

# A General Equilibrium Analysis of the Economic Impacts of Vietnam's Accession to AFTA.

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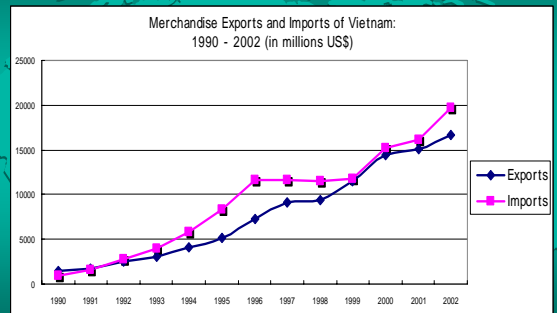
## The main areas in Trade policy reforms of Vietnam

1. Relaxing the restrictions on entry into foreign trade activities.
2. Introducing market-based trade policy instruments including quantitative restrictions and tariff system.
3. Liberalizing the foreign exchange regime.
4. Participating in Regional and Multilateral Trading Agreements

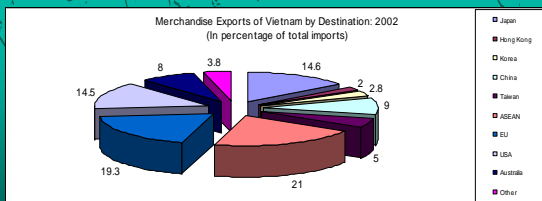
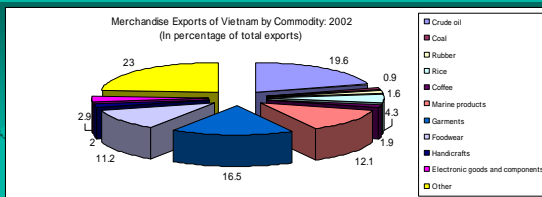
## Joining Trade Agreements

1. Trade Agreement with the EU in 1992
2. Membership in ASEAN and ASEAN Free Trade Area (AFTA) since 1995
3. Membership in APEC since 1998
4. Bilateral Trade Agreement with the U. S in 2001
5. Negotiating for membership in WTO since 1995.

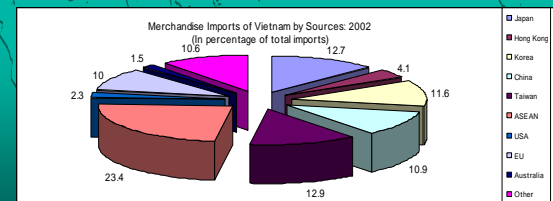
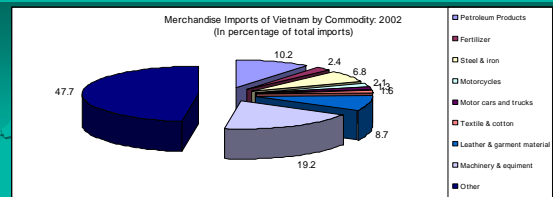
## Foreign trade performance of Vietnam



## Structure of Vietnam's Merchandise Exports



## Structure of Vietnam's Merchandise Imports



## Position of Vietnam Economy in ASEAN-10

Macro-Economic Indicators of ASEAN 10 Countries in 2002.

	Real GDP growth rate (%)	GDP per capita in US\$	GDP (current US\$ bn)	Population (ml)	Exports (US\$ ml)	Imports (US\$ ml)	Openness index (%)	Secondary Enrollment Ratio (%)
<b>Brunei</b>	3.2	12,971	4.66	0.36	na	Na	na	na
<b>Cambodia</b>	5	310	4.09	13.2	2,360	2,696	120	27
<b>Indonesia</b>	4.1	972	205.7	211.7	61,934	50,689	54.7	47.4
<b>Laos</b>	5.9	362	2	5.5	334	642	49	28.6
<b>Malaysia</b>	5.2	4,175	101.4	24.3	108,281	91,673	155.5	61
<b>Myanmar</b>	5.1	179	8.7	48.8	1,187	2,524	49	34.2
<b>Philippines</b>	4.5	987	78.86	79.9	38,142	38,532	65.6	79
<b>Singapore</b>	1.1	20,987	88.145	4.2	124,794	121,084	270	84
<b>Thailand</b>	6.8	2,291	114.125	61.6	82,104	72,967	70	84.2
<b>Vietnam</b>	7.2	481	38.67	80.4	19,480	20,884	110	61.4
<b>Total</b>	<b>5</b>	<b>1,267</b>	<b>646.35</b>	<b>530</b>	<b>450,016</b>	<b>401,091</b>		

Source: ASEAN Secretariat, 2003; World Bank, World Development Indicators 2003.

## CEPT liberalization scheme

Country	Inclusion List		Temporary Exclusion List		Sensitive List		General Exclusion List		Total
	Tariff lines	Share (%)	Tariff lines	Share (%)	Tariff lines	Share (%)	Tariff lines	Share (%)	
Brunei	6105	94	135	2.1	14	0.2	239	3.7	6493
Indonesia	6622	91.8	545	7.6	4	0.1	45	0.6	7216
Laos	533	15	2831	79.7	96	2.7	91	2.6	3551
Malaysia	8648	95.1	276	3	104	1.1	63	0.7	9091
Myanmar	2356	43.1	2987	54.6	21	0.4	108	2	5472
Philippine	5221	91.6	385	6.8	68	1.2	28	0.5	5702
Singapore	5739	98	0	0	0	0	120	2	5859
Thailand	9040	99.1	79	0.9	7	0.1	0	0	9126
<b>Vietnam</b>	<b>1718</b>	<b>57</b>	<b>1147</b>	<b>38</b>	<b>23</b>	<b>0.8</b>	<b>127</b>	<b>4.2</b>	<b>3015</b>
<b>Total</b>	<b>45982</b>	<b>82.8</b>	<b>8385</b>	<b>15.1</b>	<b>337</b>	<b>0.6</b>	<b>821</b>	<b>1.5</b>	<b>55525</b>

Source: ASEAN Secretariat, CEPT Product Lists, 1998.

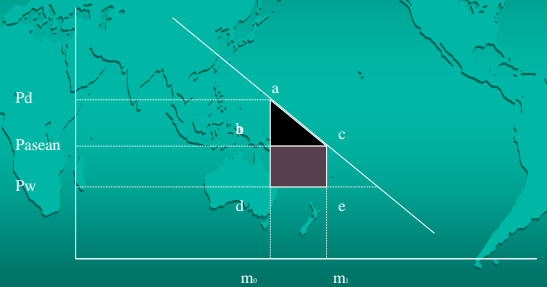
## Structure of Trade of Vietnam with ASEAN-10

Trade with ASEAN by SITC 1-digit commodity in 2002.

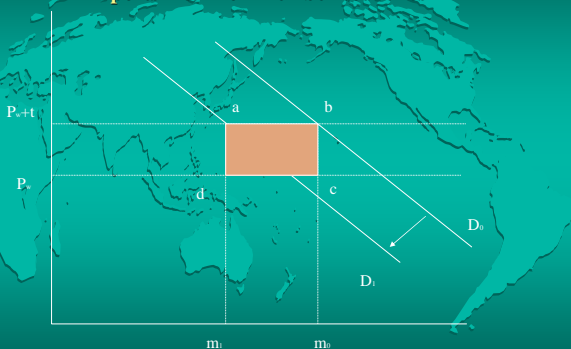
SITC Code	Section	Exports to ASEAN		Imports from ASEAN	
		Value (US\$ 1000)	Share (%)	Value (US\$ 1000)	Share (%)
	<b>Total</b>	<b>2,434,915</b>	<b>100</b>	<b>4,789,177</b>	<b>100</b>
<b>I</b>	<b>Primary Products (0-4)</b>	<b>1,681,771</b>	<b>69.11</b>	<b>1,620,515</b>	<b>40.3</b>
0	Food & live animal	469,809	19.3	184,028	3.9
1	Beverages & tobacco	9,944	0.4	104,822	2.2
2	Crude materials, except fuels	127,709	5.2	280,327	5.9
3	Mineral fuels, lubricants & related materials	1,073,642	44.1	1,252,581	26.3
4	Animal & vegetable oils, fats	667	0.03	98,758	2.1
<b>II</b>	<b>Manufactured Products (5-9)</b>	<b>753,144</b>	<b>30.9</b>	<b>2,946,615</b>	<b>59.7</b>
5	Chemical & related products	84,819	3.5	912,727	19.1
6	Manufactured products	180,782	7.4	741,993	15.6
7	Machinery and transports	350,064	14.4	1,025,390	21.5
8	Miscellaneous manufactures	137,480	5.6	168,505	3.5
9	Commodities not classified	0	0	47	0

Source: General Statistics Office, International Merchandise Trade of Vietnam, 2002.

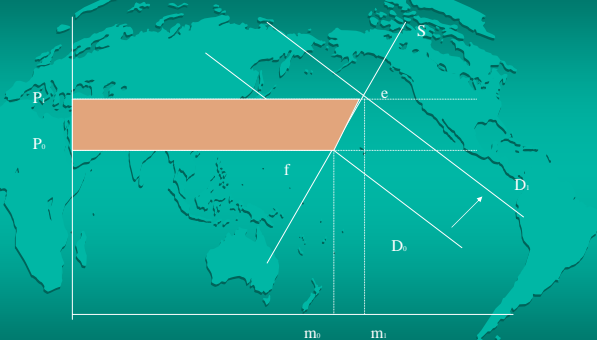
## Theoretical Impacts of Vietnam's liberalization of ASEAN members' imports



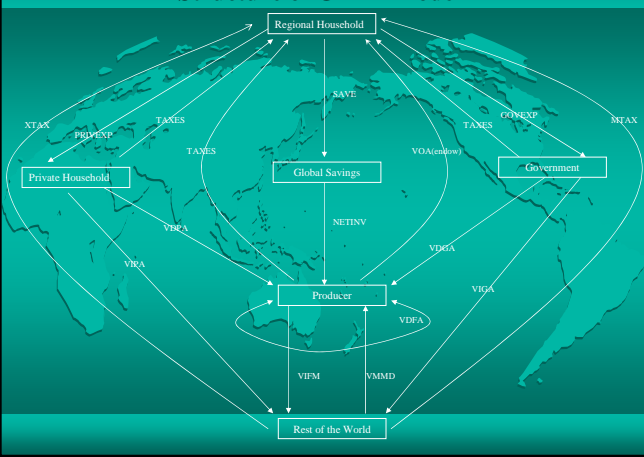
## Theoretical Impact of preferential liberalization on imports from non-member countries



## Theoretical Impact of improved access to member market



## Structure of GTAP Model



### Main assumptions:

1. Firm use constant return to scale technology in perfect competitive markets.
2. Household consumption behavior is represented by constant difference elasticities expenditure function (Hanoch, 1975).
3. Different elasticities of private demand for imports by country of origin (Amington, 1969).

### Composition of Database (GTAP 5.4 includes database for 57 sectors and 78 regions at the based year of 1997):

1. International trade and transport data.
2. Supports and Protection data.
3. Input-output table data.

## Simulation Designs.

- **Scenario 1: AFTA1, Vietnam liberalizes the products in the Inclusion List and Temporary Excluding List and the ASEAN-5 members reciprocate the concessions.**
- **Scenario 2: AFTA2, Scenario 1 plus liberalization of products in the Sensitive List and ASEAN-5 members reciprocate the concessions.**
- **Scenario 3: AFTA3, Scenario 2 plus liberalization of products in the General Exclusion List and ASEAN-5 members reciprocate concessions.**

## Regions Aggregation Scheme

1. VNM: Vietnam	5. SGP: Singapore
2. IND: Indonesia	6. THA: Thailand
3. MYS: Malaysia	7. JPN: Japan
4. PHL: The Philippine	8. ROW: Rest of the world

## Sector Aggregation Scheme

<b>1. AGR</b> (Agricultures and Forestry)	<b>3. FOODS</b>	<b>8. AUTO</b> (auto vehicle and others)
1. paddy rice	19. bovine meat products	38. motor vehicle and parts
2. wheat	20. meat products nec	39. transport equipments nec
3. cereal grains nec	21. vegetables oil and fats	<b>9. ELECTMACH</b>
4. vegetables, fruits, nuts	22. dairy products	40. electronic equipments
5. oil seeds	23. processed rice	41. machinery equipment and nec
6. sugar cane, sugar beet	25. food products nec	42. manufactures nec
7. plant based fibers	<b>4. BEVTAB</b> (beverages and tobacco)	<b>10. SVCS</b> (services)
8. crops nec	26. beverages and tobacco products	43. electricity
9. bovine cattle, sheep, goats, horses	<b>5. LIGHMANU</b> (light manufacturing)	44. gas manuf. distribution
10. animal products nec	27. textiles	45. water
11. raw milk	28. wearing apparel	46. construction
12. wool, silk, worm cocoons	29. leather products	47. trade
13. forestry	30. wood products	48. transport nec
14. fishing	31. paper products & publishing	49. water transport
24. sugar	<b>6. FUELS</b>	50. air transport
<b>2. RESOURCE</b> (natural resources)	32. Petroleum, coal products	51. communication
15. coal	<b>7. BASMANU</b> (basic manufacturing)	52. financial services nec
16. oil	33. chemical, rubber, plastic products	53. insurance
17. gas	34. mineral products nec	54. business service nec
18. mineral nec	35. ferrous metal	55. recreational & other services
	36. metal nec	56. public services
	37. metal products	57. dwelling

## Structure of Trade protection between Vietnam and ASEAN - 5 in 1997

Ad valorem import tax rates imposed by Vietnam on imports from ASEAN-5 members countries (%).

Products	IND	MYS	PHL	SGP	THA
1 AGR	0.76	2.53	8.04	20.12	0.39
2 NATFUEL	2.32	4.39	1.44	0.74	1.71
3 FOOD	30.07	20.27	11.27	32.56	1.35
4 BEVTAB	99.14	96.33	36.1	99.96	75
5 LIGHMANU	21.1	9.19	15.07	26.04	23.91
6 FUELS	0	38.6	6.53	38.73	34.74
7 BASMANU	5.1	9.69	2.11	9.75	9.28
8 AUTO	47.5	38.08	15.93	21.79	52.88
9 ELECMACh	14.55	23.67	3.71	9.81	13.81

Ad Valorem import tax rates imposed by ASEAN-5 members countries on Vietnam's exports in (%).

Products	IND	MYS	PHL	SGP	THA
1 AGR	4.11	69.89	11.6	0.39	18.37
2 NATFUEL	2.71	0.18	0	0	3.13
3 FOOD	3.98	32.55	49.64	7.77	40.33
4 BEVTAB	86.11	9.44	17.03	0	50.96
5 LIGHMANU	19.07	21.05	32	0	41.47
6 FUELS	0	0	0	0	0
7 BASMANU	8.99	2.32	0	0	14.27
8 AUTO	3.47	26.19	0	0	10.67
9 ELECMACh	1.34	6.92	0	0	6.87

Source: GTAP 5.4 data base.

## Changes in exports structure of Vietnam after AFTA 1 liberalization

AFTA 1 (%)

Sector	2 IND	3 MYS	4 PHL	5 SGP	6 THA	7 JPN	8 ROW	Total
1 AGR	-12.96	-12.83	-14.27	-12.63	-12.94	-12.62	-13.36	-13.21
2 NATFUEL	-0.94	-0.85	0.68	-1.00	-0.93	-0.99	-1.01	-1.00
3 FOOD	7.67	145.64	282.19	25.23	219.31	-9.96	-9.80	28.67
4 BEVTAB	0.00	0.00	0.00	-6.27	-8.33	-6.97	-6.94	-6.77
5 LIGHMANU	112.95	133.60	0.48	0.92	492.12	0.44	0.44	2.14
6 FUELS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7 BASMANU	44.34	7.40	-3.42	-3.27	79.33	-3.49	-3.48	-1.83
8 AUTO	0.00	-3.33	-1.61	-2.14	0.00	-2.07	-2.05	-2.06
9 ELECMACH	9.42	47.84	1.60	1.63	47.12	1.53	1.52	10.87
10 Svces	-7.73	-7.80	-8.03	-7.59	-7.55	-7.74	-7.74	-7.74
Total	-2.84	76.93	102.19	-1.37	68.36	-2.99	-3.51	2.81

## Changes in exports structure of Vietnam after AFTA 2 liberalization

AFTA 2 (%)

Sector	2 IND	3 MYS	4 PHL	5 SGP	6 THA	7 JPN	8 ROW	Total
1 AGR	-4.30	781.11	30.15	-18.88	73.50	-19.87	-20.98	-3.78
2 NATFUEL	-1.18	-0.85	-0.93	-1.24	-1.21	-1.22	-1.25	-1.23
3 FOOD	2.05	133.16	264.67	18.45	201.77	-14.91	-14.68	22.00
4 BEVTAB	0.00	-14.29	0.00	-8.36	-8.33	-8.96	-9.10	-9.01
5 LIGHMANU	110.79	130.83	-0.72	-0.39	484.93	-0.79	-0.82	0.87
6 FUELS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7 BASMANU	42.45	6.11	-4.47	-4.40	77.37	-4.60	-4.61	-2.97
8 AUTO	0.00	-3.33	-3.23	-3.42	0.00	-3.45	-3.57	-3.56
9 ELECMACH	8.32	46.39	0.61	0.66	45.67	0.54	0.53	9.78
10 Svces	-8.79	-8.81	-9.24	-8.62	-8.78	-8.88	-8.88	-8.88
Total	0.08	161.52	96.62	-3.55	68.73	-4.88	-5.70	2.19

## Changes in exports structure of Vietnam after AFTA 3 liberalization

AFTA 3 (%)

Sector	2 IND	3 MYS	4 PHL	5 SGP	6 THA	7 JPN	8 ROW	Total
1 AGR	-3.72	786.40	30.89	-17.22	74.11	-19.40	-20.49	-3.08
2 NATFUEL	15.47	1.69	-0.51	2.10	20.32	-0.54	-0.56	0.34
3 FOOD	6.48	143.13	278.27	24.02	215.55	-11.06	-10.89	27.21
4 BEVTAB	355.00	85.71	100.00	5.57	123.00	5.97	5.69	21.97
5 LIGHMANU	121.58	142.72	4.34	4.88	515.24	4.26	4.35	6.09
6 FUELS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7 BASMANU	50.94	12.44	0.92	1.18	87.99	0.92	0.91	2.67
8 AUTO	155.56	181.00	77.42	80.34	550.00	78.28	78.29	13.00
9 ELECMACH	14.57	54.74	6.30	6.35	54.10	6.23	6.21	16.03
10 Svces	-0.91	-1.02	-1.20	-0.69	-0.41	-1.04	-1.03	-1.03
Total	7.46	173.70	104.97	0.77	79.67	-0.93	-1.06	7.06

## Changes in imports structure of Vietnam after AFTA 1 liberalization

AFTA 1 (%)

Sector	2 IND	3 MYS	4 PHL	5 SGP	6 THA	7 JPN	8 ROW	Total
1 AGR	0.00	8.50	0.00	8.03	14.29	8.33	8.44	8.43
2 NATFUEL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 FOOD	193.06	68.12	21.63	156.87	0.00	-7.61	-7.58	16.89
4 BEVTAB	3.13	2.91	0.00	2.12	0.00	2.63	2.81	2.77
5 LIGHMANU	113.16	14.97	57.93	169.82	144.55	-8.84	-8.84	3.64
6 FUELS	1.09	0.78	0.89	0.80	0.80	0.86	0.86	0.85
7 BASMANU	15.68	40.98	1.87	41.13	38.58	-7.99	-8.00	2.83
8 AUTO	0.31	0.29	0.92	-0.18	0.28	0.73	0.73	0.66
9 ELECMACH	81.36	178.26	4.31	42.92	74.93	-15.10	-15.10	2.91
10 Svces	3.60	3.73	4.37	3.41	3.50	3.85	3.85	3.85
Total	36.53	71.27	4.15	42.15	36.91	-7.41	-7.09	3.17

## Changes in imports structure of Vietnam after AFTA 2 liberalization

AFTA 2 (%)

Sector	2 IND	3 MYS	4 PHL	5 SGP	6 THA	7 JPN	8 ROW	Total
1 AGR	25.00	26.80	100.00	159.85	14.29	11.46	11.36	15.32
2 NATFUEL	0.00	-1.59	0.00	0.00	0.00	0.00	-0.78	-0.80
3 FOOD	198.98	72.30	23.92	161.95	0.00	-5.75	-5.76	19.33
4 BEVTAB	3.13	4.00	0.00	3.25	0.00	3.95	3.84	3.80
5 LIGHMANU	112.14	14.92	57.24	168.52	143.35	-9.29	-9.29	3.13
6 FUELS	1.09	0.81	0.91	0.84	0.84	0.90	0.90	0.88
7 BASMANU	15.70	41.02	1.85	41.14	38.60	-7.99	-7.99	2.84
8 AUTO	0.76	0.58	1.83	0.18	0.63	1.09	1.08	1.01
9 ELECMACH	81.79	178.82	4.50	43.25	75.34	-14.90	-14.90	3.16
10 Svces	4.05	4.07	4.76	3.75	4.12	4.31	4.31	4.31
Total	36.50	72.26	4.23	42.70	36.93	-7.26	-6.97	3.35

## Changes in imports structure of Vietnam after AFTA 3 liberalization

AFTA 3

Sector	2 IND	3 MYS	4 PHL	5 SGP	6 THA	7 JPN	8 ROW	Total
1 AGR	25.00	24.18	100.00	155.11	14.29	9.38	9.38	13.26
2 NATFUEL	0.00	23.81	5.56	0.00	7.69	-2.17	-1.34	0.06
3 FOOD	192.05	68.35	21.12	155.81	0.00	-7.85	-7.86	16.64
4 BEVTAB	1925.00	1770.55	0.00	1977.28	0.00	-71.05	-71.61	97.78
5 LIGHMANU	115.83	16.94	60.23	172.97	145.12	-7.58	-7.61	4.96
6 FUELS	-38.04	114.12	-20.82	115.82	92.82	-37.73	-37.74	4.85
7 BASMANU	14.74	39.81	1.08	39.89	36.54	-8.66	-8.68	1.97
8 AUTO	511.76	205.78	-52.29	-20.47	774.15	-88.23	-88.24	19.25
9 ELECMACH	79.48	175.09	3.13	41.26	71.83	-15.93	-15.96	1.80
10 Svces	0.00	0.00	0.79	-0.34	-0.82	0.36	0.33	0.32
Total	50.01	100.60	-4.28	72.65	174.83	-26.73	-15.80	5.24

## The effects on sectoral outputs

The effects on output in Vietnam by sector (in 1997 US\$ mil)

Sector	Output values by trade-goods sectors in 1997	Changes after AFTA liberalization		
		AFTA 1	AFTA 2	AFTA 3
1 AGR	4555.47	17.04	47.02	72.34
2 NATFUEL	2452.34	-27.41	-31.86	-6.03
3 FOOD	2945.74	288.36	182.08	236.08
4 BEVTAB	437.07	-5.02	-6.51	-125.91
5 LIGHMANU	4717.58	30.86	32.1	193.04
6 FUELS	6.82	-0.25	-0.29	-1.5
7 BASMANU	3048.99	-119.1	-134.47	-68.95
8 AUTO	212.51	-1.88	-3.29	-77.54
9 ELECMAH	1915.4	21.46	9.15	77.17

## The effects on returns to production factors

Change in Returns to Production Factors (in 1997 US\$ mil)

Factor	Values of returns to production factors in 1997	Changes after AFTA liberalization		
		AFTA 1	AFTA 2	AFTA 3
1 Land	1078.58	73.1(6.8%)	141.94(13.16%)	179.85(16.67%)
2 Unskilled Labors	6004.58	222.49(3.7)	250.77(4.17)	161.15(2.68)
3 Skilled Labors	1727.96	60.35(3.5)	66.83(3.86)	35.07(0.58)
4 Capital	8975.04	297.11(3.3)	335.3(3.73)	170.66(1.9)
5 Natural Resources	586.27	-13.1(-2.2)	-7.47(-1.27)	25.75(4.39)
<b>Total</b>	<b>18372.42</b>	<b>639.96(3.5)</b>	<b>787.38(4.28)</b>	<b>572.48(3.1)</b>

## Impacts on macroeconomic conditions

Change in Macroeconomic Indicators (%)

Variables	AFTA 1	AFTA 2	AFTA 3
Total export changes	<b>2.8</b>	<b>2.1</b>	<b>7</b>
- To ASEAN	43.1	52.15	59.71
- To ROW	-3.3	-5.48	-1.02
Total import changes	<b>3.16</b>	<b>3.34</b>	<b>5.23</b>
- From ASEAN	41.87	42.25	91.37
- From ROW	-7.1	-7.01	-17.7
Changes in real GDP	<b>1.7</b>	<b>2.44</b>	<b>-1.35</b>
Changes in Tariff Revenue	-0.2	-0.45	-31.66

Change in Final Demand Structure (in 1997 US\$ mil)

	Value of final demands in 1997	Change after liberalization		
		AFTA 1	AFTA 2	AFTA 3
Consumption	15469	298	411	-200
Investment	7247	107	149	-99
Government	2203	40	56	-41
Exports	9303	333	334	691
Imports	-12376	-391	-414	-647
<b>Total</b>	<b>21946</b>	<b>388</b>	<b>505</b>	<b>-296</b>

## Conclusions

1. Trade liberalization under CEPT scheme (the IL and TEL) have positive impacts on overall economic growth of Vietnam while liberalization of industries in GEL may negatively affect GDP growth.
2. Due to the discriminatory nature of AFTA liberalization, the crowding out effect on trade volume with the non-member countries reduce the total change in expansion of trade of Vietnam.
3. The most fruitful impacts of trade liberalization toward agriculture sectors and labor intensive sectors, which account for the most portion of the poorest population of Vietnam, particularly in AFTA 2 scenario.
4. Because of the static nature of GTAP model, the dynamic effects of trade liberalization under AFTA could not be evaluated within the working model framework.

Thank you very much.