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ASEAN and China: Managing Competition and Exploring Complementarities

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Abstract:

The emergence of China as an economic powerhouse provides both challenges and opportunities to the Southeast Asian developing economies, the ASEAN countries. The paper analyzes the trade pattern and investment relationship between the two areas and tries to shed a light on the above issues. It is found that competition did exist between the two areas in world export markets for manufacturing goods and in attraction for foreign direct investment. On the other hand, the expansion of Chinese economy provides a brightly promising export market for ASEAN countries. The dramatic increase of exports of ASEAN to China in the past decade might indicate a very different picture of the so said “missing middle” in economic globalization time, i.e., there could be a newly appearing niche for middle income countries in the “chain” of world export market. The paper also discusses policy responses of ASEAN countries toward the impact of the newly emerged Chinese influence.

I. Introduction

The emergence of China as an economic powerhouse provides both challenges and opportunities to its neighboring developing countries. ASEAN (Association of Southeast Asian Nations) economies are in the immediate region of the rising Chinese influence. One of the concerns is that ASEAN’s traditional exports market in the world may be taken away by China if China turns into the world low cost manufacturing workshop. Another challenge facing ASEAN is the outflow of foreign direct investment to China. Meanwhile, trade between China and ASEAN increased dramatically during the past decade, grown at an annual average of 19 percent (Table 8). China’s exports to ASEAN-5 grew from US\$10 billion in 1995 to US\$44 billion in 2004 while ASEAN’s exports to China grew from US\$8.2 billion in 1995 to US\$42.2 billion in 2004. Not surprisingly, China’s accession to WTO and the future establishment of a Free Trade Area (FTA) between ASEAN and China will further change the trade relations between the two areas.

Facing the fast expansion of China’s impact, how should the ASEAN economies respond to all the challenges and the opportunities? It is of great importance to have a thorough investigation of the issue. The purpose of this chapter is to examine the above issues from three aspects: (1) look at past trade pattern and the movement of FDI between China and ASEAN and find out the areas of possible competitions between China and ASEAN, and find out the possible impacts of the these competitions to ASEAN members, in particular, the impacts to specific industries in each individual country; (2) examine the emerging market opportunity of the expanding Chinese economy to ASEAN countries, and (3) analyze the responding polices of ASEAN countries and consequences of the policies.

The chapter is organized as follows. Section two provides a brief review of the recent development in ASEAN economies and the trend of the economic relationship between ASEAN and Chinese economies. Section three analyzes in detail of the evidences of the possible challenges and opportunities of the rising Chinese economy to ASEAN members. Section four discusses the policy responses of ASEAN members to the rising Chinese economy and the possible consequences. Section five provides brief concluding remarks.

II. ASEAN Economies and Recently Appeared Problems

The ASEAN Economies. The outbreak of Asian financial crisis in 1997 was critical for ASEAN economies. Since then the development road became stumble and the future was getting unclear (See Table 1). Before the crisis, however, the ASEAN economies documented a long term high growth rate during the period of 1980s and early 1990s. Started from a very primary level of technology and with limited market size and resources, outward looking policies in trade and investment were the most feasible choices for ASEAN. Exports of labor intensive products and inflow of foreign direct investment eventually transformed ASEAN into the fast growing economy in the last two decades of the previous century.

The performances of the ASEAN economies are, however, diversified. Among them, Singapore singled out close to developed economy, Malaysia and Thailand are at a relatively high industrialization level, and Philippines and Indonesia are at the less developed level. Major economic indicators of the ASEAN-5 in the last decade are listed in Table 2.

TABLE 1
Real GDP Growth Rate of ASEAN-5 and China 1987-2004
(in percentages)

	Indonesia	Malaysia	Philippines	Singapore	Thailand	China
1987	4.9	5.4	4.8	9.4	9.5	11.1
1988	5.8	8.9	6.3	11.1	13.3	11.3
1989	7.5	9.2	6.1	9.2	12.3	4.3
1990	7.1	9.7	2.7	8.3	11.6	3.9
1991	6.6	8.7	-0.7	6.7	7.9	8.0
1992	5.8	8.5	0.0	5.8	7.5	13.2
1993	5.9	8.4	1.0	9.9	7.7	13.5
1994	7.5	9.2	4.4	11.4	9.0	12.7
1995	8.2	9.8	4.7	8.0	9.3	10.5
1996	7.8	10.0	5.8	7.6	5.9	9.6
1997	4.7	7.3	5.2	8.5	-1.4	8.8
1998	-13.1	-7.4	-0.6	0.1	-10.8	7.8
1999	0.8	6.1	3.4	5.9	4.4	7.1
2000	4.8	8.9	4.4	9.6	4.8	8.0

2001	3.8	0.3	1.8	-2.0	2.2	7.5
2002	4.4	4.1	4.3	3.2	5.3	8.3
2003	4.9	5.3	4.7	1.4	6.9	9.5
2004	5.1	7.1	6.1	8.4	6.1	9.5

Source: Asian Development Bank, *Key Indicators of Developing Asian and Pacific Countries*, 2005.

TABLE 2
Key Economic Indicators of ASEAN-5 and China 1995 - 2004

Country / Item	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Indonesia										
Per Capita GDP, US\$	1038	1154	1083	467	675	802	788	948	1116	1191
Unemployment rate, %	7.2	4.9	4.7	5.5	6.4	6.1	8.1	9.1	9.9	...
Exports, US\$ Billion	45.4	49.8	53.4	48.8	48.6	62.1	56.3	57.1	60.9	77.8
Imports, US\$ Billion	40.6	42.9	41.6	27.3	24.0	33.5	30.9	31.2	32.5	51.7
Exchange rate, Rupiah/US\$	2249	2342	2909	10014	7855	8422	10261	9311	8577	8939
Malaysia										
Per Capita GDP, US\$	4294	4764	4623	3254	3485	3844	3665	3880	4142	4604
Unemployment rate, %	3.1	2.5	2.4	3.2	3.4	3.0	3.5	3.5	3.6	3.5
Exports, US\$ Billion	73.7	78.2	78.9	73.4	84.5	98.1	88.1	93.3	104.9	126.5
Imports, US\$ Billion	77.6	78.4	79.0	58.3	65.4	82.1	73.3	79.5	82.7	104.2
Exchange Rate, Ringgit/US\$	2.50	2.52	2.81	3.92	3.80	3.80	3.80	3.80	3.80	3.80
Philippines										
Per Capita GDP, US\$	1083	1183	1149	889	1015	987	907	957	970	1035
Unemployment rate, %	8.4	7.4	7.9	9.6	9.6	10.1	9.8	10.2	10.1	10.9
Exports, US\$ Billion	17.3	20.5	25.2	29.4	35.4	38.2	32.1	35.1	36.2	46.7
Imports, US\$ Billion	28.2	31.7	39.1	29.5	30.7	34.4	33.0	35.4	37.5	47.8
Exchange Rate, Pesos/US\$	25.7	26.2	29.4	40.8	39.0	44.1	50.9	51.6	54.2	56.0
Singapore										
Per Capita GDP, US\$	23807	25106	25143	20922	20891	23042	20774	21206	22071	25192
Unemployment rate, %	2.0	2.0	1.8	3.2	3.5	3.1	3.3	4.4	4.7	4.0
Exports, US\$ Billion	118	125	125	109	114	137	121	125	144	179
Imports, US\$ Billion	124	131	132	101	111	134	116	116	127	162
Exchange Rate S\$/US\$	1.41	1.41	1.48	1.67	1.69	1.72	1.79	1.79	1.74	1.69
Thailand										
Per Capita GDP, US\$	2829	3032	2490	1828	1984	1972	1844	2008	2246	2547
Unemployment rate, %	1.1	1.1	0.9	3.4	3.0	2.4	2.6	1.8	1.5	1.5
Exports, US\$ Billion	57.2	55.7	57.5	54.4	58.4	68.9	65.1	68.8	80.3	97.4
Imports, US\$ Billion	73.6	73.3	62.8	43.1	50.3	61.9	62.0	64.7	75.8	95.3
Exchange Rate, Baht/US\$	24.9	25.3	31.3	41.3	37.8	40.1	44.4	42.9	41.4	40.2
China										
Per Capita GDP, US\$	581	671	730	762	791	856	924	992	1100	1273
Unemployment rate, %	2.9	3.0	3.1	3.1	3.1	3.1	3.6	4.0	4.3	4.2
Exports, US\$ Billion	148	151	182	183	194	249	266	325	438	614

Imports, US\$ Billion	132	138	142	140	165	224	243	295	412	569
Exchange Rate, Yuan/US\$	8.35	8.31	8.28	8.27	8.27	8.27	8.27	8.27	8.27	8.27

Data source: Asian Development Bank, 2005.

One thing in common of all the ASEAN-5 is that the per capita GDP did not change very much during the past decade, only Singapore and Malaysia received a small increase. Their trade volume however all increased moderately. The reason for this phenomenon is due to the depreciation in currency value, which could be a result of overall decreasing competitiveness of their economy.

Recently Appeared Problems. The occurrence of 1997's Asian financial crisis seriously hit the region, caused unstable currencies and significant withdrawal of FDI. The world economic recession in 2000 further put the future of these countries into uncertainty. Among the ASEAN-5, Indonesia and Philippines suffered serious from the high unemployment and unstable currency value, while Malaysia and Singapore suffered more from the unstable economic growth and unemployment. The economy of Thailand, however, moved in a relatively smooth mode. In addition to their domestic problems, increasing competition from newly rising power of China, high oil price and fast development of globalization are definitely three important international factors to ASEAN economies in the recent time.

III. Challenges and Opportunities to ASEAN Facing Rising China

Accompanying the stumble road for ASEAN economies since late 1990s is the emerging Chinese economy. Though China's non-depreciation policy during the crisis helped the region out of the downturn trend eventually, but some also believe that the devaluation of Chinese Yuan in 1994 and then fast expanded China's exports in labor intensive products were one of the important factors to the crisis occurrence. And the consequently well developed Chinese economy brought an unprecedented shock not only to the region of Southeast Asia and but also to the rest of the world.

III.1 Competition in World Export Market

The success of China's economic reform generated tremendous economic power as a huge trade nation and magnetic field for international investment capital. The abundant labor and land have turned China into a world production factory for labor intensive products. China's WTO entry in 2001 further ensured the world market access for its exports in the coming

time. Within just ten years, China's exports increased from US\$120 billion in 1994 to US\$762 billion in 2005, ranked world second largest exporting country after Germany.

Given the steady slow growth of world market demand for labor intensive goods in the past ten years, fast expansion of China's exports will inevitably take certain market shares away from traditional labor intensive products exporting countries. The ASEAN economies are the immediate affected ones, among them, Singapore is the most likely affected because a large proportion of China's exports production is relocated from Taiwan and Hong Kong, which produce the similar goods as Singapore does. Table 2 shows that since 1997 financial crisis, ASEAN's exports experienced drastic ups and downs while China's exports grew often at a high rate of more than 20 per cent.

More specifically, we may check the export competition between ASEAN-5 and China in US market. Table 3 provides the amounts of exports of ASEAN and China to US market. Table 4 indicates that the changes of ASEAN's exports to US market do not have the often high growth rates as in early 1990s, while China's exports to US increased mostly with a double digits growth rate. Although there could be many reasons for the fluctuations of ASEAN's exports to US market, by just looking at the data, we can prove that the competition from China is the most important factor.

TABLE 3
US Imports from ASEAN-5 and China in Billions of US dollars

	World Total of US	Indonesia	Malaysia	Philippines	Singapore	Thailand	ASEAN-5	China
1987	424.4	4.0	3.1	2.5	7.3	2.3	19.2	3.1
1988	459.5	3.6	3.7	2.6	9.5	3.3	22.7	3.5
1989	492.9	4.3	4.9	3.3	10.7	4.5	27.7	4.7
1990	517.0	4.2	5.2	3.3	11.7	5.5	29.7	5.8
1991	508.4	4.2	6.0	3.3	11.9	6.3	31.7	6.8
1992	553.9	5.3	7.9	4.0	13.6	7.6	38.5	9.6
1993	603.4	6.1	10.2	4.6	15.1	8.3	44.3	18.4
1994	689.2	6.7	12.7	5.3	17.6	9.6	51.8	22.5
1995	770.9	7.5	15.7	6.4	21.2	10.3	61.0	26.0
1996	822.0	8.1	14.9	7.4	23.2	10.4	63.9	28.9
1997	899.0	8.5	15.2	9.2	23.1	11.8	67.8	35.4
1998	944.4	8.5	16.4	10.3	22.0	14.0	71.2	41.2
1999	1059.4	8.6	19.2	11.1	22.6	13.5	75.0	47.4
2000	1259.3	9.4	22.8	12.5	23.6	15.5	83.8	62.3
2001	1180.1	7.7	17.8	8.9	18.7	13.2	47.8	54.3
2002	1202.3	7.5	18.8	8.6	19.1	13.5	48.6	70.0
2003	1305.1	7.3	20.5	7.2	20.5	13.6	48.8	92.6
2004	1525.3	10.5	23.7	8.1	23.5	15.5	57.9	139.7

Source: 1. Asian Development Bank, 2005 for ASEAN and China.

2. <http://www.oecd.org/statisticsdata/> for United States imports total.

TABLE 4
Growth Rate of Imports of US from ASEAN-5 and China (%)

	World Total of US	Indonesia	Malaysia	Philippines	Singapore	Thailand	ASEAN- 5	China
1988	8.3	-9.8	17.6	5.7	29.9	42.5	18.0	12.5
1989	7.3	18.3	32.4	26.3	12.8	39.7	22.3	33.8
1990	4.9	-2.6	6.2	-1.5	8.8	20.0	7.2	22.5
1991	-1.7	1.0	16.5	0.6	2.1	15.2	6.7	17.5
1992	9.0	27.0	32.1	22.9	13.8	21.5	21.5	41.5
1993	8.9	15.4	28.2	13.7	11.2	8.4	15.0	91.7
1994	14.2	8.5	24.7	14.6	16.8	15.8	17.1	22.1
1995	11.8	12.2	23.4	21.1	20.0	7.5	17.6	16.0
1996	6.6	8.2	-4.8	15.7	9.6	0.9	4.9	10.9
1997	9.4	5.3	2.0	24.5	-0.4	13.3	6.0	22.4
1998	5.0	-0.4	7.7	12.3	-4.6	18.7	5.0	16.6
1999	12.2	1.4	17.0	8.3	2.4	-3.4	5.3	14.9
2000	18.9	9.3	18.8	12.6	4.4	14.8	11.7	31.4
2001	-5.6	-18	-21.9	-28.8	-20.8	-14.8	-43	-12.8
2002	1.9	-2.6	5.6	-3.4	2.1	1.5	1.7	28.9
2003	8.9	-2.7	9.0	-7.0	7.3	0.7	0	32.2
2004	16.9	43.8	15.6	12.5	14.6	14.0	18.6	50.9

Source: 1. Asian Development Bank, 2005 for ASEAN and China.

2. <http://www.oecd.org/statisticsdata/> for United States imports total.

To further check the extent of impact and time period of China's competition in specific type of industry, we may use the results of Liu and Luo 2005, where a competition matrix is estimated as shown in Table 5. The market share regression model is specified in

$$MS_i = a + bMS_c + u \quad (1)$$

Where MS_i is individual ASEAN member's total market shares in the US for a particular type of products, MS_c is the China's market share in the US for the same type of products. The assumption is that the sign of parameter b should be negative if competition happened between ASEAN members and China for that particular type of products. If a positive sign appears for parameter b , the assumption of competition of China and ASEAN members should not hold in that product. Statistically, the method should also overcome the possible problems of heteroscedasticity when different products are pooled into one group. Another assumption is that the sum of the market shares of the two regions maintains a stable trend.

The data covers 1-digit and 2-digit SITC goods and the time periods are 1987-1992 (Chew and Liu 1998) and 1987-2000 (Liu and Luo 2004). The results are presented in Table 5.

In general, competition happened in primary good between ASEAN members of Indonesia, Malaysia, Philippines, Thailand and China, while the competition between Singapore and China is mostly in manufacturing sectors. It is also clear that in the period 1987-1992 (Chew and Liu 1998), no competition was seriously appearing except in the group of manufactured good of SITC 81-89. However, after extension to the period 1987-2000, the big category of basic manufactures (SITC 61-60) turned to be significantly negative and the bigger group of one digit regression (SITC 5-9) also turned to be significantly negative. Overall, we can conclude that the export competition in US market between Singapore and China was getting severe starting from the early mid 1990s. The results are not surprising and are consistent with our common believe that Singapore has a relatively advanced production level among the four NIEs, but with time passes, China caught up very quickly in the basic and mid range of industrial products. It means that in the coming years, Singapore will face further pressure from China given China's fast learning ability.

The above estimation is however only covering the data up to year 2000. After year 2000, the competition in general is getting more severe to all of the ASEAN-5 members.

TABLE 5
Competition matrix for ASEAN-5 and China for different types of products
in US market (1987-2000)

Products	N	ASEAN -5	Indone Sia	Malay sia	Philipp ines	Singa Pore	Thai land
Primary goods (sitc 0,1,2,3,4)	70	-5.82 (-2.25)	0.10 (0.31)	-3.39 (-4.08)	-4.73 (-4.03)	0.15 (3.45)	2.05 (9.33)
Manufactures (sitc 5,6,7,8,9)	70	0.02 (0.12)	0.13 (4.81)	0.05 (2.12)	-0.21 (-1.78)	-0.08 (-2.06)	0.13 (8.41)
Food & beverages (sitc 00-12)	168	3.44 (15.01)	0.43 (4.37)	0.08 (3.11)	0.39 (3.75)	0.17 (4.35)	2.36 (12.73)
Crude materials (sitc 21-43)	224	-0.87 (-2.58)	-0.18 (-1.13)	-0.38 (-2.46)	-0.18 (-1.75)	-0.06 (-2.17)	-0.07 (-1.25)
Chemical & related (sitc 51-59)	126	-0.05 (-0.56)	-0.01 (-0.31)	0.02 (0.77)	0.001 (0.07)	-0.09 (-1.30)	0.01 (1.28)
Basic manufactures (sitc 61-69)	126	0.10 (0.63)	-0.04 (-0.33)	0.03 (1.16)	0.02 (1.35)	-0.02 (-3.42)	0.12 (3.05)
Machines, transport (sitc 71-79)	126	1.70 (5.81)	0.12 (11.13)	0.74 (8.23)	0.21 (6.85)	0.37 (1.86)	0.26 (7.97)
Miscellaneous manufactured (sitc 81-89)	112	0.10 (2.91)	0.08 (5.27)	-0.01 (-1.10)	0.02 (1.71)	-0.03 (-4.16)	0.05 (4.28)

Note: N is the number of observations; numbers in the parentheses below the estimators are t-values.

Source: Liu and Luo 2005.

III.2 Competition in Attracting FDI

No doubt, the diversion of FDI from Southeast Asia to China is an obvious fact. The main flow of FDI to Asia has changed the direction in recent years that more than 70 per cent of the FDI is now flowing into China instead to Southeast Asia as before. Table 6 shows the FDI diversion pattern for Singapore and China over the past two decades. Historically, Singapore relies on FDI heavily for its economic expansion and for its industry level upgrading. Even the economy size is small, the FDI inflow to Singapore only fell behind China significantly after 1991. Less capital inflow and own capital outflow could mean less economic growth and less jobs, but some argued that the competition could appear any time and the jobs might not be kept if one country's economic environment is not competitive enough. FDI diversions need to be viewed in different perspectives (Tain and Ku 2003).

TABLE 6
FDI inflows of China and Singapore, US\$ million

Year	China	Singapore	Year	China	Singapore
1980	57	1,236	1992	11,156	2,204
1981	265	1,660	1993	27,515	4,686
1982	430	1,602	1994	33,787	8,550
1983	636	1,134	1995	35,849	11,503
1984	1,258	1,302	1996	40,180	9,303
1985	1,659	1,047	1997	44,237	13,533
1986	1,875	1,710	1998	43,751	7,594
1987	2,314	2,836	1999	40,319	13,245
1988	3,194	3,655	2000	40,772	12,464
1989	3,393	2,887	2001	46,846	10,949
1990	3,487	5,575	2002	52,700	7,655
1991	4,366	4,887	2003	53,500	5,528

Source:

1. *World Trade Analyzer (WTA) CDROM, 2001* and International Monetary Fund, *International Financial Statistics, 2001*.
2. Data after 2000 are from <http://www.singstat.gov.sg/keystats/economy.html>, and http://www.uschina.org/statistics/fdi_cumulative.html.

Table 7 shows further that during the past decade, the competition in attraction of FDI between China and ASEAN is getting severe. The relative share of ASEAN comparing to that of China shrunk further to 15 percent.

TABLE 7

FDI inflow of China and ASEAN-5 in past 11 years, US\$ billion

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
China	27.5	33.7	35.8	40.1	44.2	43.7	38.7	38.3	44.2	49.3	53.5
Indonesia	2.0	2.1	4.3	6.1	4.6	-0.3	-2.7	-4.5	-3.2	-1.5	-0.5
Malaysia	5.0	4.3	4.1	5.0	5.1	2.1	3.8	3.7	0.5	3.2	2.4
Philippines	1.2	1.5	1.4	1.5	1.2	2.2	1.7	1.3	0.9	1.7	0.3
Singapore	4.6	8.5	11.5	9.3	13.5	7.5	13.2	12.4	10.9	7.6	5.5
Thailand	1.8	1.3	2.0	2.3	3.8	7.3	6.1	3.3	3.8	0.9	1.9
ASEAN-5	14.7	17.9	23.5	24.4	28.4	19.0	22.2	16.4	13.1	12.0	96.7
China and ASEAN-5 Total	42.2	51.7	59.4	64.6	72.7	62.7	60.9	54.8	57.3	61.3	63.1
ASEAN-5/Total	35	35	40	38	39	30	36	30	23	20	15
China/ Total	65	65	60	62	61	70	64	70	77	80	85

Data source: Asian Development Bank, 2005.

III.3 The Increasing Importance of China's Market to ASEAN

Parallel to the challenges of the rising Chinese economy that ASEAN must face is the opportunity appeared of China's large market. For the past decade, all of the ASEAN-5 experienced fast increase in trade with China. The annual average increasing rate is all more than 14 percent. (See Table 8).

TABLE 8
ASEAN's Trade with China, 1995-2004, US\$, million

Country / Item	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	1995-2004, average %
Indonesia											
Exports	1741	2057	2229	1832	2008	2767	2200	2903	3802	5870	14.5
Imports	1495	1597	1518	906	1242	2022	1842	2427	2957	5693	16.0
Malaysia											
Exports	1889	1882	1852	1994	2318	3028	3821	5253	6810	8460	18.1
Imports	1709	1876	2232	1849	2139	3237	3804	6157	7300	10339	22.1
Philippines											
Exports	209	328	244	344	575	663	793	1356	2145	5342	43.3
Imports	660	653	972	1199	1040	786	975	1252	1798	3539	20.5
Singapore											
Exports	2759	3395	4053	4065	3920	5377	5329	6863	10134	15392	21.0
Imports	4042	4439	5668	4851	5697	7116	7195	8869	11073	16211	16.7
Thailand											
Exports	1642	1868	1744	1769	1861	2806	2863	3553	5707	7103	17.6
Imports	2096	1953	2260	1822	2495	3377	3711	4928	6067	8185	16.3
Vietnam											
Exports	361	340	474	440	746	1536	1417	1518	1883	2321	23.0

Imports	329	329	404	515	673	1401	1606	2158	3138	4557	34.0
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Data source: Asian Development Bank, 2005.

It is interesting to see that in 2003 and 2004 Singapore's exports rebounded with a sharp increase of 15 and 28 per cent respectively comparing to the 3 per cent increase in 2002 (Table 2). The destination change of Singapore's exports for the past 10 years is shown in Table 9, from which we can observe clearly that the quickest expanded market for Singapore is China. In 2004, Singapore's exports to China increased by 51.5 per cent. In 2004, the trade volume between the two countries reached US\$31.5 billion, increased by 48.6 per cent, accounted 9.2 per cent of Singapore's total trade, while in 1995, it was only 2.8 per cent. In 2004, China replaced Hong Kong became Singapore's fourth largest trading partner after Malaysia, US, EU and Japan. The year of 2004 also marked that the sum of trade volume of Singapore with China and Hong Kong over passed Malaysia becoming Singapore's first largest market and this change only happened within less than ten years.

Imports of Singapore from China show another facet of its trade relationship with China, the increasing complementarity. More often than not, Singapore recorded a trade deficit with China in the past ten years. China's diversified resources, products and technology become Singapore's important supplier in consumption goods and in production parts (Chew and Liu 1998).

TABLE 9

Direction of Singapore's Exports and Imports, billion US dollars

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Exports, total	118.2	125.1	125.3	109.8	114.7	137.9	121.7	125.0	144.1	179.4
1. Malaysia	22.7	22.5	21.8	16.7	18.9	25.0	21.1	21.8	22.7	27.2
2. US	21.6	23.1	23.1	21.8	22.0	23.8	18.7	19.1	20.5	23.2
3. Hong Kong	10.1	10.2	12.0	9.2	8.8	10.8	10.8	11.4	14.4	17.6
4. Japan	9.2	10.2	8.8	7.2	8.5	10.4	9.3	8.9	9.6	11.5
5. China, P. R.	2.8	3.3	4.0	4.0	3.9	5.3	5.3	6.8	10.1	15.3
6. Thailand	6.8	7.0	5.7	4.2	5.0	5.8	5.3	5.7	6.1	7.7
7. Korea	3.2	4.7	3.6	2.5	3.5	4.9	4.6	5.2	6.0	7.3
8. Germany	4.0	3.8	3.6	3.3	3.2	4.2	4.2	4.0	4.4	6.2
9. Netherlands	3.1	2.8	3.0	3.7	3.8	4.0	4.0	4.3	4.6	5.4
10. Australia	2.6	2.8	2.9	3.1	3.1	3.2	3.1	3.3	4.6	6.6
Imports, total	124.4	131.3	132.5	101.6	111.0	134.6	116.0	116.4	127.9	162.9
1. Malaysia	19.3	19.7	19.9	15.6	17.2	22.8	20.0	21.2	21.5	24.9
2. US	18.7	21.5	22.3	18.7	19.0	20.2	19.1	16.6	18.0	20.7

3. Japan	26.3	23.8	23.2	17.0	18.5	23.1	16.0	14.5	15.3	19.0
4. China, P. R.	4.0	4.4	5.6	4.8	5.6	7.1	7.1	8.8	11.0	16.2
5. Thailand	6.4	7.1	6.8	4.8	5.2	5.8	5.1	5.4	5.5	6.7
6. Korea	5.4	4.8	4.1	3.0	4.1	4.8	3.8	4.3	4.9	6.9
7. Germany	4.3	4.7	4.5	3.4	3.6	4.2	3.8	3.9	4.8	5.6
8. Saudi Arabia	3.8	4.9	5.3	3.2	3.2	4.3	4.2	3.8	3.9	5.0
9. Hong Kong	4.1	4.2	3.9	2.8	3.1	3.5	2.7	2.8	3.0	3.6
10. Philippines	1.1	1.3	1.9	2.3	2.9	3.3	2.5	2.5	2.8	4.2

Source: Asian Development Bank (ADB) - Key Indicators 2005 (www.adb.org/statistics) May 2006.

The potentials of China's WTO entry and future FTA to exports of ASEAN. Facing the emerging Chinese economy, one major concern of the Asian countries was that the rising China could become a threat to other countries politically and economically. Recent development in the relationship between China and Asian countries, however, shows a very different trend. The strong demand for investment and consumption in the fast growing Chinese economy is appearing as a leading force to turn the economies of neighboring countries from stagnation or downturn to a rising trend. The fast increase of exports of Japan, Malaysia, and Singapore to China in recent years all shows the signal. The “world largest market” is functioning.

With China's WTO entry and the on going progress of FTA between China and ASEAN countries, the impact of China's tariff reduction and trade restriction removal on trade and investment could be substantial to the related countries. To examine the effect of the policy and institutional change of China on specific industries in ASEAN economies, we may use the result of Liu and Luo 2005. A model of ASEAN's exports related to exchange rate, China's tariff reduction and time trend is estimated using the SITC data for the period of 1987 to 2000.

$$EX = a_0 + a_1ER + a_2TR + a_3YEAR + u \quad (2)$$

where EX = ASEAN's exports to China (US\$000),

ER = exchange rate between Chinese Yuan and individual ASEAN member country current, Chinese Yuan/ASEAN member country currency,

TR = China's import tariff rate, average tariff rate in a specific industry (%).

Tariff and exchange rate are two of the many factors that influence trade. This model allows us to analyze the effect of changes in the two variables on trade. According to economic theory, both tariff and exchange rate share an inverse relationship with trade value. Therefore the sign of parameter of both tariff and exchange rate should be negative. Another variable added to our model is the year variable. This variable helps to account for changes in trade value that is attributed to economic factors other than tariff and exchange rate.

Within the primary sector, there are 5 individual industries. Hence 4 dummy variables are introduced into the model. Dummy variables help to capture effects that are due to changes in any industries within the primary sector. Three dummy variables are also introduced to the manufacturing sector model for the same reason. The results are presented in Table 10.

TABLE 10
Tariff-export matrix for different types of products in China market
from ASEAN-5 (1987-2000)

Products	N	Indone sia	Malay sia	Philipp ines	Singa pore	Thai land
Primary goods (sitc 0,1,2,3,4)	168	-888.16 (-2.62)	-195.30 (-0.90)	-36.35 (-1.33)	-732.63 (-1.88)	-203.95 (-1.29)
Food & beverages (sitc 00-12)	72	20.88 (0.75)	-21.38 (-1.32)	2.94 (0.09)	392.32 (2.26)	-218.49 (-1.27)
Crude materials (sitc 21- 43)	96	-2510.71 (-2.52)	812.96 (1.30)	-93.40 (-1.40)	-2537.54 (-2.49)	-333.82 (-0.84)
Manufactures (sitc 5,6,7,8,9)	210	-231.13 (-1.23)	-412.98 (-2.09)	-119.37 (-1.48)	-602.82 (-1.56)	-205.96 (-1.02)
Chemical & related (sitc 51-59)	54	-163.64 (-0.79)	-47.85 (-0.26)	-105.16 (-2.33)	60.31 (0.15)	72.48 (0.19)
Basic manufactures (sitc 61-69)	54	-682.93 (-0.96)	-581.39 (-1.57)	-173.71 (-1.78)	-153.08 (-2.30)	232.54 (1.94)
Machines,transport (sitc 71-79)	54	-69.64 (-0.32)	-529.31 (-1.97)	-33.72 (-0.08)	-636.27 (-2.33)	-418.88 (-2.42)
Miscellaneous manufactured (sitc 81-89)	48	79.98 (3.04)	-73.52 (-2.28)	-4.36 (-0.89)	-168.58 (-2.54)	-53.70 (-1.43)

Note: N is the number of observations; due to the conversion from Harmonized System to SITC code and the difference in general tariff rates, the number of observation is not following the pattern that within each year there are 5 observations (for sitc 0, 1, 2, 3, 4). Estimators are tariff's coefficients; numbers in the parentheses below the estimators are t-values.

The results show that Singapore and Malaysia are benefiting more from China's tariff cut in manufacturing goods, while Indonesia is benefiting more in primary goods. Singapore is benefiting substantially in all manufactures with a rate from US\$153,080 to US\$636,270

for each six-digit item for one per cent tariff reduction in China, and the current average tariff of China is 11.3 per cent. By the end of 5th year of China's WTO entry, the average tariff rate of China should fall to 9 per cent, while once the China-ASEAN FTA established in 2010, the tariff will be removed completely. The biggest effect is for the large item of crude materials, which is Singapore's refined oil exports. If the tariff eventually removed completely, the total stimulation to Singapore's exports will certainly a big impact.

IV. Policy Responses and Adjustment of ASEAN Countries

Facing the fast development of economic globalization and the challenges posed and opportunities provided by the rising Chinese economy, ASEAN countries had in fact actively managed their policies to copy with the changing world economic environment. Although some policy changes adopted in ASEAN nations are not necessarily due to the pressure of the rising Chinese economy, it is obvious that competition from China is one of the important factors. Accordingly, we examine the policy responses in two aspects, policies copying with competition and policies to make use of the opportunity.

IV.1 Policies Coping with the Competitions

During the past decade, ASEAN countries as a whole had initiated a positive approach towards the increasing world economic competition environment. On the regional scale, they adopts regional co-operation in forming the ASEAN free trade zone, and expand the free trade zone to include China (ASEAN plus one). At the national level, each of the countries separately signed free trade agreements with third parties, to secure its market access. To avert direct competition with China, they make extraneous effort by moving up the technological ladder so that they are always ahead of China. In no small effort, they also develop their niche areas to avoid head-on collusion with China. For those relatively large economies such as Indonesia, Malaysia, Thailand and Vietnam, they take a two-track approach. On the one hand, they continue with the export-oriented approach, albeit with some differences in view of the emergence of China. On the other hand, they look inward to their domestic market as a new source of economic stimulus for sustaining their economic growth.

As far back as in 1993, ASEAN countries took the initiative to set up the ASEAN Free Trade Area (AFTA). The purpose was not so much a direct response to the rise of China but rather for the humble aim to integrate a market economy comprising of 500 million people in Southeast Asia. On this free trade platform, intra-ASEAN industrial linkages can be forged with the ultimate aim of developing the ASEAN region as a viable international production

centre. Such a move is economically beneficial to all the countries. Firstly, industries in the region can enjoy massive economies of scale. Secondly, comparative advantage of each country can be exploited and intra-trade can be expanded. Finally, through industrial linkages, an integrated production and trade system will be developed such that the regional as a whole can withstand the onslaught of severe competition in the international market.

Apart from the AFTA, ASEAN countries extend their regional co-operation into investment areas. These include the formation of the ASEAN Investment Area (AIA), the ASEAN Industrial Cooperation (AICO) scheme, the ASEAN Framework Agreement on Services, e-ASEAN, and the ASEAN Integration of Preferences. These regional co-operation efforts were initiated, like the AFTA, not so much to avert the so-called threats from the rise of China (Zainal Aznam, 2003), but rather the rise of China makes the need for these agreements more pressing as a self-help approach to sustain regional economic growth.

At the national level, it is natural that each ASEAN member country responded differently according to its own special condition.

Singapore. Restructuring economies, expanding potential export markets, and cutting business cost are the three major strategies used in Singapore to cope with the increasing world competition.

To resolve the hardship since 1997, Singapore had initiated a series of policy change which are not only responses to the challenges from China, but also overall strategies coping with the increasing competition from the accelerated globalization. Among all the competition that Singapore faces, disappearing of the country's traditional competitive advantage is the essential one. That is, the labor and land cost is reaching the level of developed economies while the production technology is not the same as in the developed economies. Once the multinational companies relocate their headquarters and production factories to China, the weakness of indigenous enterprises emerged. Upgrading the level of industries and to find and to create new advantages become the unavoidable choice, as Mr Goh Chok Tong, then Prime Minister of Singapore, indicated Singapore has to remake their economy.

For the long term strategy, Singapore is investing in research and development in new industries like biochemical industry and life sciences to create new comparative advantages, and reforming the education system to encourage innovative thinking and talents to fit the demand of knowledge economy. For the short term, business policies are changed to improve the investment environment by cutting corporation taxes and labor wages to keep Singapore as a regional base for company headquarters and factories. Efforts are also spent to expand

international markets for Singapore's exports by forging new trade pacts and to enhance regional co-operations in investment and production to overcome the size constraint. In following we will review the policies that Singapore has adopted in detail.

Restructure industries to increase competitiveness. Singapore economy is characterized by strong state control and foreign investment. State and foreign entrepreneurship has been the driving force in the economy; the local private sector in comparison has been relatively weak, particularly in industry (relative to commerce and services). Large scale of government linked companies (GLCs) and many statutory boards monopolized major social resources in infrastructure, financial services, telecommunications, health services, education, port shipping services, housing, and so on, private sector has little space to develop. With the declining returns of GLCs investment, bold reforms have been carried out in privatizing many of the state controlled business.

Increase investment in new industries to foster comparative advantages. As a long term goal toward a knowledge-based economy, Singapore has been actively cultivating intellectual capital and advanced infrastructure to build strong industries with competitive levels of innovation and technology. To facilitate the new knowledge-based economy, the Government is making further improvements in infrastructure.

- Terminal 3 at Singapore's Changi Airport will be completed in the year 2004, which will increase the capacity of the airport to 60 million passengers a year.
- Singapore will be the 1st country in the world to be connected by a single broadband network. Singapore ONE's collaboration with US-based @Home Network will expand its services beyond the domestic market.
- The National Science and Technology Plan 2000 aims to spend more than S\$4 billion over five years to strengthen indigenous technological capabilities to support private R&D work.
- The Singapore government is spending S\$2 billion on information technology for education. In 2002, there was a ratio of one computer for every two students.

Accompanying the industrial upgrading strategy, measures to improve the quality of labor force has also been adopted. The international talent policy is changed to attract professional talents from international market with more flexible requirements. Reforms in education system have been carrying out to adapt better of a knowledge based-economy.

Cut business cost to remain Singapore competitive. In cutting business cost, Singapore government has done (1) reducing land rent, office rent, water and electricity prices; (2)

cutting labor wages and changing wage structure to flexible wage scheme; and (3) cutting corporation tax to 20 per cent from 22 per cent.

Expanding potential export markets by signing bilateral agreement with other countries.

Since 2001, Singapore had successfully completed the negotiation and concluded the FTA agreements with US (USSFTA, 2004), Japan (JSEPA, 2002), Australia (SAFTA, 2003), New Zealand (ANZSCEP, 2001) and European Free Trade Association (ESFTA, 2003). The coming ones with Canada, Jordan, India, Korea, Mexico, Pacific Three (Singapore, Chile, New Zealand), Sri Lanka and the ASEAN-China as a member are either in negotiation or in progress.

Malaysia. *Inward-Looking for domestic growth source to dilute the heavy reliance of the economy on trade and foreign capital, promoting knowledge-based economy and upgrading manufacturing sector are the major measures for Malaysia to face the competition from China.*

Suffered from the destabilization as an open economy heavily relying trade and foreign capital, Malaysia adopted the macro-strategy of inward-looking for domestic growth source. Incentives for domestic investment are provided such as the corporation tax cut. Incentives were also granted to companies to reduce the cost of doing business and to encourage exports.

Another strategy is to promote new sources of growth, particularly in the services sector. Viewing the fact that service sector accounts for 55 percent of Malaysia's GDP, service industry promotion packages were to attract more operational headquarters, regional distribution centers, and representative offices to Malaysia. Efforts were also made to exploit opportunities for "exporting" certain services, particularly tourism, education and health. (See Zainal Aznam, 2004).

With a very much similar exporting structure and higher labor cost than China, Malaysia has very limited choices in manufacturing sector except to upgrade the manufacturing level and move up the value-added chain by promoting the knowledge-based economy.

Developing a highly educated work force and increasing the expenditure on research and development (R & D) are the two most important measures for this purpose.

Thailand. *Similar Malaysia, Thailand also emphasized the balance between external reliance and domestic strength in order to mitigate the problem of over-dependence on the possible volatile external demand. A dual track policy of maintaining the traditional export oriented*

economy and fostering the domestic growth driving force in consumption and investment was adopted.

The dual track policy of Thailand is that the first track is the usual model which emphasizes export-oriented strategy in manufacturing spearheaded by multinational corporations (MNCs). The second track is more domestic in focus. It provides strong support to local enterprises leveraging on indigenous skills and resources. In the short run, the government strategy is to stimulate domestic demand through its expenditure on rural and agricultural sector. In the meantime, the second track also seeks to develop new local industries as part of the diversification away from traditional model. In addition, the track also attempt to implement measures to assist business to move up the value added chain, thus keeping ahead of direct Chinese competition.

Under this dual track policy, Thailand has achieved a reasonable economic growth after the Asian financial crisis. The Thai economy accelerated from 2.2% in 2001 to 6.1 in 2004. In 2005, real GDP growth recorded a slowdown of 3.5% because of the Tsunami disaster occurring in December 2004. Inflation recorded less than 3% during 2001-2004 and accelerated to 4.2% in 2005 arising from higher oil prices in the latter part of 2005.

***Philippines and Indonesia.** With different resources endowments comparing to China, trade of the Philippines and Indonesia with China are more on the basis of inter-industry trade and exports competition in the world market is not significant as indicated by the competition matrix in Table 5. Policies of the Philippines and Indonesia are more focused on their domestic economic problems due to the unstable political and economic conditions. In coping with the impact of rising China, the two countries are more in the aspect of looking for economic opportunities in China's market.*

IV.1 Policies toward Complementarities

Contrary to the competition in the world exports markets and FDI attraction between ASEAN countries and China, the complementarities of the two areas are showing a great potential in trade and in investment. Market opportunities provided by growing Chinese economy to ASEAN countries are already revealed in Table 8 and Table 10. The growing Chinese economy has become another engine of growth to ASEAN countries.

The most important policy mechanism to make a full use of the complementarities between ASEAN and China is the planned Free Trade Area by 2010. In 2001, both parties agreed to sign the ASEAN-China FTA which covers commodity and service trade, as well as

investment. Under the agreement, the free trade zone will be established among the developed ASEAN countries and China by year 2010, and extend to less developed ASEAN nations by year 2015. Such regional approach will provide a synergy among countries in this region to further boost and sustain economic development based on complementarities and economies of scale. ASEAN, being a region richly endowed with natural resources, will be able to meet the increasing demand for raw materials, especially oil and gases for its industrial production. At the same time, especially in the electronics and telecommunication sector, China will serve as assembly and export platform for ASEAN manufactured exports. Chantasawat, Fung, Iizaka and Siu (2004) find that China's FDI receipts and other Asian countries' receipts are positively correlated. This evidence together with an increasing intraregional trade confirms the every existence of an integrated production system in Asia including ASEAN based on international division of labour and each and every country's comparative advantage.

Besides the regional approach, each ASEAN country also formulates strategies and policy responses to the new regional environment. One key strategy common to all ASEAN countries is how to free ride the Chinese economic growth and at the same time integrate its economy with the Chinese economy. Since China is richly endowed with cheap labor, Singapore and Malaysia move up their technological ladders such that their production system is well integrated with that of China. In this case, the two countries concentrate on manufacturing of intermediate electronic components and export to China for assembly as final consumer electronics for exports. At the same time, ASEAN countries that are richly endowed with natural resources, such as Indonesia, Malaysia, Myanmar and Thailand are exporting raw materials including oils and gases to China. Such complementarities have resulted in a rapid rise in regional intra-trade. In fact, while China has a trade surplus with the United States, it has trade deficits with almost all the ASEAN countries.

China, with its rapid economic growth over the decades and also its huge domestic market as well as its cheap labor, China represents a substantial investment opportunities for ASEAN countries which have significant large ethnic Chinese population. Through their cultural affinity, ethnic Chinese businesses have been investing in China and the pace gained momentum after China adopted its open door policy in 1978. Ethnic Chinese businesses are able to exploit these cultural resources for investment in China (Gao, 2001; Dhales, 2005) and together with Chinese from Hong Kong and Taiwan, they accounted for about 60% of FDI to China. Singapore, in particular, accelerated its investment in China since its determination to have regionalization drive in 1992. Its main investment drive in China

started with the setting up of Suzhou Industrial Park which followed the model of Jurong Industrial Park in Singapore. The project is a joint-venture between Suzhou Provincial Government and Singapore Government with strong support from the Central Government of China. In the initial years, Singapore has a majority share and there were conflicts between the two parties. Finally the dispute was settled amicably with the Suzhou Provincial Government became the major shareholder. Ethnic Chinese businesses invest in China as a part of the strategy to avert the New Economic Policy's rulings which have discriminatory effect on ethnic Chinese investment (Ng, 1998). Ethnic Chinese businesses in Indonesia were somewhat forced to invest in China as apart of diversification strategy as the country constantly encountering political uncertainties.

With its huge external reserves and also as a strategy to neutralizing capital inflows, China began to invest abroad since early 1979. However, investment abroad gained momentum since 2001 when there occurred massive capital inflows into China in anticipation of its currency appreciation. Cumulatively, China invested the second largest amount of fund in the ASEAN region (13.2%) after the European Union (15.3%) (Wong and Chan, 2003). Among the ASEAN countries, the largest recipient was Thailand, followed by Cambodia, Indonesia, Vietnam and Myanmar. At the same time, about 100 Chinese companies have been listed in the Singapore Stock Exchange.

In integrating their economies with the rising Chinese economy among the ASEAN members, Vietnam appeared to be a newly emerged regionally economic star, with a steadily high growth rate during the past decade, outperformed all ASEAN member countries (See Table 11). Started rather late in 1980s, Vietnam made some important policy reforms to integrate its economy to the world. These policy reforms include shifting from a centrally planned economy to a multi-sector market economy, creating favorable conditions for business activities to ensure domestic and foreign investment, creating a legal framework in administration for the market economy. These policies of "Doi Moi" (means renovation) have generated significant results in Vietnam's economic performance.

TABLE 11
Main economic indicators of Vietnam during 1996-2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
GDP, %	9.3	8.2	5.8	4.8	6.8	6.9	7.1	7.3	7.8	8.4
Exports, US\$ Billion	7.4	9.4	9.3	11.5	14.4	15.0	16.7	20.1	25.8	30.8
Imports, US\$ Billion	11.2	11.8	11.3	11.7	15.6	16.2	19.7	25.2	33.2	39.9
Unemployment, %	-	-	4.5	4.4	2.3	2.8	2.2	2.2	2.1	2.1

Source: ADB Statistics online, 2006.

Not much time in facing the competition from China, instead, Vietnam's economy grows more parallelly with the expansion of its trade with China. Table 12 shows that Vietnam experienced an average of 23.8 percent growth rate in exports to China during the last decade and even a higher average rate of 38.6 percent in imports (See Table 12). Adjacent to China, Vietnam stands in a much better position in linking its economy with China than other ASEAN members, and the diversified economic resources and products of China provide with Vietnam a various sources of complementarity for its economic development. No doubt, in the coming years, Vietnam will benefit more from the rising Chinese economy and its pursuing of WTO entry will eventually open up a more steady trade relation with China and with the rest of world.

TABLE 12
Vietnam's Trade with China during 1996-2005, US\$ million

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	1995-2004, average %
Exports	340	474	440	746	1536	1417	1518	1883	2321	2317	23.8
Imports	329	404	515	673	1401	1606	2158	3138	4557	6203	38.6

Source: ADB, statistics online, 2006.

V. Concluding Remarks

China may be seen as a threat to the ASEAN economy as indicated by some empirical evidences. There are also strong evidences to show that this threat can be turned into potential opportunities provided policy responses are conducive to such transition. While regional approach towards the rise of China may be considered as rational and positive, the effectiveness and success of such approach depends largely on strong political commitment and co-operation of each and every ASEAN member. National policy responses may vary from country to country.

It is surprising that the trade expansion between ASEAN and China developed with such a fast speed and magnitude given the moderate similarities of the economic development level, allowing us to conclude a challenge new economic phenomenon that the simple classification of low-tech and high-tech-based comparative advantage can not appropriately explain the trade between ASEAN and China. As commonly explained that being positioned in middle of economic development level, ASEAN countries are squeezed by the

globalization that it can not compete with developed economies in the high-tech export markets in China and it can not compete with China in the low-tech export markets in developed economies. The real development of trade pattern between ASEAN and China, however, indicated a quite different picture about the good classification, rather, the exports market should be viewed as “A Continued Chain” market, in which every country at different level of production will have their own niche. It is interesting to see that the trade between Philippines and China is showing a growing trend of intra-industry pattern in basic manufacturing sector (Ellen H. Palanca, 2004). Others are also showing the similar pattern.

With such a new pattern of economic integration between the ASEAN and China, we should be confident to expect that the potential of the economic cooperation between the two areas are only at the beginning stage and future is bright.

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