

**A COMPARATIVE ANALYSIS OF SHALLOW AND DEEP INTEGRATION
OF CHINA AND INDIA INTO THE GLOBAL ECONOMY: A RESEARCH
AGENDA AND FIRST APPLICATION OF THE DISAGGREGATED
“TAPES” PARTIAL EQUILIBRIUM MODEL TO CHINA**

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ABBREVIATIONS

CGE Model	Computable General Equilibrium Model
FDI	Foreign Direct Investment
GTAP	Global Trade Analysis Project
HS	Harmonised System for Classification of Traded Commodities
IIT	Intra Industry Trade
aveNTB	ad valorem equivalent of Non Tariff Barrier
TAPES PE model	Trade Analysis Partial Equilibrium Sussex

ABSTRACT

“New trade theory” and the theory of “new regionalism” suggests that there may be significant gains arising from deeper regional and global economic integration that are much greater than the shallow integration covered by standard international trade theory. The potential chain of relations linking deep integration to economic performance is: shallow integration → deep integration → expanded trade → externalities and scale economies → productivity increases → improved economic performance. Note that, shallow integration is probably a necessary precursor to successful deep integration. Some of the links and consequent externalities are likely to be commodity/sector specific, whereas others will be broader.

Deep integration poses a set of major challenges to modellers. This exploratory paper sets out a research agenda for modelling some key aspects of deep integration and reports on some preliminary findings for China. The first is a radical disaggregation of model datasets which is essential to capture trade in intermediates, a hall-mark deep integration. Second, it is argued that indices of Intra Industry Trade (IIT) could provide a useful summary indicator of the degree to which firms and sectors have undergone deep integration. Third, the high degree of disaggregation chosen (HS4) with nearly 1200 commodities dictates the use of a partial equilibrium model. This means that in the absence of readily obtainable estimates of domestic production at this level of disaggregation, only import demand is modelled on the import side. Standard tariffs and estimates of the ad valorem equivalents are included in the protective structure on the import and export demand side.

The first results for China are based on the TAPES partial equilibrium model using HS4 imports and exports with applied tariffs used on the import side and for partner countries on the export side. 10 regions are defined (including China and India). Importable and exportable production is not included. Advalorem equivalents of NTBs could not be included on this round. The data are averaged across three years 2003-2005. Four sets of experiments are reported, for a 50% across the board tariff cut in all regions, a China-EU FTA, a China-NAFTA FTA and a China- East Asia FTA. Welfare is measured by changes in apparent consumption (absorption). The results are presented in aggregate and for an aggregation of the results to Broad Economic Categories (BEC). The main findings are:

- The main message of our findings so far is that China's integration into the regional and global economy is more of the shallow integration variety and not of the deep

integration variety if the results of the trade policy experiments are to be believed. The simulation results show very modest changes in IIT.

- Qualification of our finding on shallow vs deep integration needs the historical evidence on changes in intermediate inputs and IIT for which we do not yet have secure results to report.
- These preliminary findings suggest a comparative advantage story for trade in intermediates and IIT. Inherently, PE models are good at capturing this. The question that follows is this: can a PE model be extended to better capture deep integration, or do we need to develop our measures of deep integration from historical statistics? The answer is: probably both.
- My own instinct (presenter) is to suggest that the Tapes model would be better run at the 6 digit level with improved disaggregation of the BEC categories for reporting and analysis to capture trade in various types of intermediates. The greater degree of disaggregation of the Tapes model would also require the use of a statistical package for presenting and analysing results.

1. THE RESEARCH AGENDA: WHY PARTIAL EQUILIBRIUM?¹

1.1 OLD AND NEW REGIONALISM, SHALLOW AND DEEP INTEGRATION

The historical transition from old to new regionalism—a transition from shallow integration to deep integration, and the partnering of developed and developing countries—has been accompanied by developments in economic theory and empirical work in international trade. Here, old regionalism and shallow integration are linked, involving the lowering or elimination of barriers to the movement of goods and services across national borders within the region. Within this context “negative” integration entails the lowering trade barriers created by national policies. In contrast, new regionalism and deep integration are linked. Both involve establishing or expanding the institutional environment in order to facilitate trade and location of production without regard to national borders. Within this context “positive” integration suggests policies designed to encourage trade and facilitate segmentation of production processes and value chains.

Old regionalism and shallow integration have been associated with old trade theory, based on the elegant Heckscher-Ohlin-Samuelson (HOS) and Viner-Meade theoretical frameworks, providing a powerful set of tools for analyzing policy issues arising from both global trade liberalization and the formation of regional trade agreements involving liberalizing commodity trade within the RTA (e.g., a customs union or free trade agreement). As both global liberalization and regional trade agreements moved beyond commodity trade to incorporate additional elements—deep versus shallow integration—new theoretical analysis also followed. However, new trade theory, whilst roughly associated with elements of new regionalism and deep integration, is much more eclectic than work in the earlier HOS and Viner-Meade frameworks, at least in part because the theory is less unified and coherent—as would be expected of a new field.

There is a significant body of CGE work using the methods of old trade theory to analyze the impact of a wide range of issues in international economic policy over the last 40 years or so. The issues covered range from single country trade policy liberalisation to multilateral trade policy liberalisation to regional integration. However, this model cannot capture important trends in the evolution of the world trading system over that time, particularly the

¹ This argument was developed in Robinson et al (2006).

emergence of major trade blocs characterized by elements of “deep integration”, expanded trade in new goods and intermediate inputs, and links between expanded trade, productivity growth, and economic performance. There is an active literature on “new trade theory” and “new regionalism” that attempts to analyze some of the elements that characterize deep integration and increasing “globalization” of the world economy, but this work program is at an early stage.

1.2 DEEP INTEGRATION AND TRADE THEORY²

Adam Smith argued that specialisation of work increases job-specific skills due to improved dexterity, concentration on a particular task, and even invention of new machinery by workmen specialised in a particular field. This produced local economies of scale and externalities arising from the need to co-ordinate highly disaggregated parts of production processes. Later, the argument was developed to show that entrepreneurs could in some circumstances separate skilled from unskilled tasks, thus making it unnecessary to pay for skilled workers to execute the integrated task when by a division of labour into skilled and unskilled components could lower wage payments. the organisation of work. These arguments are developed in Evans (1989, sections 4.1 and 4.2). One possible outcome might be a “de-skilling” of the workforce with work organised in a hierarchical manner. In this case, job-specific skilled labour would only be required at the top of the hierarchy that controlled the production process and also the application of new machinery through investment, an argument similar to Feenstra (2004) writing on H-O trade in intermediates. Alternatively, it might generate the acquisition of very specific skills for highly specialised tasks that may involve the re-organisation of work generating technical change at constant factor prices or through H-O trade in intermediates. Both cases are potentially of importance for RTAs.

In Smith’s case, improved division of labour in the pin factory was also associated with a radical increase in intra factory trade. In old trade theory, the triumph of Ricardo over Smith was the triumph of comparative over absolute advantage. Smith’s association of radical productivity improvement with increased exchange of intermediates - whether intra factory, intra firm, intra national economies, or in international trade - was largely forgotten after

² Much of the argument in this section derives from Evans et al (2006)

Ricardo. Glimpses of the theoretical importance of intermediates in international trade returned in the 1960s with the concept of effective protection, and with the analysis of the effect of intermediates in international trade on the gains from trade. It was only with the recognition in the 1970s that globalisation was associated with increased intra trade that the association of intermediates trade, FDI and radical productivity improvement that the importance of Smith's original insight was recognised. In the literature on deep integration, it is now recognised that increased inter and intra industry trade can be associated with a variety of institutional arrangements ranging from FDI to mixed public/ private to purely public forms.

A second type of intra industry trade is where the "value chain" is broken up and, in an extension of Adam Smith's example, different parts of the pin production process are located all over the world. For this segmentation to happen, we need a mechanism for the contracts between upstream and downstream producers to be able to be very carefully and reliably monitored and enforced. This depends on the capacity of the producers to guarantee quality, which depends both on the market and public standards and regulations at national or regional level. Horizontal intra-industry trade tends to be in final goods differentiated by brands or quality attributes, including the "food niche products" and some special high-value horticultural products. Examples of vertical intra-industry trade include intermediate goods and outsourcing.

1.3 INDICATORS OF SHALLOW AND DEEP INTEGRATION AND MODELLING STRATEGY

The above observations have important implications for modelling in the presence of large numbers of intermediate goods entering into trade associated in one way or another with deep integration. In fact, one can observe cycles in what was regarded as the appropriate levels of aggregation for economic policy analysis using I/O and CGE models - political, modelling capability and intellectual fashion. In the immediate post-war period, the 1947 US input-output table had over 400 sectors. After Eisenhower this was cut down to a little more than 80 sectors. By the time general equilibrium models came into use in the 1970s, CGE models with up to 50 sectors were dominant except for the analysis of short-run structural adjustment issues where considerable aggregation was the norm. Today, the GTAP dataset has 57 sectors recognised, a dataset that has set the standard for much trade policy analysis over the last 10-15 years and single country CGE models have similar sector limits.

Whatever ones views on the limitations of CGE models, it is certainly true that the 57 sector GTAP dataset does not pick up the full extent of intermediate goods in trade. Hence, in our work on shallow and deep integration in China and India, we have opted for a degree of disaggregation of the trade data (HS4) with around 1200 traded goods that allows us to capture intermediate inputs in trade. We think that the importance of radical disaggregation that allows us to capture elements of intermediates trade over-rides the loss entailed by using the TAPES PE model for impact analysis rather than a CGE model. Further, working with HS4 trade data for a recent year means that we only capture import demand since there is no domestic production data at that level of disaggregation. On the export side, we are able to model export supply because by definition export supply is equal to exports.

1.4 OTHER POSSIBLE INDICATORS: TRADE INDUCED TFP

Ideally, our analysis of deep integration would include evidence on trade-productivity links, in both developed and developing countries. Schematic values of parameters reflecting trade induced TFP are sometimes used in CGE models. Rarely, econometric estimates of trade induced TFP are available and can be used in CGE models - see for example Evans et al (2006). Unfortunately, the evidence for China and India is very sketchy and we make no attempt at this stage to connect the impact analysis of trade policy liberalisation to econometrically estimated trade-productivity links.

1.5 REGIONAL DISAGGREGATION

The process of regional integration without formal agreement has been described in Robinson (2003). Here, Robinson's description of the structure of regions in the global economy for the 1990s has been used as the starting point for our regional disaggregation of China's and India's trade flows. Conceptually this is very different from the usual selection of regions for policy analysis, although in practice there may not be a great deal of difference.

1.6 THE ARGUMENT SO FAR

"Shallow" integration involves the lowering of barriers to goods and services across national borders. In contrast, "Deep" integration involves establishing or expanding the institutional environment in order to facilitate trade and location of production without regard to national borders. Elements of deep integration may include: Regulatory harmonization; establishment of common standards and technical regulations; harmonization of institutional structures; harmonization of domestic tax and subsidy policies; coordination of macro policies, and the creation of institutions to manage and facilitate integration.

Unilateral, multilateral, and preferential liberalisation all involve aspects of shallow integration. International trade theory and empirical evidence suggests that the consequences of will be a mix of the standard gains from trade and terms of trade effects. With respect to preferential liberalisation, trade creation, trade diversion enter into the net welfare calculation. There is then a potential for an overall negative impact of shallow integration when trade diversion is large.

International trade theory drawing on elements of “new regionalism” suggests that there may be significant gains, however, arising from deeper integration. The potential chain of relations linking deep integration to economic performance is: shallow integration → deep integration → expanded trade → externalities and scale economies → productivity increases → improved economic performance. Note that, shallow integration is probably a necessary precursor to successful deep integration. Some of the links and consequent externalities are likely to be commodity/sector specific, whereas others will be broader. In considering the above, an important issue is whether the beneficial links can be better achieved through regional integration or via processes of global/MFN liberalisation.

Computable General Equilibrium models have long been applied to the analysis of shallow integration, occasionally also being applied in the context of deep integration. This is typically modelled by guesstimate-based exogenous changes in the Armington and/or CET functions, or through exogenous changes in cost function parameters, or from lower transactions costs driven eg. by the harmonisation of standards . For example, in the Egypt case study reported in Evans et al (2006), the model had trade induced technical change specified on the basis of econometrically estimated parameters

There are inherent advantages to both partial and general equilibrium models. Analytically the advantage of CGE models is precisely their basis in general equilibrium, which allows them to capture linkages across markets. This is important and over the years has yielded important insights. A potential disadvantage of such models is the, largely data-driven, need to work at a fairly high level of aggregation. In certain contexts it is desirable to work at a more detailed level of disaggregation and for this partial equilibrium models are particularly useful. For example, highly disaggregated partial equilibrium modelling (using the Sussex TAPES model) has been undertaken in the context of the current round of EPA (Economic Partnership Agreement) negotiations between the EU and the Caribbean (reported in Evans et al (2006), and the EU and COMESA (EDRI (2006). These analyses have been conducted at the HS 6-digit level of aggregation. This is considerably more detailed than typically used in

CGE analysis. A more aggregate version of the TAPES model has also been used to assess the possible implications of an EU-China FTA (Evans and Robinson, 2007). PE models are extremely useful where there is a need for a high degree of sectoral disaggregation and/or where there is considerable sectoral level information available, which would be lost in a more aggregate model.

2. PRELIMINARY APPLICATION TO CHINA

2.1 THE TAPES MODEL APPLIED

The TAPES model is a fairly standard PE model with three variations in the application used here. First, rather than a standard Armington nest to model imports, a translog model has been used here. This allows for a variable elasticity of substitution between regional imports sources. Second, the model is run without domestic production on the import side and with export supply functions on the export side. Finally, the model is run with an endogenous exchange rate to maintain the base current account balance. For a longer summary and references, see Annex 1.

2.2 DATA

The HS4 trade and applied tariff database was obtained from TRAINS using WITS. As the model is developed ad valorem equivalents of NTBs from World Bank (Kee et al. 2004a and b). The model results were aggregated from HS4 to Broad Economic Equivalents (BEC). Indices of Intra Industry Trade (vertical and horizontal) were also calculated. See Annex 1 and 2 for greater detail.

2.3 ECONOMIC STRUCTURE

2.3.1 Regions

The regions are summarised in Table 1 below:

Table 1: Regions

	Regions	
1	AFR	Africa
2	EAR	East Asia Rich
3	EAM	East Asia Middle
4	EAP	East Asia Poor
5	EUP	EU and Periphery
6	INA	India
7	LAC	Latin American Countries

8	NAF	NAFTA
9	OAD	Other Asia and Oil

Details of the country composition of the regions are shown in Annex 1.3.

2.3.2 Pattern of Trade and Tariffs

Table 2: China 2003-5 Regional Pattern of Import, Exports and Tariffs

Base	Imports	Imports shr	Tariffs %	Exports	Exports shr	Partner Tariffs %
AFR	13685	0.025	5.94	5556	0.011	38.03
EAM	54787	0.100	11.42	34930	0.071	24.65
EAP	1163	0.002	12.92	1305	0.003	20.81
EAR	268600	0.491	15.89	151237	0.306	11.13
EUP	96961	0.177	18.28	18955	0.038	22.59
INA	8741	0.016	8.66	5579	0.011	55.23
LAC	19742	0.036	14.61	12201	0.025	33.91
NAF	56446	0.103	17.73	252370	0.510	11.32
OAD	26396	0.048	7.12	12299	0.025	31.23
Tot or avg	546520	1.000	15.22	494432	1.000	14.51

From Table 2, it can be seen that the average import tariffs (weighted average applied tariffs) are just over 15% and for export partner countries just over 14.5%. It is apparent that the East Asian regions EAR, EAM and EAP are the dominant sources of imports into China in the base period 2003-2005. The highest regional tariffs are also on imports from the East Asian regions. The dominant export partners are in the East Asian middle and rich (EAR and EAM) regions and over-all the largest export destination is with NAFTA (NAF). Export barriers in partner countries are lowest in the strongest export markets EAR and NAF.

An important aspect of import tariff and export partner tariffs is the pattern of tariff peaks. These are shown in Charts 1 and 2 below and in the tables in Annex 3.

Chart 1 China 2003-5 Tariff Peaks Imports

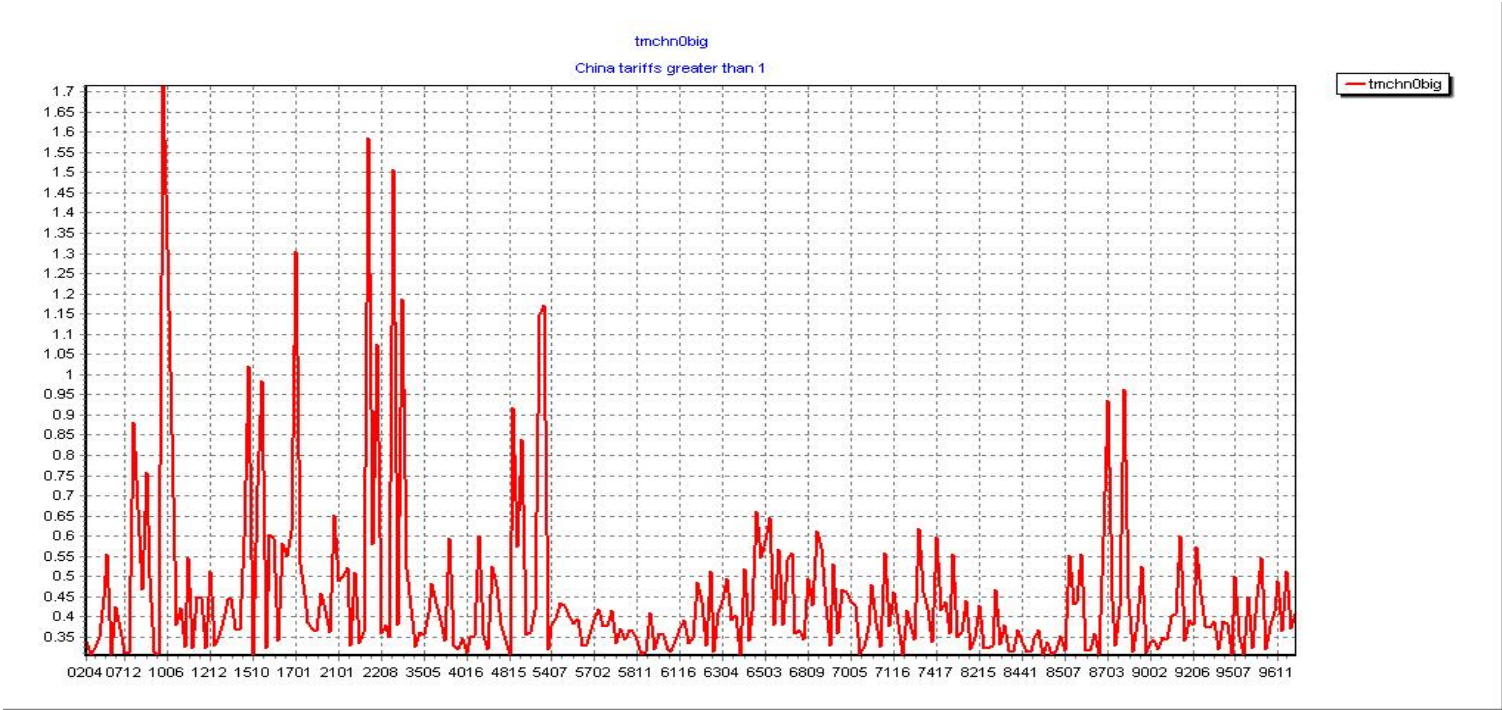
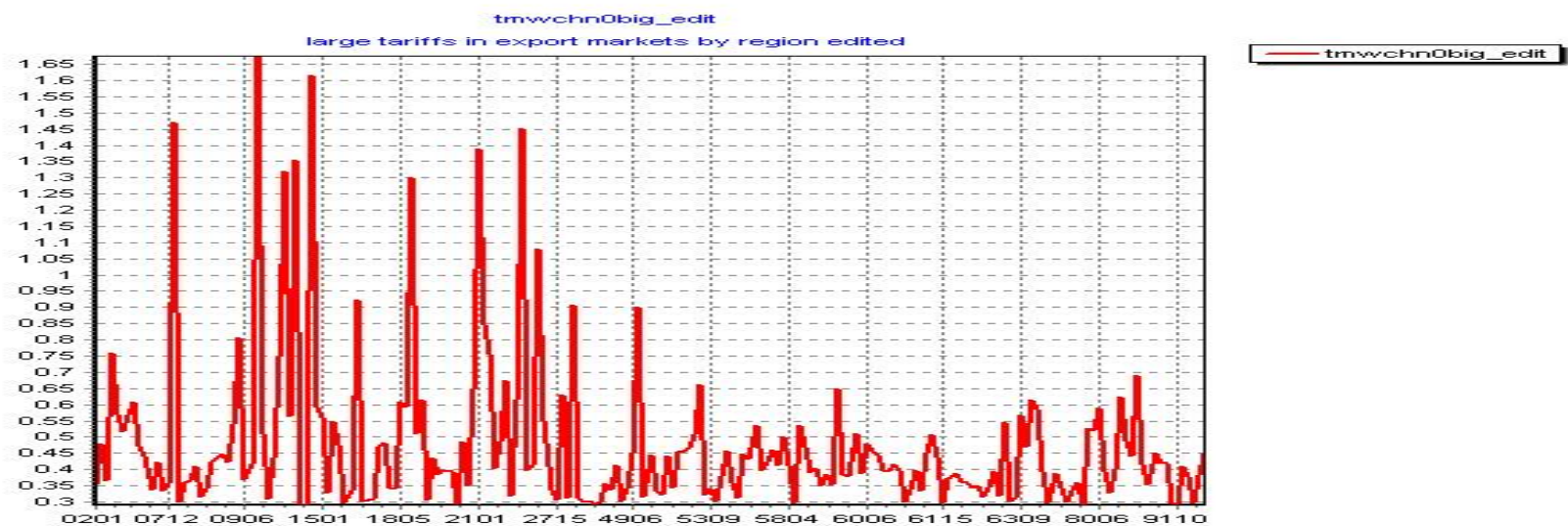


Chart 2 China 2003-5 Tariff Peaks Export Partners



It is of course straightforward to chart and draw up tables of the tariff outliers. It is a part of our research programme to go further than this, drawing on the fact that the model operates at the HS4 digit level and identifying any sector characteristics associated with tariff outliers. Moreover, policy makers are often interested in results at a high level of disaggregation.

2.4 EXPERIMENTS

The exploratory set of experiments reported for China are for shallow integration. TARIF1 simply cuts all tariffs by 50%. RTA1 and 2 are for FTAs with the EU and NAFTA. RTA3 is for a FTA with East Asia. Model 2 is used with an exchange rate adjustment to maintain base current account balance. The experiments are summarised in Table 3 below,

Table 3: Experiments Summarised

Simulation	Model	Description
Base	0	
Tariff1	2	All tariffs cut 50%
RTA1	2	FTA with EUP
RTA2	2	FTA with NAF
RTA3	2	FTA with EAR, EAM, EAP

2.5 AGGREGATE RESULTS

The aggregate results are shown in Tables 4 for changes in trade volumes under the different policy experiments, and changes in the exchange rate for the same experiments in Table 5.

Table 4: Change in Imports and Exports, Trade Policy Experiments

Imports: % change on Base					
	Base	Tariff1	RTA1	RTA2	RTA3
Total M	546520	7.10	1.65	5.68	7.65
RTA M					
RTA1	96961		27.43		
RTA2	56446			35.26	
RTA3	324550				17.52
ROW M					
RTA1	449559		-3.91		
RTA2	490075			2.27	
RTA3	221970				-6.79
Exports: % change on Base					
	Base	Tariff1	RTA1	RTA2	RTA3
Total E	494432	6.40	3.09	3.06	8.23
RTA E					
RTA1	18955		33.81		
RTA2	252370			10.00	
RTA3	187472				19.40
ROW E					
RTA1	475477		1.86		
RTA2	242062			-4.18	
RTA3	306960				1.41

Table 5: Exchange Rate by Experiment

Experiment	Exchange Rate
Base	1
Tariff1	1.003
RTA1	1.022
RTA2	0.974
RTA3	1.027

Changes in apparent consumption (absorption) or changes in total imports shown in Table 4 can be thought of as a first approximation of a welfare measure. From Table 5, it can be seen that in all experiments except RTA2 (FTA with NAFTA), there is a modest devaluation of the exchange rate required to maintain the current account balance. In the case of RTA2 (FTA with NAFTA), the effects on exports are strong enough for the exchange rate to appreciate.

In welfare terms, notice that RTA3, the FTA with East Asian partners, dominates the other experiments. There is also some evidence of trade diversion in RTA1 (FTA with EUP) and RTA3 (FTA with East Asia). If desired, such trade diversion could be lowered by a multilateral tariff cuts in conjunction with RTA1 and RTA3.

2.6 RESULTS BY BROAD ECONOMIC CATEGORIES AND INTRA INDUSTRY TRADE

An important part of the research agenda is to explore the effects of the trade policy experiments on various types of trade in intermediates. Thus the results for HS4 sectors were translated post calculation to 18 Broad Economic Categories sectors (details of the BEC sectors and the translation of the concordance from HS6 to HS4 are discussed in Annex 3. The results by BEC categories for imports, exports and a measure of IIT trade are shown in Table 6 below.

Table 6: Results by Broad Economic Categories

		Imports by simulation % change on base				
BEC	Product Names BEC Short	Base	Tariff1	RTA1	RTA2	RTA3
111	Food and Beverages - Mainly for Industry - Primary	8630	9.81	-1.09	24.61	7.99
112	Food and Beverages - Mainly Households - Primary	1796	10.20	0.05	8.53	11.76
121	Food and Beverages - Mainly for Industry - Processed	4702	28.97	-0.08	9.06	39.08
122	Food and Beverages - Mainly for Households - Processed	4365	13.78	11.99	13.34	5.48
210	Industrial Supplies nes - Primary	39751	6.13	-1.02	10.18	3.90
220	Industrial Supplies nes - Processed	164189	9.65	1.51	5.81	12.28
310	Fuels and Lubricants - Primary	34838	-0.22	-2.43	3.18	-2.78
320	Fuels and Lubricants - Processed	13298	8.60	0.38	3.68	9.05
410	Capital Goods (except Transport)	109884	8.02	3.16	4.83	9.02
420	Capital Goods (except Transport) - Parts and Accessories	126423	2.03	-1.15	3.52	0.74
510	Transport Parts and Accessories - Passenger Cars	5149	36.96	63.17	13.70	54.91
521	Transport and Parts and Accessories - Industrial - Other	5995	7.09	4.41	8.63	1.85
522	Transport and Parts and Accessories - Non-Industrial - Other	71	5.66	3.45	7.30	0.77
530	Transport and Parts and Accessories - Parts and Accessories	11883	14.67	11.73	6.65	18.08
610	Consumer Goods nes - Durable	7586	4.56	0.42	3.69	4.37
620	Consumer Goods nes - Semi - Durable	4176	7.38	2.66	5.25	8.36
630	Consumer Goods nes - Non - Durable	3711	9.21	6.36	7.39	6.36
700	Goods nes	75	3.25	1.91	5.73	-2.05

		Exports by simulation % change on base				
BEC	Product Names BEC Short	Base	Tariff1	RTA1	RTA2	RTA3
111	Food and Beverages - Mainly for Industry - Primary	1238	19.62	11.54	-1.95	84.82
112	Food and Beverages - Mainly Households - Primary	3513	12.10	4.18	-0.97	32.43
121	Food and Beverages - Mainly for Industry - Processed	467	17.92	4.71	1.81	42.34
122	Food and Beverages - Mainly for Households - Processed	8539	12.51	3.88	1.83	26.86
210	Industrial Supplies nes - Primary	11453	6.83	2.76	0.27	20.96
220	Industrial Supplies nes - Processed	98030	6.57	3.32	1.77	7.39
310	Fuels and Lubricants - Primary	4857	6.90	2.21	-2.04	13.86

320	Fuels and Lubricants - Processed	366	5.01	2.44	1.94	5.19
410	Capital Goods (except Transport)	151007	2.87	2.69	-0.78	4.19
420	Capital Goods (except Transport) - Parts and Accessories	42723	3.89	2.70	0.19	5.26
510	Transport Parts and Accessories - Passenger Cars	139	19.06	10.57	-2.00	19.39
521	Transport and Parts and Accessories - Industrial - Other	1041	10.30	4.38	-0.54	20.36
522	Transport and Parts and Accessories - Non-Industrial - Other	2746	11.21	3.72	5.99	12.80
530	Transport and Parts and Accessories - Parts and Accessories	4903	5.41	2.85	2.86	5.60
610	Consumer Goods nes - Durable	11132	4.82	3.34	1.54	5.16
620	Consumer Goods nes - Semi - Durable	124760	10.11	3.24	10.39	10.05
630	Consumer Goods nes - Non - Durable	20883	10.67	3.92	5.46	13.50
700	Goods nes	6635	2.33	2.65	-1.73	4.35

		% Change in IIT on base				
BEC	Product Names BEC Short	Base	Tariff1	RTA1	RTA2	RTA3
111	Food and Beverages - Mainly for Industry - Primary	0.275	0.64	1.83	-1.72	13.76
112	Food and Beverages - Mainly Households - Primary	0.364	-0.99	-0.10	3.88	-4.68
121	Food and Beverages - Mainly for Industry - Processed	0.360	-1.34	1.18	-3.34	2.83
122	Food and Beverages - Mainly for Households - Processed	0.343	-0.14	0.53	3.07	-3.54
210	Industrial Supplies nes - Primary	0.291	0.13	0.58	0.15	-1.01
220	Industrial Supplies nes - Processed	0.319	0.59	0.92	-0.24	0.93
310	Fuels and Lubricants - Primary	0.286	1.25	2.67	-1.88	5.63
320	Fuels and Lubricants - Processed	0.204	-1.09	0.22	-2.61	1.10
410	Capital Goods (except Transport)	0.329	0.41	0.22	-0.08	0.28
420	Capital Goods (except Transport) - Parts and Accessories	0.425	-0.29	1.70	-1.12	-1.21
510	Transport Parts and Accessories - Passenger Cars	0.053	-12.77	-31.66	-13.49	-22.46
521	Transport and Parts and Accessories - Industrial - Other	0.308	1.15	0.79	-3.36	4.48
522	Transport and Parts and Accessories - Non-Industrial - Other	0.168	-1.24	-0.44	5.07	-6.29
530	Transport and Parts and Accessories - Parts and Accessories	0.275	1.99	4.63	-2.02	5.16
610	Consumer Goods nes - Durable	0.188	1.73	0.31	1.07	3.54
620	Consumer Goods nes - Semi - Durable	0.105	0.87	3.26	-1.83	1.59
630	Consumer Goods nes - Non - Durable	0.234	1.38	0.05	-0.40	14.42
700	Goods nes	0.145	0.44	6.88	8.64	-7.28

A striking aspect of the BEC calculation is that for RTA3, FTA with East Asia, processed goods for industry and cars have the strongest increase in imports. That is, shallow integration in East Asia encourages increased trade in intermediates. On the export side, for RTA3 there are strong increases in exports of food and beverages, and to a lesser extent, intermediates and cars. Finally, for both imports and exports, trade in capital goods and accessories does not increase as fast as trade in intermediates.

It will be recalled that an important part of the research agenda was to develop measures of changes in intermediates trade as an indicator of deep integration. Interpreting the results of the trade policy experiments as explorations in shallow integration, there is modest evidence of an increase in IIT trade with the major exceptions being for Passenger Cars and Transport and Parts and Accessories - Non-Industrial - Other. We have begun work on the historical changes in IIT indexes but the results are not yet secure enough to report.

3. CONCLUDING REMARKS

- The main message of our findings so far is that China's integration into the regional and global economy is more of the shallow integration variety and not of the deep integration variety if the results of the trade policy experiments are to be believed. The simulation results show very modest changes in IIT.
- Qualification of our finding on shallow vs deep integration needs the historical evidence on changes in intermediate inputs and IIT for which we do not yet have secure results to report.
- These preliminary findings suggest a comparative advantage story for trade in intermediates and IIT. Inherently, PE models are good at capturing this. The question that follows is this: can a PE model be extended to better capture deep integration, or do we need to develop our measures of deep integration from historical statistics? The answer is: probably both.

- My own instinct (presenter) is to suggest that the Tapes model would be better run at the 6 digit level with improved disaggregation of the BEC categories for reporting and analysis to capture trade in various types of intermediates. The greater degree of disaggregation of the Tapes model would also require the use of a statistical package for presenting and analysing results.

ANNEX 1: THE MODEL, SECTORS AND REGIONS

A1.1 THE TAPES PE MODEL

The TAPES model used in this paper is GAMS based version of a standard PE model with two extensions. First, it can be solved with or without domestic import competing production for a large number of import and export sectors, for example HS4 or HS6. Second, it has a translog specification of the elasticity of substitution between regional sources of supply of imports, and regional destinations of exports (excluding domestic). The 2004 base data for the model for China and India at the HS4 level of disaggregation has around 1200 traded goods with associated tariff and average NTBs. On the import side there is no domestic production identified. On the export side, export supply is implied. Imports and exports are further disaggregated by China's and India's main regional trading partners. The core of a partial equilibrium model is built around supply and demand curves for exports and demand curves for imports. Consumer welfare can be measured using consumer and producer surpluses or roughly by changes in apparent consumption. Tariff and non-tariff barriers are applied to the value of imports for each sector in order to arrive at the domestic price valuation of imports. Imports valued at domestic prices gives total import demand or apparent import consumption. Demand curves for imports are defined for each imported good and each regional source of imports has a supply curve specified. The composition of imports from different regional sources of supply is treated as an imperfect substitute and is governed by a variable elasticity of substitution related to the Armington elasticities. Imports into each sector by region are aggregated using the elasticity of substitution. Thus an Armington or constant elasticity of substitution elasticity would require, for example, that machinery imports from the US and from India be equally substitutable. By using a different elasticity of substitution between different types of imports from different regional sources can be differentiated from each other. For example, imports of machinery from the US and EU can be treated as highly substitutable with one another, but not highly substitutable with machinery from a less developed country such as India.

On the export side, domestic export supply curves are defined for each sector. Export demand for each sector is broken down into export demand by each region. Thus any identified export taxes or subsidies affect the domestic price of exports and, where world prices are determined

in foreign markets, tariff or non-tariff barriers affect in export markets lower the returns to exporters. For a more detailed description of the TAPES model see Evans et al (2007, forthcoming).

A1.2 DATA

The sectoral definition was in HS4 Combined Nomenclature. Imports data for China and partner imports and associated applied tariffs were from TRAINS. No adjustment was made for fob/cif margins in partner imports were made. Such adjustments will be made as this work is revised using Comtrade export data for China and China's partner imports. Ad valorem equivalents of non-tariff barriers will be used in future work using World Bank data (Kee et al 2004a and b) described in detail in Evans et al (2007).

A1.3 REGIONS

Table A2.1 Regions

CHI	CHI --- China and former territories		
	CHN	156	China
	HKG	344	Hong Kong, China
	MAC	446	Macao
AFR	AFR --- Africa		
	AGO	24	Angola
	BWA	72	Botswana
	BDI	108	Burundi
	CMR	120	Cameroon
	CPV	132	Cape Verde
	CAF	140	Central African Republic
	TCD	148	Chad
	MYT	175	Mayotte
	COG	178	Congo, Rep.
	ZAR	180	Congo, Dem. Rep.
	GNQ	226	Equatorial Guinea
	ETH	231	Ethiopia(excludes Eritrea)
	ERI	232	Eritrea
	ATF	260	Fr. So. Ant. Tr
	DJI	262	Djibouti
	GAB	266	Gabon
	GMB	270	Gambia, The
	GHA	288	Ghana
	GIN	324	Guinea
	CIV	384	Cote d'Ivoire
	KEN	404	Kenya
	LSO	426	Lesotho
	LBR	430	Liberia
	MDG	450	Madagascar
	MWI	454	Malawi
	MLI	466	Mali
	MRT	478	Mauritania

	MUS	480	Mauritius
	MOZ	508	Mozambique
	NAM	516	Namibia
	NER	562	Niger
	NGA	566	Nigeria
	GNB	624	Guinea-Bissau
	RWA	646	Rwanda
	STP	678	Sao Tome and Principe
	SEN	686	Senegal
	SLE	694	Sierra Leone
	SOM	706	Somalia
	ZAF	710	South Africa
	ZWE	716	Zimbabwe
	ESH	732	Western Sahara
	SDN	736	Sudan
	SWZ	748	Swaziland
	TGO	768	Togo
	UGA	800	Uganda
	TZA	834	Tanzania
	BFA	854	Burkina Faso
	ZMB	894	Zambia
EAM	EAM --- East & SE Asia_Middle		
	BRN	96	Brunei
	IDN	360	Indonesia
	SWK	457	Sarawak
	MYS	458	Malaysia
	PHL	608	Philippines
	VNM	704	Vietnam
	THA	764	Thailand
EAP	EAP --- East & SE Asia_Poor		
	SLB	90	Solomon Islands
	MMR	104	Myanmar
	KHM	116	Cambodia
	CXR	162	Christmas Island
	COK	184	Cook Islands
	FJI	242	Fiji
	PYF	258	French Polynesia
	KIR	296	Kiribati
	PRK	408	Korea, Dem. Rep.
	LAO	418	Lao PDR
	NCL	540	New Caledonia
	VUT	548	Vanuatu
	NIU	570	Niue
	NFK	574	Norfolk Island
	FSM	583	Micronesia, Fed. Sts.
	MHL	584	Marshall Islands
	PLW	585	Palau
	PNG	598	Papua New Guinea
	PCN	612	Pitcairn
	TMP	626	East Timor
	TKL	772	Tokelau
	TON	776	Tonga

	TUV	798	Tuvalu
	USP	849	Us Msc.Pac.I
	WSM	882	Samoa
EAR	EAR --- East & SE Asia_Rich		
	AUS	36	Australia
	TWN	158	Taiwan, China
	JPN	392	Japan
	KOR	410	Korea, Rep.
	NZL	554	New Zealand
	SGP	702	Singapore
INA	INA --- India		
	IND	356	India
LAC	LAC --- Latin America		
	ATG	28	Antigua and Barbuda
	ARG	32	Argentina
	BHS	44	Bahamas, The
	BRB	52	Barbados
	BMU	60	Bermuda
	BOL	68	Bolivia
	BRA	76	Brazil
	BLZ	84	Belize
	VGB	92	British Virgin Islands
	CYM	136	Cayman Islands
	CHL	152	Chile
	COL	170	Colombia
	CRI	188	Costa Rica
	CUB	192	Cuba
	BEN	204	Benin
	DMA	212	Dominica
	DOM	214	Dominican Republic
	ECU	218	Ecuador
	SLV	222	El Salvador
	GRD	308	Grenada
	GLP	312	Guadeloupe
	GTM	320	Guatemala
	GUY	328	Guyana
	HTI	332	Haiti
	HND	340	Honduras
	JAM	388	Jamaica
	MSR	500	Montserrat
	ANT	530	Netherlands Antilles
	ABW	533	Aruba
	NIC	558	Nicaragua
	PAN	591	Panama
	PRY	600	Paraguay
	PER	604	Peru
	SHN	654	Saint Helena
	KN1	658	Saint Kitts-Nevis-Anguilla-Aru
	KNA	659	St. Kitts and Nevis
	AIA	660	Anguila
	LCA	662	St. Lucia
	VCT	670	St. Vincent and the Grenadines

	SMR	674	San Marino
	SUR	740	Suriname
	TTO	780	Trinidad and Tobago
	TCA	796	Turks and Caicos Isl.
	VIR	850	Virgin Islands (U.S.)
	URY	858	Uruguay
	VEN	862	Venezuela
	WLF	876	Wallis and Futura Isl.
NAF	NAF --- NAFTA		
	CAN	124	Canada
	MEX	484	Mexico
	PRI	630	Puerto Rico
	SPM	666	Saint Pierre and Miquelon
	USA	840	United States
OAD	OAD --- Other Asia & Oceania		
	AFG	4	Afghanistan
	ATA	10	Antarctica
	ASM	16	American Samoa
	BHR	48	Bahrain
	BGD	50	Bangladesh
	BTN	64	Bhutan
	BAT	80	Br. Antr. Terr
	IOT	86	British Indian Ocean Ter.
	LKA	144	Sri Lanka
	CCK	166	Cocos (Keeling) Islands
	COM	174	Comoros
	MYT	175	Mayotte
	GUM	316	Guam
	HMD	334	Heard Island and McDonald Isla
	IRN	364	Iran, Islamic Rep.
	IRQ	368	Iraq
	JTN	396	Jhonston Island
	KAZ	398	Kazakhstan
	KWT	414	Kuwait
	KGZ	417	Kyrgyz Republic
	MDV	462	Maldives
	MNG	496	Mongolia
	OMN	512	Oman
	NRU	520	Nauru
	NPL	524	Nepal
	PAK	586	Pakistan
	QAT	634	Qatar
	RYU	647	Ryukyu Is
	SAU	682	Saudi Arabia
	SYC	690	Seychelles
	YDR	720	Yemen Democratic
	SYR	760	Syrian Arab Republic
	TJK	762	Tajikistan
	ARE	784	United Arab Emirates
	TKM	795	Turkmenistan
	BUN	837	Bunkers
	UZB	860	Uzbekistan

	YEM	887	Yemen
	UNS	898	Unspecified
EUP	EUP --- EU & Periphery		
	ALB	8	Albania
	DZA	12	Algeria
	AND	20	Andorra
	AZE	31	Azerbaijan
	AUT	40	Austria
	ARM	51	Armenia
	BEL	56	Belgium
	BIH	70	Bosnia and Herzegovina
	BVT	74	Bouvet Island
	BGR	100	Bulgaria
	BLR	112	Belarus
	HRV	191	Croatia
	CYP	196	Cyprus
	CZE	203	Czech Republic
	DNK	208	Denmark
	EST	233	Estonia
	FRO	234	Faeroe Islands
	FLK	238	Falkland Island
	SGS	239	South Georgia and the South Sa
	FIN	246	Finland
	FRA	250	France
	GEO	268	Georgia
	GAZ	274	Gaza Strip
	PSE	275	Occ.Pal.Terr
	DEU	276	Germany
	GIB	292	Gibraltar
	GRC	300	Greece
	GRL	304	Greenland
	VAT	336	Holy See
	HUN	348	Hungary
	ISL	352	Iceland
	IRL	372	Ireland
	ISR	376	Israel
	ITA	380	Italy
	JOR	400	Jordan
	LBN	422	Lebanon
	LVA	428	Latvia
	LBY	434	Libya
	LIE	438	Liechtenstein
	LTU	440	Lithuania
	LUX	442	Luxembourg
	MLT	470	Malta
	MDA	498	Moldova
	MAR	504	Morocco
	NLD	528	Netherlands
	NOR	578	Norway
	POL	616	Poland
	PRT	620	Portugal
	ROM	642	Romania

	RUS	643	Russian Federation
	SVK	703	Slovak Republic
	SVN	705	Slovenia
	ESP	724	Spain
	SWE	752	Sweden
	CHE	756	Switzerland
	TUN	788	Tunisia
	TUR	792	Turkey
	UKR	804	Ukraine
	MKD	807	Macedonia, FYR
	EGY	818	Egypt, Arab Rep.
	GBR	826	United Kingdom
	SER	891	Yugoslavia

ANNEX 2: INTERMEDIATE INPUTS AND BROAD ECONOMIC CATEGORIES

A2.1 INTERMEDIATE INPUTS

We have chosen the Broad Economic Categories and the starting point for defining differences between sectors producing intermediate inputs and final goods. It is likely that these categories will be refined for our descriptive analysis of deep integration. HS4 to BEC for translating experiment results in HS4 to BEC. In quite a large number of cases this required arbitrary allocation of HS4 categories to a single EC category. Roughly speaking this meant that some processed primary goods were assumed to be in industry rather than holds, and some intermediate goods were allocated to capital goods.

TABLE A.3: BROAD ECONOMIC CATEGORIES: BEC REV.3

BEC code	Product Name
111	Food and Beverages - Mainly for Industry - Primary
112	Food and Beverages - Mainly for Household Consumption - Primary
121	Food and Beverages - Mainly for Industry - Processed
122	Food and Beverages - Mainly for Household Consumption - Processed
210	Industrial Supplies nes - Primary
220	Industrial Supplies nes - Processed
310	Fuels and Lubricants - Primary
321	Fuels and Lubricants - Motor Spirit - Processed
322	Fuels and Lubricants - Other - Processed
410	Capital Goods (except Transport Equipment)
420	Capital Goods (except Transport Equipment) - Parts and Accessories
510	Transport Equipment and Parts and Accessories thereof - Passenger Motor Cars
521	Transport Equipment and Parts and Accessories thereof - Industrial - Other
522	Transport Equipment and Parts and Accessories thereof - Non-Industrial - Other
530	Transport Equipment and Parts and Accessories thereof - Parts and Accessories
610	Consumer Goods nes - Durable
620	Consumer Goods nes - Semi - Durable
630	Consumer Goods nes - Non - Durable
700	Goods nes

A2.2 INDICES OF INTRA INDUSTRY TRADE³

The original measure, the Grubel-Lloyd (G-L) index of ITT, measures the extent to which exports and imports overlap. Subsequently the original Grubel-Lloyd index has been greatly refined. A general problem with this type of index concerns choosing the correct level of aggregation—the measures are sensitive to sector definition. Previous work by one of the authors suggested that HS4 disaggregation of trade data eliminated obvious bias arising from the choice of aggregation. Once the level of disaggregation has been decided, it is important to distinguish between goods that are “horizontally differentiated” (different varieties) from goods that are “vertically differentiated” (different qualities entering into production). A version of the indices of IIT with horizontal and vertical differential will be used in this paper.

³ Indices of IIT are discussed at length in Evans et al (2006).

ANNEX 3: TARIFF OUTLIERS

The tariff outliers are defined by twice the average applied tariffs in Tables A2.2 and 2.3 below.

Table A.2 China Import Tariffs Big

HS4	Product name	Applied Tariffs (weighted)
Average import tariff		15.2%
0204	Meat of sheep or goats, fresh, chilled or frozen.	33.92%
0303	Fish, frozen, excluding fish fillets and other fish	30.77%
0405	Butter and other fats and oils derived from milk;	32.12%
0502	Pigs', hogs' or boars' bristles and hair; badger h	35.09%
0503	Horsehair and horsehair waste, whether or not put	44.90%
0504	Guts, bladders and stomachs of animals (other than	55.51%
0506	Bones and horn-cores, unworked, defatted, simply p	30.76%
0509	Natural sponges of animal origin.	42.48%
0711	Vegetables provisionally preserved (for example, b	37.15%
0712	Dried vegetables, whole, cut, sliced, broken or in	30.96%
0810	Other fruit, fresh.	31.13%
0811	Fruit and nuts, uncooked or cooked by steaming or	88.29%
0812	Fruit and nuts, provisionally preserved (for example	66.76%
0813	Fruit, dried, other than that of headings Nos. 08.	46.63%
0814	Peel of citrus fruit or melons (including watermelon	75.66%
0904	Pepper of the genus Piper; dried or crushed or ground	49.90%
0905	Vanilla.	31.37%
0910	Ginger, saffron, turmeric (curcuma), thyme, bay le	30.71%
1001	Wheat and meslin.	171.57%
1006	Rice.	131.23%
1101	Wheat or meslin flour.	85.42%
1102	Cereal flours other than of wheat or meslin.	37.97%
1106	Flour, meal and powder of the dried leguminous vegetables	42.09%
1108	Starches; inulin.	32.55%
1109	Wheat gluten, whether or not dried.	54.52%

1202	Ground-nuts, not roasted or otherwise cooked, whet	32.14%
1203	Copra.	45.00%
1204	Linseed, whether or not broken.	44.52%
1210	Hop cones, fresh or dried, whether or not ground,	32.21%
1212	Locust beans, seaweeds and other algae, sugar beet	51.44%
1213	Cereal straw and husks, unprepared, whether or not	32.78%
1301	Lac; natural gums, resins, gum-resins and oleoresi	35.21%
1302	Vegetable saps and extracts; pectic substances, pe	39.09%
1402	Vegetable materials of a kind used primarily as st	44.36%
1403	Vegetable materials of a kind used primarily in br	44.71%
1504	Fats and oils and their fractions, of fish or mari	37.09%
1505	Wool grease and fatty substances derived therefrom	36.71%
1506	Other animal fats and oils and their fractions, wh	59.73%
1507	Soya-bean oil and its fractions, whether or not re	102.13%
1510	Other oils and their fractions, obtained solely fr	30.45%
1511	Palm oil and its fractions, whether or not refined	72.38%
1514	Rape, colza or mustard oil and fractions thereof,	98.49%
1515	Other fixed vegetable fats and oils (including joj	32.27%
1516	Animal or vegetable fats and oils and their fracti	60.48%
1517	Margarine; edible mixtures or preparations of anim	59.56%
1518	Animal or vegetable fats and oils and their fracti	34.10%
1520	Glycerol, crude; glycerol waters and glycerol lyes	58.31%
1521	Vegetable waxes (other than triglycerides), beeswa	54.99%
1522	Degras; residues resulting from the treatment of f	61.16%
1701	Cane or beet sugar and chemically pure sucrose, in	130.44%
1702	Other sugars, including chemically pure lactose, m	53.02%
1804	Cocoa butter, fat and oil.	45.54%
1805	Cocoa powder, not containing added sugar or other	38.55%
1901	Malt extract; food preparations of flour, groats,	37.20%
1903	Tapioca and substitutes therefor prepared from sta	36.34%
1904	Prepared foods obtained by the swelling or roastin	45.86%
2002	Tomatoes prepared or preserved otherwise than by v	41.65%

2004	Other vegetables prepared or preserved otherwise t	36.07%
2006	Vegetables, fruit, nuts, fruit-peel and other part	65.17%
2101	Extracts, essences and concentrates, of coffee, te	48.75%
2102	Yeasts (active or inactive); other single-cell mic	50.09%
2103	Sauces and preparations therefor; mixed condiments	52.12%
2105	Ice cream and other edible ice, whether or not con	32.89%
2106	Food preparations not elsewhere specified or inclu	50.89%
2201	Waters, including natural or artificial mineral wa	33.35%
2204	Wine of fresh grapes, including fortified wines; g	36.29%
2205	Vermouth and other wine of fresh grapes flavoured	158.58%
2206	Other fermented beverages (for example, cider, per	57.82%
2207	Undenatured ethyl alcohol of an alcoholic strength	107.41%
2208	Undenatured ethyl alcohol of an alcoholic strength	35.93%
2209	Vinegar and substitutes for vinegar obtained from	38.11%
2401	Unmanufactured tobacco; tobacco refuse.	34.85%
2403	Other manufactured tobacco and manufactured tobacc	150.62%
3102	Mineral or chemical fertilisers, nitrogenous.	37.92%
3105	Mineral or chemical fertilisers containing two or	118.77%
3301	Essential oils (terpeneless or not), including con	51.75%
3302	Mixtures of odoriferous substances and mixtures (i	42.18%
3401	Soap; organic surface-active products and preparat	32.67%
3503	Gelatin (including gelatin in rectangular (includi	36.22%
3505	Dextrins and other modified starches (for example,	35.52%
3702	Photographic film in rolls, sensitised, unexposed,	41.04%
3703	Photographic paper, paperboard and textiles, sensi	48.18%
3704	Photographic plates, film, paper, paperboard and t	43.59%
3823	Industrial monocarboxylic fatty acids; acid oils f	39.12%
3905	Polymers of vinyl acetate or of other vinyl esters	34.04%
4001	Natural rubber, balata, gutta-percha, guayule, chi	59.48%
4007	Vulcanised rubber thread and cord.	32.87%
4012	Retreaded or used pneumatic tyres of rubber; solid	31.99%
4015	Articles of apparel and clothing accessories (incl	34.73%

4016	Other articles of vulcanised rubber other than har	30.93%
4106	Tanned or crust hides and skins of other animals,	34.86%
4205	Other articles of leather or of composition leathe	35.16%
4206	Articles of gut (other than silk-worm gut), of gol	60.00%
4302	Tanned or dressed furskins (including heads, tails	35.45%
4303	Articles of apparel, clothing accessories and othe	31.88%
4304	Artificial fur and articles thereof.	52.62%
4416	Casks, barrels, vats, tubs and other coopers' prod	47.80%
4417	Tools, tool bodies, tool handles, broom or brush b	38.07%
4813	Cigarette paper, whether or not cut to size or in	34.40%
4815	Floor coverings on a base of paper or of paperboar	30.89%
5101	Wool, not carded or combed.	91.75%
5103	Waste of wool or of fine or coarse animal hair, in	57.23%
5105	Wool and fine or coarse animal hair, carded or com	83.83%
5111	Woven fabrics of carded wool or of carded fine ani	35.71%
5112	Woven fabrics of combed wool or of combed fine ani	36.31%
5113	Woven fabrics of coarse animal hair or of horsehai	41.77%
5201	Cotton, not carded or combed.	114.61%
5203	Cotton, carded or combed.	117.22%
5311	Woven fabrics of other vegetable textile fibres; w	31.95%
5407	Woven fabrics of synthetic filament yarn, includin	37.69%
5512	Woven fabrics of synthetic staple fibres, containi	39.41%
5513	Woven fabrics of synthetic staple fibres, containi	43.39%
5514	Woven fabrics of synthetic staple fibres, containi	42.89%
5515	Other woven fabrics of synthetic staple fibres.	40.34%
5516	Woven fabrics of artificial staple fibres.	38.28%
5601	Wadding of textile materials and articles thereof;	39.46%
5602	Felt, whether or not impregnated, coated, covered	32.90%
5603	Nonwovens, whether or not impregnated, coated, cov	33.07%
5608	Knotted netting of twine, cordage or rope; made up	35.46%
5702	Carpets and other textile floor coverings, woven,	39.25%
5704	Carpets and other textile floor coverings, of felt	41.95%

5801	Woven pile fabrics and chenille fabrics, other tha	37.76%
5802	Terry towelling and similar woven terry fabrics, o	37.74%
5803	Gauze, other than narrow fabrics of heading 58.06.	41.57%
5804	Tulles and other net fabrics, not including woven,	33.35%
5805	Hand-woven tapestries of the type Gobelins, Flande	37.01%
5806	Narrow woven fabrics, other than goods of headingá	34.45%
5808	Braids in the piece; ornamental trimmings in the p	36.84%
5809	Woven fabrics of metal thread and woven fabrics of	36.37%
5811	Quilted textile products in the piece, composed of	34.50%
5901	Textile fabrics coated with gum or amylaceous subs	30.62%
5902	Tyre cord fabric of high tenacity yarn of nylon or	31.22%
5904	Linoleum, whether or not cut to shape; floor cover	41.10%
5906	Rubberised textile fabrics, other than those of he	32.09%
6001	Pile fabrics, including "long pile" fabrics and te	35.86%
6002	Knitted or crocheted fabrics of a width not exceed	35.60%
6006	(2002-) Other knitted or crocheted fabrics.	32.06%
6103	Men's or boys' suits, ensembles, jackets, blazers,	31.30%
6112	Track suits, ski suits and swimwear, knitted or cr	34.12%
6116	Gloves, mittens and mitts, knitted or crocheted.	37.00%
6201	Men's or boys' overcoats, car-coats, capes, cloaks	39.16%
6202	Women's or girls' overcoats, car-coats, capes, clo	33.50%
6203	Men's or boys' suits, ensembles, jackets, blazers,	34.76%
6210	Garments, made up of fabrics of heading 56.02, 56.	48.68%
6211	Track suits, ski suits and swimwear; other garment	43.62%
6216	Gloves, mittens and mitts.	32.89%
6217	Other made up clothing accessories; parts of garme	51.31%
6301	Blankets and travelling rugs.	31.43%
6303	Curtains (including drapes) and interior blinds; c	41.15%
6304	Other furnishing articles, excluding those of head	44.15%
6305	Sacks and bags, of a kind used for the packing of	49.50%
6307	Other made up articles, including dress patterns.	39.30%
6308	Sets consisting of woven fabric and yarn, whether	40.40%

6310	Used or new rags, scrap twine, cordage, rope and c	30.65%
6402	Other footwear with outer soles and uppers of rubb	51.80%
6404	Footwear with outer soles of rubber, plastics, lea	34.10%
6406	Parts of footwear (including uppers whether or not	41.39%
6501	Hat-forms, hat bodies and hoods of felt, neither b	66.00%
6502	Hat-shapes, plaited or made by assembling strips o	54.61%
6503	Felt hats and other felt headgear, made from the h	58.87%
6507	Head-bands, linings, covers, hat foundations, hat	64.47%
6603	Parts, trimmings and accessories of articles of he	38.04%
6701	Skins and other parts of birds with their feathers	56.67%
6702	Artificial flowers, foliage and fruit and parts th	38.02%
6703	Human hair, dressed, thinned, bleached or otherwis	54.02%
6704	Wigs, false beards, eyebrows and eyelashes, switch	55.90%
6801	Setts, curbstones and flagstones, of natural stone	36.00%
6802	Worked monumental or building stone (except slate)	36.66%
6807	Articles of asphalt or of similar material (for ex	34.42%
6809	Articles of plaster or of compositions based on pl	49.48%
6815	Articles of stone or of other mineral substances (	42.88%
6904	Ceramic building bricks, flooring blocks, support	61.32%
6905	Roofing tiles, chimney-pots, cowls, chimney liners	56.89%
6906	Ceramic pipes, conduits, guttering and pipe fittin	42.75%
6910	Ceramic sinks, wash basins, wash basin pedestals,	32.94%
6914	Other ceramic articles.	53.19%
7001	Cullet and other waste and scrap of glass; glass i	35.99%
7003	Cast glass and rolled glass, in sheets or profiles	46.74%
7004	Drawn glass and blown glass, in sheets, whether or	46.23%
7005	Float glass and surface ground or polished glass,	43.63%
7006	Glass of heading 70.03, 70.04 or 70.05, bent, edge	42.89%
7008	Multiple-walled insulating units of glass.	30.64%
7009	Glass mirrors, whether or not framed, including re	32.70%
7010	Carboys, bottles, flasks, jars, pots, phials, ampo	37.69%
7012	Glass inners for vacuum flasks or for other vacuum	48.06%

7014	Signalling glassware and optical elements of glass	38.63%
7015	Clock or watch glasses and similar glasses, glasse	32.53%
7016	Paving blocks, slabs, bricks, squares, tiles and o	55.98%
7115	Other articles of precious metal or of metal clad	37.59%
7116	Articles of natural or cultured pearls, precious o	46.29%
7117	Imitation jewellery.	38.33%
7309	Reservoirs, tanks, vats and similar containers for	30.53%
7310	Tanks, casks, drums, cans, boxes and similar conta	41.72%
7311	Containers for compressed or liquefied gas, of iro	37.14%
7315	Chain and parts thereof, of iron or steel.	34.23%
7322	Radiators for central heating, not electrically he	62.01%
7324	Sanitary ware and parts thereof, of iron or steel.	46.05%
7325	Other cast articles of iron or steel.	41.82%
7414	Cloth (including endless bands), grill and netting	33.84%
7417	Cooking or heating apparatus of a kind used for do	59.66%
7418	Table, kitchen or other household articles and par	41.61%
7419	Other articles of copper.	43.76%
7611	Aluminium reservoirs, tanks, vats and similar cont	35.89%
7612	Aluminium casks, drums, cans, boxes and similar co	55.62%
7616	Other articles of aluminium.	34.93%
8007	Other articles of tin.	36.28%
8210	Hand-operated mechanical appliances, weighing 10 k	44.06%
8211	Knives with cutting blades, serrated or not (inclu	32.03%
8212	Razors and razor blades (including razor blade bla	34.88%
8215	Spoons, forks, ladles, skimmers, cake-servers, fis	42.84%
8301	Padlocks and locks (key, combination or electrical	32.36%
8303	Armoured or reinforced safes, strong-boxes and doo	32.21%
8309	Stoppers, caps and lids (including crown corks, sc	33.01%
8310	Sign-plates, name-plates, address-plates and simil	46.71%
8405	Producer gas or water gas generators, with or with	33.30%
8407	Spark-ignition reciprocating or rotary internal co	38.06%
8412	Other engines and motors.	31.65%

8415	Air conditioning machines, comprising a motor-driv	31.26%
8418	Refrigerators, freezers and other refrigerating or	36.66%
8441	Other machinery for making up paper pulp, paper or	33.74%
8452	Sewing machines, other than book-sewing machines o	31.41%
8455	Metal-rolling mills and rolls therefor.	31.40%
8460	Machine-tools for deburring, sharpening, grinding,	34.53%
8461	Machine-tools for planing, shaping, slotting, broa	36.74%
8463	Other machine-tools for working metal or cermets,	30.57%
8468	Machinery and apparatus for soldering, brazing or	33.89%
8469	Typewriters other than printers of heading 84.71;	30.52%
8501	Electric motors and generators (excluding generati	31.78%
8506	Primary cells and primary batteries.	35.37%
8507	Electric accumulators, including separators theref	31.63%
8510	Shavers, hair clippers and hair-removing appliance	55.28%
8519	Turntables (record-decks), record-players, cassett	43.21%
8521	Video recording or reproducing apparatus, whether	43.74%
8522	Parts and accessories suitable for use solely or p	55.58%
8528	Reception apparatus for television, whether or not	31.72%
8535	Electrical apparatus for switching or protecting e	31.56%
8548	Waste and scrap of primary cells, primary batterie	35.90%
8609	Containers (including containers for the transport	30.66%
8702	Motor vehicles for the transport of ten or more pe	59.73%
8703	Motor cars and other motor vehicles principally de	93.50%
8704	Motor vehicles for the transport of goods.	44.08%
8705	Special purpose motor vehicles, other than those p	32.96%
8706	Chassis fitted with engines, for the motor vehicle	42.57%
8707	Bodies (including cabs), for the motor vehicles of	96.44%
8708	Parts and accessories of the motor vehicles of hea	44.68%
8709	Works trucks, self-propelled, not fitted with lift	31.27%
8714	Parts and accessories of vehicles of headings 87.1	38.57%
8715	Baby carriages and parts thereof.	52.46%
8716	Trailers and semi-trailers; other vehicles, not me	31.07%

9002	Lenses, prisms, mirrors and other optical elements	33.74%
9008	Image projectors, other than cinematographic; phot	34.40%
9104	Instrument panel clocks and clocks of a similar ty	31.86%
9106	Time of day recording apparatus and apparatus for	35.11%
9107	Time switches with clock or watch movement or with	34.43%
9109	Clock movements, complete and assembled.	40.07%
9201	Pianos, including automatic pianos; harpsichords a	40.72%
9203	Keyboard pipe organs; harmoniums and similar keybo	60.00%
9204	Accordions and similar instruments; mouth organs.	34.08%
9205	Other wind musical instruments (for example, clari	39.12%
9206	Percussion musical instruments (for example, drums	38.10%
9207	Musical instruments, the sound of which is produce	57.28%
9209	Parts (for example, mechanisms for musical boxes)	45.65%
9303	Other firearms and similar devices which operate b	37.61%
9304	Other arms (for example, spring, air or gas guns a	37.45%
9305	Parts and accessories of articles of headings 93.0	38.80%
9307	Swords, cutlasses, bayonets, lances and similar ar	31.82%
9404	Mattress supports; articles of bedding and similar	38.91%
9405	Lamps and lighting fittings including searchlights	38.36%
9406	Prefabricated buildings.	30.65%
9507	Fishing rods, fish-hooks and other line fishing ta	49.99%
9508	Roundabouts, swings, shooting galleries and other	35.31%
9602	Worked vegetable or mineral carving material and a	30.68%
9603	Brooms, brushes (including brushes constituting pa	44.90%
9604	Hand sieves and hand riddles.	32.14%
9606	Buttons, press-fasteners, snap-fasteners and press	45.03%
9607	Slide fasteners and parts thereof.	54.64%
9608	Ball point pens; felt tipped and other porous-tipp	31.98%
9609	Pencils (other than pencils of heading 96.08), cra	37.63%
9610	Slates and boards, with writing or drawing surface	41.34%
9611	Date, sealing or numbering stamps, and the like (i	49.01%
9613	Cigarette lighters and other lighters, whether or	36.48%

9616	Scent sprays and similar toilet sprays, and mounts	51.27%
9617	Vacuum flasks and other vacuum vessels, complete w	37.02%
9618	Tailors' dummies and other lay figures; automata a	40.85%

Table A.3: China Export Partner Barriers Big

HS4	Product name	Applied Tariffs (weighted)
Average tariff barrier facing exporters		14.5%
0201	Meat of bovine animals, fresh or chilled.	35.48%
0206	Edible offal of bovine animals, swine, sheep, goat	48.02%
0207	Meat and edible offal, of the poultry of heading 0	36.63%
0210	Meat and edible meat offal, salted, in brine, drier	75.82%
0403	Buttermilk, curdled milk and cream, yogurt, kephir	56.98%
0405	Butter and other fats and oils derived from milk;	51.76%
0406	Cheese and curd.	56.74%
0408	Birds' eggs, not in shell, and egg yolks, fresh, d	60.73%
0409	Natural honey.	47.39%
0702	Tomatoes, fresh or chilled.	44.11%
0703	Onions, shallots, garlic, leeks and other alliaceous	33.66%
0707	Cucumbers and gherkins, fresh or chilled.	42.12%
0711	Vegetables provisionally preserved (for example, b	33.42%
0712	Dried vegetables, whole, cut, sliced, broken or in	35.51%
0713	Dried leguminous vegetables, shelled, whether or n	147.07%
0714	Manioc, arrowroot, salep, Jerusalem artichokes, sw	30.02%
0803	Bananas, including plantains, fresh or dried.	36.07%
0805	Citrus fruit, fresh or dried.	36.55%
0806	Grapes, fresh or dried.	40.90%
0807	Melons (including watermelons) and papaws (papayas	31.53%
0808	Apples, pears and quinces, fresh.	34.06%
0811	Fruit and nuts, uncooked or cooked by steaming or	42.40%
0812	Fruit and nuts, provisionally preserved (for examp	43.64%
0813	Fruit, dried, other than that of headings Nos. 08.	44.93%
0902	Tea, whether or not flavoured.	42.17%
0903	Maté.	53.95%
0904	Pepper of the genus Piper; dried or crushed or gro	80.57%
0906	Cinnamon and cinnamon-tree flowers.	36.92%

0908	Nutmeg, mace and cardamoms.	41.60%
1002	Rye.	167.55%
1003	Barley.	421.52%
1005	Maize (corn).	237.01%
1006	Rice.	204.34%
1007	Grain sorghum.	51.18%
1008	Buckwheat, millet and canary seed; other cereals.	31.03%
1102	Cereal flours other than of wheat or meslin.	43.41%
1104	Cereal grains otherwise worked (for example, hulle	74.72%
1107	Malt, whether or not roasted.	131.96%
1108	Starches; inulin.	306.86%
1201	Soya beans, whether or not broken.	56.41%
1202	Ground-nuts, not roasted or otherwise cooked, whet	135.55%
1203	Copra.	29.29%
1205	Rape or colza seeds, whether or not broken.	29.07%
1207	Other oil seeds and oleaginous fruits, whether or	313.14%
1212	Locust beans, seaweeds and other algae, sugar beet	161.61%
1214	Swedes, mangolds, fodder roots, hay, lucerne (alfa	59.42%
1501	Pig fat (including lard) and poultry fat, other th	56.06%
1503	Lard stearin, lard oil, oleostearin, oleo-oil and	32.80%
1507	Soya-bean oil and its fractions, whether or not re	54.94%
1511	Palm oil and its fractions, whether or not refined	47.76%
1515	Other fixed vegetable fats and oils (including joj	29.55%
1516	Animal or vegetable fats and oils and their fracti	33.59%
1517	Margarine; edible mixtures or preparations of anim	92.39%
1601	Sausages and similar products, of meat, meat offal	30.21%
1602	Other prepared or preserved meat, meat offal or bl	30.48%
1603	Extracts and juices of meat, fish or crustaceans,	30.92%
1701	Cane or beet sugar and chemically pure sucrose, in	47.07%
1702	Other sugars, including chemically pure lactose, m	48.24%
1704	Sugar confectionery (including white chocolate), n	34.52%
1801	Cocoa beans, whole or broken, raw or roasted.	34.13%

1805	Cocoa powder, not containing added sugar or other	60.69%
1806	Chocolate and other food preparations containing c	59.34%
1901	Malt extract; food preparations of flour, groats,	130.00%
1902	Pasta, whether or not cooked or stuffed (with meat	51.03%
1904	Prepared foods obtained by the swelling or roasting	61.56%
1905	Bread, pastry, cakes, biscuits and other bakers' w	30.58%
2002	Tomatoes prepared or preserved otherwise than by v	43.49%
2003	Mushrooms and truffles, prepared or preserved othe	38.40%
2004	Other vegetables prepared or preserved otherwise t	39.90%
2005	Other vegetables prepared or preserved otherwise t	39.57%
2006	Vegetables, fruit, nuts, fruit-peel and other part	29.30%
2007	Jams, fruit jellies, marmalades, fruit or nut purT	48.61%
2008	Fruit, nuts and other edible parts of plants, othe	35.16%
2009	Fruit juices (including grape must) and vegetable	64.58%
2101	Extracts, essences and concentrates, of coffee, te	138.90%
2105	Ice cream and other edible ice, whether or not con	84.77%
2106	Food preparations not elsewhere specified or inclu	75.55%
2203	Beer made from malt.	40.30%
2204	Wine of fresh grapes, including fortified wines; g	48.62%
2205	Vermouth and other wine of fresh grapes flavoured	67.35%
2206	Other fermented beverages (for example, cider, per	32.00%
2207	Undenatured ethyl alcohol of an alcoholic strength	61.60%
2208	Undenatured ethyl alcohol of an alcoholic strength	145.14%
2309	Preparations of a kind used in animal feeding.	39.62%
2401	Unmanufactured tobacco; tobacco refuse.	41.46%
2402	Cigars, cheroots, cigarillos and cigarettes, of to	108.14%
2501	Salt (including table salt and denatured salt) and	55.02%
2523	Portland cement, aluminous cement, slag cement, su	33.73%
2715	Bituminous mixtures based on natural asphalt, on n	30.57%
2942	Other organic compounds.	63.15%
3210	Other paints and varnishes (including enamels, lac	31.25%
3505	Dextrins and other modified starches (for example,	90.67%

3601	Propellent powders.	31.30%
3703	Photographic paper, paperboard and textiles, sensi	30.04%
3819	Hydraulic brake fluids and other prepared liquids	30.33%
4013	Inner tubes, of rubber.	29.27%
4303	Articles of apparel, clothing accessories and othe	30.04%
4304	Artificial fur and articles thereof.	35.60%
4501	Natural cork, raw or simply prepared; waste cork;	33.79%
4807	Composite paper and paperboard (made by sticking f	41.21%
4813	Cigarette paper, whether or not cut to size or in	30.40%
4821	Paper or paperboard labels of all kinds, whether o	34.18%
4906	Plans and drawings for architectural, engineering,	45.00%
5001	Silk-worm cocoons suitable for reeling.	703.21%
5002	Raw silk (not thrown).	90.15%
5004	Silk yarn (other than yarn spun from silk waste) n	31.62%
5006	Silk yarn and yarn spun from silk waste, put up fo	44.60%
5007	Woven fabrics of silk or of silk waste.	33.29%
5101	Wool, not carded or combed.	32.14%
5111	Woven fabrics of carded wool or of carded fine ani	44.20%
5112	Woven fabrics of combed wool or of combed fine ani	34.52%
5208	Woven fabrics of cotton, containing 85 % or more b	45.29%
5209	Woven fabrics of cotton, containing 85 % or more b	45.72%
5210	Woven fabrics of cotton, containing less than 85 %	46.70%
5211	Woven fabrics of cotton, containing less than 85 %	50.61%
5212	Other woven fabrics of cotton.	66.03%
5306	Flax yarn.	32.28%
5309	Woven fabrics of flax.	34.12%
5311	Woven fabrics of other vegetable textile fibres; w	30.31%
5401	Sewing thread of man-made filaments, whether or no	37.73%
5407	Woven fabrics of synthetic filament yarn, includin	45.75%
5408	Woven fabrics of artificial filament yarn, includi	35.91%
5508	Sewing thread of man-made staple fibres, whether o	31.21%
5512	Woven fabrics of synthetic staple fibres, containi	44.80%

5513	Woven fabrics of synthetic staple fibres, containi	43.35%
5514	Woven fabrics of synthetic staple fibres, containi	53.71%
5515	Other woven fabrics of synthetic staple fibres.	39.63%
5516	Woven fabrics of artificial staple fibres.	42.33%
5606	Gimped yarn, and strip and the like of heading 54.	46.17%
5801	Woven pile fabrics and chenille fabrics, other tha	41.46%
5802	Terry towelling and similar woven terry fabrics, o	50.15%
5804	Tulles and other net fabrics, not including woven,	41.45%
5806	Narrow woven fabrics, other than goods of headingá	29.73%
5807	Labels, badges and similar articles of textile mat	53.48%
5809	Woven fabrics of metal thread and woven fabrics of	46.94%
5810	Embroidery in the piece, in strips or in motifs.	39.01%
5811	Quilted textile products in the piece, composed of	40.30%
5902	Tyre cord fabric of high tenacity yarn of nylon or	34.93%
5903	Textile fabrics impregnated, coated, covered or la	38.47%
5907	Textile fabrics otherwise impregnated, coated or c	35.41%
6001	Pile fabrics, including "long pile" fabrics and te	64.83%
6002	Knitted or crocheted fabrics of a width not exceed	38.33%
6003	(2002-) Knitted or crocheted fabrics of a width no	37.74%
6004	(2002-) Knitted or crocheted fabrics of a width ex	51.05%
6005	(2002-) Warp knit fabrics (including those made on	38.66%
6006	(2002-) Other knitted or crocheted fabrics.	48.08%
6101	Men's or boys' overcoats, car-coats, capes, cloaks	45.86%
6102	Women's or girls' overcoats, car-coats, capes, clo	44.42%
6103	Men's or boys' suits, ensembles, jackets, blazers,	39.89%
6104	Women's or girls' suits, ensembles, jackets, blaze	39.44%
6105	Men's or boys' shirts, knitted or crocheted.	41.65%
6106	Women's or girls' blouses, shirts and shirt-blouse	39.73%
6107	Men's or boys' underpants, briefs, nightshirts, py	29.95%
6108	Women's or girls' slips, petticoats, briefs, pant	33.87%
6109	T-shirts, singlets and other vests, knitted or cro	39.60%
6110	Jerseys, pullovers, cardigans, waist-coats and sim	33.47%

6111	Babies' garments and clothing accessories, knitted	45.23%
6112	Track suits, ski suits and swimwear, knitted or cr	50.72%
6114	Other garments, knitted or crocheted.	43.89%
6115	Panty hose, tights, stockings, socks and other hos	29.69%
6117	Other made up clothing accessories, knitted or cro	37.25%
6201	Men's or boys' overcoats, car-coats, capes, cloaks	38.73%
6202	Women's or girls' overcoats, car-coats, capes, clo	36.36%
6203	Men's or boys' suits, ensembles, jackets, blazers,	35.89%
6204	Women's or girls' suits, ensembles, jackets, blaze	34.34%
6205	Men's or boys' shirts.	34.89%
6206	Women's or girls' blouses, shirts and shirt-blouse	31.47%
6208	Women's or girls' singlets and other vests, slips,	34.50%
6209	Babies' garments and clothing accessories.	39.53%
6211	Track suits, ski suits and swimwear; other garment	31.73%
6217	Other made up clothing accessories; parts of garme	54.61%
6303	Curtains (including drapes) and interior blinds; c	30.43%
6308	Sets consisting of woven fabric and yarn, whether	31.16%
6309	Worn clothing and other worn articles.	56.67%
6401	Waterproof footwear with outer soles and uppers of	46.89%
6402	Other footwear with outer soles and uppers of rubb	61.54%
6404	Footwear with outer soles of rubber, plastics, lea	58.78%
6406	Parts of footwear (including uppers whether or not	39.36%
6807	Articles of asphalt or of similar material (for ex	29.51%
6907	Unglazed ceramic flags and paving, hearth or wall	38.90%
6908	Glazed ceramic flags and paving, hearth or wall ti	34.46%
6911	Tableware, kitchenware, other household articles a	29.95%
7013	Glassware of a kind used for table, kitchen, toile	33.52%
7212	Flat-rolled products of iron or non-alloy steel, o	35.86%
7313	Barbed wire of iron or steel; twisted hoop or sing	29.04%
7614	Stranded wire, cables, plaited bands and the like,	52.61%
7902	Zinc waste and scrap.	52.07%
8006	Tin tubes, pipes and tube or pipe fittings (for ex	59.04%

8407	Spark-ignition reciprocating or rotary internal co	39.28%
8606	Railway or tramway goods vans and wagons, not self	32.67%
8702	Motor vehicles for the transport of ten or more pe	40.15%
8703	Motor cars and other motor vehicles principally de	62.41%
8704	Motor vehicles for the transport of goods.	48.75%
8705	Special purpose motor vehicles, other than those p	44.06%
8706	Chassis fitted with engines, for the motor vehicle	69.01%
8707	Bodies (including cabs), for the motor vehicles of	41.70%
8711	Motorcycles (including mopeds) and cycles fitted w	35.35%
8714	Parts and accessories of vehicles of headings 87.1	45.17%
8907	Other floating structures (for example, rafts, tan	41.88%
8908	Vessels and other floating structures for breaking	390.99%
9103	Clocks with watch movements, excluding clocks of h	41.99%
9109	Clock movements, complete and assembled.	29.68%
9110	Complete watch or clock movements, unassembled or	29.36%
9302	Revolvers and pistols, other than those of heading	40.88%
9306	Bombs, grenades, torpedoes, mines, missiles and si	37.74%
9602	Worked vegetable or mineral carving material and a	29.82%
9606	Buttons, press-fasteners, snap-fasteners and press	38.23%
9607	Slide fasteners and parts thereof.	44.66%

REFERENCES

- EDRI (2006), “The Implications on Ethiopia of Economic Partnership Agreement (EPA) with the European Union and Eastern and Southern Africa (ESA): A partial Equilibrium Model Analysis”, Ethiopian Development Research Institute, mimeo, June.
- Evans, D., M. Gasiorrek, S. McDonald and S. Robinson, “Trade Liberalisation with Trade Induced Technical Change in Morocco and Egypt: Findings and Wider Research Implications”, Paper prepared for the GTAP Conference Ethiopia June 15-17 2006
- Evans, D, (1989), “Alternative Perspectives on Trade and Development”, ch 24 in H. Chenery and T.N. Srinivasan eds **Handbook of Development Economics**, vol 11, North Holland.
- Evans, David (2003), “Trade Employment and Poverty in Southern Africa: The Analysis of Winners and Losers in Retrospect and Prospect.” Trade and Industrial Policy Strategies Working Paper, 6-2003.
- Evans, D. , M. Gasiorrek, A. Ghoneim, M. Haynes-Prempeh, P. Holmes, L. Iacovone, K. Jackson, T. Iwanow, S. Robinson, J. Rollo, (2006), “Assessing Regional Trade Agreements with Developing Countries: Shallow and Deep Integration, Trade, Productivity, and Economic Performance” , DFID Project NUMBER 04 5881 (March).
- Evans, D., M. Gasiorrek, S. Robinson, M. van der Meer, (2007), “Market Access into China: Tariff and Non Tariff Barriers in Selected Sectors”, IDS & CARIS Joint Working Paper, University of Sussex, in preparation January 2007. Based in part on a report of the same title to the European Commission, DG Trade, December 2006.
- Feenstra, Robert C., 2004, **Advanced International Trade: Theory and Evidence**, Princeton University Press, Princeton and Oxford.)
- Kee, H.L., A. Nicita and M. Olarreaga, (2004a), “Import Demand Elasticities and Trade Distortions”, CEPR Discussion Paper Series No 4669, London (October).
- Kee, H.L. et al ,(2004b), “Ad valorem Equivalents of Non Tariff Barriers”, mimeo, World Bank (December).
- Robinson, Sherman and Karen Thierfelder. (2002) “Trade Liberalization and Regional Integration: The Search for Large Numbers.” Australian Journal of Agricultural and Resource Economics, 46(2), pp. 585-604.
- Robinson, S., (2003), reported in Evans et al (2006 ch 2).
- Robinson, S. and M. Burfisher and S. McDonald, (2006), “Deep Integration and Trade Productivity Links: Tentative Lessons for CGE International Trade Models”, paper presented at the GTAP Annual Conference, Addis Ababa, Ethiopia, June 2006. (Preliminary draft. Please do not quote. Comments welcome).