

## **THE CHALLENGES AND OPPORTUNITIES IN CHINA-PHILIPPINE ECONOMIC RELATIONSHIPS**

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China's opening up to the world since 1978 and its accession to the World Trade Organization (WTO) have raised questions on the trade and investment impact on other Asian developing countries, in particular, the ASEAN. It is conventional thinking that China poses very stiff competition to ASEAN in both areas. However, using a computable general equilibrium (CGE) model, Tongzon (2001) argued that China's entry into the WTO would generate net benefits to ASEAN. The growing regionalization of the world has also accelerated intensification of China-ASEAN relationships with the signing of a China-ASEAN Free Trade Area (CTA) agreement to culminate by 2010. Chiratvhitvat (2002) presents evidence based on the same CGE model that, indeed, both China and ASEAN will be net beneficiaries of an FTA as cited in Laurenceson (2003).

The popular perception of China as the 'super factory' has stoked considerable concern in both public and academic debate in the Philippines. This paper assesses how China's growing weight in the world markets will affect the Philippine's trading sector. Will China so dominate world export markets as to overshadow Philippine exports? Or, conversely, will China's emergence create opportunities for small countries, such as Philippines? In addition, the paper looks into the implications for the Philippines as a result of the massive inflows of foreign direct investments (FDI) to China. Does China 'crowd out' the Philippines?

The analysis uses trade indices, such as the revealed comparative advantage (RCA) indices and draws on the findings of the empirical literature pertaining to the relationship between ASEAN and China.

## I. CHALLENGES AND OPPORTUNITIES FOR TRADE BETWEEN THE PHILIPPINES AND CHINA

This first part of the paper examines how China's entry into the world merchandise markets will impact the Philippines' own trade record and prospects. We consider this issue from two aspects: (1) competition between the two countries in each other's markets and (2) competition between the two countries in third markets including the world in general and the specific major markets of the United States, Japan, and the European Union.

### Bi-lateral Trade Between China and the Philippines

Prior to this, however, we look into the trade and investment intensity of the ASEAN countries with respect to China for the period 1996-2001 in Table 1 taken from Laureceson (2003). He defines the "trade intensity ratio" as China's exports plus imports with the ASEAN5, divided by China's GDP (all in U.S. dollars). On the other hand, since FDI from China into the ASEAN5 is deemed small, the "investment intensity ratio" is just the FDI from the ASEAN5 into China divided by total FDI into China.

**Table 1: Trade and Investment Intensity between China and ASEAN-5 Member Countries**  
Percent

	Trade Intensity Ratio	Investment Intensity
China – Hong Kong	4.95	37.25
China – Philippines	0.23	0.27
China – Thailand	0.47	0.41
China – Indonesia	0.52	0.23
China – Malaysia	0.58	0.61
China – Singapore	0.93	5.09

Note: Averages of annual figures estimated for 1996-2001.

Source: J. Laureceson, op. cit.

It is clear from this table that the Philippines is the ASEAN5 member that is the least integrated with China. The intensity of the Philippines' trade with China is lowest of all five ASEAN countries and investment intensity is only slightly above that for Indonesia. Further tests carried out by Laureceson confirm that goods and services markets of ASEAN5 and China are fairly linked but they do not show similar results for the financial markets.

We should caution that because these ratios are averages for the period 1996 to 2001, they may not reflect post-Asian crisis developments. This is especially true for the Philippines, which, as reported in Table 2, doubled its total trade with China from 1995 to 2002, compared to minimal

growth in the 1980s. While the Philippines' imports from China have been fairly stable at 3-4% of total imports, exports from the Philippines to China have risen fourfold since 1995. Surprisingly, the net trade of the Philippines with China, which had been persistently in deficit, turned positive in 2002.

**Table 2: Philippine Exports to and Imports from China, 1980-2002**

	Exports		Imports		Balance of Trade
	\$ million	% of Total	\$ million	% of Total	\$ million
1980	45	0.78	258	3.11	-213
1985	81	1.76	314	5.75	-233
1990	62	0.76	205	1.57	-143
1995	216	1.25	1030	3.63	-814
1996	328	1.61	1015	2.97	-687
1997	244	0.97	872	2.40	-628
1998	345	1.17	1199	4.06	-854
1999	575	1.64	1040	3.38	-465
2000	663	1.74	786	2.28	-123
2001	793	2.47	975	2.95	-182
2002	1,356	3.85	1252	3.53	104

Source: National Statistics Office (Philippines); Ellen Palanca, "China's Changing Trade Patterns: Implications for ASEAN-China Trade", in *China's Economic Growth and the ASEAN*, ed. by E. Palanca, Philippine APEC Study Center, Philippine Institute for Development Studies, 2001.

As China's economy has progressed rapidly since 1978, changes in its industrial structure are reflected also in its trade sector, and vice-versa. When we look at the trade between the Philippines and China, we can note the changing structure of trade through the changes in the composition of the ten top imports from China and exports to China (Table 3). None of the ten leading products exported by China to the Philippines in 1980 appears in the 2002 list of top-ten exports. Even comparing the more recent years 1996 and 2002, only one product—cotton fabrics, woven—remains among China's top ten exports to the Philippine in both years. Also, crude materials or primary products dominated the list for 1980, but by 2002, except for coal, the products appearing in the top ten export items are more sophisticated.

Table 3. Top Ten Mutual Exports of China and the Philippines (1980-2002)

Rank	1980	1988	1996	2002
		<b>China's Exports to the Philippines</b>		
1	331 Crude petroleum, etc	321 Coal coke Bhrig	122 Tobacco mfrs	334 Heavy petrol/bitum oils
2	332 petroleum Prods	081 Animal feedstuff	331 Crude petroleum, etc	764 Telecomms equip, nes
3	931 Special transacts	331 Crude petroleum, etc	719 Machinery, nes non-elec	759 Office equip parts/accs
4	512 Organic chemicals	652 Cotton fabrics woven	661 Cement etc, bldg prod	778 Electrical equipment, nes
5	051 Fruit/nuts, fresh/dried	671 Pig iron, etc	652 Cotton fabrics woven	652 Cotton fabrics woven
6	729 Elec. machinery, nes	674 Iron/ steel, univ plate sheet	724 Telecom equip.	776 Valves/transistors/ etc
7	672 Iron/steel primary forms	332 Petroleum Prods	629 Rubber articles nes	523 Metal salts inorganic acid
8	581 Plastic materials, etc	653 Woven textiles, non-cotton	221 Oil seeds nuts kernels	321 Coal non-agglomerated
9	514 Other inorganic chemicals	899 Other mfg goods	722 Elec. power mach switch	785 Motorcycles/cycles/ etc
10	715 Metal working machinery	263 Cotton	514 Other inorganic chemicals	752 Computer equipment
		<b>Philippines' Exports to China</b>		
1	422 Fixed veg oil nonsoft	561 Fertilizers, mfg	341 Gas natural mfg	334 Heavy petrol/bitum oils
2	061 Sugar Honey	631 Veneers plywood, etc	051 Fruit/nuts, fresh/dried	682 Copper
3	283 Nonfer base mat, ore conc	422 Fixed veg oil nonsoft	682 Copper	759 Office equip parts/accs
4	285 Silver platinum ores	051 Fruit/nuts, Fresh/dried	714 Office machinery	752 Computer equipment
5	651 Textile yarn and thread	581 Plastic materials, etc	332 Petroleum prods	776 Valves/transistors/ etc
6	729 Ele. Machinery, nes	122 Tobacco mfrs	422 Fixed veg oil nonsoft	051 Fruit/nuts, fresh/dried
7	599 Chemicals, nes	719 Machinery, nes, non-elec	283 Nonfer. basic metal, ore cn	422 Fixed veg oils not soft
8	655 Spec textiles, etc prod	691 Struct parts, nes	729 Elect. machinery, nes	784 Motor vehicle parts/access
9	292 Crude veg, matris, nes	012 Meat dried/salted/smoked	631 Veneer plywood etc.	898 Musical instruments/records
10	051 Fruit/nuts, fresh/dried	031 Fish fresh simply presvd	231 Rubber crude synthetic	764 Telecomms equipment nes

Source: UNCTAD database; E. Palanca, op cit.

Philippine exports to China have changed as well, but not as drastically as China's exports to the Philippines. Two among the Philippines top ten exports to China in the 1980s are still among the top ten in 2002. Furthermore, there are three products in the 1996 list of top exports that remained top exports in 2002. These are copper cathodes, fruits and nuts whether fresh or dried, and fixed vegetable oils. Fruits are primary products, while copper cathodes and fixed vegetable oils are intermediate products. The other seven top exports from the Philippines to China in 2002, however, are more advanced products. The shift to more finished goods reflects the China's changing needs.

Despite some similarities among the top export products of both countries, world export data initially suggest that the Philippines and China are more complementary than competitive in world markets. For one thing, we can note that while China's share in global exports rose dramatically from 2.3% in 1992 to 6.1% in 2002, the Philippines' performance was also relatively good, increasing from 0.3% in 1992 to 0.6% in 2002. This gives broad indication that China has not been taking away the export markets of the Philippines, at least not in a systematic way. If China were replacing Philippine exports, then we would expect that Philippine exports would be progressively declining. Moreover, even with the emergence of China, the Philippines has done more than maintain its market share in world exports.

### **Competition between the Philippines and China in Third Markets**

China does compete with the Philippines in some major export markets. The important question, however, is whether there a systematic decline in Philippine exports as a consequence of China's emergence. The main tool to answer this question is analysis of the revealed comparative advantage (RCA) of each country with respect to the other's markets—the world in general and the major markets of the United States, the European Union, and Japan. There are two sources of trade data using the 3-digit level of commodity classification. NAPES data cover the period 1980-1999 and include only 183 commodities while data for 1995-2002 from UNCTAD include 260 commodities. An RCA greater than one in a particular commodity implies that the country specializes in export of that commodity and exhibits comparative advantage (see Appendix for discussion of the calculation of the RCA). We computed the percentage of the commodities that each country exports to a given market

for which its RCA was above 1. We also computed the rank correlation between the products exported by China and the Philippines. A positive rank correlation would suggest that the products of the two countries compete with each other, while a negative or zero rank correlation would tend to show complementarity. Since rank correlation ranges from  $-1$  to  $1$ , results closer to zero suggest greater neutrality.

The results of these calculations with reference to the world market as a whole are shown in Table 4.

**Table 4: Summary of RCA Results for Exports to the World**

Percentage of country's export commodities with  $RCA > 1$

	China		Philippines		Rank Correlation	
	% of 183 commodities	% of 260 commodities	% of 183 commodities	% of 260 commodities	183 commodities	260 commodities
1980	58.5		35.0		0.25	
1990	52.5		49.2		0.09	
1995	56.8	35.4	43.2	21.9	0.27	0.33
2002		35.0		18.8		0.33

Sources: UNCTAD. E. Palanca, op. cit.

Both from 1980 to 1990 and for the shorter period from 1995 to 2002, there was little change in the share of commodities in which China has comparative advantage. On the other hand, the Philippines' position in world export markets appears to have improved in the earlier period and deteriorated since 1995. However, we should note that 2001-2002 was a period of export recovery for the Philippines, most probably due to the peso depreciation that took place during that time. Actually, the Philippines' Real Effective Exchange Rate Index deteriorated continuously until 2003, placing it below the level in 1985.

According to the figures for 1995, the rank correlation based on the 260-commodity data increased over that based on the 183 commodities, while the rank correlation on the larger data set remained constant from 1995 to 2002. Assuming that the rank correlation for the smaller set of commodities remained relatively constant from 1995 to 2002 as well, we would estimate the 2002 rank correlation for the 183 commodities to be about 0.27. This estimate is lower than similar estimates calculated by Palanca for the rank correlation between exports of China and Thailand (0.45) and China and Indonesia (0.38). Our findings suggest that the emergence of China as an export powerhouse has not greatly eroded the Philippines' comparative advantage over a wide range of traded

goods.

A possible reason for the finding that the Philippines has not suffered significantly from China's export surge relates to unit labor cost (ULC, which is wages (including all benefits) divided by manufacturing value added. In 1998, the ULC in the Philippines was only 70% as high as in China, even though the wage rate in the Philippines was four times China's (UNCTAD, 2002). One explanation for China's surprising high ULC is the low productivity of state-owned enterprises, which China is still striving to rationalize.

### RCAs in Specific Markets

In this section, we look into the extent of competition or complementarity between the Philippines and China specifically in the third markets of the United States, Japan, and the European Union. For this purpose, we analyze the movements of the rank correlations as well as the share of export commodities for which the RCA is above 1 in each market. In order to have a consistent list of commodities, we are restricted to data for 1995 and 2002. Besides, the rapidly changing structure of China's economy urges us to focus on the more recent period. The results are summarized in Table 5.

**Table 5: Summary of RCAs for China and the Philippines in the U.S. , EU, and Japanese Markets, 1995 and 2002**

	Percent					
	United States		Export Market Japan		EU	
	1995	2002	1995	2002	1995	2002
% of export commodities with RCA>1						
China	40.8	38.5	57.3	54.6	36.9	36.5
Philippines	26.5	21.9	43.0	36.5	24.6	19.2
Rank correlation	0.44	0.43	0.57	0.59	0.39	0.34

Note: All the rank correlations are significant at 1% level.

The table suggests that the Philippines and China may compete with each other more in the Japanese market correlation and less in the European market, with the United States in between. Overall, then, increased competition in the Japanese market is offset by the lower correlations in the U.S. and E.U, and probably other markets. For this reason, the rank correlation between Philippine and Chinese exports with respect to the entire world remained unchanged between 1995 and 2002.

We note that the number of commodities with RCAs above 1 in the U.S., Japanese, and EU markets, declined for both China and the Philippines. However, a straightforward comparison of the percentages of these commodities between the two countries may give a biased picture of the change.

Even though percentages do not depend on units (a commodity classification), a one-unit change converts into a larger percentage change for the Philippines, which had lower absolute base levels, than for China.

The results of Tables 4 and 5 together tend to confirm the conclusion that the emergence of China in world export markets did not have a significant negative impact on the position of the Philippines.

**Market Positioning and Opportunities**

We can classify Philippine exports to China by market position in order to identify the potential areas of enhanced trade between the two economies based on past trends. Philippine exports to China can be put into one of four market position categories, based on the change in market share from 1996 to 2000 (Figure 1). High-potential and competitive products are those where Philippine share of China’s imports is rising at the same time that the share of those products in China’s total imports from the world is rising. Low potential but competitive products are those whose share of Philippine exports to China is increasing but whose share in China’s total imports is decreasing. Lost opportunity products are those whose share of China’s total imports is increasing but whose share of Philippines exports to China is decreasing. Products falling in the ‘Restructuring’ quadrant are those with decreasing shares both of Philippines exports to China and of China’s imports from the world.

**Figure 1: Market Position Classification for Philippine Exports to China**

		Share of China’s Imports from the World	
		Rising	Falling
Share of China’s Imports from the Philippines	Rising	High potential, competitive	Low potential but competitive
	Falling	Lost opportunity	Restructuring

The results of this classification are summarized in Table 6, which also summarizes China’s market position vis a vis the Philippines. Looking at the Philippines’ market positioning with respect to China, we can see that 73.85% of Philippine exports to China are high-potential and competitive products. This implies that that almost three-fourths of the products that the Philippines sends to China



are ones for which China's demand is growing. Lost opportunity products amount to 18.45% of Philippine's total exports to China, with low potential but competitive products under restructuring together making up 6.61% of the Philippines exports to China. This breakdown indicates that the bulk of the Philippine's exports are products that are gaining importance in China's market.

**Table 6: Market Positioning of Exports of China and the Philippines**  
(Percent)

	<b>Philippine Exports to China</b>	<b>China Exports to the Philippines</b>
High potential competitive	73.85	16.06
Low potential but competitive	18.45	14.42
Lost opportunity	4.50	40.84
Restructuring	2.11	28.68

Source: PC-TAS 2000.

The market positioning of China's exports to the Philippines, on the other hand, is not as promising. For instance, products in the high potential category comprise only around 16% of China's exports to the Philippines. The share of products categorized as 'lost opportunities' is only around 14%. Thus, only 30% of China's exports to the Philippines are goods for which Philippine demand is increasing, while the bulk of China's exports (about 41%) to the Philippines in the period 1996 to 2000 were in the 'low potential but competitive' quadrant. Lastly, close to 30% of the goods that China exports to the Philippines are ones for which the Philippines' overall import demand has been decreasing through time.

The market positioning matrix gives indications of the opportunities of Philippine exports to the China market.

### **Potential Market Niches**

The fact that China is emerging as an economic powerhouse means that it will demand a greater variety of products. Even though China has many resources, it cannot specialize in everything. The law of comparative advantage still applies, just as it applies to all countries. The United States, which is even richer in per capita income and natural resources than China, does not produce everything it needs. That is why the Philippines can still penetrate the China market in view of the needs for specialization.

In this section, we use the Philippines' RCAs with respect to China to pinpoint niches for exporting to China. Commodities with RCA above 0.7 are listed in Table 7. We chose 0.7 rather than 1

as the cut-off, because more specialized products with slightly lower RCA could still have potential as export niches and also because of the declining REER of the Philippines.

The longest list of potential export niches in China's market is in food, agricultural, and mineral products. This stands to reason because of the huge population that China has to feed. The mineral products are those which are scarce in China. Intermediate goods that are potential export niches are the smallest in number, but their export amount is substantial. Copper and rubber products are prominent based on the Philippines' natural endowment. With respect to finished goods, there is greater diversity, although electronic and electric products are the most numerous. A key factor in the Philippines' relative advantage in these commodities could be the existence of specialized skills.

**Table 7: Possible Export Niches by Type of Product (Based on 2002 RCA)**

<b>Food, Agricultural, and Mineral Products</b>			<b>Intermediate Goods</b>			<b>Finished Products</b>		
<b>Commodity</b>	<b>RCA</b>	<b>Rank</b>	<b>Commodity</b>	<b>RCA</b>	<b>Rank</b>	<b>Commodity</b>	<b>RCA</b>	<b>Rank</b>
Nickel ores/concs/etc	872.00	1	Copper	5.92	20	Paper industry machinery	0.83	68
Ferrous waste/scrap	361.92	2	Paper/paperboard	1.45	47	Metal machine tools w/o metal-rmvl	0.86	65
Natural rubber/latex/etc	334.49	3	Articles of rubber nes	1.16	55	Metal machine tool parts	1.22	52
Copper ores/concentrates	89.03	5	Tulle, lace, embr, trim	1.08	58	Computer equipment	3.54	28
Petrol./hydrocarbon gas	43.34	6	Misc non-ferr base metal	1.05	59	Office equip parts/accs.	1.69	41
Pulp and waste paper	32.35	8	Wood mfg, n.e.s.	1.00	61	Electric circuit equip.	1.18	54
Nf base metal waste nes	30.51	9	Special yarns/fabrics	0.74	71	Electrical distrib. equip	3.76	25
Precious metal ore/conc.	30.50	10				Valves/transistors/etc	10.41	16
Veg text fibre ex cot/ju	18.24	11				Passenger cars etc	8.08	18
Fruit/nuts, fresh/dried	16.15	12				Motor vehicles, parts/access	6.33	19
Worn clothing etc	15.11	14				Railway vehicles/equip.	1.51	45
Milk pr exc buttr/cheese	13.08	15				Sanitary/plumb/heat fixtures	2.72	31
Cocoa	8.49	17				Furniture/stuffed furn	0.75	70
Cheese and curd	4.44	22				Women/girl clothing woven	0.86	66
Fruit/vegetable juices	4.41	23				Men/boy wear knit/crochet	0.95	63
Sugar/molasses/honey	4.00	24				Women/girls wear knit/crochet	0.71	75
Fruit preserved/fruit preps	3.61	26				Cine film developed	1.53	44
Cereal etc flour/starch	3.57	27						
Crustaceans mollusks etc	3.39	29						
Crude veg materials nes	2.46	34						
Heavy petrol/bitum oils	2.10	37						
Coffee/coffee substitute	1.88	38						
Chocolate/cocoa preps	1.88	39						
Tobacco, raw and wastes	1.72	40						
Sulphur/unroastd pyrites	1.68	42						
Sugar confectionery	1.61	43						
Fuel wood/wood charcoal	1.43	48						
Stone/sand/gravel	1.28	49						
Alcoholic beverages	1.27	50						
Edible products n.e.s.	1.19	53						
Animal feed ex unml cer.	1.14	56						
Fish/shellfish, prep/pres	1.13	57						
Tobacco, manufactured	1.03	60						
Fish, live/frsh/chld/froz	0.76	69						

## II. CHINA AND THE PHILIPPINES' PULL ON FOREIGN DIRECT INVESTMENT

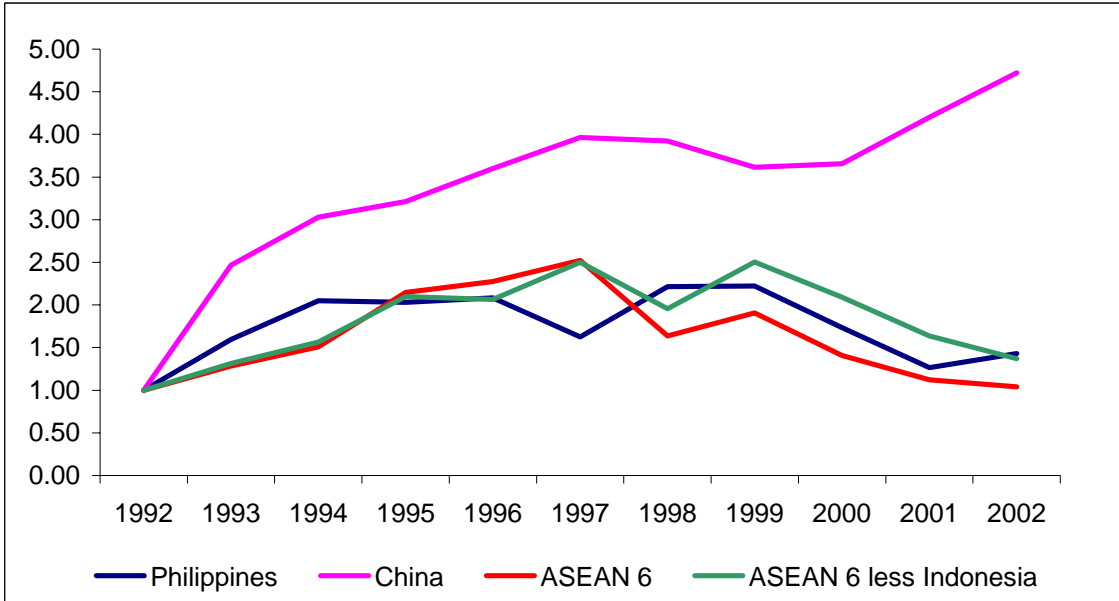
### Is China "Crowding Out" Investments from the Philippines?

China has become a storybook case for attracting foreign direct investments (FDI). In a little over a decade (1988 to 2000), China's FDI intake grew by an average rate of 23% per year to reach a cumulative total of US\$339 billion (Abeyasinghe and Lu 2003). China is now the largest recipient of

FDI among developing countries, and it took in more than half of total FDI going to the developing countries in Asia since 1998.

China’s success in generating FDI has contrasted sharply with the disappointing performance of the ASEAN in general and the Philippines in particular. China has been labeled as a ‘giant sucking machine of FDI’ that takes away FDI from the neighboring Asian economies. Figure 2 shows the relative movements of FDI inflows in the Asia region. Clearly since 1999 China has been attracting increasing amounts of FDI and the ASEAN members less. The question that naturally arises is: “Is China diverting FDI from the Philippines?”

**Figure: 2 Trends in FDI Inflows to the Philippines, China, and ASEAN Indexed at 1992=100**



normalized year 1992.  
Source: UNCTAD.

Note:

There are a number of reasons why the fear of China’s diverting FDI from the Philippines may be overblown. They encompass data measurement as well as analytical issues. This section analyzes the issue of whether China is ‘crowding-out’ the Philippines in FDI using various approaches.

**Simple Comparative Data Approach**

Conceptually, if China were to divert FDI from other potential host countries in Asia such as the Philippines, then one would expect that an increase in the FDI going to China should be matched by a decrease in FDI going to the Philippines. In other words, there should be a negative correlation in the

FDI flows between China and the Philippines. Implicit in this perception is the zero sum game view of FDI where China's gain is invariably the Philippine's loss.

As Table 8 reports, China accounting for an increasing share of the total FDI flows to Asia during the decade of the 1990s. The takeoff of China's inward FDI occurred during 1992 and 1993 when its share of total FDI to Asia jumped by around 20%. China's share of total FDI to Asia mushroomed from 18.8% in 1990 to close to 56% in 2000.

**Table 8: Recipient Countries' Shares of Total FDI Flows to Asia 1990-2000**

Percent

Shares in FDI Flows to Asia of the PRC and ASEAN, 1990-2000 (%)<sup>a</sup>

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
PRC	18.8	21.0	42.9	59.2	58.1	52.3	50.6	49.8	57.4	53.8	55.9
ASEAN - 10	65.7	64.5	46.5	34.3	34.6	35.5	36.9	35.5	26.8	21.2	16.4
ASEAN exc. INO <sup>b</sup>	59.8	57.4	39.7	30.0	31.0	29.1	29.1	30.2	27.3	25.0	23.0
Brunei Darussalam	-	0.0	0.0	0.0	0.0	0.9	0.8	0.8	0.8	0.8	0.9
Cambodia	0.0	0.0	0.1	0.1	0.1	0.2	0.4	0.2	0.2	0.2	0.2
Indonesia	5.9	7.1	6.8	4.3	3.6	6.3	7.8	5.3	-0.5	-3.8	-6.6
Lao PDR	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
Malaysia	12.6	19.3	19.9	10.8	7.5	6.1	6.4	5.8	2.8	2.2	2.4
Myanmar	0.9	1.2	0.7	0.2	0.2	0.4	0.4	0.4	0.4	0.4	0.4
Philippines	2.9	2.6	0.9	2.7	2.7	2.2	1.9	1.4	3.0	0.8	3.0
Singapore	30.1	23.5	8.5	10.1	14.7	12.8	13.1	14.6	8.3	10.0	9.3
Thailand	13.2	9.7	8.1	3.9	2.4	3.0	2.9	4.4	9.6	8.6	4.9
Vietnam	0.1	1.1	1.5	2.2	3.3	3.4	3.0	2.5	2.2	2.0	1.9
ASEAN - 5	64.7	62.2	44.2	31.8	30.9	30.4	32.1	31.5	23.2	17.8	13.0
Korea	4.3	5.7	2.8	1.3	1.4	2.6	2.9	3.2	7.1	13.0	13.5
Taipei, China	7.2	6.1	3.4	2.0	2.4	2.3	2.4	2.5	0.3	4.1	7.2

<sup>a</sup> Asia refers to ADB developing member countries plus Brunei Darussalam.

<sup>b</sup> ASEAN excluding Indonesia

Source: ADB Key Indicators and UNCTAD database.

The literature in this area often focuses on the relative movement of the share of China of FDI going to the Asian region against the aggregate flows to the ASEAN. Many observers point out that though there are reasons to believe that ASEAN's loss of market share cannot be attributed solely to diversion towards China. Rajan (2003) attributes the relatively sharp decline in aggregate FDI flows to ASEAN to the downward pull of Indonesia, which suffered negative flows during the Asian financial crisis of 1997-98. More importantly he stresses that the decline in the FDI to Indonesia is due to the social and political uncertainties in the aftermath of the crisis rather than to competition from China. To illustrate, a study by Deutsche Bank (2003) calculated that ASEAN excluding Indonesia still attracts reasonable amounts of FDI despite the crisis and competition from China (Deutsche Bank 2003). Others (Wu et al. 2002), point out that the FDI flows to the ASEAN5 (Thailand, Malaysia, Philippines, Singapore and Indonesia) and to China tended to move in tandem in 1998-2000,

indicating that the growth of FDI in China is not at the expense of the ASEAN5.

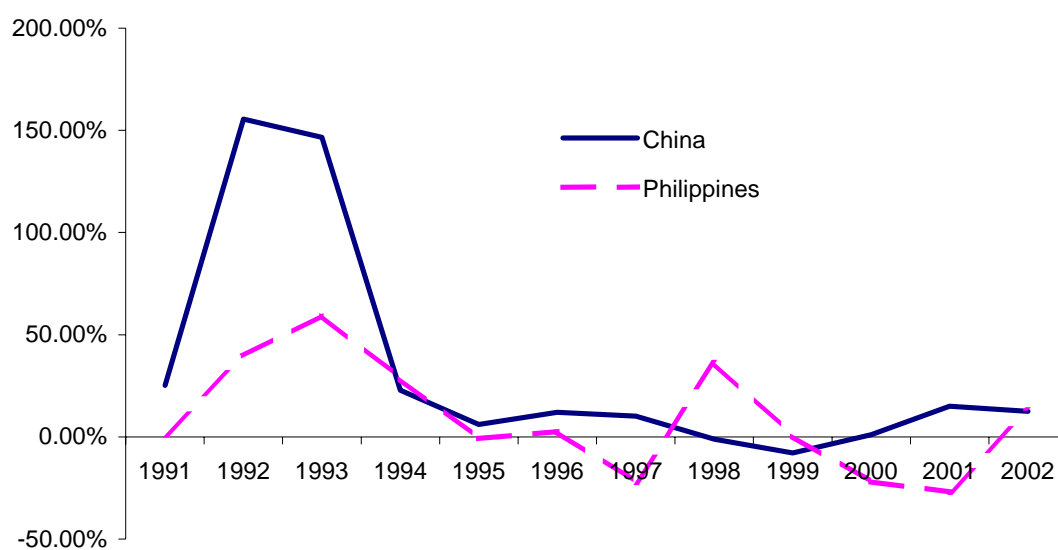
A review of the data however indicates no systematic diminution of the share of FDI to the Philippines in the midst of the progressive expansion of FDI to China. This can be gleaned from an analysis of the relative share of China and the Philippines in the FDI inflows to Asia (Table 8). A number of points can be raised that indicates that the increase in inflows of FDI to Chinas are not necessarily at the expense of the Philippines:

First, prior to the sharp increase of FDI to China in 1992-93, the Philippines received some 2.6% of all FDI inflows to Asia. This share is the lowest among the ASEAN5 in 1990, indicating that the Philippines was not as successful in attracting FDI as Singapore. The Philippines' share dipped to 1.4% during the Asian financial crisis, but it subsequently improved to around 3% in 2000. Thus, the Philippines' share of total inward FDI to Asia did not vary much over the decade of the 1990s. The standard deviation of the inward FDI is only 0.825 for the Philippines compared to 15.6 for ASEAN. This implies that even if China did exert substantial competitive pressure for FDI, members the Philippines was less affected relative to other the ASEAN economies.

Over the period 1990-2000, the correlation between the shares of the Philippines and China of total inward FDI to Asia is around -10%. This low negative correlation implies that China did not systematically expropriate the Philippines's lost share of FDI. In contrast, the high -91% correlation between the shares of China and ASEAN during this period suggests that China's gain in share was largely associated with ASEAN's loss of market share.

Second, in absolute value, the amount of FDI going to the Philippines pales in comparison to the amount going to China. In 1990, FDI to China was six times the Philippines' FDI intake. By 2002, the inflow of FDI to China was fifty times that of the Philippines. However, the more interesting feature is the trend of FDI growth. If China were considered to be taking FDI away from the Philippines, then an increase in the FDI of China should be matched by a decrease in FDI of the Philippines. A closer look at the data over the past decade indicates that there is no systematic negative relation between the growth rates of FDI for both countries (Figure 3). In fact, the correlation of the FDI growth rates of both countries is close to positive 70%.

**Figure 3: Growth Rates of FDI to China and the Philippines, 1991-2002**



Source: UNCTAD

There does not appear to be a systematic relation between the FDI flow to the Philippines and China that suggests a zero-sum game.<sup>1</sup> Between 1991 and 1995, the relative growth of FDI flows to both countries moved roughly in tandem. There are however a number of instances where the growth rates of inward FDI diverged. When FDI flow to China slowed slightly in 1998 and 1999, the FDI growth rate in the Philippines was positive. In the same vein, when the Philippines registered negative FDI in 2000 and 2001 owing in large part to political uncertainties rather than to competition from China, FDI flows to China surged.

The main limitation of the comparative data approach is the lack of decomposition of the singular effects of various factors on FDI. This kind of analysis implicitly attributes movements in FDI across countries to the “China factor.” However, there are a multitude of other factors—a number of them not even economic—that affect FDI. There is thus, a need to consider other arguments to supplement the comparative data approach.

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<sup>1</sup> We performed a cointegration test to examine the long-run relationship between the FDI inflows to the Philippines and China. Using assumption that the cointegration equation has no linear trend but has intercepts, the test rejects the null hypothesis of no cointegrating relationship between the two data series (FDI inflows to the Philippines and China from the UNCTAD data for 1992 to 2002) at the 5% level. The test shows a positive co-integrating coefficient for the FDI Inflows of China and the Philippines indicating that it may be possible that there is a common factor driving both variables. Although the cointegration tests may not be definitive, the fact that there is no indication of a negative coefficient implies that indeed, there is no convincing evidence for FDI inflows to China to crowd out FDI inflows to the Philippines.

## Measurement Approach

Perhaps a more fundamental measurement issue that casts doubts on the issue of the diversion of FDI away from other countries to China is the reliability of FDI data on China. Statistics on FDI flows to China may be overstated as a result of 'round tripping', a practice where Chinese companies transfer funds out of China into offshore centers such as Hong Kong and some Caribbean countries and eventually bring them back to China in the form of FDI to take advantage of tax incentives. One estimate from the World Bank (Wu et al. 2002) found that close to one-fourth of China's reported FDI in 1992 was sourced from 'round-tripping.'

Although it is not easy to quantify the extent of 'round tripping', the fact that close to half of inward FDI to China emanates from Hong Kong and the British Virgin Islands gives some indication that this practice may not be insignificant. If this is the case, then it should be expected China directs its outward capital flows to these same offshore centers and receives inward FDI from them. Wu et al (2003) point out that in 2000 Hong Kong received 80% of its FDI flows from China and the tax havens while 96% of its FDI outflows were directed to these countries. As a result, Hong Kong remains the biggest single source of FDI for China while Japan, the United States, and the EU are the principal sources of FDI for the ASEAN5.

To the extent that 'round tripping' is prevalent, then China's inward FDI figures are suspect and the case for FDI diversion away from ASEAN and the Philippines becomes weaker.

## Approach using Standards

Another way of looking whether China is crowding out FDI from the Philippines is to evaluate whether China is taking an inordinately high amount of FDI, given its size and level of development. Of course, this begs the question of whether there are threshold levels or standards that signify the 'optimum' level of FDI flows. One standard that developed by the United Nations Conference on Trade and Development is the UNCTAD Inward FDI Performance Index, which is the ratio of a country's share of world FDI to its share in world GDP. This ratio 'normalizes' FDI flows by GDP (EIU 2003), indicating how its FDI flows compare with its economic size. A value greater than 1 indicates that a country is receiving more than its expected share of world FDI given its GDP. Implicit



in the benchmark is that larger countries should receive higher levels of FDI.

The advantage of using standards is that it sets a benchmark with which to evaluate whether countries have indeed been receiving the ‘natural’ amount of FDI given its size. If a country manages to attract more FDI than warranted by its size, it means that other factors such as political and macroeconomic stability, the FDI policy regime, industrial competitiveness, superior cost structures, natural and human resources, and the like (UNCTAD, 2002) may be affecting FDI inflows. On the other hand, countries with index values below one may suffer from instability, high cost structures, poor infrastructure, corruption or unfriendly policy regime.<sup>2</sup>

**Table 9: Inward FDI Performance Indices for Asian Economies Calculated by UNCTAD and EIU**

	UNCTAD				EIU			
	1988-1990		1998-2000		1998-2002		2003-07	
	Value	Rank	Value	Rank	Value	Rank	Value	Rank
Singapore	13.8	1	2.2	18	3.10	8	3.10	5
Hong Kong	5.4	4	5.9	2	5.95	2	5.41	3
Malaysia	4.4	8	1.2	44	0.98	33	0.93	39
Thailand	2.6	25	1.3	41	1.39	22	1.00	37
Myanmar	1.9	36	0.6	82	...	...	...	...
Philippines	1.7	39	0.6	89	0.68	42	0.88	41
Vietnam	1.0	53	2.0	20	1.58	21	2.12	11
Taiwan	0.9	58	0.3	112	0.33	51	0.65	49
China	0.9	61	1.2	47	1.36	24	1.59	17
Indonesia	0.8	63	-0.6	138	-0.66	60	0.05	60
South Korea	0.5	93	0.6	87	0.48	47	0.26	57
Japan	0.0	128	0.1	131	0.06	59	0.07	59
Asia	1.07	...	0.85	...	...	...	...	...

Source: World Investment Report 2002, UNCTAD, and *World Investment Prospects*, EIU.

Table 9 gives the rank and value for the Inward FDI Performance Index for countries in Asia for 1988-90 and 1998-2000. China ranked only forty-seventh among 140 countries for 1998-2000, although this was a marked improvement its rank of sixty-one for 1988-1990. The Philippines, on the other hand, ranked higher than China for 1988-90 but fell in rank for 1998-2000. As with most ASEAN countries in the years following the Asian financial crisis, FDI flows to the Philippines petered relative to its GDP.

<sup>2</sup> The UNCTAD Inward FDI Performance Index is admittedly a crude benchmark and caution should be exercised in the interpretation due to a number of limitations such as the comparability of FDI inflow data across countries. In addition, some countries may have ‘lumpy’ inflows over short periods due perhaps to large mergers and acquisition with foreign investors or large privatizations (UNCTAD 2002).

The Economist Intelligence Unit (EIU 2002) constructed Inward FDI Performance Indices on a more recent past period and made a projection for the period 2003 to 2007 (Table 9 right hand side). On the EUI index China ranked twenty-four and the Philippines forty-two on for the period 1998-2002, while the EIU showed China moving up to seventeenth place for the near future.

Index rankings based on FDI relative to economic size give a significantly different impression than rankings based only on absolute amounts of FDI. Although China FDI inward index was greater than unity in 1998-2000, it still ranked behind Thailand and Singapore. This analysis reveals that although FDI flows to China surged in the 1990s, these inflows merely kept up with the increase in the size of China's economy. China's share of global FDI is not out of proportion to its size (Wu et al. 2002).

### Determinants Approach

None of the approaches used so far takes account of the multitude of factors that determine investment and the interplay of these factors. One approach for analyzing whether China crowd outs FDI from the Philippines, is to compare the attributes of both countries on the determinants of FDI. In general, the direction and magnitude of FDI can be influenced by both 'push' and 'pull' factors. Push factors pertain to conditions in the home countries that encourage capital outflow, such as high cost structures or unfavorable exchange rates. Pull factors, on the other hand, reflect conditions in the host countries that attract FDI. The 'pull' factors are more relevant to evaluating the competitive pressure from China for FDI and reflect more fully the attributes in host countries that could make a difference in attracting FDI. To illustrate, the meaning of "competitive pressure" from China in the popular media pertains to 'pull' factors.

The determinants of FDI depend on the purpose of the investment. Foreign investments that are geared to serve the local (host) market are often called 'horizontal' or 'market-seeking' FDI. On the other hand, FDI in search of lower-cost inputs is called 'vertical' or "production cost-minimizing" and is attracted to locate due to the presence of either raw materials or a competitive wage structure. Thus, the determinants of FDI could vary in importance depending on the type of FDI. Of course, there are also economy-wide factors, usually social and political conditions, that affect all types of FDI.

The literature proposes a number of pull factors that might affect FDI. Lim (2001) cites economic distance, size of host market, agglomeration effects, factor costs, business/investment climate, trade barriers and fiscal incentives as major determinants. UNCTAD (2002), on the other hand, categorizes the determinants according to three main types: a) policy framework for FDI, b) business facilitation variables, and c) economic determinants which vary according to whether the FDI is market-seeking, resource-seeking or efficiency -seeking.

In a survey of empirical works, Lim (2001), finds that market size is the most robust, positive determinant of FDI. Also FDI appears to cluster, making the quality of infrastructure an important determinant. Factor cost, primarily labor cost, is generally an important factor, but measuring it can be problematic. Political and economic instability are found to hinder FDI. At the same time, investor surveys (not econometric evidence) identify regulatory system as an important determinant of FDI. It is not clear however, whether either fiscal incentives or transport costs are major factors in attracting FDI.

UNCTAD (2002) constructed an index, UNCTAD Inward FDI Potential Index, based on measurable variables that are expected to attract inward FDI. These variables are: GDP growth rate; per capita GDP; share of exports in GDP; telephone lines per 1,000 inhabitants; commercial energy use per capita; share of R&D expenditures in gross national income; share of tertiary students in the population; and country risk. The FDI Potential Index, is an unweighted average of the normalized values of these eight variables. Like the FDI Inward Performance Index, this index consolidates the attributes of various factors in a single number.<sup>3</sup>

Table 10 reports the UNCTAD Inward FDI Potential Index for the periods 1988-90 and 1998-2000. China's ranking, 88 out of 140 countries in 1998-2000, is not as high as one might expect given the magnitude of its inward FDI and the interest accorded by the popular media. More puzzling, China's rank as a potential recipient of FDI is lower than it was a decade earlier, even though it was the more recent period when China experienced a surge in FDI. As a potential recipient of FDI, the Philippines, on the other hand, improved its rank from 111 in 1988-90 to 78 in 1998-2000, to the point

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<sup>3</sup> As UNCTAD is quick to point, this index does not explain the flows of FDI in a statistical sense. It is simply a benchmark for comparing countries in terms of FDI attractiveness as well as tracking the countries' rankings through time.

of surpassing China.

**Table 10: FDI Potential Index**

Economy	Score 0-1		Rank	
	1988-1990	1998-2000	1988-1990	1998-2000
Singapore	0.470	0.641	16	3
Malaysia	0.252	0.368	52	40
Thailand	0.235	0.298	57	61
Myanmar	0.067	0.083	138	139
Philippines	0.139	0.265	111	78
Vietnam	0.134	0.277	115	71
Taiwan	0.444	0.570	20	15
United States	0.649	0.666	1	1

Source: UNCTAD, *World Investment Report 2002*.

Admittedly, the UNCTAD index is quite crude. The determinants of FDI were chosen in a rather ad hoc fashion and they are not weighted to indicate their relative importance. Nonetheless, the index offers one benchmark to evaluate the capacity of a country to attract FDI. As such it does not support the view that China is diverting FDI away from neighboring countries.

**Investment Prospects**

For close to a decade, China has managed to attract the bulk of FDI to Asia??. Is China siphoning away FDI from ASEAN in general and from the Philippines in particular? It is true that China’s attractiveness as an huge, robust market and its rosy growth prospects may continue to make it a very attractive destination of FDI. Nevertheless we have shown through a variety of measures that the increased flows of FDI to China are not harming the Philippines to the extent that is popularly perceived.

For one thing, adjusted for the size of its economy, China is not pulling in as much FDI as expected. Second, the phenomenon of ‘round-tripping’ may have overstated the magnitude of FDI going to China. In addition, there is little evidence of negative and systematic relation between FDI to the Philippines and China. In fact the correlation of the FDI growth of these two countries for the past decade is very small.

There are also other considerations that augur against the idea of China’s cornering the whole FDI flows to Asia. International investor’ need to diversify is a principle that supports a broader distribution of FDI in Asia. Although it is true that clustering of industries in a country can be an

important 'pull' factor for FDI, at some point the risks associated with over concentrating investments in a single country may counter act the benefits of agglomeration which such clustering makes possible. Besides, it is not always the case that investment in China offers the highest return.<sup>4</sup> In addition, China's recent WTO accession may curtail the incentives of 'tariff-jumping' FDI, particularly for investments those that are oriented to China's domestic market.

In the end, the Philippines' greatest challenge in attracting is not China but things internal. In the short to medium term, Philippine authorities should focus on 'putting the house in order' especially in the area of social governance. The impeachment proceedings, the subsequent change of the Estrada administration and the attempted military mutiny certainly have not bolstered the image of the Philippines as an investment destination. Improving social and political stability will, in the end, prove to be a potent force in attracting more FDI to offset the competition from the China factor.

### **III. ON REGIONAL COOPERATION**

How should the Philippines use regional cooperation, particularly the ASEAN, as a channel to capitalize on the opportunities and manage the challenges arising from the emergence of China? The Philippines has to weigh in heavily with the ASEAN to engage China in regional economic cooperation, because, acting alone, the Philippines has neither the economic nor the political clout to enforce discipline and trade rules on China.

Indeed, China's emergence poses serious concerns on the ASEAN, which is a competitor, a supplier, and a market for China. ASEAN-China economic relations have grown dramatically given the liberalization and industrial reform measures enacted in both regions. China's accession to the World Trade Organization (WTO) opens up greater commercial possibilities for the ASEAN as well as challenges. At the same time, ASEAN has continued to widen its membership thereby expanding its combined market. Consultative dialogue between ASEAN and China has given rise to initiatives for more economic cooperation and integration, including the possibility of an ASEAN-China Free Trade Area (ACFTA).

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<sup>4</sup> Wu et al. (2001) cited a study by the US Department of Commerce which found that US investments in China for 2001 earned a rate of interest of 12%, but the rates of return in Malaysia and Indonesia, 17% and 15% respectively, were even higher.

To date the ACFTA is still a mere possibility considering that it will take some ten years of negotiations before a specific agreement can be expected to materialize. Despite the uncertainty, the possibilities of the free trade area (FTA) already catch the imagination. First of all, consider the sheer size of this Asian FTA—1.7 billion consumers, a combined GDP of about US\$2 trillion and a trade bill of some US\$1.23 trillion—is indeed remarkable. Second, consider its composition—the world’s largest country in terms of population together with a group of rapidly industrializing economies and a host of economies in transition with ample natural resources. Indeed, the market and investment potential of the FTA are truly promising.

Crafting the blueprint for such an FTA can be a daunting task. So far, the initiative has gone ahead on the basis of political consensus. By engaging in a regional framework, China hopes to reduce regional anxiety especially on the part of its ASEAN neighbors (Munakata 2002). ASEAN, on the other hand, sought to engage China and tacitly accepted China’s “early harvest” offer. However, the specific provisions—particularly in the legal and economic areas—need to be painstakingly ironed out in the years to come.

For the ASEAN, and the Philippines in particular, developing closer economic relations with China via a free trade area or any other form of engagement has a number of strategic advantages. First, given the positive readings on the growth prospects of China in the medium term, China could well be an engine of growth in Asia and it would be in the interest for the Philippines and the ASEAN as a whole to develop strong linkages with an economic powerhouse.

On the trade front, as China continues to grow, it is expected that its import demand from the rest of the world will also increase. Currently, China sources its imports mainly from Japan, the EU, Taiwan, and Korea. Interestingly, China’s imports from the ASEAN as a whole have been rapidly increasing in the past decade. The ASEAN’s share of China’s total imports increased from 5.6% in 1990 to 10.6% in 2002. China’s imports from the Philippines, in particular, grew more than 60% for the period 1990-2002. The share of the Philippines in China’s total imports is still small at 1.1% in 2002, but given China’s robust medium-term growth prospects exports from the Philippines to China are likely to grow rapidly.

There are indications that China will take on an increasing role as a major market in Asia.

Abeyasinghe and Lu (2003) observe several indications that China is shifting away from a purely export-driven growth model towards one that attaches greater role on domestic demand. For one thing, the demographic transformation in China points to a situation where domestic consumption is likely to dominate demand in the medium to long term. The expected massive increase of the elderly segment in the population, due basically to the population policy adopted in the past, would lead to reduced domestic savings. The slowing population growth implies that the cohort of younger persons, supposedly the segment that are high savers will dwindle relative to the elderly who are expected to dissave. The cut in domestic savings, in turn, will have negative implications on trade and the current account. All told the demographic trend points to the fact that China is most likely to import more in the medium term.

On the policy side, Abeyasinghe and Lu (2003) state that the accession of China to the WTO in December 2001 and the subsequent dialogue about the ACFTA show that China's markets will be much more open to foreign products. By virtue of its commitments to the WTO China is expected to introduce sweeping reforms that will liberalize its trading regime—both tariffs and non-tariff issues—and create a more transparent and predictable investment environment for FDI and the services sector. Abeyasinghe and Lu (2003) expect China to increase its marginal propensity to import. They provided estimates of the impact of China's remarkable economic performance over the past twenty years on the economic growth of the ASEAN4. Using a structural vector autoregression (VAR) model, they examined how a positive shock in China spreads over to other countries, such as the ASEAN, through trade linkage. They used the model to simulate the impact of a 1% positive shock to China on the GDP of a number of countries (i.e., the multiplier effects) as reported in Table 11.

**Table 11: Multiplier effects (after 5 years) on GDP growth of a 1% positive shock to China and other countries under 1986 and 2000 trading patterns**

Effect on	1986	2000	Change Per year %	1986	2000	Change Per year %	1986	2000	Change Per year %
	<i>Shock in China</i>			<i>Shock in Japan</i>			<i>Shock in US</i>		
<b>ASEAN4</b>	<b>0.28</b>	<b>0.68</b>	<b>9.84</b>	<b>1.91</b>	<b>1.40</b>	<b>-1.89</b>	<b>2.32</b>	<b>2.27</b>	<b>-0.16</b>
Indonesia	0.43	1.21	13.02	3.73	2.61	-2.14	3.69	3.67	-0.04
Malaysia	0.43	0.96	8.83	2.66	1.90	-2.03	3.53	3.43	-0.20
Philippines	0.08	0.15	7.33	0.38	0.34	-0.74	0.66	0.64	-0.25
Thailand	0.20	0.38	6.20	0.88	0.77	-0.89	1.41	1.34	-0.32
<b>NIE4</b>	<b>0.24</b>	<b>0.63</b>	<b>11.74</b>	<b>0.91</b>	<b>0.75</b>	<b>-1.29</b>	<b>1.69</b>	<b>1.44</b>	<b>-1.05</b>
Hong Kong	0.35	0.60	4.97	0.38	0.31	-1.30	0.88	0.73	-1.26
Singapore	0.30	0.64	8.04	1.48	1.12	-1.72	2.28	2.10	-0.54
S. Korea	0.20	0.82	22.03	1.28	1.11	-0.92	2.44	2.07	-1.09
Taiwan	0.09	0.45	27.04	0.51	0.44	-0.95	1.15	0.85	-1.83
<b>BIG4</b>	<b>0.12</b>	<b>0.24</b>	<b>6.74</b>	<b>0.40</b>	<b>0.33</b>	<b>-1.23</b>	<b>0.92</b>	<b>1.18</b>	<b>2.04</b>
China	1.99	2.03	0.13	0.29	0.23	-1.30	0.40	0.45	0.85
Japan	0.15	0.31	7.38	2.37	2.35	-0.07	1.13	1.04	-0.61
ROECD	0.13	0.23	5.47	0.48	0.40	-1.15	1.22	2.05	4.89
USA	0.09	0.18	7.46	0.43	0.35	-1.27	2.08	2.05	-0.10

Note: The highlighted average effects for each group do not include "own effect." The columns under Shock in ASEAN4 and Shock in NIE4 are the averages for these groups excluding "own effects."

Source: Abeysinghe and Lu (2003)

The multiplier of a 1% positive shock of China on the GDP growth of ASEAN countries in the sample has increased substantially over the period 1986 to 2000 at 9.84% change per year. This means that the trade linkages between China and the ASEAN deepened over the past 15 years and that the ASEAN countries have made progress in penetrating the Chinese market. The multiplier effect increased in all four ASEAN countries in the sample over the period 1996 to 2000, although the increase was smallest for the Philippines. It may be that the economic structures of Indonesia, Thailand, and Malaysia are more complementary with China than is the economic structure of the Philippines. The low multiplier of the Philippines, relative to those of the other ASEAN countries, is consistent with the findings of a study by the ASEAN Secretariat. The study (ASEAN-China EG 2001) showed that while the ACFTA would induce more regional trade, the effects are not spread evenly among the ASEAN members. The Philippines, in particular, would not see as much an increase



in trade with China as the other ASEAN countries.

In contrast, the multiplier effect of a 1% positive shock in Japan on ASEAN economics diminished from 1986 to 2000, but the multiplier effect from Japan is still higher than from China. The same observation can be said of the influence of the U.S. economy on ASEAN. The United States, however, has still the highest multiplier in Southeast Asia, as it continues to be a dominant export market for the region. The implication of the simulation on multipliers is that China is becoming more economically intertwined in the Southeast Asian region to the point that any shocks to it could have important effects on its trading partners. If China does emerge as an engine of growth in Asia, then it would be strategic for the Philippines to seek closer economic relationship with China, using ASEAN as a vehicle.

#### **IV. CONCLUDING REMARKS**

We can now summarize our analysis and empirical verification in five concluding points. First, since 1995 the Philippines increased exports to China more rapidly than its import from, so that it moved from a perennial trade deficit to register a trade surplus for the first time in 2002. Secondly, the emergence of China need not mean the demise of Philippine exports to the world. The impact of China will be detrimental if it replaces Philippine exports in third markets. Export data reveal that while China's exports surged in the past ten years, Philippines' share in the world export market also roughly doubled.

China's emergence as a powerhouse, particularly in manufacturing, indicates that it could drive away competitors such as the Philippines and the ASEAN. This assumes that the export structure of China and the Philippines (or the ASEAN) is competitive. The RCAs of China and the Philippines with respect to the world and to the specific major markets of the United States, Japan, and the EU, and their rank correlations show a low positive correlation, albeit not as positive as the correlations of China with Thailand and Indonesia. Thus, the RCA analysis shows that the Philippines export structure has more complementary features than competitive with respect to China. The fear that Philippine exports will lose out to China does not appear to be supported.

Third, RCA analysis of the Philippines' exports to China shows that there exists a number of

market niches that the Philippines can exploit. Foremost among these are primary products such as fruits, marine products, nickel and copper ore concentrates, intermediate products that are based on copper and rubber, and finished goods like electronic parts and other products that are skills-specific. This result underscores the fact that no nation, no matter how large or how competitive its cost structure, can have competitive advantage in all goods and services.

Fourth, it also appears that the fear of China's crowding out FDI to the Philippines may be overblown. Analysis of comparative data did not find systematic diversion of FDI from the Philippines to China. In addition, flows of FDI to China may be overstated because of measurement errors.

Finally, risk diversification by international investors and multinational corporations augurs well for FDI potential of the ASEAN and the Philippines. This means that concentrating resources or investments in China, despite its superior cost structure relative to ASEAN, may increase country risk. The growing interest in a China-ASEAN free trade area can actually benefit the ASEAN, in terms offering diversification benefits to foreign investors.

Engaging China, not singly, but through as a cooperative effort of ASEAN, would be the strategic way to go for the Philippines.

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## APPENDIX: A BRIEF NOTE ON REVEALED COMPARATIVE ADVANTAGE

One common tool for measuring complementarity in trade is Revealed Comparative Advantage (RCA). RCA is a good measure of trade complementarity because a country will export what it is good at producing and import what it can produce less efficiently. This comparative advantage can result from a country's natural endowments, such as land or inexpensive labor, or from strategic intervention, such as the high-technology products from East/Southeast Asia. The RCA index was first developed by Bela Balassa in 1964, and it has since become a widely used indicator of the level of comparative advantage a country enjoys. Since comparative advantage is defined in term of price relationships in autarky, and is therefore, not observable, Balassa assumed that post-trade data reveals the true pattern of comparative advantage (Bender and Li, 2002).

However, the RCA has its limitations. Although RCA can indirectly measure the effects of trade liberalization and expansion, it does not distinguish the effects of changes in factor endowments from the effects of appropriate trade policy (Bender and Li 2002). Moreover, RCA, being based on relative export shares, could be biased from various trade and non-trade barriers.

The equation below shows Balassa's RCA index, which compares the export share of a given sector in a country with the export share of that sector in the world market.

$$RCA = \frac{\frac{X_{ij}}{\sum_i X_{ij}}}{\frac{\sum_j X_{ij}}{\sum_j \sum_i X_{ij}}} \quad \text{where}$$

- $X_{ij}$  = exports of product i by country j;
- $\sum_i X_{ij}$  = total exports of country j;
- $\sum_j X_{ij}$  = world exports of product i;
- $\sum_j \sum_i X_{ij}$  = total world exports.

Global RCAs use exports of both countries to the world market. Global RCAs reflect comparative advantages in the world export market. Comparative advantage depend on the particular geographic export market. A country may enjoy an advantage in a particular product in the world export market but not in a specific individual country market (Schott and Choi 2000).