

A Comparison of the Impacts of Vietnam's Free Trade Agreements

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Abstract

As a member of ASEAN, Vietnam has negotiated a number of bilateral and regional trade agreements with Australia and New Zealand, China, India, Japan and Korea. It is also currently negotiating agreements with the European Union, Turkey and Chile. However, to date no systematic analysis has been undertaken to compare the impacts of these various agreements.

China, Japan and Korea are the countries of major interest to Vietnam. Average tariffs on Vietnam's exports are low, around five per cent, but very high peaks exist. Vietnam has relatively high average tariffs and in particular supports motor vehicles and garments.

A static version of a general equilibrium model, GTAP version 7, is used to estimate the likely trade and welfare impacts of the various agreements. When the negotiated agreements are fully implemented, annual welfare increases amount to an estimated \$2400 million per year, assuming flexible capital markets and the existence of some surplus unskilled labour.

These agreements are difficult to negotiate. An alternative approach, which has worked well for Vietnam in the past, is further unilateral liberalisation. This could generate large welfare gains of \$1,738 million, almost as much as the sum of the various free trade agreements.

JEL subject codes F13, Q17. Key words: Vietnam, trade policy, FTA.

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1 Introduction

Part of the continuing impressive performance of Vietnam's economy over the last decade has been attributed to improved trade policies centred on trade liberalisation in conjunction with greater international economic integration. Vietnam became a member of ASEAN in 1995 and acceded to the WTO in 2007, following substantial unilateral trade reform. Currently the focus of Vietnam's trade strategy, in the context of ASEAN, has been the negotiation of a number of bilateral and regional trade agreements.

While economic theory and empirical studies indicate that freer trade is associated with economic growth and development, the evidence on regional trade agreements is mixed. Granting trade preferences to some, but not all, trading partners might create more beneficial trade, but it could also divert imports to higher cost trading partners who are allowed to export to Vietnam duty free or at a concessional rate.

This study therefore aims to identify the impact and efficiency of several Free Trade Agreements – especially, ASEAN-Korea, ASEAN-India, ASEAN-Australia New Zealand and AFTA. The study also examines negotiated agreements with Japan and China and proposed agreements with the European Union, Turkey and Chile. Specific lessons for future trade negotiations are noted.

The “ASEAN plus” free trade area (ASEAN +) is an economic zone of variable geometry with different levels of economic integration created by separate FTAs concluded by ASEAN with strategic economic partners in the Asia-Pacific region. It is the largest economic zone in terms of population. The FTAs have been selectively negotiated with the most important economic partners in the region: China, India, Korea, Japan and Australia-New Zealand. Vietnam's trade with these partners is shown in table 1.

Vietnam's current global merchandise export trade is around \$62 billion with imports \$80 billion (WTO country profiles). Although a member of ASEAN, only a relatively small share of Vietnam's trade is within the region. Trade with FTA members other than ASEAN is about half total imports, whereas exports to these countries amount to

a quarter. China is the single largest source of imports, whereas the United States and the European Union are the major destination for exports.

Table 1 Vietnam's current merchandise trade, 2009

	Imports	Exports
	\$m	\$m
ASEAN	13,813	8,591
China	16,440	4,909
India	1,634	0,419
Japan	7,468	6,291
Korea	6,976	2,064
Australia	1,050	2,276

Source: General Statistics Office, Hanoi.

Vietnam's tariffs on imports and exports

Much unilateral liberalisation has already occurred in Vietnam following its accession to the WTO, and average applied tariffs are a relatively modest 13 per cent (table 2). Agricultural tariffs are much higher, averaging 24 per cent. The difference between simple and trade weighted tariffs suggests there are some peak tariffs with low levels of imports. Average bound and applied tariffs are relatively close together which might suggest Vietnam has only limited scope to raise applied tariffs, although this limitation doesn't apply to some individual tariff lines.

Table 2 Vietnam's average tariffs, 2007

	Bound		Applied	
	Simple %	Trade weighted %	Simple %	Trade weighted %
Agriculture	24.15	14.53	21.58	9.93
Non-agriculture	15.70	12.60	10.88	10.61
Total	16.81	12.73	11.68	10.57

Source: WITS (2010)

Vietnam's tariffs as applied to imports from ASEAN's more recent FTA partners are shown in table 3. The trade weighted tariffs are particularly low on imports from Australia and India. The high tariffs for the other countries suggest their imports are facing relatively high tariffs (e.g. milk from New Zealand) and there could be large potential benefits from liberalisation.

Table 3 Vietnam's average tariffs by source of imports

	Simple	Trade weighted
	%	%
Australia	16	4
China	12	12
India	12	5
Japan	15	12
Korea, Rep.	15	15
New Zealand	16	10

Source: GTAP, last version 2007.

Perhaps of greater interest are the tariffs facing Vietnam's exports with its FTA partners. These are shown in table 4. Tariffs on its exports to the world are generally low, but very high on exports to Korea and India. By contrast, trade weighted tariffs on exports to Japan are very low, but this hides a huge tariff on rice of several hundred per cent as imports are very low.

Table 4 Vietnam's average tariffs on its exports

	Trade weighted
	%
Australia	1
China	3
India	40
Japan	4
Korea, Rep.	34
New Zealand	5
World	7

Source: GTAP, last version 2007.

In this paper, a well-documented global computable general equilibrium model, GTAP, is used to model the effects of a range of current FTAs in trade in goods (Hertel and Tsigas 1997). The model has its own database, which includes intersectoral flows, trade flows, parameters and policy variables such as tariffs. The results indicate that the FTAs are generally beneficial for Vietnam, with those with China, Japan and Korea providing the greatest benefits. However, Vietnam could obtain a large share of these gains without further negotiation, by continuing its earlier policies of unilateral negotiation. Some lessons are drawn for Vietnam's ongoing negotiations with the European Union.

2. Model, data and closure

The GTAP 7 database is used here (Narayanan and Walmsley 2008). The value (of output and trade flows) data relate to 2004 and the behavioural parameters, specifying the responses of consumers and producers to price changes for example, are taken from the literature rather than econometrically estimated.² Input-output data are taken from national accounts and vary from year to year, depending on their availability in particular countries. Applied tariff data are from 2007. Preferential tariffs are included in the tariff database. The tariffs are trade weighted.³

Regions and sectors

The major focus of this study is the impact on the Vietnamese economy, rather than the partner countries or other members of ASEAN. Nevertheless, six members of ASEAN are singled out, while Cambodia, Laos and Myanmar are treated as a single region. Other single countries include Japan, China, India, Korea, Australia and New Zealand, with whom Vietnam has an FTA, and Turkey and Chile, prospective FTA members (table 5). The EU27, another prospective member, is treated as one region, as are members of the European Free Trade Agreement, other developed countries, Africa and Latin America. Remaining countries are included in a ‘Rest of World’ region.

In each country or region the economy is divided into 22 sectors, including six agricultural sectors, three resource sectors, ten industrial sectors and three service sectors. This aggregation reflects areas where protection is greatest, namely agriculture, textiles and automobiles.

² To the extent that the Vietnamese and other economies have grown since 2004, the estimated changes in values are underestimates. Most of the variables are reported in percentage changes, which are largely unaffected by a growing economy.

³ Trade weighted tariffs suffer from an endogeneity problem. In the extreme, prohibitive tariffs have zero trade, and thus zero weights. For this reason trade weighted tariffs may be biased downwards. However, simple average tariffs also can be misleading.

Table 5 Regions and sectors

Regions		Sectors	
EU25	European Union	RCE	Rice
USA	United States	VFN	Vegetables, fruit and nuts
JPN	Japan	XCR	Other crops
KOR	Korea	LVS	Livestock
AUS	Australia	FRS	Forestry
NZL	New Zealand	FSH	Fishing
EFT	EFTA	RES	Petroleum and coal products
ODV	Other developed	MT	Meats
CHINA	China	XPA	Other processed agriculture
CHL	Chile	TXT	Textiles
IND	India	LEA	Leather
RUS	Russian Federation	WAP	Wearing apparel
TUR	Turkey	CRP	Chemicals
IDN	Indonesia	MET	Metal manufactures
MYS	Malaysia	WPP	Wood & paper products
PHL	Philippines	MVT	Motor vehicles and other transport equipment
THA	Thailand	NMM	Mineral products nes
VNM	Vietnam	MAN	Manufactures
SGP	Singapore	ELE	Electronics
XAS	Rest of ASEAN	TCN	Transport & communications
LAM	Central and South America	BSV	Business services
AFR	Africa	SVC	Services and activities nes
ROW	Rest of World		

The model closure

Model closure refers to specifying variables to be either exogenous (fixed) or endogenous (determined by the model). The choice of closure depends on economic behaviour, and often reflects the presence of quantitative restrictions, such as a fixed exchange rate. In the GTAP model the standard labour market closure specifies that the amount of skilled and unskilled labour is fixed and workers cannot move between regions, although they can readily move between sectors. Wage rates are assumed flexible. This closure is somewhat at odds with reality, especially in developing countries, given that unemployment varies with the business cycle. In addition, in developing countries in particular, there appears to be a pool of unemployed or members of the labour force that work with low intensity. Changes in the amount of labour employed have a far greater effect on output and welfare than merely reallocating resources in response to changes in relative prices. An alternative to the

standard closure is to assume fixed wages and allow unskilled labour use to vary. This is based on the intuition that the informal sector in developing countries is characterized by significant unemployment and underemployment. Because the demand for labour is indirectly derived from the demand for labour-intensive goods, liberalisation tends to increase employment in developing countries and reduce it in developed countries. Furthermore, because real wages of unskilled labour are fixed, the costs of production remain lower than otherwise. This helps the country remain competitive in export markets. Thus, with this more realistic closure, developing countries are estimated to gain more from liberalisation at the expense of developed countries.

Neither of these closures seems fully realistic. It seems more sensible to expect some movement in both the price and quantity side of the labour market. In this application we assume half the response goes into wages and half into employment. We also assume that the amount of surplus unskilled labour cannot exceed three per cent. To simulate this we run a scenario with the standard closure, observe the changes in the wage rate, then run a second scenario that includes an exogenous shock to unskilled employment that equals half the change observed in the first scenario. Skilled labour remains fixed. The choice of response, half in this case, is somewhat arbitrary but more realistic than either of the alternative closures. The justification is that industry groups in Vietnam have remarked that unskilled labour is no longer as abundant as it once was, and higher wages and vocational training are necessary to attract workers.⁴

It could be argued that some developed country economies that are characterized by rigid wages, such as those of Japan and some EU members, should also be treated in a similar way. However, these economies also have regulations governing the shedding of labour, which restrict downward changes in labour use. In these simulations, the standard labour market closure is applied to these economies.

The second modification to the standard GTAP closure relates to capital, which is normally a fixed amount in each region. We use a long run closure by allowing the movement of capital between regions. There is a fixed amount of global capital, but it

⁴ A chart on welfare decomposition, shown later, identifies the contribution to welfare of additional labour.

flows to where it can receive the greatest returns. This means that where there is an increased demand for capital intensive goods, there will be inflows of capital. This helps expand the productive capacity of those countries attracting the capital. This assumption can make a significant difference to the welfare effects of trade liberalisation. However, individual countries can be worse off under this assumption because they now need to compete for a fixed amount of global capital.

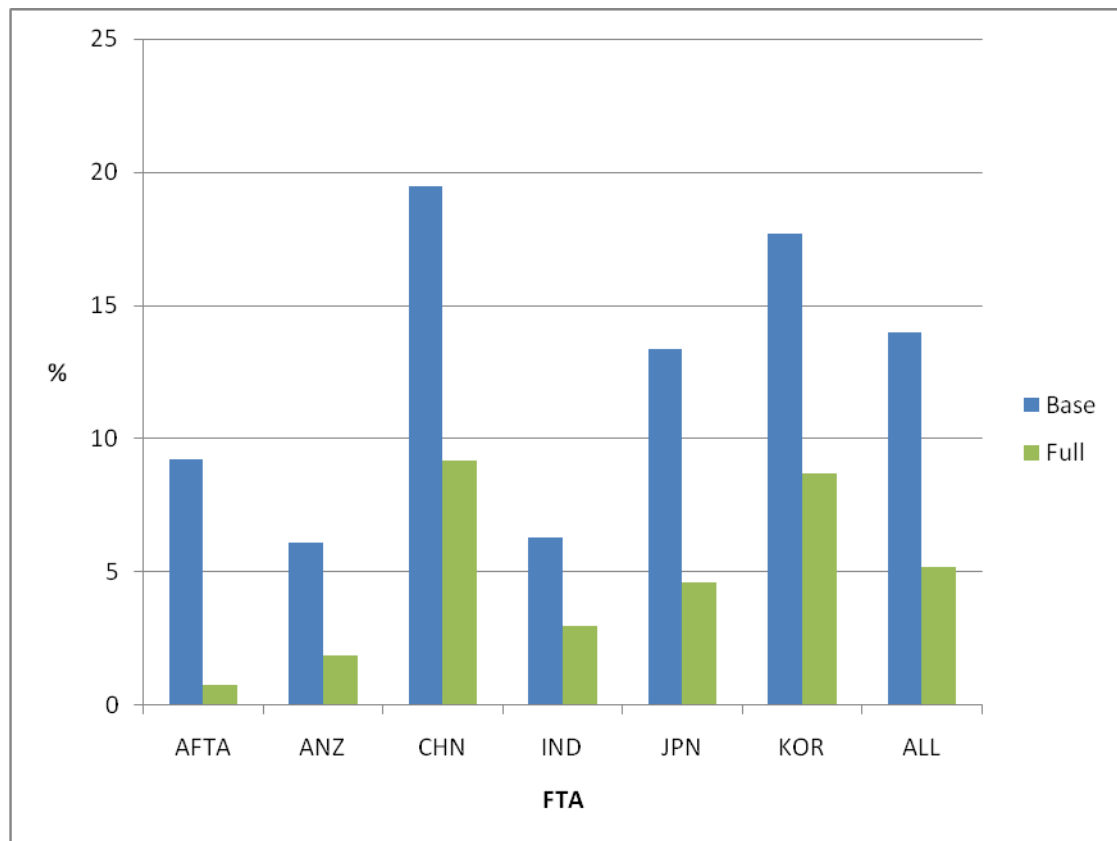
3 Scenarios

Judging by negotiated outcomes, the approach taken to negotiating FTAs appears to be to obtain market access in other countries' markets while giving up little in one's own market. The key trade-off in FTA negotiations is improved market access versus the necessary flexibility to protect politically sensitive industries. Rather than sticking to an agreed formula with no exemptions, history has shown that some flexibility is necessary to obtain a negotiated outcome. However, too many exemptions may undermine the level of ambition and the benefits from liberalisation. This appears to be the case in FTAs involving the ASEAN region. The six agreements are listed in table 6. The scenarios 1-7 are modelled according to tariff reductions when fully implemented, some time between 2015 and 2021. The exemptions are specified in the tariff reductions schedules that are part of the annexes to the agreements.⁵ These tariffs are compared with the 2007 tariff data base. Vietnam's trade weighted average import tariffs against the relevant partner countries are shown in figure 1. Tariffs on Vietnam's exports are shown in figure 2. There are numerous exemptions, even after full implementation, most notably on imports from China and Korea. The average tariff against all the partners is five per cent. On the export side tariffs are very much reduced, with the exception of India.

⁵ The tariff reductions schedules are available from the ASEAN Secretariat. These data are then entered into a GEMPACK utility, TASTE (Horridge and [Laborde](#)), which aggregates tariff cuts at the six digit level to the 22 user-defined GTAP sectors used here. Trade weights are used for the aggregation procedure.

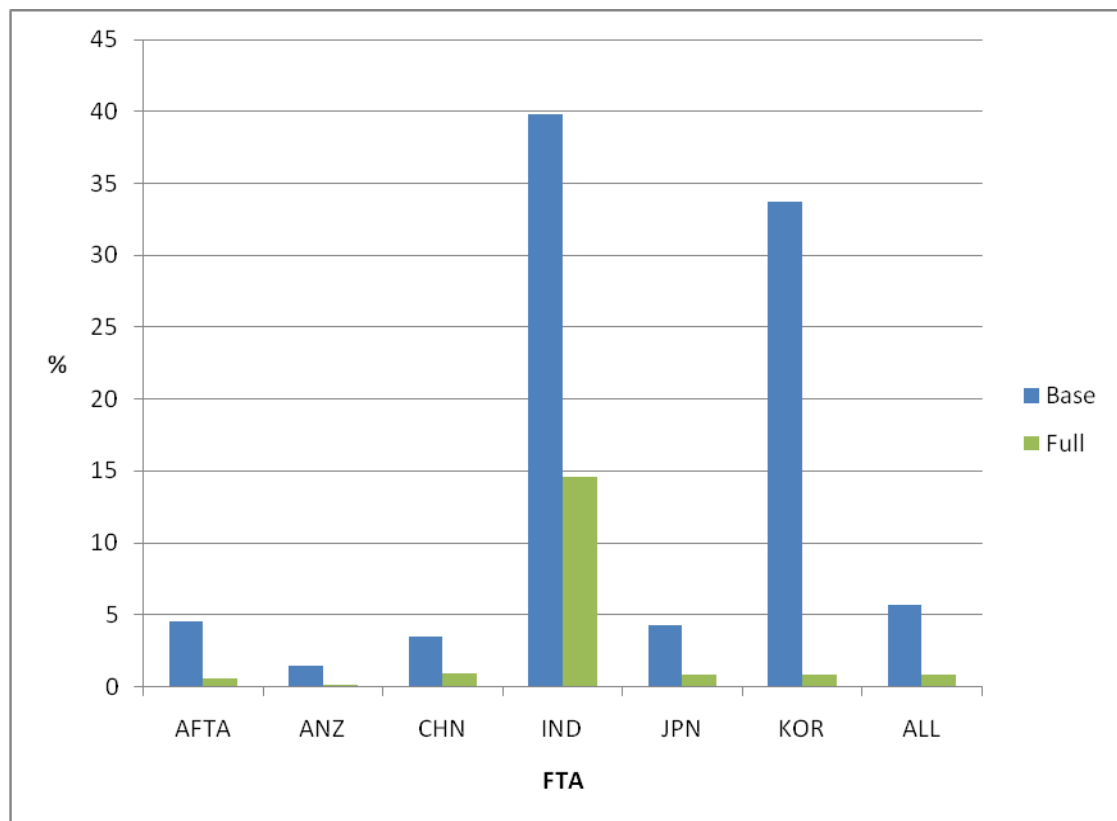
Table 6 Scenarios

No	Label	Description
1	AFTA	ASEAN Free Trade Agreement
2	ANZ	AFTA Australia New Zealand agreement
3	CHN	ASEAN China agreement
4	IND	ASEAN India agreement
5	JPN	Vietnam Japan agreement
6	KOR	AFTA Korea agreement
7	ALL	All six agreements together
8	EU	VNM – EU agreement
9	CHL	VNM – Chile agreement
10	TUR	VNM – Turkey agreement
11	UNI	VNM – unilateral liberalisation

Figure 1 Vietnam's base and simulated average import tariffs

Source: GTAP and authors' calculations

Figure 2 Vietnam's base and simulated average tariffs on exports



Source: GTAP and authors' calculations.

The second set of scenarios, 8-11, examines several prospective free trade agreements not yet negotiated. These scenarios show the potential gains or losses from full liberalisation, although the European Union has tended not to liberalise fully in its Economic Partnership Agreements with developing countries. The unilateral scenario would not need to be negotiated, at least with trading partners. It shows the potential gains available immediately.

4 Simulation results

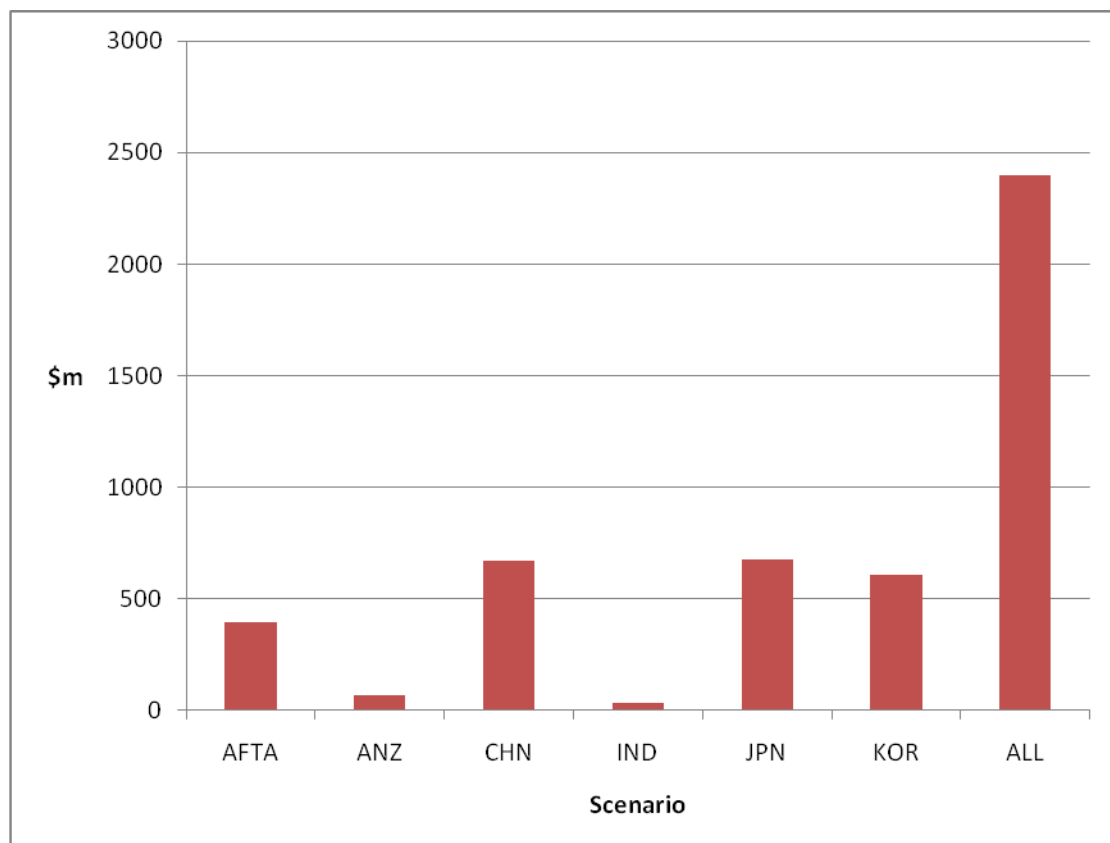
Macroeconomic impact of interest to policy makers includes imports, exports, real wages, employment, investment and tariff revenues. Economists also like to calculate welfare, a measure of real income that takes into account all of the other factors listed here.⁶ This is examined first.

⁶ The welfare measure used here is equivalent variation, the change in income that would leave consumers no worse off than before the policy change.

Welfare

The estimated impacts of various scenarios on Vietnam's annual welfare are shown in figure 3. These data show the change in welfare on an annual basis once the policy changes have worked through. FTAs with China, Japan and Korea provide the greatest potential gains in absolute terms for Vietnam, whereas ANZ and India generate very little. There is little trade with Australia and New Zealand and tariffs on such trade are generally low. Vietnam has little trade with India, and its tariffs on Indian exports are also low. The scenario including all FTAs generates gains of \$2,400 million when fully implemented.

Figure 3 Vietnam's annual welfare effects under alternative scenarios

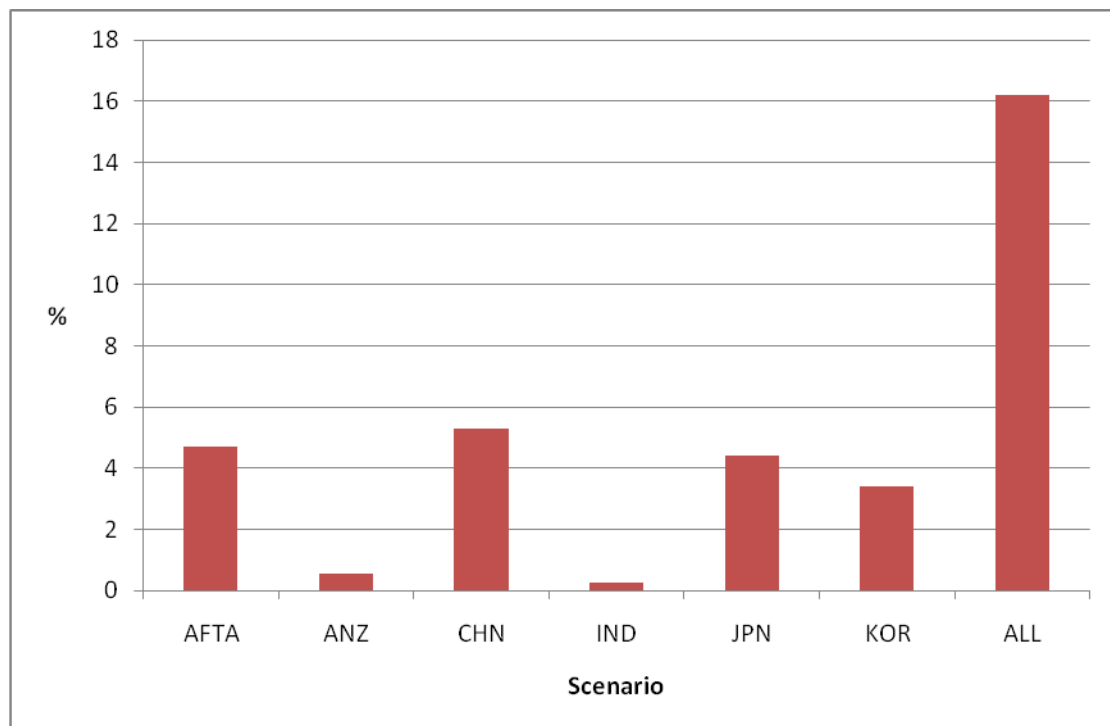


Source: GTAP simulations

Export and imports

The estimated trade impacts reveal a similar story (figure 4). The estimated national export gains from implementing all the agreed FTAs are 16 per cent. The FTAs with ANZ and India achieve very little in export growth, whereas Japan and Korea provide the greatest opportunities. China also provides significant additional market access.

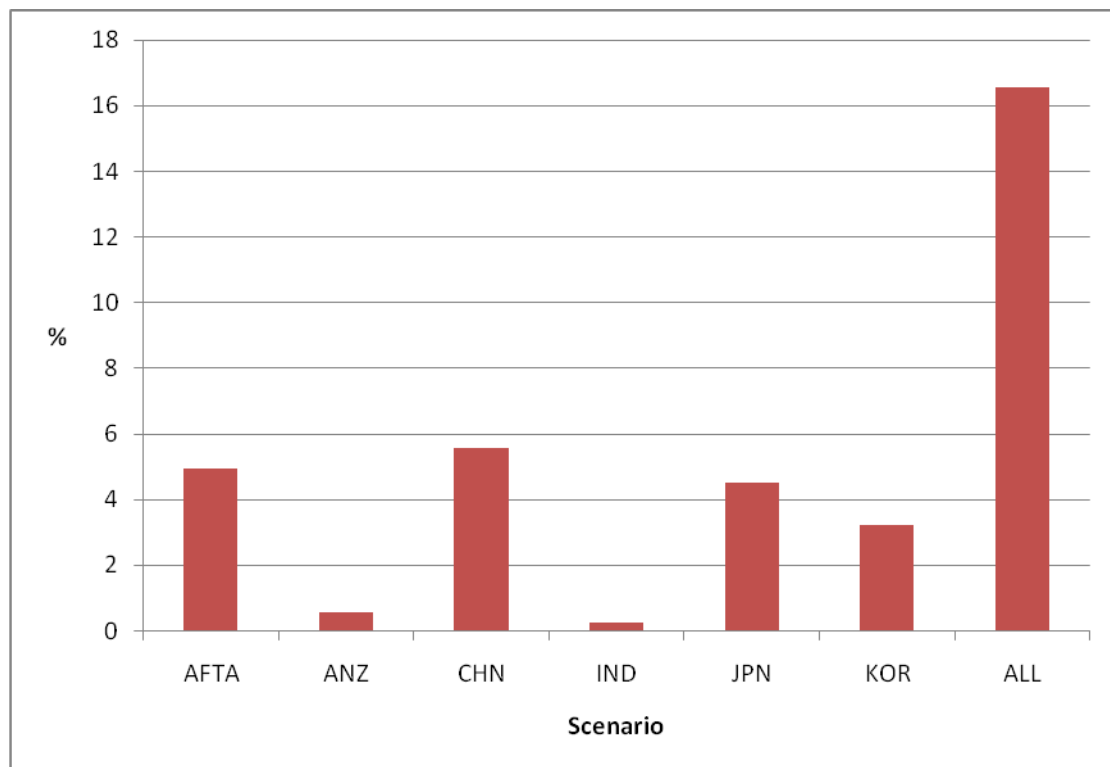
Figure 4 Vietnam's annual change in exports under alternative scenarios



Source: GTAP simulations

A similar story holds for national imports, figure 5. The FTAs with the larger countries provide the greatest increase in imports. China, Japan and Korea along with AFTA provide the greatest benefits in terms of additional market access for Vietnam's exports although India, also a large country, does not.

Figure 5 Vietnam's annual change in imports under alternative scenarios



Source: GTAP simulation

The trade deficit

One possible reason for the apparent reluctance among negotiators to reduce tariffs is the concern that the trade deficit will increase as tariffs are reduced. The trade, or current account, deficit is imports minus exports, and it is expected to increase when tariff are reduced unilaterally. Many countries do run balance of trade deficits, even in the absence of liberalisation. This not necessarily detrimental, but to offset the current account deficit, there must be a surplus on the capital account, implying that savings must exceed investment. Capital inflows from abroad can boost savings, so long as they exceed outflows. A feature of the model is that global imports must equal global exports and global savings equals global investment. Hence, in the model, as in reality, not all countries can run surpluses or deficits. At a national level, the model closure requires that the exports and imports grow at a similar rate because in the long run investment is tied to savings. In these simulations the growth in exports is close to equivalent to the growth in imports, but because a deficit exists in the base period, the

deficit increases.⁷ In the full ‘All’ scenario, the deficit expands by \$775 million from a base of \$3,983 million. This is also the value of the capital account. In other words, the question of whether liberalisation would lead to an increase in the deficit in Vietnam is not addressed here because it is assumed in the model that policymakers would in the long run implement a flexible exchange rate to maintain it.⁸ In reality more direct policies that attract investment could be used to constrain the deficit.⁹ However, it is of some interest to look at bilateral trade flows. After full implementation of all FTAs, Vietnam’s bilateral trade deficit increases with China, Singapore and Japan and some AFTA countries, but not with India, Korea, Australian and New Zealand. The FTAs lead to an improvement in the trade balance with the European Union and the United States, even though these countries do not provide additional market access.

Real wages and employment

In this application the increased demand for labour intensive goods following trade liberalisation leads to an increase in both wages and employment of unskilled labour. The estimated changes in employment and wages are shown in table 7. The changes are quite significant. Employment of skilled labour is assumed fixed, so all adjustment in this market occurs in wages. It is notable that the change in skilled wages is similar to the sum of the changes in wages and employment of unskilled labour. This reflects the substitutability between skilled and unskilled labour.¹⁰

⁷ Since exports minus imports must equal investment minus saving, one of these variables must be selected as exogenous.

⁸ In an alternative simulation we assume a fixed exchange rate for Vietnam, with capital fixed and adjustment occurring in the balance of payments. Rather than growth in exports and imports of around nine per cent in the ‘All’ scenario, exports are estimated to grow by six per cent and imports by 12 per cent. This implies the trade deficit increases by \$3,936 million rather than \$775 million.

⁹ Currently Vietnam implements a managed float, with the currency tied to the US dollar between adjustments.

¹⁰ In GTAP there is a common elasticity of substitution for each sector. This determines the substitutability of land, capital and labour in response to changing prices. The elasticities are relatively low, 0.2-0.3, for primary products, but in excess of one for processed agriculture and industrial products.

Table 7 Vietnam's real wage and employment effects under ALL scenario

	%
Unskilled employment	3.0
Unskilled real wage	7.6
Skilled employment	0
Skilled real wage	9.6

Source: GTAP simulations. There is assumed to be no change in total employment of skilled labour.

The increase in employment of unskilled labour has a significant impact on welfare, as shown in table 8. The change in national welfare can be decomposed into three effects:

- (i) allocative efficiency;
- (ii) terms of trade; and
- (iii) endowment (labour, capital) effects.

The allocative efficiency gains, from using resources better, amount to \$1,099 million. The impact of negative terms of trade effects on the overall welfare impacts for the AFTA, China and Japan FTAs are evident from this table. Importantly, the welfare gains from the increase in labour and capital amounts to \$1,229 million. This is the major contributor to total welfare gains of \$2,400 million (table 8). The implication here is that it is important to develop a flexible labour and capital markets to take advantage of opportunities as they arise through structural adjustment.

Investment

The long run closure used here assumes sufficient time has passed for global capital to be allocated to its most efficient use. This re-allocation occurs across countries as well as between sectors as in the short run closure. This assumption has a significant effect on investment, trade and welfare, as shown in table 9. In the long run closure the capital stock is increased 14 per cent instead of remaining fixed in the standard closure. This holds down the price of capital, and leads to an increase in exports, imports and welfare.¹¹

¹¹ To gauge the importance of capital, an alternative scenario involves increasing the capital stock in Vietnam. This could follow making capital more productive, or reducing risk to encourage capital inflow by, for example, removing some of the restrictions on foreign ownership. The effect of an exogenous 5 per cent increase in capital is estimated to reduce the price of capital goods by 0.89 per cent and increase exports and welfare by 3.6 per cent and \$246 million respectively.

Table 8 Decomposition of Vietnam's welfare gains

	Allocative efficiency \$m	Terms of trade \$m	Increase in labour and capital \$m
AFTA	52	-100	178
ANZ	23	4	42
CHN	299	-138	187
IND	0	11	4
JPN	409	-76	394
KOR	141	283	166
ALL	1099	163	1229

Source: GTAP simulations

Table 9 The impact in Vietnam of mobile capital under All scenario

	Short run	Long run
	%	%
Investment	0	13.46
Price capital	7.52	-1.10
Exports	6.39	16.19
Imports	12.08	16.54
	\$m	\$m
Welfare	1116	2400

Source: GTAP simulations.

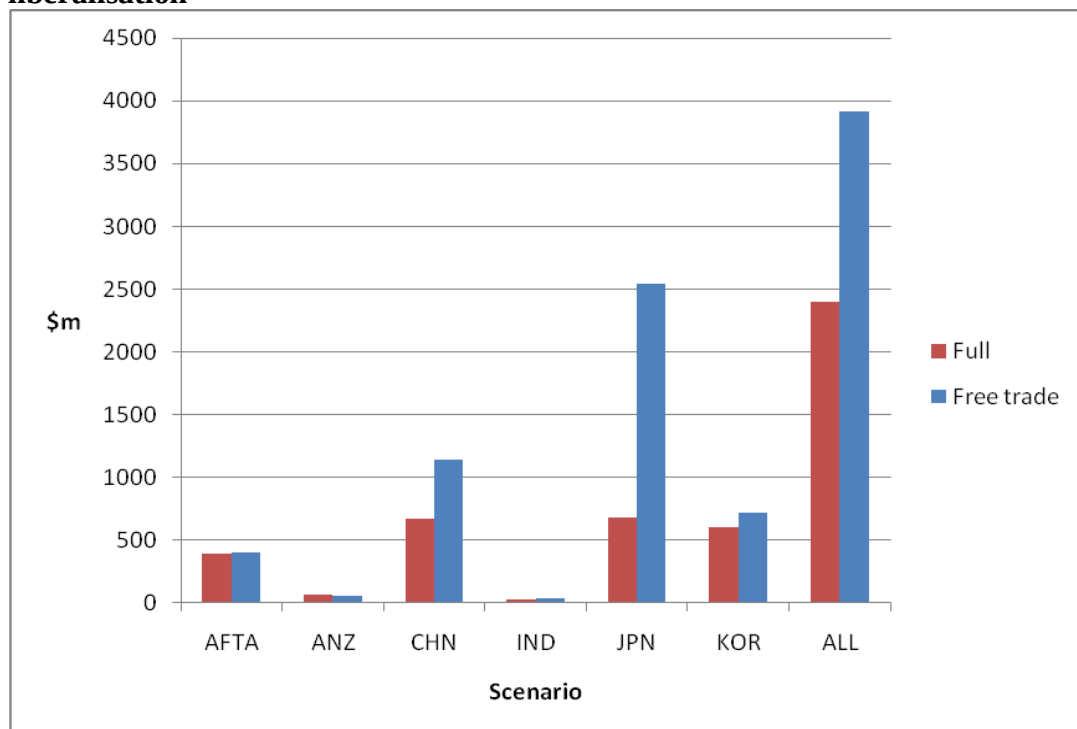
Tariff revenue

Another variable of interest to policy makers is tariff revenue. Small or moderate changes in tariffs may lead to increases in tariff revenue, because the effect of lower tariffs is increased imports, and the increase in imports may more than offsets the lower tariffs. At some point, however, tariff revenue must be reduced as tariffs are lowered, because if they are eliminated altogether the revenue must be zero. In the ALL scenario, tariff revenue falls from the imputed baseline value of \$4,198 million to \$2,500 million. The estimated values include tariff revenue from all sources, not only FTA members. GTAP also takes into account rising government revenues from other taxes on, for example, income, consumption and output which should be incorporated in any assessment of revenue impacts of FTAs.

The importance of exemptions

All the FTAs, with the exception of AFTA which has been under implementation for many years, had considerable exemptions for sensitive products. To determine the importance of these exemptions a further set of scenarios were simulated showing the potential gains had all tariffs on trade with the respective FTAs been removed. This is described here as ‘free trade’ liberalisation, in the sense that tariffs are eliminated, although only between FTA members. A comparison of the full and free trade welfare effects is shown in figure 6. The gains under the free trade scenarios are almost double those from full implementation, \$3,913 million as against \$2,400 million. This is mainly attributable to Japan, and to a lesser extent, China, because of exemptions, in Japan’s case for agricultural products, particularly rice. The remaining exemptions for AFTA, ANZ, India and Korea hardly seem to matter. However, the free trade results may be biased downward because the tariffs are trade weighted, meaning prohibitive tariffs have a low weight.

Figure 6 Vietnam’s annual change in welfare under full and free trade liberalisation



Source: GTAP simulations.

Prospective FTAs and unilateral liberalisation

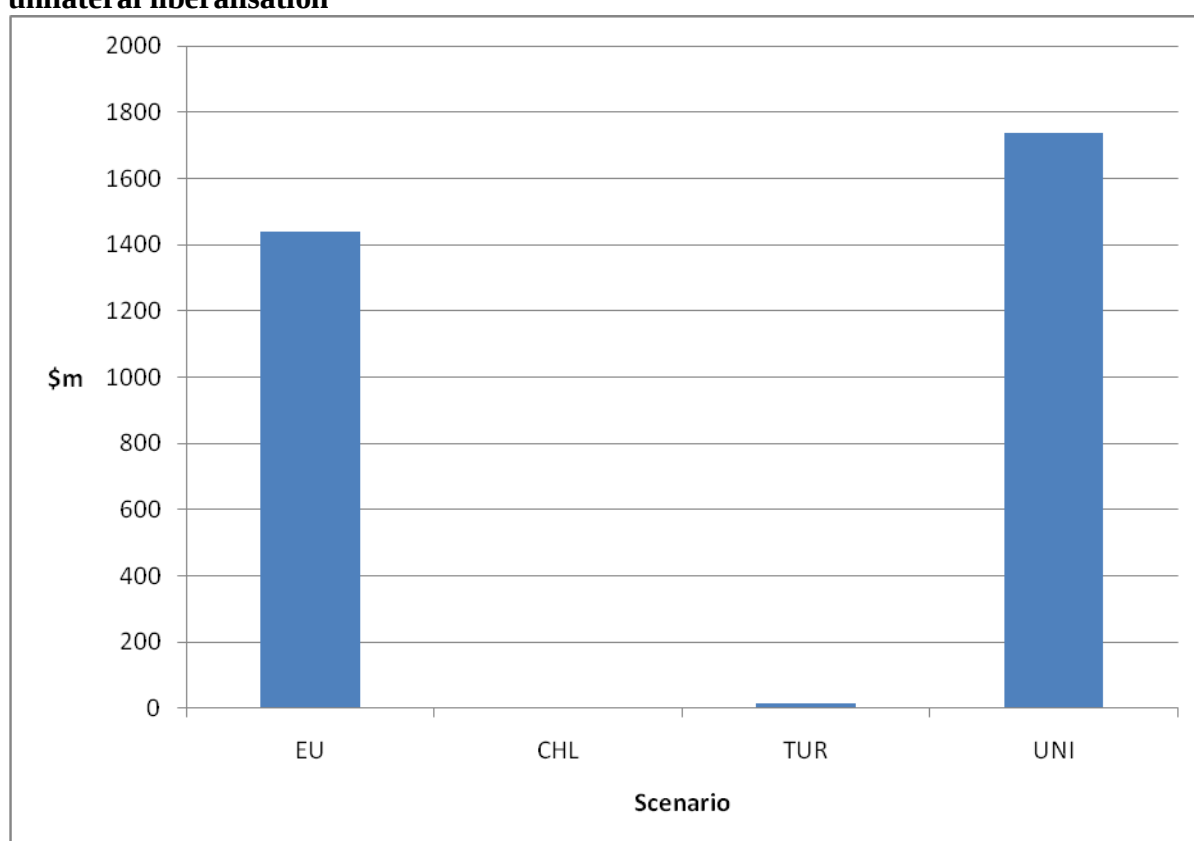
A final set of simulations shows the gains to Vietnam from several FTAs (figure 7) under negotiation. These hypothetical scenarios assume full liberalisation with no exemptions for sensitive products. This is most unlikely given past experience so the estimates should be considered “outer envelope” ones. FTAs with Chile and Turkey provide practically no welfare gains for Vietnam. Chile is a small open economy with few barriers to trade. Tariffs are a uniform six per cent on most goods. Turkey is also a relatively small market. There are some potential gains for Vietnam in primary and processed agriculture, but negative terms of trade impacts in textiles and apparel.

The gains from an FTA with the European Union are significant. Welfare gains of \$1,437 million are split between allocative efficiency \$462m, endowment (labour market) effects of \$690 million and positive terms of trade effects of \$257m.¹² Most of the gains are due to an increase in exports of primary and processed agriculture, particularly rice. There are currently large tariffs on imports of rice into the European Union. There are also significant increases in the volume of textiles, leather and apparel (assuming no anti-dumping actions), but negative terms of trade effects diminish the benefits in these sectors.

Finally, the benefits available to Vietnam from unilateral liberalisation are calculated at \$1,738 million. These can be obtained without negotiation. Here the gains are from improved allocative efficiency (\$1,379 million) and labour market effects (\$1,802 million) rather than improved market access. There are, however, negative terms of trade effects, particularly in the leather and apparel sectors.

¹² The remaining welfare effects are attributed to changes in the capital market.

Figure 7 Vietnam's annual change in welfare from prospective FTAs and unilateral liberalisation



Source: GTAP simulations.

In summary to this point, the macroeconomic results suggest Vietnam is expected to gain in the long run from the various negotiated agreements if they are implemented as modelled here, although the gains could have been greater had the parties been more ambitious.¹³ Not surprisingly, the FTAs with the larger markets are estimated to generate the greatest gains in exports and welfare, although these markets appear to have the more significant exemptions. The value of exports is reduced somewhat by the negative terms of trade effects in some cases. The trade deficit may rise, but government revenues are maintained.

Sectoral effects of further liberalisation

Perhaps the reluctance of governments in Vietnam and elsewhere to be more ambitious when negotiating trade agreements stems from concerns about negative output and employment effects in specific sectors. While positive changes in sectoral

¹³ Some observers have noted an increase anti-dumping and other non-price measures following liberalisation. These factors are not taken into account here.

output and employment are opportunities, the negative changes represent challenges to be managed. There is the issue of moving resources from one sector to another, for example from agriculture to textiles and apparel which Vietnam is already addressing through a special training program for agricultural workers.

While there are negative effects, policy changes are implemented over a six or ten year period during which the economy may grow significantly. An economy, such as Vietnam's, growing at 7 per cent per year will double in ten years, and thus a 30 per cent drop in output in one sector may merely represent a slowdown rather than a fall in output or labour use. In the following pages the estimated sectoral changes in output, trade and employment are described for the ALL scenarios.

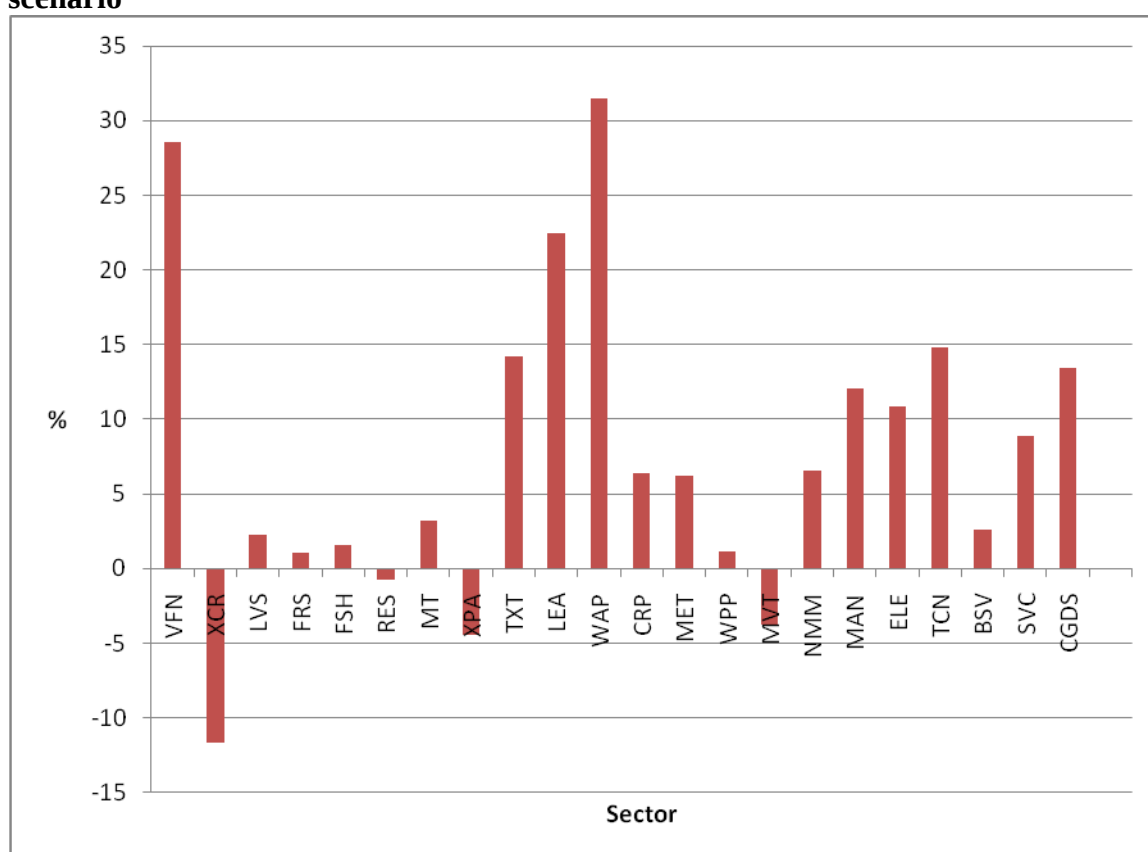
Output

Output increases less than trade because it is constrained by available resources and the existing technology, whereas trade depends on the location of production. At a sectoral level, however, changes in output can be much greater as labour and capital are switched from one sector to another.

The percentage changes observed in output are somewhat arbitrary because they depend on the definition of a sector. For Vietnam, there is a fall in output estimated for the sector 'Other crops'. If this sector was combined with rice, the negative result would disappear. Conversely, if the sectors were more narrowly defined, greater variation would be observed.

For Vietnam, the first observation is that most sectors are estimated to experience an increase in output and exports regardless of the scenario. The output effects for the ALL scenario are shown in figure 8. In percentage terms the major gains are in vegetables, fruit and nuts, wearing apparel, textiles, manufactures, metal manufactures, electronics and leather products. There are also significant increases in the transport and communications service. This is an intermediate input in the production of other goods.

Figure 8 Potential changes in annual sectoral output for Vietnam from All scenario



Source: GTAP simulations. See table 5 for sector descriptions.

The most notable changes are for output of vegetables, fruit and nuts in the Korea FTA scenario. This sector includes manioc. Output changes by an estimated 29 per cent, although this necessitates a switch from rice (-2 per cent) and other crops (-11 per cent). There are also significant changes in textiles (7 per cent) and (apparel 13 per cent) in the Japan FTA scenario. Services and apparel stand out. Services is a large sector with a small percentage change in output, but it makes the biggest contribution to national output, even though no liberalisation occurs in this sector under the modelled scenarios. This reflects the removal of protection from other sectors, which leads to a movement in capital and labour into services. Services impacts would be much larger if services liberalisation as negotiated in AANZFTA was effective and incorporated in the modelling.

Exports

The absolute change in annual exports by sector is dominated by apparel, manufacturers, leather, processed agriculture and resources. The percentage changes are shown in figure 9.

The changes in vegetables, fruit and nuts, textiles, leather and apparel are driven by liberalisation in Japan and Korea, especially apparel into Japan. The most notable change is an increase in vegetables, fruit and nut (manioc) exports to Korea. Vietnam's baseline exports of these products to Korea are small, only \$20 million, but are estimated to increase to \$1,027 million when Korea reduces its current tariff of 688 per cent.

Figure 9 Potential change in annual sectoral exports for Vietnam from All scenario



Source: GTAP simulations. See table 5 for sector descriptions.

The bulk of the additional exports go to Korea (\$1,485 million), Japan (\$1,372 million), and China (\$563 million). In absolute terms the largest changes are in apparel to Japan (\$753 million). Other changes of significance include leather (\$579

million) to the European Union and apparel to the USA. This reflects increased competitiveness rather than improved market access.

After full implementation of the various FTAs Vietnam's total trade is estimated to increase by \$5,223 million. Trade diversion amounts to only \$314 million, a small fraction of the trade created. Global trade increases by almost one per cent.

Imports

The percentage change in annual imports by sector is shown in Figure 10. (For ease of comparison, the scale is the same as Figure 9.) In absolute terms the largest increases in imports are in textiles, manufactures, resources (i.e. coal, oil and gas), motor vehicles and parts, and chemicals, rubber and plastics. China (\$2,291 million) and Japan (\$2,115 million) account for most of the increase in imports. The textile imports, which come from China, Korea and Japan, are driven by the demand for garments, the sector with the largest increase in exports. These countries also supply most of the additional manufactures. Most of the increase in resource imports comes from China and Singapore. Japanese motor vehicles displace imports from other developed countries.

There is some trade diversion of the import side. Vietnam's additional imports from member countries are \$8,140 million, while imports from non-members fall by \$2,103 million. These estimates are based on the assumption that no trade liberalisation is taking place in non-members of Vietnam related FTAs. As trade preferences are eroded by further liberalisation the estimates of diversion would decrease.

Figure 10 Potential change in annual sectoral imports for Vietnam from All scenario



Source: GTAP simulations. Excludes rice, which shows large change from low base. See table 5 for sector descriptions.

Labour use by sector

Unskilled labour use increases in most sectors with the notable exception of agriculture, wood and paper products, motor vehicles and petroleum and coal products (table 10). The change in labour use is similar to the change in output, although a certain amount of capital-labour substitution occurs, most noticeably in agriculture, where labour productivity is very low. Vietnam has a high intensity of use of unskilled labour in the agricultural sector, at some 76 per cent, according to the GTAP database.¹⁴ The capital/labour ratio is also low in primary agriculture, although it is much higher for processed agriculture. Although the capital/output ratio in Vietnam is quite low, the labour/output ratio is similar to other ASEAN countries because labour is relatively cheap. Unemployment in agriculture is unlikely to be a problem because labour can readily move into other agricultural products. Jobs in the motor vehicle and wood product sectors are a greater concern.

¹⁴ The definition of unskilled versus skilled labour is somewhat arbitrary. What passes for skilled labour in Vietnam would not be classified as skilled in more advanced countries.

More problematic is the negative impact on skilled labour. Recall that the quantity of skilled labour is assumed not to increase, in contrast to unskilled labour, so there is no upward shift in overall skilled labour use. There are falls in ten sectors. These falls account for about 0.5 per cent of the skilled labour force which needs to find employment in a different sector.

Table 10 Changes in output and factor use by sector in Vietnam following ALL scenario

	Output	Unskilled labour	Skilled labour	Capital
	%	%	%	%
Sector				
Rice	-2	3	2	8
Vegetables, fruit and nuts	29	37	36	40
Other crops	-12	-10	-11	-8
Livestock	2	6	5	8
Forestry	1	0	0	2
Fishing	2	2	2	4
Petroleum and coal products	-1	-2	-3	0
Meats	3	-1	-3	9
Other processed agriculture	-4	-9	-10	1
Textiles	14	8	6	21
Leather	22	16	13	30
Wearing apparel	32	23	20	38
Chemicals	6	1	-1	13
Metal manufactures	6	2	-1	14
Wood & paper products	1	-5	-7	7
Motor vehicles and other transport equipment	-4	-8	-10	3
Mineral products nec	7	0	-2	13
Manufactures	12	6	4	19
Electronics	11	5	3	18
Transport & communications	15	6	3	22
Business services	3	-2	-4	11
Services and activities nes	9	4	1	18
Capital goods	13	10	8	21

Source: GTAP simulation.

Implications for governments

The simulation results provide a few guidelines for policy makers. The first is that size matters. In comparing the alternative FTAs, greater gains for Vietnam are to be obtained from FTAs with China, Japan and Korea. The FTAs with Australia and New Zealand, and a large size country in India appear to have little benefit. In looking

ahead, an FTA with the European Union presents an opportunity to access a large market that could generate significant gains.

The second point is that ambition is important. The estimated gains from trade liberalisation within the FTAs as agreed falls well short of the potential gains from free trade with the FTA area.

A third point is that the focus on market access may be misplaced. Unilateral liberalisation would generate a large share of the potential gains.

Tariff revenue would be eliminated under unilateral or other full liberalisation, but other sources of revenue would grow. Incomplete liberalisation as negotiated under the various FTAs preserves this source of revenue. The increase in imports following tariff reductions is estimated to lead to an increase in revenue.

The scenarios highlight the importance of a functioning labour market. Increase in the use of labour in response to increased demand for labour intensive goods is a significant source of gains in national income.

Under the modelling assumptions, imports and exports are likely to expand at a similar rate. This implies the deficit will increase because the baseline imports exceed exports. A surplus of capital inflows accommodates the trade deficit.

Attracting investment is also important. The modelling allows for capital flows based on competitive returns. Vietnam has to compete with other countries for scarce global capital. Attracting capital is important to economic growth.

A further point is that the phasing in of tariff reductions will ease the cost of structural adjustment. Few sectors are expected to suffer relative decline in output, and considering that the economy may grow at 7 or 8 per cent a year, the falls in employment will be relative rather than absolute.

Individual countries and sectors may experience a fall in output, exports and welfare. Even where there are national gains, there are inevitably significant distributional

effects between sectors and between producers, consumers and taxpayers. Given these considerations, it is important for policymakers to consider the most appropriate negotiating proposal when considering further FTAs.

If exports are the main criteria, the China, Japan and Korea FTAs as modelled here appear superior to all other scenarios. Among the potential FTAs, the EU-FTA provides the greatest potential, assuming that the sensitive products are not quarantined.

Vietnam should support an ambitious line on sensitive products. Exemptions appear to have considerable impact on the welfare and exports results, so these are a concern. Exemptions limit liberalisation and changes in output, so there may be some advantage if structural adjustment is a problem but at a cost to increased allocative efficiencies. However, for the sectoral aggregation used here, changes in output are generally less than five per cent and should be manageable with a phase-in period of ten years.

In summary, Vietnam would most likely be favoured by pursuing a more ambitious liberalisation in future agreements.

Limitations of the analysis should be noted. Apart from the usual data issues and absence of dynamic gains, there are concerns about whether the implementation would occur as envisaged in the scenarios. Liberalisation exposes an incentive to raise non-tariffs barriers, such as, Technical Barriers to Trade and SPS barriers on agricultural imports. A rise in spurious anti-dumping measures might also be expected. For these reasons, the impacts of liberalisation may be overstated. On the other hand, some of the policy changes simulated may occur in the absence of an FTA agreement. The European Union has plans to reduce its sugar support, and there are numerous regional and bilateral preferential trading arrangements under discussion. Finally, not included here are costs of structural adjustment, of moving resources from one sector to another. Temporary unemployment of labour is usually a feature of such adjustment. This is difficult to calculate, especially in developing countries where it is generally low, but is tangible nonetheless.

No account here has been taken of rules of origin and rates of utilisation, the extent to which exporters take advantage of preferential rates. Here it is assumed that the lowest available tariffs are the ones used, although there is evidence that utilisation rates may be as low as 13 per cent (for example AFTA (Productivity Commission 2010)). This occurs for example if the preference margin is small or the administrative burden large. By assuming full utilisation, we overestimate the benefits of the modelled tariff reductions and underestimate the benefits of further tariff reductions as well as of transaction costs to obtain preferences.

The whole economy approach used in this chapter comes at a cost. Because all sectors of the economy are modelled simultaneously, there is a limit the amount of detail that can be provided. There are over 5000 tariff lines at the HS six digit level, but GTAP needs to be aggregated to around 25 sectors and regions. Tariff reductions are calculated at the six digit level, but the aggregation procedure necessarily removes variation in tariffs within a sector. Since it is the variation in tariffs that contributes to distortions within an economy, the aggregation underestimates the benefits of reform. For example, the analysis suggests Vietnam is a competitor with India in exports of beverages. Closely scrutiny reveals that India exports tea while Vietnam exports coffee. These are distinct products.

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