Emergent Trilateralism in the Pacific Basin: How Should China, Japan, and the United States Respond to Regional Trade Initiatives?

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ABSTRACT

China's accession to WTO and accelerated global emergence will dramatically change trade patterns with the Pacific region and exert important influence on its trilateral relationship with Japan and the United States. Because of its size and stage of development, China will play two roles in the region with unusual prominence. First, it will stiffen regional export competition in a broad spectrum of products. Second, the size of China's growing internal market will make it, by 2015, the largest trading nation in East Asia. Thus China interposes itself between the rest of East Asia and the U.S.-Japan market as an export competitor and magnet for imports. The objective of this paper is to evaluate this phenomenon empirically and elucidate the regional and domestic adjustments that might ensue. Our basic finding is that the United States, Japan, and China would gain substantially from a trilateral free trade agreement and, indeed, they could realize most of the residual gains from globalization thereby. We contrast this with the many suggestions for China's involvement in less inclusive East Asian FTAs, and we find this would benefit smaller member economies (e.g., ASEAN countries), but not China itself.

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1. Introduction

Over the last decade, a new landscape of economic relations has begun to emerge in the Pacific Basin. As conflicts and rivalries between the United States and Japan appear to have receded and the agenda of globalization has advanced, more countries are embracing outward economic orientation and open multilateralism as a means of accelerating domestic economic growth. Most prominent of the later entrants in the regional arena is China, whose domestic economic reforms have led it to record growth rates, dramatically accelerating export expansion and sharply raising living standards. With the entry to the WTO, China is likely to speed up its domestic and external liberalization.

The emergence of China as a major trading partner has important implications for the U.S.-Japan bilateral relationship in particular and the evolution of Asian Pacific trade patterns generally. Because of its size and stage of development, China will play two roles in the region with unusual prominence. First, it is likely to strengthen its export competitiveness in a wider range of products. Second, the size of China's growing internal market will make it the largest East Asian importer of East Asian goods. Thus China interposes itself between the rest of East Asia and the U.S.-Japan as an export and import competitor, respectively. The Asia's newly industrialized economies (NIEs) have played such a role in the past, but none are comparable to China in size or scope of potential regional influence.

Clearly, the emergence of China into this new economic prominence will be most successful if it can be accommodated into a framework of regional cooperation, particularly with respect to the most influential economies, the United States and Japan. It is not enough to simply argue that all three should get along, however, since the evolution of domestic economic conditions and external trade patterns will exert important influences on policy in all three countries. A more realistic way to promote the smooth evolution of open multilateralism in the region would be to clearly elucidate the interests and potential rewards to participating countries.

However, in the past decade the number of regional integration agreements (RIAs) has proliferated rapidly. Japan and Singapore signed a bilateral free trade agreement in January 2002, and both countries are actively discussing similar arrangements with other countries in the Asia-Pacific region. ASEAN+3 group, consisting of the ASEAN countries, Japan, China/Hong Kong, and Korea, has emerged primarily to provide a framework for establishing East Asian leadership and influence on regional and international affairs (Drysdale, 2002). The trends in negotiating for new RIA are likely to continue.

Whether regional agreements are a facilitating intermediate step towards global free trade or a hindrance to greater global trade liberalization is a hotly debated issue.[1] Proponents for regional integration argue that RIAs encourage member countries to liberalize beyond the level committed by multilateral negotiations and that they promote developing countries to carry out trade reforms and stimulate foreign direct investment from developed countries.[2] In addition, a regional agreement makes it easier to handle the tougher negotiating issues (Kahler, 1995). Opponents worry that the proliferation of RIAs is likely to undermine the multilateral trading system and that beneficiaries of RIAs might form a political lobby to deter further multilateral liberalization (e.g., Bhagwati, 1995; Levy, 1997; Srinivasan, 1998ab; Panagariya, 1999).

Empirical evidence on benefits and costs of RIAs suggests that trade creation exceeds trade diversion in almost all RIAs (Robinson and Thierfelder, 1999). The positive effect on economic welfare resulting from the European Union (EU) and North American Free Trade Agreement (NAFTA) is supported by Baldwin et al. (1995), Brown et al. (1992), Harrison et al. (1996), and Roland-Holst et al. (1992). However, Yeats (1998) finds that during 1988-94 Mercosur countries experienced significant trade diversion when their intra-Mercosur trade increased sharply.

In this paper, we evaluate the effects of multilateral and regional trade policy scenarios that are particularly relevant to the United States, Japan, and China using the LINKAGE model (van der Mensbrugghe, 2001). The next section provides the trends in trilateral trade among the three countries during the 1980-2001 period. An overview of the model is given in section 3, followed by a brief description of scenarios and assessments of computational results in section 4. The final section summarizes the main policy conclusions.

2. Trilateral Trade among China, Japan and the United States, 1980-2001

Figures 1-2 provide trends in China and Hong Kong's shares of merchandize trade with Japan, other East Asia, the United States, and each other (i.e., intra-China-Hong Kong trade). Three arresting features are readily observed from these figures. First, trade between China and Hong Kong as the ratio of their total trade surged from 12-15 percent in 1980 to about one-third in 1991-92, before falling off to about one-fourth in the past several years. Significant portions of Hong Kong's trade with China are entrepôt trade or

[1] See, for example, Krueger (1999) and Laird (1999).

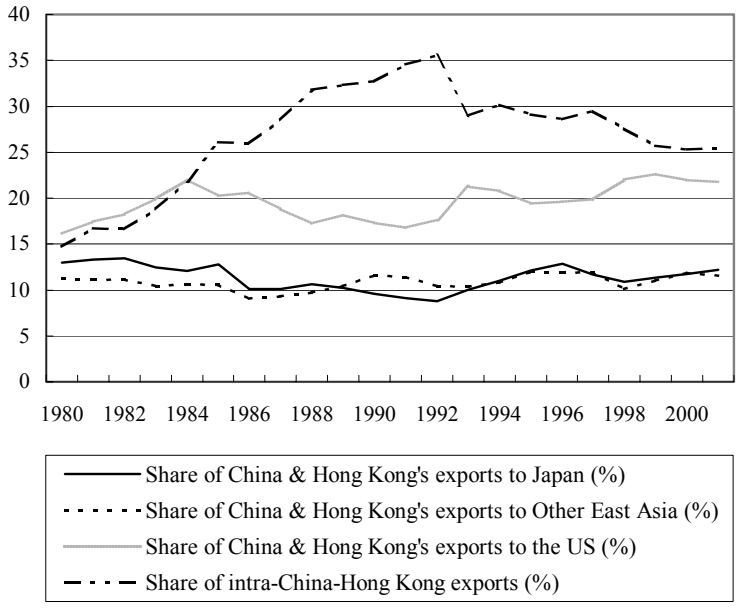
[2] Ethier (1998) suggests that small-country members are induced to lock in their liberalized trade regimes and that RIAs are congruent with further multilateral liberalization.

re-exports (Hong Kong, Census and Statistics Department, various years). Until the early 1990s, China-Hong Kong trade as the share of their total trade continued to rise as China's growing trade with East Asian countries, particularly with Korea and Taiwan, passed through Hong Kong.

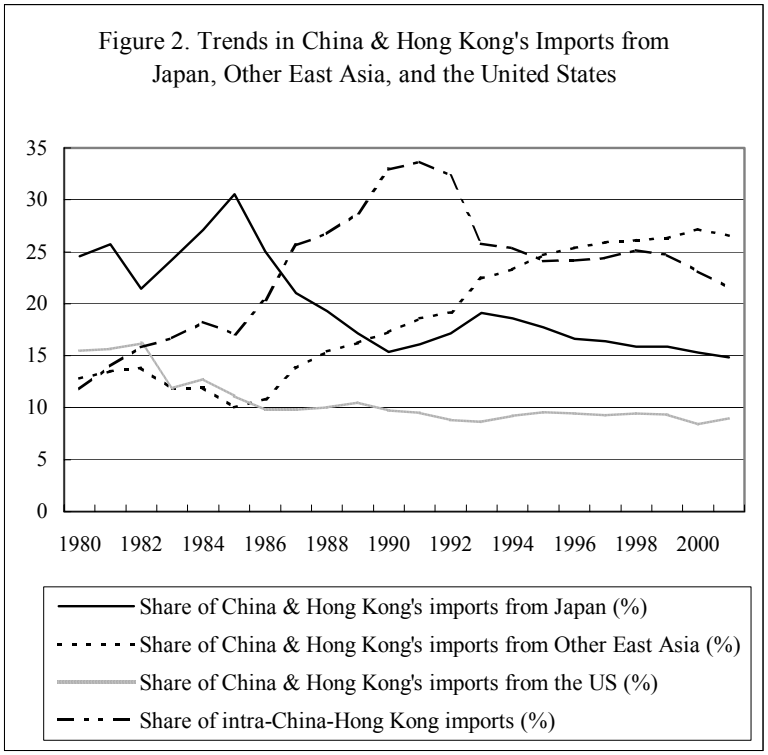
Second, the United States has been the largest export destination country for China and Hong Kong, and the share of Chinese (including Hong Kong) exports to the United States has increased in the past decade. In contrast, the share of its imports from the United States has steadily declined over the 1980-2001 period, thereby widening China's trade surplus with the United States in recent years.

Third, the share of Chinese imports from Japan has also declined from the mid-1980s although Japan still remains the largest single exporter to China. However, a group of other East Asian countries' exports to China surpassed Japanese exports in 1990 and continued to grow very rapidly in the past decade. The shares of Chinese exports to both Japan and other East Asia have remained relatively stable since 1980.

Figure 1. Trends in China & Hong Kong's Exports to Japan, Other East Asia, and the United States



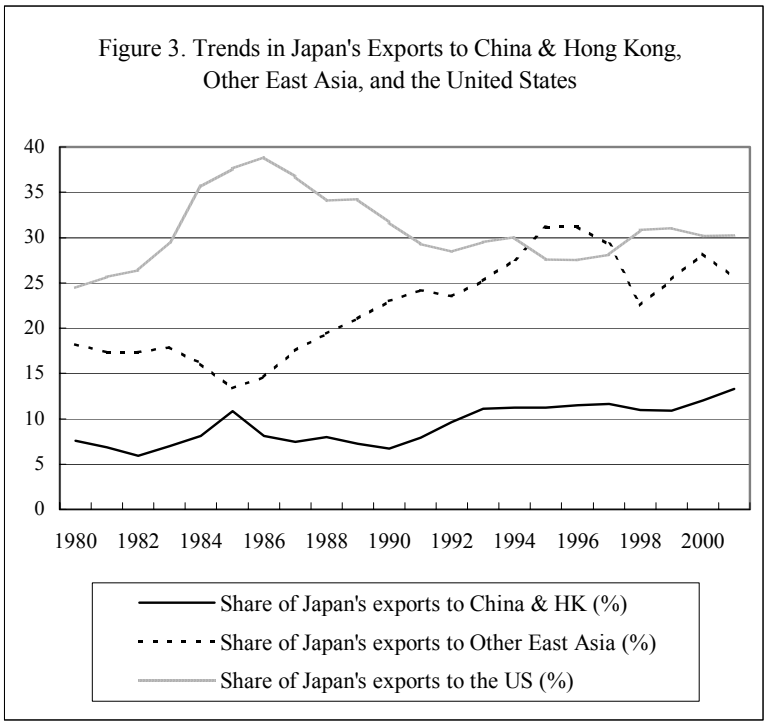
Sources: International Centre for the Study of East Asian Development (2002); International Monetary Fund, *Direction of Trade Statistics Yearbook*, various issues.



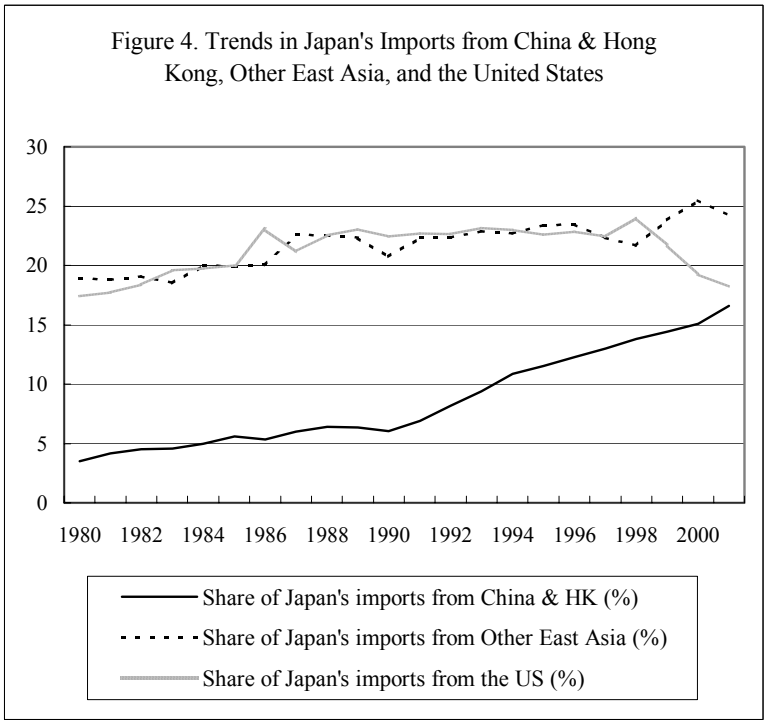
Sources: Same as Figure 1.

Figures 3-4 provide trends in Japan's shares of merchandize trade with China and Hong Kong, other East Asia, and the United States during the period 1980-2001. Similar to China, the largest share of Japanese exports is destined to the United States, peaking at 39 percent in 1986 and hovering around 30 percent since 1990. During the 1985-1996 period, the share of Japanese exports to other East Asia surged from 13 percent to 31 percent. Its exports to crisis-hit Asian countries fell drastically in 1997 and 1998 before they recovered in 1999 and 2000. Since 1990, the share of Japanese exports to China has steadily increased.[3]

[3] The fact that Japan's exports to China and other East Asia has increased trade during the 1985-96 period might be explained by the rapid average growth of the importing countries (Frankel, 1993; Frankel et al., 1998). Bilateral trade would be affected by the partner country's growth rate of real GDP and changes in relative openness.



Sources: Same as Figure 1.



Sources: Same as Figure 1.

On the import side, the share of Japanese imports from China increased dramatically from 6 percent in 1990 to 17 percent in 2001. The shares of imports from other East Asia and the United States remained relatively stable until 1998. During 1998-2001, the imports from other East Asia increased rapidly while those from the United States stagnated. Comparisons of the trend in the shares of Chinese exports to Japan in Figure 1 and that of Japanese imports from China (including Hong Kong) in Figure 4, as well as comparisons of the trend in the shares of Chinese imports from Japan in Figures 2 and that of Japanese exports to China in Figure 3, make evident that China (including Hong Kong)'s trade grew much more rapidly than Japan's during the 1980-2001 period.

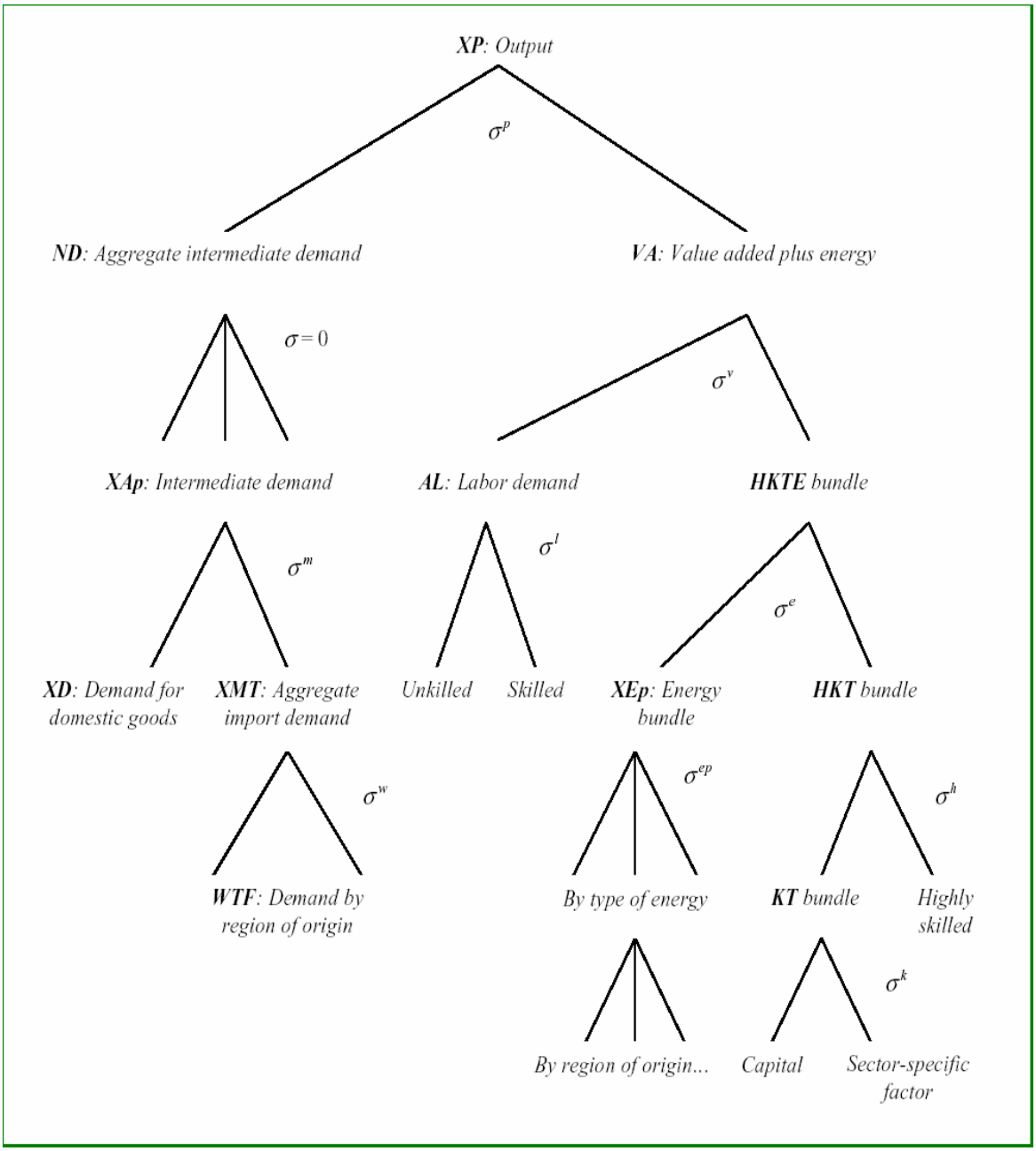
Since trends in the U.S. share of merchandize trade with China (including Hong Kong) and Japan may be deduced from Figures 1-4, we omit corresponding graphs for the United States. Japan is the second largest trading partner for the United States after Canada, whereas China is the third largest supplier of U.S. imports. Both countries have been running extremely large trade surpluses with the United States, accounting for 37-70 percent of U.S. merchandize trade deficits during the 1990-2000 period (International Monetary Fund, *Direction of Trade Statistics Yearbook*). Japan was the largest bilateral deficit partner-country for the United States until 1999, but China became the largest deficit partner-country in 2000, accounting for 19 percent of U.S. merchandize trade deficits of $476 billion that year.

3. Overview of the Model

The model used in this study is a dynamic global CGE model developed by van der Mensbrugghe (2001). All sectors are assumed to be perfectly competitive and operate under constant returns to scale. Production in each sector is modeled by a series of nested CES production functions, which are intended to represent the different substitution and complementarity relations across the various inputs in each sector. The CES nests for production archetype in goods and services other than crops and livestock are depicted in Figure 5.[4] At the top nest, production is formed by the combination of aggregate intermediate demand other than energy (*ND*) and value added plus energy (*VA*). The second nest consists of two nodes. The first node decomposes aggregate intermediate demand into sectoral demand for goods and services. The second node decomposes *VA* between demand for labor (*L*) and demand for human capital, physical capital, energy, and sector-specific factor composite (*HKTE*). The third and subsequent nodes are decomposed by a similar fashion, as illustrated in Figure 5.

[4] See van der Mensbrugghe (2001) for the CES nests for production archetypes in crops and livestock.

Figure 5. Production Nesting in the Manufacturing and Services Sectors



Labor can have three different skill levels: unskilled, skilled, and highly skilled. The first two are substitutable and combined in a CES aggregation function as a single labor bundle. Highly skilled labor is combined with capital to form a physical plus human capital bundle.

In each period, the supply of primary factors – capital, labor, and land – is generally predetermined. The supply of land is assumed to be sensitive to the contemporaneous price of land, however. Land is assumed to be partially mobile across agricultural sectors. Thus rates of return are sector-specific, but sectoral land supply reacts to changes in relative rates of return. Some of the natural resource sectors also have a sector-specific factor whose contemporaneous supply is price sensitive. The model includes adjustment rigidities. An important feature is the distinction between *old* and *new* capital goods. In addition, capital is assumed to be partially mobile, reflecting differences in the marketability of capital goods across sectors. Labor and population growth are exogenous. Labor within each skill category is perfectly mobile across sectors.

All income generated by economic activity is assumed to be distributed to consumers. A single representative consumer (or household) allocates optimally his/her disposable income among the consumer goods and saving. The consumption/saving decision is static: saving is treated as a good and its amount is determined simultaneously with the demands for the other goods. The price of saving is set arbitrarily equal to the average price of consumer goods. Investment is driven by aggregate saving, or the sum of household, government, and foreign savings. We assume that foreign saving is exogenous and that the ratio of government expenditures to GDP remains constant in each region over time.

Products are differentiated by region of origin and modeled as imperfect substitutes. On the import side, this is reflected by the implementation of the so-called Armington assumption, where a constant elasticity of substitution (CES) specification is used to incorporate imperfect substitution of imported goods with respect to domestically produced goods. A symmetric specification is used to model export supply, the latter being implemented with constant elasticity of transformation (CET) functions. Trade measures are fully bilateral and include both export and import taxes/subsidies. Trade and transport margins are also included; therefore world prices reflect the difference between FOB and CIF pricing.

The model is calibrated to a given baseline from 1997 to 2015. The per capita GDP growth rates are broadly consistent with the World Bank's long-term forecast. Productivity is calibrated in the baseline to achieve the desired GDP trends. Several

assumptions underline the calibration of productivity. Agricultural productivity is exogenous, user-determined and varies across regions. Manufacturing productivity growth is assumed to be higher than services productivity growth. An economywide productivity factor is calibrated to achieve the given GDP target, and productivity growth is assumed to be labor-augmenting.

4. Scenarios and Results

To assess the global consequences of China's emergence in the context of alternative regional arrangements, the following four counterfactual policy scenarios are considered:

1) Global trade liberalization (GTL) – complete abolition of import tariffs and export subsidies

2) Northeast Asia Free Trade Area (NEAFTA) – free trade among Japan, China/Hong Kong, Korea, and Taiwan

3) ASEAN+3 – Free trade among the ASEAN countries, Japan, China/Hong Kong, and Korea

4) U.S.-Japan-China free trade – Accelerating bilateral phase-ins to finish by 2005

5) U.S.-China-Japan free trade with strong complementarity – Scenario 4 with accelerated bilateral FDI from the United States and Japan to China. Specifically, China receives $8 billion, $16 billion, and $24 billion additional FDI compared with the baseline in 2002, 2003, and 2004-2010, respectively, where the United States and Japan each pays one-half of these amounts. Resumption of baseline flows after 2010.

Phase-in periods for global and regional trade liberalization are 2005-2010 for the first three scenarios and 2002-2005 for scenarios 4 and 5.

4.1 Effects on Equivalent Variation National Income

Aggregate income gains and/or losses summarize the extent trade distortions are hindering growth prospects and the ability of economies to use the gains to help those whose income could potentially decline. We compared the four counterfactual scenarios with the baseline situation in the terminal year, 2015, using a measure of compensated or equivalent variation aggregate national income. Real income is summarized by Hicksian

equivalent variation (EV). This represents the income consumers would be willing to forego to achieve post-reform well-being (u^p) compared to baseline well-being (u^b) at baseline prices (p^b):

$$EV = E\left(p^b, u^p\right) - E\left(p^b, u^b\right)$$

where E represents the expenditure function to achieve utility level u given a vector of prices p (superscript b represents baseline levels, and p the post-reform levels). The model uses the extended linear expenditure system (ELES), which incorporates savings in the consumer's utility function (Lluch, 1973; Howe, 1975). The ELES expenditure function is easy to evaluate at each point in time.[5] The discounted real income uses the following formula:

$$CEV = \sum_{t=2005}^{2015} \beta^{(t-2004)} EV_t^a \; / \; \sum_{t=2005}^{2015} \beta^{(t-2004)} Y_t^d$$

where CEV is the cumulative measure of real income (as a percent of baseline income), β is the discount factor (equal to $1/(1+r)$ where r is the subjective discount rate), Y^d is real disposable income, and EV^a is adjusted equivalent variation. The adjustment to EV extracts the component measuring the contribution of household saving, since this represents future consumption. Without the adjustment, the EV measure would be double counting. The saving component is included in the EV evaluation for the terminal year.

Table 1 summarizes these aggregate results. Clearly, the GTL or full WTO scenario is the most attractive for all countries considered except China and Japan. To be realistic, however, the WTO process is fraught with uncertainty about the scope, depth, and timeliness of multilateral commitments to abolish trade barriers. This kind of uncertainty has been an important impetus to regional agreements, particularly those between small groups of nations who find consensus, implementation, and monitoring easier.

[5] Unlike the OECD treatment of EV in previous studies (e.g., Burniaux et al., 1992), we use baseline prices in each year rather than base year prices.

Table 1. Effects on Equivalent Variation National Income
(Deviations from the baseline in 2015)

	Senarios[a)]				
	GTL	NEAFTA	ASEAN+3	Trilat	Trilat+FDI
	Absolute changes (billions of 1997 US$)				
United States	22.4	-3.3	-3.6	19.0	18.6
Japan	55.8	17.9	24.1	56.7	62.6
China/Hong Kong	29.2	-2.3	-1.2	78.4	89.7
Korea	19.6	14.1	16.5	-2.0	-2.0
Taiwan	8.7	9.5	-5.6	-3.2	-3.1
Singapore	7.3	-0.6	6.5	-0.2	-0.2
Other ASEAN[b)]	20.1	-4.5	19.6	-4.8	-4.7
Canada and ANZ[c)]	8.2	-0.2	-0.4	-1.6	-1.5
Western Europe	75.5	1.2	1.8	4.4	4.9
Rest of the world	70.0	-2.9	-3.5	-12.0	-11.9
Total	316.8	28.9	54.3	134.6	152.3
	Percentage changes				
United States	0.2	0.0	0.0	0.2	0.2
Japan	1.4	0.4	0.6	1.4	1.5
China/Hong Kong	1.2	-0.1	0.0	3.2	3.7
Korea	2.4	1.7	2.0	-0.3	-0.2
Taiwan	1.6	1.8	-1.1	-0.6	-0.6
Singapore	5.9	-0.5	5.3	-0.2	-0.2
Other ASEAN[b)]	2.3	-0.5	2.3	-0.6	-0.6
Canada and ANZ[c)]	0.7	0.0	0.0	-0.1	-0.1
Western Europe	0.9	0.0	0.0	0.1	0.1
Rest of the world	1.1	0.0	-0.1	-0.2	-0.2
Total	0.9	0.1	0.2	0.4	0.4

Notes:

a) Scenarios: GTL: global trade liberalization; Northeast Asia Free Trade Area (Japan, China, Korea, and Taiwan); ASEAN+3: ASEAN, Japan, China, and Korea; NEAFTA: Trilat: free trade among the United States, Japan, and China; Trilat+FDI: Net FDI between China, Japan, and the United States is modified from baseline. In 2002, 2003, 2004-2010, China receives respectively $8, $16, $24 billion additional FDI compared to the baseline. Japan and the United States pay each one-half of these amounts. Resumption of baseline flows after 2010.

b) Only Indonesia, Malaysia, the Philippines, Thailand, and Vietnam are included in Other ASEAN. Brunei, Cambodia, Laos, and Myanmar are excluded because of the data constraints.

c) Canada, Australia and New Zealand

The United States would clearly prefer global liberalization to any of the regional arrangements under consideration, but it is essential to note that the trilateral arrangements could be very attractive stepping stones to globalization. In scenarios 4 and 5, about 80 percent of GTL's benefits would be obtained in exchange for liberalizing only two components of U.S. bilateral trade. The arrangement would also be incentive compatible for the other two countries, since each enjoys greater benefits under Trilateralism than

under GTL. In the case of China, the benefits are up to three times greater. The main reason for this is trade diversion, where China enjoys privileged access to the U.S. market at the expense of many other export competitors. These results put two strong negotiating tools in the hands of the United States, a carrot for China and Japan and a stick for the rest of East Asia.

It is clear that Trilateralism also induces significant trade creation since the income gains of Japan and China are not nearly offset by losses elsewhere in the world. Again, this supports the idea that Trilateralism might be a desirable intermediate step to globalization. This arrangement clearly works because of the diversity of the economies in question, allowing significant new specialization and gains from trade. This is an important reason why the trilateral arrangement dominates more conventional and widely discussed East Asian regional agreements like NEAFTA and ASEAN+3.

In percent of GDP terms, it is clear that the stakes are much higher for China and Japan than for the United States. For this reason, one might expect the impetus for such an arrangement to arise in East Asia. That neither China nor Japan has initiated a talk on trilateral free trade agreement might be because China is concerned with balancing alliances across East Asia, Japan is too preoccupied with China's emergence, or because it is politically infeasible to pursue this kind of agreement at present. On economic grounds, there appears to be relatively little trade exclusion resulting from Trilateralism, and there is an appropriate response for other East Asian economies; i.e., moving on to global trade liberalization.

Finally, it is especially noteworthy that the two East Asian regional arrangements appear to be detrimental to China in aggregate EV terms. This result is discussed in greater detail in Roland-Holst and van der Mensbrugghe (2002), and it portends significant incentive problems for new trade blocs in the region. The basic problem for China is the scale of its export capacity. Joining an East Asian FTA would divert its trade into a smaller market, leading to adverse terms-of-trade effects. China is much better off going directly toward globalization, as it is doing with its WTO commitments or, at a minimum, crafting regional arrangements with market (like the United States and Japan) large enough to absorb its burgeoning export potential. From our results, it is clear why other East Asian economies might want to entice China into a regional FTA, but it is not at all clear why China would accede to it.

Between the two trilateral scenarios, the basic difference is a transfer of the capital stock and the trade growth that ensues from a higher production capacity. FDI flows from the United States and Japan into China would expand the production possibilities in China

and increase competitiveness. This increases trade with both Japan and the United States, increasing aggregate welfare for the former but, in the net, reducing it for the latter. In other words, for Japan the trade growth effect more than offsets the hollowing out effect, but for the United States the opposite occurs.

4.2 Effects on Bilateral and World Trade Flows

As might be expected given the competitive nature of the Pacific Basin economy, FTA in this region can induce substantial trade diversion. This is particularly the case for arrangements that include economies like China and Japan with relatively high prior protection. Privileged access to these markets would confer significant market access, both new and appropriated, on other FTA members. To better understand these compositional adjustments, Tables 2-4 present bilateral trade flow adjustments (in some cases with respect to aggregate trade partners like the EU) resulting from global trade liberalization, free trade among the ASEAN+3 countries, and trilateral liberalization with no change in FDI flows. Figures are given in deviations from the baseline scenario in 2015 in terms of billions of 1997 US dollars (top panels) and percentages (bottom panels).

To begin, it is noteworthy that even the GTL scenario entails some competitive crowding out. Trade adjustments in this scenario are obviously driven by prior protection levels, and even though there is substantial global trade growth and aggregate export growth for every country and group considered, detailed patterns of trade still exhibit some diversion because of differences in net real exchange rate adjustments. For example, China has higher than average prior protection, implying that its market will open more than average, but also that its real exchange rate will depreciate vis-à-vis the average currency. The latter factor gives Chinese exports an across the board competitive advantage, allowing them to appropriate new market share faster than the rate of trade growth.

When this happens in relatively large liberalization scenarios, China benefits substantially and some of its trading partners give up significant exports, although these detailed market losses are offset by aggregate trade growth. In less inclusive regional arrangements, two factors come into play. First, China's accelerated import and export growth run into adverse terms-of-trade adjustments because of trade diversion within the regional market. Second, the more restrictive agreements offer less aggregate trade expansion, so that competitive bilateral crowding out is not offset and some countries actually suffer declining aggregate trade.

The trade flow tables reward closer inspection, particularly to obtain deeper insights about bilateral interactions and incentive properties. For example, in most cases China is running a significant trade surplus with the United States and a substantial deficit with East Asia other than Japan, implying a transitive surplus for its regional partners. While this might be a desirable property from the East Asian perspective, it puts China in a difficult position as a member of less inclusive East Asian arrangements. This is because, to join such an arrangement, China is implicitly expected to expand exports outside the region by significantly reduce extra-regional imports. This might complicate bilateral relations (particularly with respect to the OECD countries) for a newly emergent WTO member.

Of greatest immediate interest to this paper is the trilateral scenario, the trade flow results of which are given in Table 4. Here we see compositional adjustments that include substantial trade creation among the three principals, as well as significant trade diversion. While the former outweighs the latter, the incidence of trade diversion is such that we might expect vigorous challenges to emergent Trilateralism in the Pacific. While trade growth is about three times the total amount of trade diversion, every country and region outside the agreement experiences an absolute decline in aggregate exports. This strong and uniform diversion is again a result of the relatively high prior protection in China and Japan. For this reason, it is reasonable to expect mitigation of this effect over time, at least from the Chinese side, as WTO conformity levels the playing field for countries outside the trilateral agreement.

Why does Trilateralism look so much better to China than other regional arrangements? The answer, as suggested already, is partly market size. Another important aspect, however, is economic diversity. Despite Japan and Korea's OECD status, the Trilateral scenario is the only FTA we consider that can truly be termed North-South. This is as much because of prior trade patterns as domestic economic structure. By joining with the United States, China gets access to more diversified import demand and export supply than is available in East Asia, and on a scale that attenuates terms-of-trade effects. This kind of diversification completes international networks of comparative advantages and is one of the primary attractions of North-South regionalism.[6]

Even with strong trade diversion, does Pacific Trilateralism provide a solid stepping stone to globalization? To the extent that it accelerates trade between the three largest economies in the region, such an agreement can advance the case for greater global interdependence. Whether or not Trilateralism is really on the path to globalization,

[6] The case for North-South regionalism has been strenuously argued along these lines in, among others, World Bank (2000).

however, depends upon the nature of the structural adjustments ensuing from both trade regimes. A key question is whether the composition of sectoral output, factor use, and trade arising from Trilateralism are structurally consistent with patterns of comparative advantage that would emerge in the same countries under long-run WTO implementation. This question can only be answered conclusively by detailed analysis of sectoral information, the next stage of our work in progress.

For the present, the most important lesson drawn from our work is that the largest economies in the region have a strong incentive to take the lead in any regional liberalization initiatives. For the United States, Japan, and China, trilateral liberalization dominates any regional arrangements including only one of two of these players. Other economies in the region have strong incentive to enlist them in less inclusive arrangements, but it is not at all clear on economic grounds why they would accept.

Table 2. Effects on Bilateral Trade Flows resulting from Global Trade Liberalization
(Deviations from the baseline in 2015)

		Importers										**$1997 billion**
Exporters		USA	JPN	CHN	KOR	TWN	SGP	OASE	CANZ	EUR	ROW	Total
United States	USA		18.9	35.3	15.3	7.6	0.2	7.8	-13.2	32.2	29.8	134.0
Japan	JPN	5.6		53.9	10.7	4.6	-2.5	19.4	7.4	20.0	25.8	144.8
China/Hong Kong	CHN	56.4	33.2	18.3	18.6	8.5	3.5	28.8	13.8	61.8	79.2	322.1
Korea	KOR	-0.2	5.1	37.7		1.2	-0.4	13.8	1.5	5.8	17.3	81.7
Taiwan	TWN	-0.8	-0.3	39.2	0.7		-1.0	4.7	0.4	1.0	2.2	46.1
Singapore	SGP	-3.4	-0.2	12.5	0.5	0.6		8.7	-0.7	-1.0	0.5	17.7
Other ASEAN	OASE	16.7	15.2	21.6	3.5	4.2	3.4	12.6	2.8	28.2	16.6	124.7
Canada and ANZ	CANZ	-22.0	20.1	4.7	-2.0	1.0	-0.4	-1.0	-3.4	30.0	11.0	38.0
Western Europe	EUR	45.5	21.3	46.3	18.0	14.8	4.6	16.8	20.7	-205.2	180.2	162.9
Rest of the world	ROW	36.5	31.6	28.5	19.7	2.9	12.4	8.3	8.8	225.3	247.2	621.2
World total	Total	134.3	145.0	297.9	85.0	45.2	19.9	119.9	38.1	197.9	609.9	1693.1

		Importers										**Percentages**
Exporters		USA	JPN	CHN	KOR	TWN	SGP	OASE	CANZ	EUR	ROW	Total
United States	USA		12.6	33.0	21.7	14.3	0.5	9.7	-4.7	7.4	7.2	8.2
Japan	JPN	2.9		43.5	23.1	8.9	-8.1	23.7	24.9	14.0	29.0	18.4
China/Hong Kong	CHN	27.0	31.2	37.3	57.4	38.4	13.8	69.1	48.1	33.9	61.3	39.0
Korea	KOR	-0.3	20.3	50.6		10.7	-4.8	41.9	13.8	11.8	26.8	25.2
Taiwan	TWN	-1.4	-1.8	45.4	12.8		-10.1	21.5	5.0	2.3	12.9	17.2
Singapore	SGP	-8.6	-1.2	24.4	7.0	4.9		14.5	-7.8	-2.2	1.5	6.5
Other ASEAN	OASE	15.9	23.9	47.2	19.5	20.6	5.3	32.6	13.8	23.7	28.9	22.6
Canada and ANZ	CANZ	-7.2	49.7	15.0	-9.7	9.1	-6.0	-4.8	-19.9	43.8	23.5	6.7
Western Europe	EUR	11.6	13.2	35.1	27.4	37.3	10.3	15.6	20.6	-9.4	25.3	4.1
Rest of the world	ROW	8.8	27.0	31.0	31.8	16.8	28.0	14.6	20.3	35.7	48.1	31.2
World total	Total	7.6	20.8	37.6	25.9	19.1	7.2	22.1	7.0	5.1	29.3	15.2

Table 3. Effects on Bilateral Trade Flows resulting from Free Trade among ASEAN+3 Countries
(Deviations from the baseline in 2015)

Importers **$1997 billion**

Exporters		USA	JPN	CHN	KOR	TWN	SGP	OASE	CANZ	EUR	ROW	Total
United States	USA		-4.4	-16.6	-5.0	-0.1	2.6	-7.5	2.1	5.3	3.3	-20.5
Japan93	JPN	-20.2		91.0	21.8	-5.4	-2.3	36.5	-2.9	-13.1	-7.6	97.8
China/Hong Kong	CHN	9.2	51.9	25.7	31.1	0.6	2.6	34.7	1.2	10.0	3.9	170.8
Korea	KOR	-6.8	14.8	57.5		-1.9	-1.0	15.6	-1.7	-7.2	-10.4	59.0
Taiwan	TWN	4.2	1.5	-18.5	-0.3		0.9	-3.9	0.6	3.1	1.4	-11.0
Singapore	SGP	-4.0	0.2	17.7	1.6	-1.2		13.3	-1.0	-5.0	-4.4	17.3
Other ASEAN	OASE	-2.1	34.2	39.6	8.6	-0.5	1.5	18.9	-0.8	-1.2	-2.7	95.5
Canada and ANZ	CANZ	1.3	-0.2	-4.0	-0.5	-0.2	0.7	-2.0	0.2	0.6	0.5	-3.5
Western Europe	EUR	-1.7	1.5	-15.6	0.3	-1.2	3.6	-9.0	-0.6	-7.6	0.0	-30.1
Rest of the world	ROW	1.5	-5.0	-17.7	0.0	-0.6	8.6	-5.9	0.1	-1.8	1.1	-19.7
World total	Total	-18.6	94.5	159.2	57.5	-10.5	17.3	90.8	-2.8	-16.9	-15.0	355.6

Importers **Percentages**

Exporters		USA	JPN	CHN	KOR	TWN	SGP	OASE	CANZ	EUR	ROW	Total
United States	USA		-2.9	-15.5	-7.1	-0.2	6.2	-9.3	0.7	1.2	0.8	-1.3
Japan	JPN	-10.5		73.4	46.9	-10.5	-7.3	44.7	-9.9	-9.2	-8.5	12.4
China/Hong Kong	CHN	4.4	48.7	52.5	96.1	2.5	10.5	83.0	4.1	5.5	3.0	20.7
Korea	KOR	-14.5	58.7	77.3		-16.7	-10.6	47.5	-15.7	-14.7	-16.2	18.2
Taiwan	TWN	7.2	7.6	-21.4	-5.8		9.6	-18.1	7.2	7.5	7.8	-4.1
Singapore	SGP	-10.2	1.5	34.6	23.2	-10.4		22.0	-11.3	-11.0	-13.0	6.4
Other ASEAN	OASE	-2.0	53.7	86.6	47.5	-2.5	2.3	49.0	-4.1	-1.0	-4.7	17.3
Canada and ANZ	CANZ	0.4	-0.4	-12.6	-2.5	-1.7	10.5	-9.6	1.2	0.9	1.0	-0.6
Western Europe	EUR	-0.4	1.0	-11.8	0.5	-2.9	8.1	-8.3	-0.6	-0.4	0.0	-0.8
Rest of the world	ROW	0.4	-4.3	-19.2	0.0	-3.4	19.4	-10.3	0.1	-0.3	0.2	-1.0
World total	Total	-1.1	13.6	20.1	17.5	-4.4	6.3	16.7	-0.5	-0.4	-0.7	3.2

Table 4. Effects on Bilateral Trade Flows resulting from U.S.-Japan-China Free Trade
(Deviations from the baseline in 2015)

		Importers										**$1997 billion**
Exporters		USA	JPN	CHN	KOR	TWN	SGP	OASE	CANZ	EUR	ROW	Total
United States	USA		57.5	87.5	-3.6	-3.1	-2.4	-3.8	-9.7	-20.0	-20.1	82.4
Japan	JPN	11.2		124.2	-4.3	-5.2	-3.7	-7.9	-2.7	-14.4	-9.1	88.1
China/Hong Kong	CHN	79.6	35.3	27.4	2.4	1.2	1.7	2.0	2.4	15.2	5.1	172.3
Korea	KOR	-0.1	-0.5	-13.3		0.1	0.2	0.1	0.5	1.7	2.2	-8.9
Taiwan	TWN	1.4	1.0	-16.8	0.2		0.5	0.7	0.6	2.5	1.0	-9.0
Singapore	SGP	-1.2	0.6	-2.0	0.0	0.1		-0.3	-0.1	-0.2	-0.5	-3.6
Other ASEAN	OASE	-5.1	-3.8	-6.5	0.1	0.1	0.5	0.5	0.3	2.3	0.7	-10.9
Canada and ANZ	CANZ	-2.6	-1.2	-5.3	0.0	-0.2	0.1	0.0	0.2	0.6	0.0	-8.3
Western Europe	EUR	-2.5	2.1	-14.2	-1.3	-1.0	-0.1	-1.0	0.0	-11.0	-6.3	-35.3
Rest of the world	ROW	-5.2	-7.1	-18.6	-0.8	-0.5	0.2	-0.6	0.7	0.3	0.0	-31.6
World total	Total	75.5	83.9	162.2	-7.1	-8.6	-2.9	-10.3	-7.8	-23.0	-27.0	235.1

		Importers										**Percentages**
Exporters		USA	JPN	CHN	KOR	TWN	SGP	OASE	CANZ	EUR	ROW	Total
United States	USA		38.4	81.8	-5.0	-5.9	-5.7	-4.7	-3.4	-4.6	-4.9	5.0
Japan	JPN	5.8		100.2	-9.2	-10.2	-11.8	-9.7	-9.1	-10.1	-10.3	11.2
China/Hong Kong	CHN	38.0	33.1	55.8	7.4	5.5	6.7	4.9	8.2	8.3	4.0	20.8
Korea	KOR	-0.2	-1.8	-17.8		0.9	2.3	0.4	4.5	3.5	3.5	-2.8
Taiwan	TWN	2.3	5.2	-19.5	4.6		5.3	3.1	7.1	5.9	5.6	-3.4
Singapore	SGP	-3.0	4.3	-4.0	0.1	0.5		-0.5	-0.6	-0.4	-1.4	-1.3
Other ASEAN	OASE	-4.9	-6.0	-14.3	0.7	0.6	0.8	1.2	1.6	2.0	1.1	-2.0
Canada and ANZ	CANZ	-0.8	-2.9	-16.9	0.0	-1.7	1.1	-0.1	1.2	0.9	0.1	-1.5
Western Europe	EUR	-0.6	1.3	-10.8	-1.9	-2.6	-0.2	-0.9	0.0	-0.5	-0.9	-0.9
Rest of the world	ROW	-1.2	-6.0	-20.3	-1.2	-3.1	0.5	-1.1	1.5	0.0	0.0	-1.6
World total	Total	4.3	12.1	20.5	-2.2	-3.6	-1.1	-1.9	-1.4	-0.6	-1.3	2.1

5. Concluding Remarks

China's accession to the WTO portends dramatic evolution for the East Asian and Pacific economic regions. Over the last two decades, China has established new standards for sustained growth and dynamic resource allocation by a large economy, and further Chinese domestic and external liberalization will redefine trade relations in ways that are only beginning to be understood. Initial reactions of regional partners, who perceive China as a strong export competitor and magnet for FDI, have been rather defensive. These sentiments could undermine multilateralism and retard the dramatic historical progress of regional trade and growth.

In this paper, we examine how regional trade might evolve under a variety of alternative free trade agreements, including a trilateral FTA between the largest regional economies, the United States, Japan, and China. Using a dynamic global CGE model, we experiment with global trade liberalization, a regional agreement covering Northeast Asia, free trade among the ASEAN+3 countries, and a trilateral FTA with and without FDI flows from the United States and Japan to China. Our general findings indicate that China has made the right decision to move directly toward globalization, but that Trilateralism might be a convenient stepping stone in that direction. In particular, we find that a trilateral FTA will bring about larger aggregate benefits to China and Japan than global trade liberalization and about 80 percent of GTL's aggregate benefits to the United States, although these benefits are likely to come at the expense of extra-regional bilateral relations.

Furthermore, we find that there may be incentive problems for less inclusive East Asian FTAs, particularly for the most decisive player, China. An FTA that diverts China's trade into smaller regional markets will occasion adverse terms-of-trade effects for that country, partially or more than offsetting gains from piecemeal liberalization. It is apparent that smaller economies (e.g., ASEAN countries) would gain by drawing China into a regional conclave, but it is not at all clear on economic grounds which China would accede to this. A broader set of policy objectives normally animates China's external relations, but a simple economic justification for most of the hypothetical East Asian FTAs that include China does not appear to be supported by empirical evidence.

A trilateral arrangement, by contrast, would provide both the market depth and diversity necessary to absorb China's burgeoning export capacity and meet its complex import needs. China's diversity and scale are also apparently sufficient to meet the needs of the Pacific giants, the United States and Japan. Thus we estimate that more efficient

allocation of comparative advantage between these three economies would realize very substantial gains from trade. Exactly how this relationship would evolve in terms of structural adjustment, however, will not be clear until we conduct more detailed sectoral analysis. This extension of the present work is non-trivial to its policy implications because adversely affected industry lobbies are likely to strongly oppose new trade agreements. Suffice for the present to say that Trilateralism appears to offer very significant potential gains for the United States, Japan, and China, but that this potential will be realized only if the implied sectoral and extra-FTA trade adjustments are politically feasible. As we have seen from recent actions by the United States in the steel and agricultural sectors, one cannot even take for granted the political feasibility of prior commitments to the WTO, let alone a hypothetical FTA. There may be many microeconomic obstacles to a Pacific Trilateral FTA, but the stakes do seem high enough to justify closer examination of this prospect.

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