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Impact of A Rising Chinese Economy and ASEAN's Responses

by

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Abstract:

The emergence of China as one of the largest trading nation provides challenges and opportunities to its neighboring ASEAN countries. In the face of the rise of China, there were concerns that ASEAN economies may be adversely affected. One of the concerns is that the world export markets of labor intensive goods will be threatened if China turns into the world low cost manufacturing workshop. Meanwhile, trade between China and ASEAN countries increased dramatically during the past decade. 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. The paper analyses the past trade patterns between China and ASEAN countries and find out the impact of the FTA on ASEAN countries, in particular, the impacts to specific industries in each individual country. Secondly, the paper also examines the ever increasing role of foreign direct investment between the two regions and finally, it analyzes the possible policy responses of the ASEAN countries and consequences of these policies.

JEL classification: F13
Keywords: ASEAN trade policy, rising Chinese economy

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1. Introduction

The emergence of China as a large trading nation in recent years creates both challenges and opportunities to its neighbor competitors. Facing the fast increasing economic power of China, ASEAN economies (Association of Southeast Asian Nations) are somewhat affected in various respects and they have invariably adopt different strategies. One of the concerns is that the world export markets of labor intensive goods will be threatened by China as it is the world low cost manufacturing workshop. Meanwhile, trade between China and ASEAN increased dramatically during the past decade, grew 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 its imports from ASEAN 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.

What are the opportunities and challenges to ASEAN once the FTA between the two is established? And how will the ASEAN economies be affected and how will they respond to the changes? It is of great importance to have a thorough investigation of the issue. The purpose of this paper is to examine the above issues from three aspects: (1) look at past trade pattern between China and ASEAN and find out the impact of the FTA on ASEAN members, in particular, the impacts to specific industries in each individual country; (2) examine the ever increasing role of foreign direct investment between the two regions and (3) analyze the possible policy options and consequences of the policies by ASEAN members.

The paper 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.

[1] The paper was presented at the international conference: "WTO, China and the Asian Economies, IV" Beijing, China, June 24-25, 2006. We thank the comments of the participants.

2. 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 (%)

	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, high oil price, fast movement of globalization and increasing competition from newly rising power of China are definitely three important international factors to ASEAN economies in the recent time.

3. 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 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 unpresedented shock not only to the region of Southeast Asia and but also to the rest of the world.

3.1 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 a wide fluctuation while China's exports grew often at a high rate of more than 20 per cent. As for competition in the third 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 assess the extent of impact and time period of China's competition in specific type of industry, a simple market share regression model is used as follows,

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

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 was most severe in primary good sector between ASEAN countries and China, while the competition between Singapore and China is mostly in manufacturing sectors. In the period 1987-1992 (Chew and Liu 1998), no competition was observed except in the group of manufactured good of SITC 81-89. However, if the date extends to the period 1987-2000, the 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 result is not surprising and is consistent with the view that Singapore has a relatively advanced production technology among the four NIEs. With time passes, China may catch up very quickly in the basic and mid range of industrial products. In the coming years, Singapore is therefore expected to face further pressure from China. The above estimation however covers only the data up to year 2000. After year 2000, the competition 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.

3.2 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.

3.3 Increasing Importance of China's Market to ASEAN

In the meantime, China with large domestic market provides ASEAN with opportunities for their imports. 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

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).

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 Singapore economy, a model of

Singapore'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.

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	45	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.

$$EX = a_0 + a_1 ER + a_2 TR + a_3 YEAR + u \qquad (2)$$

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 main 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	Indonesia	Malaysia	Philippines	Singapore	Thailand
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 sitc two-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.

4. Policy Responses and Adjustment of ASEAN Countries

Despite the severe challenges posed by the emergence of China as an economic powerhouse, the ASEAN region as a whole takes a positive approach towards a new scenario. Instead of a direct confrontation either in the form of direct competition in international market or through trade protectionism as practiced by the United States and European Union, the ASEAN countries collaborate and in fact, in no small measure integrate with the Chinese economy. First, in a self-help manner, they adopts regional co-operation in forming the ASEAN free trade zone, and secondly, 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. More importantly, the ASEAN countries accept China now as another engine of economic growth by integrating their economies with the Chinese economy. 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. Such an approach is now called Thaksinomics.

4.1 Regional Approach towards the Rise of China

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.

ASEAN as a whole is China's fifth largest trading partner and, at the same time China is ASEAN's fourth largest trading partner. In addition, ASEAN also invest significantly in China. The close relationship between the two parties calls for further co-operation in trade and investment. 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. Chantasasawat, 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.

4.2 National Responses

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 it 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 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.

Another innovative national response toward to the economic rise of China is the adoption of "Thaksinomics" by Thailand under the premiership of Thaksin Shinawatra since 2001. Thaksinomics is a pragmatic response to the demise of the Washington Consensus and the East Asian Economic Model (EAEM). These two paradigms which had led to the "Asian Miracle" but ended with the Asian financial crisis in 1997, call for a new paradigm to deal with the new environment. According to Thaksinomics, it is an eclectic strategy comprising two tracks. The first tract is the usual EAEM 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 EAEM activities. 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.

The initial stage of implementing Thaksinomics is the focus on poverty alleviation, especially in rural areas. Schemes like “Farm Assistance”, “Urban Relief” and the “Village Fund” were implemented to boost rural demand and empower the grassroots. The second stage of the implementation is more ambitious and innovative. It includes the Capital Creation Scheme, the Vayupak Mutual fund Initiative and Grand Project Schemes. Under the first two schemes, assets are reclassified such that they carry the underlying legal rights or documentation necessary for collaterized bank loans. The basic idea is to legalize these assets so that owners can use them as collateral for bank loans. With this access to capital, owners can use the resources for entrepreneurial activities. The first scheme is meant for the rural folks while the second is for the government sector. However, the more ambitious scheme is a three mega projects which aim at developing Chaing Mai into an international aviation hub; transforming the resort island of Pyhuket into a laboratory for high-tech research and development; and cutting a canal across the Isthmus of Kra to shorten shipping route between Indian Ocean and South China Sea.

In short, according to Looney (2003), Thaksinomics “combines elements of demand management (Keynesianism), supply side incentives (Reganomics), entrepreneurial development (Schumpeterism), grassroots empowerment (de Sotoism) and the structuralist –non-price system reorienting- state led growth of Albert Hirschman.” It therefore incorporates globalization and comparative advantage, and at the same time, attempts to mould the country’s comparative advantage through non-price incentives so that the country is able to withstand severe competition from China.

Under the Thaksinomics programme, 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.

Thaksinomics is under heavy criticism both from political oppositions as well as from academic. The concept of Thaksinomics seems to be more balanced in its approach but the implementation can be extremely difficult in terms of resource constraints and inflationary bias. In the longer run, Thailand may have to end up with severe current account deficits and building-up of external debt. With rising oil prices, the government finally had to abandon its oil subsidies, reflecting the need to adjust in the face of reality. The programme also does not address much to the remaining structural weaknesses in the corporate and banking sector.

In response to the economic rise of China, one way is to exploit one's comparative advantage and create a niche area where China has no place to compete. Singapore is a classic example. Apart from integrating with the Chinese economy, Singapore also attempts to exploit its "state brand" which can readily serve as a bridge between China and the West, as well as a bridge between China and India. Owing to its cultural affinity with China, its English speaking population as well as multi-racial population, Singapore will be able to forge a strong link among these networks. Moreover, with its strength in government, corporate and banking governance, Singapore is the most suitable candidate to serve as a trustworthy middleman among countries with different business cultures.

Singapore also has a reputation in patent right protection and also strict rules in hygiene and healthcare. It has exploited these comparative advantages to develop its services industries such as banking and insurance, telecommunication and information technology. It has also developed its bio-chemical industries which normally require patent protection and strict rules on healthcare. These are the area where China may have to take time to enforce effectively. to expand its international markets, Singapore also signs several free trade agreements with its major trading partners such as the United States, Japan, and Australia.

5. Concluding Remarks

China may be seen as a threat to the ASEAN economy as indicated by some empirical evidences. There are also strong evidence 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. There are four broad categories. The first is direct confrontation with China through trade disputes and promote competitiveness in international market. Second, a country may try to avert such a threat by resorting to diversification or by establishing a niche market. Thirdly, instead of direct confrontation, the country may free ride the economic boom of the Chinese economy by integrating its economy with that of the latter through fostering complementarities (horizontally and vertically in international supply chain) and supplementarities. Finally, a country may want to follow Thaksinomics approach by adopting two tracks; export oriented strategy and stimulating domestic demand amidst developing indigenous skills and entrepreneurship.

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