

CHAPTER 6

DATA ANALYSIS AND EMPIRICAL FINDINGS

This chapter provides an analytical discussion of how regional industrialization in chapter 5, through labor mobility and income changes, affect the national poverty changes in the two periods; between 1988 and 1996, and between 1996 and 2000.

The industrialization policy in chapter 5 has some implications of the impact of the policy on poverty changes. As this study has explained in the theoretical framework, when a modern (industrial) sector expands, it draws a surplus of labor from a traditional (agricultural) sector because a much higher wages in a modern sector. When labor transfer out of the traditional sector, wages in the sector increase; will lead to a much increase in per capita income in a traditional sector and poverty reduction.

The analytical framework in this study allows us to disaggregate the poverty changes into two components. These are the productivity effect and the resource allocation effect. Both effects were focused as the two major factors influence national poverty changes.

The empirical works in this chapter is organized into four sections. Section 6.1 is an empirical data on changes in population share. Section 6.2 is percentage share of poor people changes in total population. The empirical data were analyzed in the decomposition analysis of the contribution of the productivity effect and the resource allocation effect to the national poverty changes in section 6.3 and 6.4.

6.1 Changes in Population Share between 1988 and 1996, and between 1996 and 2000

One of the aims of regional industrialization in Thailand is to provide additional employment and to stimulate the outward mobility of low-income labor into the higher paid areas or sectors of production.

The trend, in terms of the mobility of labor across regional areas, reversed between the two periods. Between 1988 and 1996, the share of the labor force in BMR increased from 12.9 percent to 15.1 percent and the share of the labor force in ESB increased from 2.6 percent to 3.4 percent. At the same time, the share of the labor force in other regions decreased from 84.5 percent to 81.5 percent. Between 1996 and 2000, the share of the labor force in BMR decreased from 15.1 percent to 13.1 percent and the share of the labor force in ESB slightly decreased from 3.4 percent to 3.1 percent. By contrast, the share of the labor force in the other regions increased from 81.5 percent to 83.8 percent. This is a reverse migration that might be affected by the 1997 economic crisis. The economic downturn might adversely affect the employment creation in BMR and ESB.

The majority of labor forces in Thailand in 1988, 1996, and 2000 was employed in the agricultural sector. The agricultural labor in all regions continually moved out from the agricultural sector into the non-agricultural sector. The work force share of agricultural labor that was 58.6 percent in 1988 decreased to 50.9 percent in 1996 and 46.7 percent in 2000. It should be noted that most of the agricultural labors were in the other regions outside the BMR and ESB. The share of agricultural labor in the other regions that was

Table 6.1 Population Share and Changes in Population Share Classified by

Region and Sector of Production

(unit: percent)

Year	1988	1996	2000	1988-1996		1996-2000	
	(1)	(2)	(3)	ΔP (2)-(1)	\bar{P} [(1)+(2)]÷2	ΔP (3)-(2)	\bar{P} [(2)+(3)]÷2
Whole Kingdom	100.00	100.00	100.00	0.00	100.00	0.00	100.00
Agriculture	58.60	50.90	46.70	-7.70	54.75	-4.20	48.80
Manufacturing	2.90	3.50	3.80	0.60	3.20	0.30	3.65
Services	15.30	17.80	19.40	2.50	16.55	1.60	18.60
Others	23.20	27.80	30.10	4.60	25.50	2.30	28.95
BMR	12.90	15.10	13.10	2.20	14.00	-2.00	14.10
Agriculture	1.40	1.10	0.50	-0.30	1.25	-0.60	0.80
Manufacturing	0.50	0.80	0.70	0.30	0.65	-0.10	0.75
Services	3.60	4.30	4.50	0.70	3.95	0.20	4.40
Others	7.40	8.90	7.40	1.50	8.15	-1.50	8.15
ESB	2.60	3.40	3.10	0.80	3.00	-0.30	3.25
Agriculture	1.10	1.00	0.60	-0.10	1.05	-0.40	0.80
Manufacturing	0.10	0.10	0.10	0.00	0.10	0.00	0.10
Services	0.60	0.90	0.80	0.30	0.75	-0.10	0.85
Others	0.80	1.40	1.60	0.60	1.10	0.20	1.50
Other Regions	84.50	81.50	83.80	-3.00	83.00	2.30	82.65
Agriculture	56.10	48.80	45.60	-7.30	52.45	-3.20	47.20
Manufacturing	2.30	2.60	3.00	0.30	2.45	0.40	2.80
Services	11.10	12.60	14.10	1.50	11.85	1.50	13.35
Others	15.10	17.60	21.10	2.50	16.35	3.50	19.35

Source: computed from the 1988, 1996, and 2000 SES data.

56.1 percent in 1988 decreased to 48.8 percent in 1996 and 45.6 percent in 2000. Without the outward mobility of agricultural labor in the other regions, the total agricultural employment would have not decreased by approximately 7.7 percent and 4.2 percent of total population in between 1988 and 1996 and between 1996 and 2000, respectively. In BMR and ESB, some of the agricultural labor also loss from their jobs and most of them were employed in the other sectors, followed by the services sector and the manufacturing sector.

The mobility of labor across sectors of production, as indicated by changes in the share of population also illustrate that employment in the manufacturing sector was insignificant in terms of employment creation. Most of workers who move out from the agricultural sector were employed in the services and other sectors. Thus, an increase in employment opportunities was stimulated by the inward mobility of labor into the services and the other sectors.

The services sector and the other sectors in all regions have potential to absorb an inflow of agricultural labor into the non-agricultural sector. The share of non-agricultural labor in total labor force, especially those employed by the services sector and the other sectors, continually increased between 1988 and 1996 and between 1996 and 2000. Between 1988 and 1996, 4.6 percent of the labor force moved into the other sectors and 2.5 percent moved into services sector. Between 1996 and 2000, 2.3 percent of the labor force moved into the other sectors and 1.6 percent moved into the services sector. Most of them were in the other sectors and the services sector in the other regions outside BMR and ESB.

The manufacturing sector can absorb only a small proportion of the labor force and has an insignificant effect on the creation of employment. The share of labor in the manufacturing sector that was 2.9 percent in 1988, increased slightly to 3.5 percent in 1996, and 3.8 percent in 2000. The increase between 1988 and 1996 was caused by the flow of labor into the manufacturing sector in BMR and the other regions. Between 1996 and 2000, had there been no outflow of manufacturing labor force by around 0.1 percent in BMR, the increase in manufacturing employment in the other regions would have increased the total manufacturing labor force by around 0.4 percent of the total labor force.

Share of labor in the manufacturing sector in ESB remained constant at only 0.1 percent in 1988, 1996, and 2000. Promotion of industrial activities in ESB between 1988 and 1996 stimulated an inflow of labor into the services and other sectors by around 0.3 percent and 0.6 percent, respectively. Growth of trade and services in ESB was stimulated by the industrialization in this area.



6.2 Changes in Percentage of Poor People in Total Population between 1988 and 1996, and between 1996 and 2000

Raising more labor income and reducing in the number of poor people is one of the aims of regional industrialization in alleviating poverty incidence. However, changes in the proportion of poor people in total population differed over the two periods. Findings in table 6.2 show the reverse trend of the national poverty incidence between 1988 and 1996, and between 1996 and 2000. The national poverty incidence sharply decreased between 1988 and 1996, from 24.2 percent to 6.3 percent. The incidence of poverty also decreased dramatically in all regions and all sectors of production.

Between 1996 and 2000, the national poverty incidence slightly increased from 6.3 percent in 1996 to 8.5 percent in 2000. These changes in the incidence of poverty differed across regions and between productive sector. The calculation of the distribution of the poor people classified by region, over the two periods show that the regions outside BMR and ESB were the poorest, while BMR maintained its status as the most prosperous region. At the same time, ESB development resulted in an impressive poverty reduction in the area.

The distribution of the poor people, classified by sector of production, shows that the poorest group of people was in the agricultural sector. In 1988, 1996, and 2000, the highest incidence of poverty appeared in the agricultural sector in the regions outside BMR and ESB. The incidence of poverty that was 32.5 percent in 1988 decreased dramatically to 10.2 percent in 1996 and increased to 14.7 percent in 2000. The second highest incidence of poverty

Table 6.2 Percentage of Poor People and Changes in Total Population

Classified by Region and Sector of Production

Year	1988	1996	2000	1988-1996		1996-2000	
	(1)	(2)	(3)	Δ HCR (2)-(1)	$\overline{\text{HCR}}^1$	Δ HCR (3)-(2)	$\overline{\text{HCR}}^2$
Whole Kingdom	24.20	6.30	8.50	-17.90	0.15	2.20	0.07
Agriculture	31.70	9.90	14.40	-21.80	0.21	4.50	0.12
Manufacturing	12.80	4.00	4.30	-8.80	0.08	0.30	0.04
Services	11.40	1.60	2.50	-9.80	0.07	0.90	0.02
Others	15.20	3.20	3.70	-12.00	0.09	0.50	0.03
BMR	4.90	0.40	0.40	-4.50	0.03	0.00	0.00
Agriculture	14.90	2.80	5.10	-12.10	0.09	2.30	0.04
Manufacturing	2.00	0.00	0.40	-2.20	0.01	0.40	0.00
Services	3.80	0.10	0.30	-3.70	0.02	0.20	0.00
Others	3.70	0.20	0.10	-3.50	0.02	-0.10	0.00
ESB	10.50	1.90	0.20	-8.60	0.06	-1.70	0.01
Agriculture	14.20	3.90	0.30	-10.30	0.09	-3.60	0.02
Manufacturing	10.40	0.00	0.00	-10.40	0.05	0.00	0.00
Services	2.70	0.30	0.00	-2.40	0.02	-0.30	0.00
Others	11.30	1.70	0.30	-9.60	0.07	-1.40	0.01
Other Regions	27.60	7.60	10.00	-20.00	0.18	2.40	0.09
Agriculture	32.50	10.20	14.70	-22.30	0.21	4.50	0.12
Manufacturing	15.50	5.40	5.30	-10.10	0.10	-0.10	0.05
Services	14.40	2.10	3.30	-12.30	0.08	1.20	0.03
Others	21.00	4.80	5.20	-16.20	0.13	0.40	0.05

Note: ^{1/} Average poverty incidence between 1988 and 1996 = $[(1)/100 + (2)/100] \div 2$

^{2/} Average poverty incidence between 1996 and 2000 = $[(2)/100 + (3)/100] \div 2$

Source: computed from the 1988, 1996, and 2000 SES data.

was in the other sectors, followed by the services sector, but still much lower than that in the agricultural sector.

Accompanied by large share of agricultural people in the total population, the high poverty incidence within this group implies that any changes in their incomes, either increase or decrease, will much affect the overall poverty status of Thailand. This will be proved in the following section.

Between 1996 and 2000, there was no poverty incidence among people working in the manufacturing sector in ESB. This means that the work force in the manufacturing sector in the region can earn enough to meet their basic needs (i.e. the manufacturing labor in ESB were paid with the income that higher than the poverty lines). This might be partly accompanied by the aim of regional industrialization policies in alleviating poverty via promoting ESB to be the new industrial based outside BMR.

Findings show that the percentage of poor in total population sharply decreased between 1988 and 1996 as aimed by the national development plans. The plans aimed to generate greater income to labor by allocating small-scale industries and decentralizing industrial activities outside BMR. So that the rapid manufacturing growth in ESB and the other regions should have been accompanied by an improvement in income and employment opportunities of at least some of the poor. Moreover, the increase in the number of promoted projects and employment opportunities might be partly induced by the BOI's investment promotion policy. The policy should be able to improve the labor income and to stimulate the mobility of low-income labor in all regions.

Between 1996 and 2000, decentralization of industrial activities did not move in line with the aim of industrial development plans and the investment promotion policy, in alleviating the poverty level. The national poverty incidence slightly increased while the government was focusing more on the poverty alleviation in all regions through industrial decentralization. The reverse trend of national poverty incidence might be adversely affected by the economic downturn. The onset of the 1997 crisis reflected a lowering level in employment opportunities and labor productivity in all regions and all sectors of production. It should be noted that changes in the national poverty is not only depend on regional industrialization policies but also many factors are concerned.

6.3 Decomposition Analysis of the National Poverty Changes between 1988 and 1996

The national poverty incidence between 1988 and 1996 sharply decreased to 6.3 percent in 1996 from 24.2 percent in 1988 (table 6.2). The productivity effect was a key factor, which helped to reduce the incidence of poverty in all regions and in all sectors of production between 1988 and 1996. Of the sharp decrease in national poverty incidence, 94 percent was the result of the productivity effect. The remaining 6 percent was caused by the resource allocation effect (table 6.3). However, the contribution of the productivity effect and the resource allocation effect to the national poverty changes differed across regions and across sectors of production.

Table 6.3 Contribution of the Productivity Effect and the Resource Allocation Effect to the National Poverty Changes between 1988 and 1996

Region Sector	Productivity Effect $\sum_i \sum_j (\bar{P}_{ij} \cdot dHCR_{ij})$			Resource Allocation Effect $\sum_i \sum_j (\overline{HCR}_{ij} \cdot dP_{ij})$		
	<i>BMR</i>	<i>ESB</i>	<i>Others</i>	<i>BMR</i>	<i>ESB</i>	<i>Others</i>
Agriculture	-0.15	-0.11	-11.7	-0.03	-0.01	-1.56
%	(-0.8)	(-0.6)	(-65.1)	(-0.2)	(-0.1)	(-8.7)
Manufacturing	-0.01	-0.01	-0.25	0.00	0.00	0.03
%	(-0.1)	(-0.1)	(-1.4)	(0.0)	(0.0)	(0.2)
Services	-0.15	-0.02	-1.46	0.00	0.00	0.12
%	(-0.8)	(-0.1)	(-8.1)	(0.0)	(0.0)	(0.7)
Others	-0.29	-0.11	-2.63	0.03	0.04	0.32
%	(-1.6)	(-0.6)	(-14.6)	(0.2)	(0.2)	(1.8)
Total		-16.9			-1.06	
%		(-94)			(-6)	
Poverty Changes			-17.96			
%			(-100)			

Source: computed from the 1988 and 1996 SES data.

The productivity effect had a stronger role in poverty reduction in the agricultural sector outside BMR and ESB than in any other sectors of production and regions. The productivity effect in the agricultural sector outside BMR and ESB led to a reduction of around 65 percent of the national poverty level. The greater productivity effect was induced by a larger size of population share and a sharp decrease in poverty in the agricultural sector outside BMR and ESB.

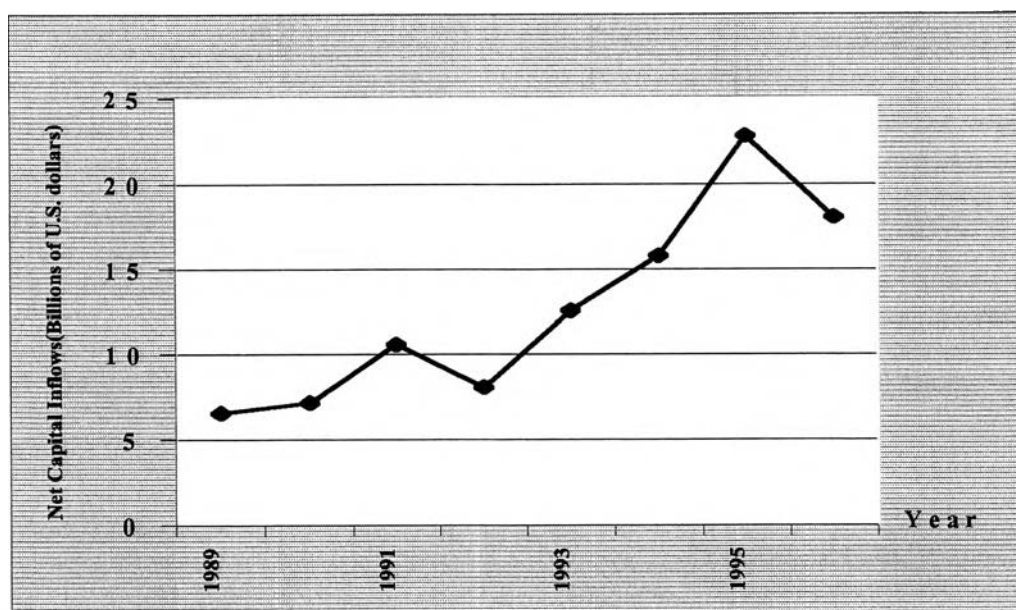
Promoting industrial activities outside BMR and ESB are potential to reduce the national poverty incidence. The evidence in table 6.3 shows that the contribution of the productivity effect in the other regions outside BMR and ESB had a stronger role in the national poverty reduction than those of BMR and ESB. This was caused by a greater average level of population share of the regions than those of BMR and ESB. Moreover, this might be partly induced by the industrial decentralization policies designed by the NESDB and the industrial promotion policy given by the BOI that provided the highest tax privileges to the investors in zone 3 (the regions outside BMR and outside ESB). The policies led to a much increase in income in the agricultural sector in the other regions and overall poverty reduction.

The resource allocation effect in the agricultural sector had a strong role in the national poverty reduction. The effect led to a reduction of around 8.7 percent of the national poverty level. On the other hand, it did not have any significant impact on poverty in the manufacturing and services sectors in BMR and ESB. This might be induced by an investment in infrastructure to support regional industrialization as aimed by the National Development Plans. Infrastructure development can stimulate the growth of trade and services activities including construction and related activities. This is not only to attract new investors, but also to attract a low-income labor in agricultural sector.

However, there were also many other factors affecting the national poverty reduction between 1988 and 1996. The extents to which these other factors affected poverty are not examined in this study. One of these factors is the financial liberalization in the early 1990s.

A gradual liberalization of the financial sector in Thailand between 1988 and 1996 had some repercussions for poverty changes. Financial reforms undertaken by the Bank of Thailand should have promoted efficiency in commercial bank operations and competition, leading to higher growth in the economy and higher benefits to bank customers in terms of better services and lower prices (service charges). Direct benefits upon poverty may not be so obvious but its alleviation could be traced through greater efficiency and growth in the economic system (ILO, 2000).

Influx of capital, as one consequence of financial liberalization, generated an investment boom. Figure 6.1 shows total net capital inflows to Thailand between 1988 and 1996. Following the influx of foreign direct investment, share of the services sector and other sectors in GDP expanded at the expense of the agricultural sector. This trend was dominated by the increase in the share of banking, financial institutions, insurance, and real estate sector (FIRE). The boom of FIRE raised the return to capital and labor in the sector (Sarntisart, 2000). Moreover, an expansion of investment in the FIRE sector also raised the demand for labor in the services and other sectors. There was an inflow of agricultural labor into the services and other sectors because they expected for higher paid. Raising in the return to capital and labor and the flows of labor into more highly productive activities in the FIRE sector could contribute to the overall decrease in the national poverty level.

Figure 6.1 Total Net Capital Inflows to Thailand during 1988 and 1996

Source: Bank of Thailand

6.4 Decomposition Analysis of the National Poverty Changes between 1996 and 2000

Between 1996 and 2000, the national poverty incidence increased from 6.3 percent in 1996 to 8.5 percent in 2000 (table 6.2). The productivity effect played a major role in the increase in national poverty. It had the potential to increase the national poverty level by 9 percent higher than the actual increase. However, the increase in the incidence of national poverty was partly offset by the resource allocation effect. Without the resource allocation effect, the national poverty incidence would have been 109 percent of the actual increase (table 6.4).

The contribution of productivity effect in the agricultural sector outside BMR and ESB had the strongest impact on the national poverty increase. This was around 7 percent higher than the actual increase in the national incidence of poverty. Its influence was significant compared with the

contribution of the productivity effect in the manufacturing, services, and other sectors in all regions.

Table 6.4 Contribution of the Productivity Effect and the Resource Allocation Effect to the National Poverty Changes between 1996 and 2000

Region Sector	Productivity Effect $\sum_i \sum_j (\bar{P}_{ij} \cdot dHCR_{ij})$			Resource Allocation Effect $\sum_i \sum_j (\overline{HCR}_{ij} \cdot dP_{ij})$		
	<i>BMR</i>	<i>ESB</i>	<i>Others</i>	<i>BMR</i>	<i>ESB</i>	<i>Others</i>
Agriculture %	0.02 (0.9)	-0.03 (-1.4)	2.36 (107.3)	-0.02 (-0.9)	-0.01 (-0.5)	-0.4 (-18.2)
Manufacturing %	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)	0.02 (0.9)
Services %	0.00 (0.0)	0.00 (0.0)	0.13 (5.9)	0.00 (0.0)	0.00 (0.0)	0.04 (1.8)
Others %	0.00 (0.0)	-0.02 (-0.9)	0.00 (0.0)	0.03 (0.0)	0.04 (0.0)	0.18 (8.2)
Total %	2.4 (109)			-0.2 (-9)		
Poverty Changes %	2.2 (100)					

Source: computed from the 1996 and 2000 SES data.

In this period, the policies focused more on poverty alleviation by promoting decentralization of industries and related activities to all regions to ensure all Thai people obtain an equal share of prosperity. Contribution of the labor income changes and the mobility of labor to the national poverty,

worked against the aims of the industrial development plans and the industrial promotion policy in alleviating poverty. This might be partly induced by the onset of the 1997 financial crisis, which adversely affected the growth of investment and employment. During the three years following the financial crisis in mid 1997, the growth rate of net flows of foreign direct investment continually decreased (table 6.5). This might contribute to the overall increase in the national poverty incidence via the lowering level of income and employment opportunities in all regions and sectors of production.

Table 6.5 Growth Rate of FDI during 1997 and 2000

Year	Growth Rate (%)			
	1997	1998	1999	2000
Net flows of FDI	104.79	78.33	-35.87	-14.34

Source: Bank of Thailand

Changes in price of major crops was the one of the important factors, which reflected the changes in income and mobility of labor as discussed in many previous studies on poverty in Thailand.

In the period after the onset of 1997 crisis, agricultural labor income makes up a significant, though falling proportion of the Thai economy, contributing about 11 percent of the Gross Domestic Product (GDP). The agricultural sector remains the main employer in the country with around 50 percent of the total labor force. The total area planted in the major crops of rice, cassava, rubber, coconut, cotton, sugar cane and palm oil. Changes in crop prices and exchange rate were two important factors behind the increase in the incidence of poverty between 1996 and 2000. The data in table 6.5

shows the domestic prices of major crops during 1996 and 2000. The prices of crops sharply increased between 1997 and 1998. The high prices of crops and the low value of the baht in 1998 helped to protect agricultural labor from the immediate impact of the crisis. However, the prices were not favorable in 1999 and poverty tended to increase (Sarntisart, 2000).

Table 6.6 Principal Agricultural Farm Price during 1996 and 2000

(Unit: Baht)

Product	Unit	1996	1997	1998	1999	2000
Rice	Metric Ton	4,809.00	5,549.00	6,962.00	5,544.00	4,680.00
Maize	Kg.	4.05	3.93	4.40	3.69	4.29
Cassava	Kg.	0.98	0.71	1.26	0.91	0.63
Sugar cane	Metric Ton	386.00	410.00	507.00	470.00	446.00
Mungbean	Kg.	11.88	11.62	11.26	12.70	11.10
Palm oil	Kg.	2.02	-	3.25	3.37	2.20
Soybeans	Kg.	8.65	8.69	10.25	9.75	8.62
Cotton	Kg.	15.05	12.51	20.37	14.49	12.20
Kenaf	Kg.	9.69	7.88	4.90	5.19	7.95
Coffee beans	Kg.	40.22	30.78	63.52	48.46	24.20
Pineapple	Kg.	2.83	-	3.33	5.24	2.40
Para rubber	Kg.	27.53	-	23.29	23.06	18.05

Source: Center for Agricultural Information Office of Agricultural Economics, Ministry of Agricultural and Co-operatives

Worldwide, the production of major crops including rice, rubber, cassava, and sugar cane exceeded demand in the last quarter of 1999, leading to a sharp decline in domestic prices. This led to a decline in agricultural labor income and an increase in poverty. The decomposition of poverty changes between 1996 and 2000 indicate that the contribution of the productivity effect in the agricultural sector in regions outside BMR and ESB had an impact of more than 7 percent on the actual national poverty increase.

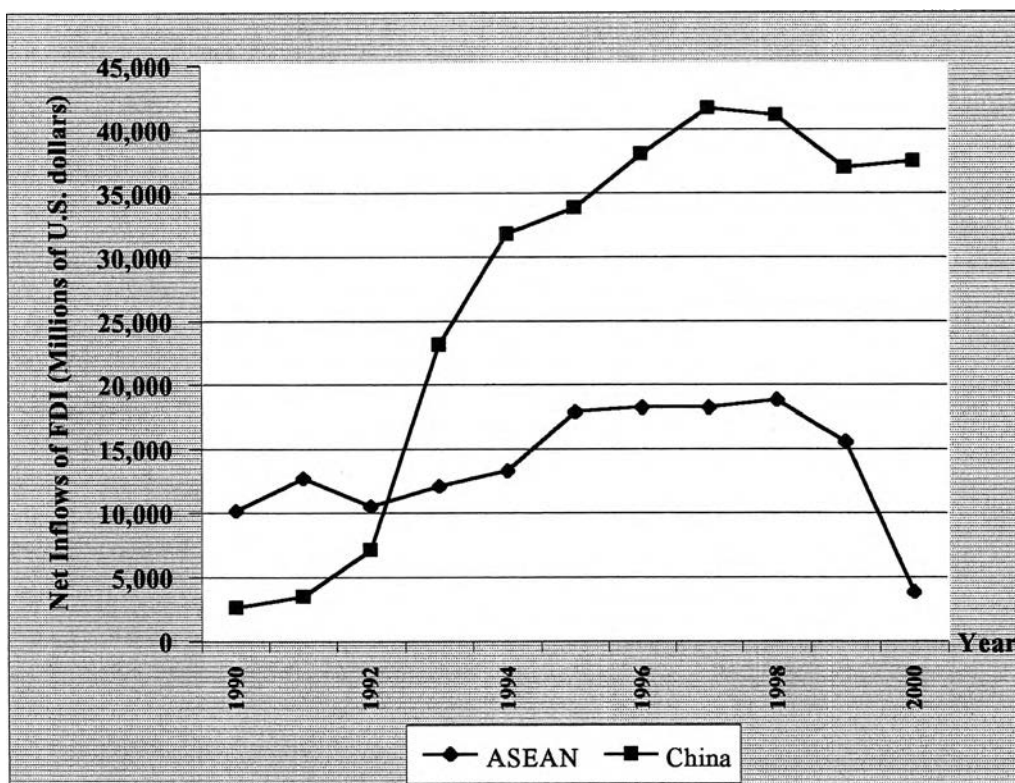
The government came under pressure to provide heavy subsidies to farmers through price support. Agricultural subsidies were able to raise the agricultural labor income through price support, but only in the short-run. For long term development, an increase in labor productivity in agricultural sector is essential for the alleviation of poverty.

There was an important factor that might contribute to the increase in the national poverty level between 1996 and 2000. This is the foreign direct investment (FDI) boom in China.

Between 1996 and 2000, the competitive pressure of China on Thailand had become intensified. This is clear whether one looks at the greater amount of foreign direct investment that flows into China compared with ASEAN (figure 6.2). This led to the competitive pressure on ASEAN and Thailand's manufactured exports.

According to Sussangkarn (2004), China's exports had increased by approximately 175 billion U.S. dollars between 1996 and 2000, compared to an increase of only 60 billion U.S. dollars for the ASEAN exports during the same period. The reason was that manufactured export from labor-intensive

Figure 6.2 Net Inflow of Foreign Direct Investment to ASEAN and China during 1990 and 2000



Source: Sussangkarn: table 4, 2004

industries in ASEAN countries were becoming less competitive, owing to higher average wages in relation to China's. This contributed to the higher prices of export manufactured goods in ASEAN with comparative to the goods produced in China.

The lowering level of ASEAN exports contributed to a decline in income and demand for labor in the manufacturing sector. It also led to a decline in employment opportunities, especially those of labor-intensive industries, which is mostly composed of unskilled or low-skilled labor. Much of them were considered as low-income labor. Consequently, the overall poverty level in ASEAN countries including Thailand would have increased.

The competitive pressure from China on ASEAN exports is even clearer when one look at the detailed product level, particularly export products like textiles, garments, toys, footwear, leather bags and other light manufactured products. China tends to be competitive with Thailand in export markets because of lower cost of production in labor-intensive manufacturing.

The emergence of China plays a significant role in a decline in demand for Thai exports, especially labor-intensive light manufactured products such as garments and leather products. Data from the Department of Business Economics shows that Thailand's export of garments that was 3,126 millions of U.S. dollars in 1997 declined to 2,991 millions of U.S. dollars in 1998, and 2,918 millions of U.S. dollars in 1999. At the same time, export of leather products declined from 513 millions of U.S. dollars in 1997 to 389 millions of U.S. dollars in 1998 and 388 millions of U.S. dollars in 1999. This might adversely affect manufacturing growth and labor-intensive manufacturing employment. Consequently, the national poverty level would increase. Impact of the competitive trade with China on the national poverty changes was not so obvious, but poverty would increase through economic recession and the decline in employment opportunities, especially those of labor-intensive manufacturing and related activities in services and other sectors which supported the manufacturing activities.