plastics	64	28	97
Electronics and machinery	284	98	575

The results show that the increase in clothing exports is especially sensitive to the parameter values, reflecting very small initial level of Vietnam's exports; a large tariff cut

<sup>12</sup> We increased (decreased) the elasticities of substitutions between domestic products and imports as well as those between import sources by 50 percent.

by the U.S.; and relatively high values of Armington parameters. If we increase the parameter values by 50 percent, exports of clothing to the United States increase by a further three and a half times. Whether Vietnam could achieve such high growth rates in clothing exports to the United States would depend upon the U.S. response. If there were a surge of textile and apparel exports from Vietnam as a result of granting MFN status, the United States might seek to impose textile import quotas.<sup>13</sup>

### ***Caveats and Qualifications on the Results***

Sensitivity analysis on the Armington elasticities of substitution reported in Table 7 and Table 8 revealed that the results are sensitive to the values of these parameters. When the elasticities of substitution between domestic goods and imports and those between import sources are both increased by 50 percent, the change in EV increases by more than 50 percent. Gehlhar (1994) has shown that the standard elasticities used in the GTAP model, while derived from the best available econometric evidence, seem to be too low to capture the changes in trade patterns over time. Gehlhar found that it was necessary to roughly double the values of these elasticities if long-run changes in trade patterns were to be captured, a finding that is supported in recent work by Liu and al. (2000). Based on the sensitivity results presented in Table 7, this would likely result in a welfare gain to Vietnam of over \$400 million per year.

Another reason to think that our estimates are conservative is examination of the estimated tariff rates. The general rates that we estimated using Vietnam's current pattern of exports to the USA are roughly a quarter of the average rates that Arce and Taylor's

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<sup>13</sup> Because Vietnam is not a member of the WTO, such quotas would not be constrained by the phase-out requirements of the WTO Agreement on Textiles and Clothing (ATC).

estimate would be applied against China in the absence of MFN (Arce and Taylor, 1997). Since Vietnam's current pattern of exports is strongly biased against the goods subject to high general tariff rates, the real rate of protection is likely to be much higher than the weighted average numbers would suggest—because prohibitive tariffs on many goods are currently assigned a zero weight, and many other goods with high tariffs have very low trade values. Since Vietnam's pattern of exports is very likely to evolve towards that of China, this higher rate is likely to be more representative in the longer term.

Further, the experiment considered focuses only on the impacts of actions by the United States. In reality, any decision by the United States to grant MFN arises from the ongoing bargaining process in which Vietnam is likely to make 'concessions' that will increase the efficiency and competitiveness of its economy. Without knowledge of the size of the reductions in Vietnam's protection, it is unclear how large the consequent economic benefits are likely to be. However, past research (see, for example, Martin and Winters 1996; Bach et al. 1999) suggests that the largest gains from reciprocal trade liberalization tend to accrue to the countries reducing their own barriers, rather than to those benefiting from reductions in the barriers they face in foreign markets.

#### **IV. Conclusions**

In this paper, the direct impacts on Vietnam's trading opportunities of the U.S. granting Most-Favored-Nation (MFN) treatment were first estimated by building up from the resulting level of tariffs applied to individual traded goods. Then, the economic impacts on Vietnam were inferred using simulations with the Global Trade Analysis

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(GTAP) model. The results revealed that the increased market access to the United States brings significant welfare gains to Vietnam. The direct terms of trade improvement resulting from increased market access accounts for 60 percent of the total gain, with the remaining 40 percent derived from second-best induced gains in efficiency. Exports to the United States more than doubled, from \$338 million to \$768 million.<sup>14</sup> The estimated increase in exports of clothing is especially significant, with these exports increasing almost fifteen-fold while exports of agricultural commodities decreased slightly. Total welfare as measured by Equivalent Variation (EV) increased by \$118 million or 0.9 percent increase in real expenditure per capita. By granting MFN status to Vietnam, the United States also gains from improved resource allocation although some of the gains are offset by deterioration in its terms of trade. The gains for the United States were estimated to be around \$56 million per year.

The model results should be interpreted as extremely conservative, lower-bound, estimates of the benefits of MFN access to the United States. They are based on a purely static framework, on estimates of protection and trade elasticities that are very likely underestimated, and they do not take into account the benefits of Vietnam's own liberalization. Even with these caveats, they point to substantial benefits to both Vietnam and the United States.

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<sup>14</sup> As Vietnam's exports to the United States have been growing rapidly since the lifting of the embargo in 1994, the magnitude of the trade-expansion resulting from MFN status may be larger by the time Vietnam obtains MFN. Based on 1998 values, the increase in exports would have been around \$750 million per year.

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Abstract: The Effects of the United States' Granting MFN Status to Vietnam. - Since the lifting of the United States' embargo on trade with Vietnam, exports from Vietnam to the USA have risen dramatically. However, these exports remain subject to U.S. General tariff rates which are much higher than MFN rates. This study uses a computable general equilibrium model to examine the consequences of the U.S. granting MFN status to Vietnam. Exports to the United States more than double, with particularly large increases in labor-intensive commodities. The welfare gains to Vietnam are very conservatively estimated at around \$120 million per year, with sixty percent from terms of trade improvements and the remainder from improvements in allocative efficiency. The welfare gains to the United States are estimated at \$56 million per year. JEL F14, C68, O53.

## Appendix

**Table A1. Aggregation of the GTAP Sectors Used for Vietnam**

### **1. Agriculture and forestry**

1. paddy rice
2. wheat
3. cereal grains
4. vegetables, fruits, nuts
5. oil seeds
6. sugar cane
7. plant based fibers
8. crops n.e.c.
9. bovine cattle, sheep, goat, etc
10. animal products
12. wool, silk-worm, cocoons
13. forestry
14. fishing

### **2. Processed agriculture**

19. bovine, cattle etc meat
20. meat products
21. vegetable oils & fats
22. daily products
23. processed rice
24. sugar
25. food products n.e.c.

### **3. Beverage and tobacco products**

26. beverages & tobacco products

### **4. Coal, oil, gas**

15. coal
16. oil
17. gas
18. minerals, n.e.c.

### **5. Refined petroleum and coal products**

32. petroleum & coal products

### **6. Textiles**

27. textiles

### **7. Apparel**

28. apparel

### **8. Light manufacturing**

29. leather products
30. wood products
42. manufactures n.e.c.

### **9. Basic manufacturing**

31. paper products, publishing
34. mineral products
35. ferrous metals
36. metal n.e.c.
37. metal products

### **10. Chemical, rubber, plastic products**

33. chemical, rubber, plastic products

### **11. Transport equipment**

38. motor vehicles & parts
39. transport equipment n.e.c.

### **12. Electronics and machinery**

40. electronic equipment
41. machinery & equipment

### **13. Others**

43. electricity
44. gas manufacture, distribution
45. water
46. construction
47. trade, transport
48. financial business, recreational services
49. pubic administration and defense, education, health services
50. dwellings



Table A2a - Leading Vietnam's Export Commodities to the U.S. 1994

	HS Code	Description	Imports	Share in Total Exports	General Tariff Rates	MFN Tariff Rates
			(US\$1,000)	(%)	(%)	(%)
1	90111	Coffee, not roasted or decaffeinated	29017	53.8	0.0	0.0
2	30613	Frozen shrimps and prawns	5352	9.9	0.0	0.0
3	100630	Semi-milled or wholly milled rice	5339	9.9	35.0	8.8
4	90112	Decaffeinated coffee, not roasted	2145	4.0	0.0	0.0
5	620520	Men's or boys' shirts of cotton	1666	3.1	67.5	14.9
6	151311	Crude coconut (copra) oil and fractions	1554	2.9	n.a.	0.0
7	270111	Anthracite, not agglomerated	1548	2.9	0.0	0.0
8	90240	Black tea	999	1.9	0.0	0.0
9	621600	Gloves, mittens and mitts	986	1.8	37.2	11.0
10	420292	Containers with surface of plastic or textiles	651	1.2	46.4	11.9
		Total	49257	91.3		

Table A2b - Leading Vietnam's Export Commodities to the U.S. 1995

	HS Code	Description	Imports	Share in Total Exports	General Tariff Rates	MFN Tariff Rates
			(US\$1,000)	(%)	(%)	(%)
1	90111	Coffee, not roasted or decaffeinated	146025	70.3	0.0	0.0
2	30613	Frozen shrimps and prawns	17067	8.2	0.0	0.0
3	621600	Gloves, mittens and mitts	8212	4.0	37.2	11.0
4	620520	Men's or boys' shirts of cotton	6899	3.3	67.5	14.9
5	90112	Decaffeinated coffee, not roasted	5642	2.7	0.0	0.0
6	640399	Footwear with rubber soles, leather uppers	3184	1.5	22.7	8.3
7	330129	Essential oils (incl. concretes and absolutes)	1606	0.8	13.3	1.0
8	180100	Cocoa beans, whole or broken	1408	0.7	0.0	0.0
9	400122	Technically specified natural rubber	1279	0.6	0.0	0.0
10	30420	Frozen fish fillets	1257	0.6	1.7	0.3
			192579	92.7		

Table A2c - Leading Vietnam's Export Commodities to the U.S. 1996

	HS Code	Description	Imports	Share in Total Exports	General Tariff Rates	MFN Tariff Rates
			(US\$1,000)	(%)	(%)	(%)
1	90111	Coffee, not roasted or decaffeinated	115708	34.3	0.0	0.0
2	270900	Petroleum oils	85834	25.4	1.3	0.4
3	30613	Frozen shrimps and prawns	28896	8.6	0.0	0.0
4	640291	Footwear covering the ankle of rubber, plastics	12658	3.8	55.0	32.9
5	640411	Sports footwear, with rubber or plastic soles	12463	3.7	57.2	34.5
6	620520	Men's or boys' shirts of cotton	9477	2.8	67.5	14.9
7	80130	Cashew nuts, fresh or dried	8015	2.4	0.9	0.0
8	640399	Footwear with rubber soles, leather uppers	7899	2.3	22.7	8.3
9	100630	Semi-milled or wholly milled rice	6568	1.9	35.0	8.8
10	621600	Gloves, mittens and mitts	6014	1.8	37.2	11.0
			293532	87.0		

Table A2d - Leading Vietnam's Export Commodities to the U.S. 1997

	HS Code	Description	Imports	Share in Total Exports	General Tariff Rates	MFN Tariff Rates
			(US\$1,000)	(%)	(%)	(%)
1	90111	Coffee, not roasted or decaffeinated	112033	27.5	0.0	0.0
2	270900	Petroleum oils	37448	9.2	0.4	1.3
3	640411	Sports footwear, with rubber or plastic soles	37411	9.2	34.5	57.4
4	30613	Frozen shrimps and prawns	36109	8.9	0.0	0.0
5	640399	Footwear with rubber soles, leather uppers	23401	5.7	8.3	22.7
6	100630	Semi-milled or wholly milled rice	21588	5.3	8.8	35.0
7	640299	Footwear not covering the ankle, of rubber or plastics	16663	4.1	25.9	48.7
8	80130	Cashew nuts, fresh or dried	15984	3.9	0.0	0.9
9	640391	Footwear with rubber soles and leather uppers	14417	3.5	7.8	20.0
10	160520	Shrimps and prawns, prepared or preserved	10352	2.5	3.5	10.0
			300637	73.8		

Table A2e - Leading Vietnam's Export Commodities to the U.S. 1998

	HS Code	Description	Imports	Share in Total Exports	General Tariff Rates	MFN Tariff Rates
			(US\$1,000)	(%)	(%)	(%)
1	90111	Coffee, not roasted or decaffeinated	147643	25.1	0.0	0.0
2	270900	Petroleum oils	122018	20.7	0.4	1.3
3	30613	Frozen shrimps and prawns	63296	10.8	0.0	0.0
4	640299	Footwear not covering the ankle, of rubber or plastics	60826	10.3	25.9	48.7
5	640399	Footwear with rubber soles, leather uppers	38714	6.6	8.3	22.7
6	80130	Cashew nuts, fresh or dried	23494	4.0	0.0	0.9
7	160520	Shrimps and prawns, prepared or preserved	13683	2.3	3.5	10.0
8	620520	Men's or boys' shirts of cotton	9142	1.6	14.9	67.5
9	640391	Footwear with rubber soles and leather uppers	8974	1.5	7.8	20.0
10	30420	Frozen fish fillets	8795	1.5	0.3	1.7
			496584	84.3		

Source: UN Comtrade System

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