CHAPTER 6

Success of the Economic Reform

In Chapter 4, we conclude that the key to the economic success of the four Little Dragons lies in their exploitation of their comparative advantages at every stage of development. The Little Dragons adopted this development approach unintentionally. Since every country has its own comparative advantages, and since its implications for the necessary policy environment and government actions are well defined, a country can thus intentionally exploit its comparative advantages in their economic development. We can call such an intentional action by a government as adopting a comparative-advantage-following strategy, or simply the comparative-advantage strategy. The economic sizes of the four Little Dragons were rather small. It is true that the development approach suitable for small economies may not be appropriate for large economies. To determine whether the comparative-advantage strategy has universal implications, we need to answer whether this strategy is appropriate for large countries, whether socialist countries can develop according to this strategy, and whether large socialist countries can successfully rely on it. This chapter will answer these questions from the perspective of the experiences of China's reform.

The conclusions of this chapter are as follows: Since the late 1970s, reforms in China have been aimed at overcoming the constraints of insufficient capital under the leap-forward strategy in the traditional economic system. With the reform of the micro-management institutions, workers' and farmers' incentive improved. A great potential for production was unleashed, and productivity increased. However, the rapid growth has also benefited from a better exploitation of China's comparative advantages during this period.

Especially in coastal areas, where the development follows closely their comparative advantages, the growth performance far exceeded that of the four Little Dragons. This indicates that the comparative-advantage strategy can be effective not only in small capitalist countries but also in large socialist countries. Thus, we can conclude that China should shift further from the traditional leap-forward strategy to the comparative-advantage strategy and take more initiative to implement the latter. This is the key to the country's economic prosperity.

6.1 Improvement of Incentives and Efficiency

In Chapter 1, we have discussed China's remarkable economic growth and the improvement in its people's living standards since the reform started in 1979. Improvement in economic incentives and efficiency were the two major contributing factors for this rapid economic growth. The economic incentive mechanism of non-SOEs was markedly superior to that of SOEs — one important reasons for the higher growth rate of the non-state-owned sector. Furthermore, the incentive improvement triggered by the reform of the micro-management institution and the efficiency improvement in resource-allocation resulted from a better utilization of China's comparative-advantages were key contributors to the higher economic growth rates and better sustainability in development during the reform period.

Before proceeding further, let us first discuss the improvement of economic incentives in China after the reform. Prior to 1978, state sectors were predominately in urban areas and rural areas were primarily under collective economy. There was a lack of economic incentive in both state and collective sectors. This accounted not only for the poor performance of urban and rural economies but also for the rural areas' limited contribution to economic growth, even though rural areas held a comparative advantage in terms of their abundant and cheap labour force. Since 1978, a series of changes have taken place in China. In particular, the collective system was replaced by a household responsibility system. This change

stimulated peasants' incentive to produce. Between 1978 and 1984, rural production increased annually by an average of 7.6% — more than twice the average annual growth rate between 1952 and 1978 (which was 2.9%). According to econometric studies, the productivity of household farms was about 20% higher than that of collective teams at that time. Between 1978 and 1984, half of all the agricultural growth could be attributed to improved incentives, an improvement that was stimulated by the change from the collective team system to the household responsibility system.[1] The reform of the micro-management institutions, which had been characterized by decentralization and profit sharing, and the reform of the resource-allocation system also improved SOEs' incentive mechanism, thereby improved management efficiency. According to the estimation of the economist Yang Jianbai, during the 25 years prior to the reform (1953–78), China's total factor productivity on average was in negative growth (the total factor productivity in 1953–57 was 0.77%, and the rate of contribution to economic growth was 8.7%).[2] In 1979–89, China's total factor productivity and its rate of contribution to economic growth were 2.48% and 28.5%, respectively.[3] The total factor productivity rose from being negative in the period before the reform to nearly 2.5%, accounting for 50% of economic growth since the reform. Research by the World Bank has yielded similar results (see Table 6.1).

On the other hand, the relaxation of state control over economy created favourable conditions for non-state sector development, including city and township collective economies, TVEs, and urban and rural private (individual) enterprises. These enterprises did not

1. Justin Yifu Lin, "Rural Reform and Agricultural Growth in China", *American Economic Review*, Vol. 82, No. 1 (March 1992), pp. 34–52.
2. The total factor productivity is the productivity induced by technological progress and improvement in organizational and institutional arrangements. Between 1957 and 1978, China made steady technological progress. The main reason for the negative growth of the total factor productivity was the lack of efficiency in organizational and institutional arrangements.
3. Yang Jianbai, "Speed, Structure and Efficiency", *Economic Research*, No. 9 (1991), p. 43.

Table 6.1 Output Growth Rate and Total Factor Productivity (%)

	1980–88	1980–84	1984–88
State sector output	8.49	6.77	10.22
Total factor productivity	2.40	1.80	3.01
Collective sector output	16.94	14.03	19.86
Total factor productivity	4.63	3.45	5.86

Source: The World Bank, *Reform and the Role of Planning in the 1990s*. Washington, DC: The World Bank, 1992.

receive any special treatment from the government, and their workers and staff were not allowed any government subsidies. Indeed, the pressure from market competition provided these enterprises with the motivation to optimize their resource allocation. What's more, a distribution system that matched worker remuneration with actual contribution stimulated each worker's incentives considerably. Consequently, the market competition mechanism and the incentive mechanism according to individual performance enabled the non-state sector to grow rapidly.

As indicated in Tables 6.2 and 6.3, since 1978 the proportion of non-state-sector products has been continuously increasing both in the industrial output value and in the total retail volume of social commodities. The proportion of the non-state sector in total industrial output value grew from 22.4% in 1978 to 74.5% in 1997, an increase of 52.1 percentage points. The proportion of the non-state sector in the total retail volume of commodities rose from 45.4% to 75.5%, an increase of 30.1 percentage points. It should be noted that the growth rates in state industry and commerce did not decline during this period (see Figure 6.1). The increase in the proportion of the non-state sector during this period was due to its higher growth rate than that of the state sector. The above-mentioned data show that the rapid national economic growth since the reform was characterized by the development of the new, non-state sector.

The "survival of the fittest" competition mechanism and the incentive mechanism of remuneration according to work performance were also effective for the state-owned sector of the economy. The main reason for its less remarkable performance is that many

SOEs established under the planned economic system were not viable in a market economy.[4] With the economy still in transition, the government had to support the nonviable SOEs; this support made it unnecessary for them to adjust their choice of industries and technologies according to the comparative advantages of the economy, which were reflected in the relative prices in the competitive market. As a result, on one hand, the government was required to provide them with low-cost production factors and price protection as well as with employee income subsidies that were unrelated to economic performance, and sometimes even subsidies to

Table 6.2 Changes in the Structure of Industrial Output Value

(Unit: RMB 100 million, %)

Year	Total industrial output value	SOEs		City and township collective economies, TVEs		Urban and rural private (individual) enterprises		Other enterprises	
		Output value	%	Output value	%	Output value	%	Output value	%
1978	4,237	3,289	77.63	948	22.37	0	0.00	0	0.00
1980	5,154	3,916	75.98	1,213	23.53	1	0.02	24	0.47
1985	9,716	6,302	64.86	3,117	32.08	180	1.85	117	1.21
1990	23,924	13,064	54.61	8,523	35.62	1,290	5.39	1,047	4.38
1995	91,894	31,220	33.97	33,623	36.59	11,821	12.86	15,231	16.58
1997	113,733	29,028	25.52	43,347	38.11	20,376	17.92	20,982	18.45

Note: a. In this table, the total national industrial output value includes the industrial output value of TVEs at the village level and below.

b. The state industrial output value in 1994 does not include RMB 460 billion of output value from enterprises of which the state is the majority stock holder.

Source: National Bureau of Statistics of China, *20 Years of Magnificent Achievement*. Beijing: China Statistics Press, 1998, p. 388.

4. A normally managed firm will not be viable if its choices of industry and/or technology are not consistent with the pattern endogenously determined by the endowment structure of the economy. See the discussion in Chapter 4 of this book and Justin Yifu Lin, "Development Strategy, Viability, and Economic Convergence" (Inaugural D. Gale Johnson Lecture, Department of Economics, the University of Chicago, 14 May 2001).

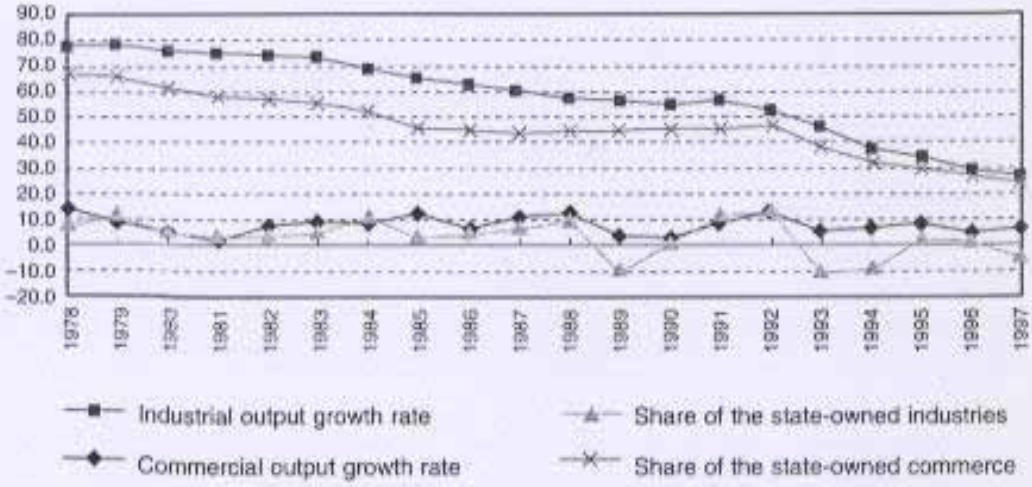
Table 6.3 Changes in the Structure of the Total Retail Sales of Commodity

(Unit: RMB 100 million, %)

Year	Total value	SOEs		City and township collective economies, TVEs		Urban and rural private (individual) enterprises		Other enterprises	
		Output value	%	Output value	%	Output value	%	Output value	%
1978	1,558.6	851.0	54.6	674.4	43.3	2.1	0.1	31.1	2.0
1980	2,139.6	1,100.7	51.4	954.9	44.6	15.0	0.7	69.0	3.2
1985	4,292.3	1,740.0	40.5	1,600.3	37.3	661.0	15.4	291.0	6.8
1990	8,259.8	3,285.9	39.8	2,631.0	31.9	1,569.6	19.0	773.3	9.4
1995	20,546.8	6,154.1	30.0	3,981.6	19.4	6,253.8	30.4	4,157.3	20.2
1997	26,699.4	6,533.2	24.5	4,887.6	18.3	8,955.8	33.5	6,322.8	23.7

Source: National Bureau of Statistics of China, *China Development Report, 1998*. Beijing: China Statistics Press, 1998, p. 69.

Figure 6.1 Annual growth rate of state industries and commerce and their shares in total output value and total volume of retail sales



Source: National Bureau of Statistics of China, *China Statistical Yearbook, 1993*. Beijing: China Statistics Press, 1993, pp. 413–14.

cover their losses; and on the other hand the SOEs lack incentives to improve production and productivity due to the policy supports and soft-budget constraints.[5]

With pressure from the rapid development of the non-state sector, the cost of subsidizing the nonviable SOEs has become much higher, while the opportunity cost of completely transforming the state-owned sector and abandoning the traditional development strategy has decreased significantly. It is time for China to shift from the leap-forward strategy to the comparative-advantage strategy. Only when China has completely realized this transition, will the distorted macro-policy environment, the planned resource-allocation mechanism and the corresponding micro-management institution (which were endogenously determined by the leap-forward strategy) cease to exist. The nonviable SOEs will withdraw from production. The viable SOEs will get rid of policy burdens, and will not receive any special treatment from the government. They will face the same market competition as enterprises with other types of ownership structures. In this way, China will realize sustainable, rapid, and healthy economic growth.

In the decades that China followed the heavy-industry-oriented development strategy, both rural and urban areas failed to develop. The rapid development of TVEs in the last 20 years shows that when government stops the artificial distortion of factors and product prices — including artificially suppressed or raised prices (or providing subsidies) — enterprises will have incentives to make full use of the economy's comparative advantages. When there are rich labour resources, labour-intensive production, especially skill-intensive production, will be enhanced, and the production factor in relative

5. See Justin Yifu Lin, Fang Cai, and Zhou Li, *State-owned Enterprise Reform in China*. Hong Kong: Chinese University Press, 2001; Justin Yifu Lin, Fang Cai, and Zhou Li, "Competition, Policy Burdens and State-owned Enterprises Reform", *American Economic Review*, Vol. 88, No. 2 (May 1998), pp. 422–27; Justin Yifu Lin and Guofu Tan, "Policy Burdens, Accountability and Soft-budget Constraint", *American Economic Review*, Vol. 89, No. 2 (May 1999), pp. 426–31.

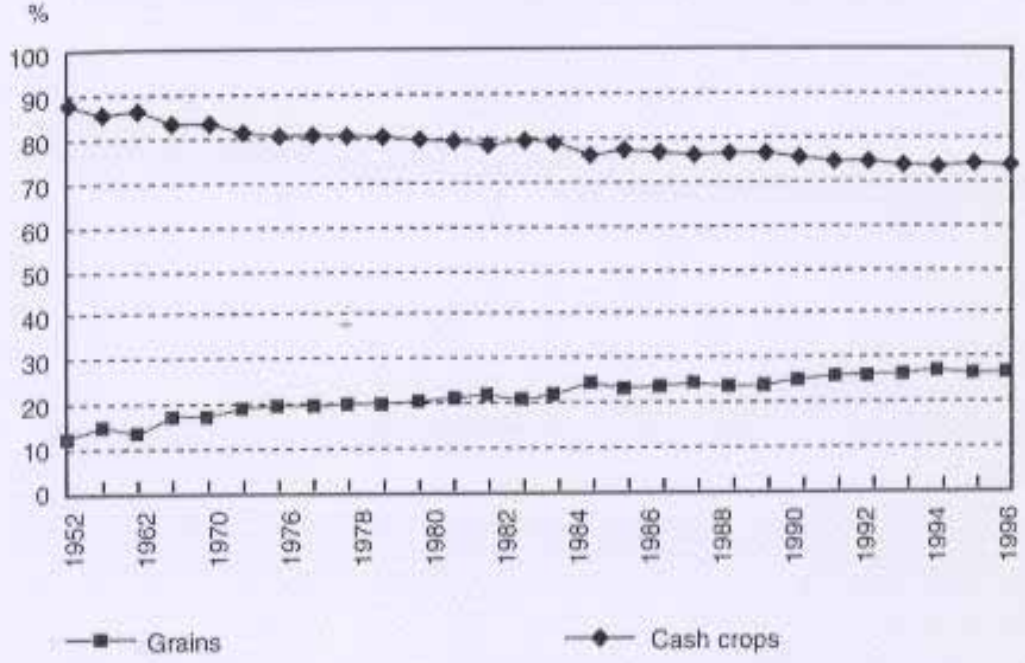
scarcity will be substituted by labour. Moreover, it will lead to a more efficient use of the resource in scarcity. As the comparative advantage changes with economic development, profit motives will stimulate enterprises to adjust their products and technological structure in order to exploit the new comparative advantages. As a result, China's industrialization and modernization will make further progress.

6.2. Correction of the Industrial Structure

The distorted industrial structure has been corrected in the reform process. In a distortion-free economy, the industrial structure is determined by the economy's comparative advantage that lies in the endowment structure. As the comparative advantage changes, the industrial structure will change accordingly. The adoption of the leap-forward strategy before the reform caused China's industrial structure to deviate from the optimum pattern determined by the country's comparative advantage, and resulted in a series of problems. For example, the overall industrial structure was too capital-intensive; and the proportion of construction, transportation and service industries in the national income remained at a low level, or even in a declining state. This distorted industrial structure ran contrary to the general laws of economic development, and has led to negative economic growth on several occasions. Since the 1978 reform, however, the bias against labour-intensive industries has been gradually alleviated and the distortion in industrial structure has been gradually corrected.

As calculated using comparable prices, between 1952 and 1978, heavy industry and light industry grew by 2779.5% and 905.2%, respectively. Between 1978 and 1997, the two industries grew by 1195.8% and 1349.3%, respectively. Agriculture has undergone a similar change in structure after 1978. There has been a reduction in the sown areas of grain crops, which requires low labour input and has relative low yield, while there has been rapid growth in cash crops, which requires high labour input and has relatively high yield (see Figure 6.2). With resources flowing to more efficient sectors, the

Figure 6.2 Changes in the sown areas of major agricultural crops



Source: National Bureau of Statistics of China, *China Statistical Yearbook, 1997*. Beijing: China Statistics Press, 1997.

sector proportions of construction, transportation, and commerce in the national income have all risen. The old, distorted industrial structure has been to a large degree corrected.

The employment structure, whose change lagged far behind that of the output structure before 1978, has also been corrected. Before the reform, the People's Communes and the household registration system fettered peasants to rural regions and to agriculture. Although there were policies to improve peasants' opportunities directly (through state work recruitment efforts) or indirectly (through military conscription), in reality these options were unavailable to most peasants. The government tried on several occasions to address this problem, but failed, either because of economic recessions or because of financial constraints. For example, from 1958 to 1960, in order to realize the Great Leap Forward, the government mobilized 28 million peasants to come to the cities to work, but it then had to force them back as a result of the ensuing economic disaster brought out by the Leap.

After reform had been launched, the government changed the dual control over the peasants' job and residence location into a single household registration control. In the past, peasants had to stay in rural areas, their households were registered as "rural", and their sole choice of profession was agricultural production. Such controls were abolished. When hundreds of millions of peasants gained the right to choose job freely, they moved into non-agricultural industries. This job migration contributed inestimably to solving the problem that had perplexed the government for several decades (i.e., how to match the employment structure with the output value structure). Between 1978 and 1997, the number of labourers that were employed in TVEs rose by 102.2 million.[6] This alone accounted for 41.4% of the increase in the number of non-agricultural labourers (246.71 million) nationally. If peasants engaging in non-agricultural activities in other industries (e.g., going into the cities on an individual basis as contract labourers, temporary workers, domestic workers, and business people) are accounted for, the percentage is even higher. According to calculations based on a large sample survey by the Chinese Association of Township and Village Enterprises, non-agricultural work already accounted for 40% of the total work of peasants in 1992.

The rapid development of collective and individual economies in cities also created many employment opportunities. Between 1978 and 1997, the number of labourers in collective and individual economies in cities and towns increased from 20.6 million to 54.9 million, an increase of 165.9%. This accounted for 13.9% of the labour increase in non-agricultural industries. The change also contributed significantly to reducing the temporary urban unemployment rate. Moreover, SOEs also made important contributions to the increase of non-agricultural employment opportunities.

With the rapid development of the manufacturing industry and tertiary industries, the proportion of primary industry labour in the total labour force decreased from 70.5% in 1978 to 50% in 2000. At

6. According to data in: National Bureau of Statistics of China. *China Statistical Yearbook, 1998*. Beijing: China Statistics Press, 1998, p. 420.

the same time, the proportion of non-agricultural labour in total labour increased from 29.5% in 1978 to 50% in 2000, an increase of 20.5 percentage points.[7] The mismatch of employment structure and output value structure has been alleviated substantially.

Moreover, the inward-looking economic structure has been corrected. One of the most remarkable changes has been China's move from a closed to an open economy. During the past two decades, China has increasingly opened its economy to the outside world. In 1979, the central government decided that Guangdong and Fujian Provinces should take the lead in practicing flexible policies. In 1980, the government opened up Shenzhen, Zhuhai, Shantou, and Xiamen cities as special economic zones (SEZs). In the spring of 1984, fourteen port cities along the coast, as well as Hainan Island, were opened up. In the spring of 1985, the government decided to open up the Yangtze River Delta, the Pearl River Delta, and the Triangular Region of Southern Fujing Province. In 1986, the Shandong Peninsula and the Eastern Peninsula of Liaoning Province opened up consecutively. In the spring of 1988, the central government turned Hainan Island into a province and made it the largest SEZ. In addition, large areas in Guangdong and Fujian Provinces were made experimental zones for reform and opening up. In 1991, it decided to extend the open door policy to coastal and border areas and areas along the rivers, thus opening the country at all levels and in all domains. In 1992, the Pudong district in Shanghai was opened for foreign investment. The government hoped that this could strongly stimulate the opening and development of provinces along the Yangtze River.

In light of a series of measures implemented by the government, the Chinese economy witnessed two major changes: the rapid increase of foreign trade and the dramatic inflow of foreign capital. Regarding foreign trade, from 1978 to 2000, the total volume of import and export increased from US$20.64 billion to US$474.29

7. National Bureau of Statistics of China, *China Statistical Yearbook, 2001*. Beijing: China Statistics Press, 2001, p. 108.

billion, an average annual increase of 15.3%. The total volume of export increased from US$9.75 billion to US$249.2 billion, an annual increase of 15.9%. The total volume of import increased from US$10.89 billion to US$225.09 billion, with an annual increase of 15.2%.[8] Both growth rates exceeded the annual growth rate of the GDP. The Chinese dependence rate on foreign trade increased from 9.8% in 1978 to 43.9% in 2000 (see Table 6.4).

Statistics also show that the inflow of foreign capital increased greatly. Between 1979 and 1983, the contract value and used value of foreign capital averaged at an annual level of US$4.8 billion and US$2.9 billion respectively. Whereas between 1996 and 2000, the corresponding figures increased respectively to US$85.3 billion and US$58.0 billion, which increased by 17.8 times and 20 times, respectively. Between 1979 and 2000, the utilization of foreign capital in terms of total contract value and used value reached US$840.3 billion and US$518.9 billion, respectively.[10] These changes mark the increasing integration of the Chinese economy into the world economy and also indicate that since the onset of reform, the nature of the economy has been gradually growing more outward looking.

Finally, the investment structure, which once relied solely on state accumulation, has been adjusted. With rural development and income increases for urban and rural residents, household savings grew dramatically and played an increasingly important role in capital accumulation. For total capital investment, the proportion from state financial appropriations has dropped from 75% to less than 20% in recent years, while the proportion from bank loans and fund-raising from the financial market has increased to over 80%

8. National Bureau of Statistics of China, *China Statistical Yearbook, 2001*. Beijing: China Statistics Press, 2001, p. 586.
9. Here, the trade dependence ratio was calculated according to the official GNP. Apparently, if it was calculated by GNP estimated using various purchasing power parity measurements, China's trade dependence ratio would be much lower.
10. National Bureau of Statistics of China, *China Statistical Yearbook, 2001*. Beijing: China Statistics Press, 2001, p. 602.

Table 6.4 Changes in the Chinese Economy's Trade Dependence Ratio[9]

(Unit: RMB 100 million, %)

Year	GNP	Total value of import and export		Total value of export		Total value of import	
		Value	Share in GNP	Value	Share in GNP	Value	Share in GNP
1978	3,624.1	355.0	9.80	167.6	4.62	187.4	5.17
1979	4,038.2	454.6	11.26	211.7	5.24	242.9	6.02
1980	4,517.8	570.0	12.62	271.2	6.00	298.8	6.61
1981	4,860.3	735.3	15.13	367.6	7.56	367.7	7.57
1982	5,301.8	771.3	14.55	413.8	7.80	357.5	6.74
1983	5,957.1	860.1	14.44	438.3	7.36	421.8	7.08
1984	7,206.7	1,201.0	16.67	580.5	8.06	620.5	8.61
1985	8,989.1	2,066.7	22.99	808.9	9.00	1,257.8	13.99
1986	10,201.4	2,580.4	25.29	1,082.1	10.61	1,498.3	14.69
1987	11,954.5	3,084.2	25.80	1,470.0	12.30	1,614.2	13.50
1988	14,922.3	3,821.8	25.61	1,766.7	11.84	2,055.1	13.77
1989	16,917.8	4,155.9	24.57	1,956.0	11.56	2,199.9	13.00
1990	18,598.4	5,560.1	29.90	2,985.8	16.05	2,574.3	13.84
1991	21,662.5	7,225.8	33.36	3,827.1	17.67	3,398.7	15.69
1992	26,651.9	9,119.6	34.22	4,676.3	17.55	4,443.3	16.67
1993	34,560.5	11,271.0	32.61	5,284.8	15.29	5,986.2	17.32
1994	46,670.0	20,381.9	43.67	10,421.8	22.33	9,960.1	21.34
1995	57,494.9	23,499.9	40.87	12,451.8	21.66	11,048.1	19.22
1996	66,850.5	24,133.8	36.10	12,576.4	18.81	11,557.4	17.29
1997	73,452.5	26,958.6	36.70	15,152.8	20.63	11,805.8	16.07

Source: National Bureau of Statistics of China, *China Statistical Yearbook, 2001*. Beijing: China Statistics Press, 2001, p. 586.

(see Tables 6.5 and 6.6). With household savings as the main source of investment, an investment structure consisting of government, enterprises, and households has replaced the one that relied solely on the state.

Table 6.5 Total Investment in Fixed Assets by Source of Funds and Its Changes

(Unit: RMB 100 million, %)

Year	Total investment	State budgetary appropriation		Domestic loans		Foreign investment		Fundraising and others	
		Value	Share	Value	Share	Value	Share	Value	Share
1981	961.01	269.76	28.07	122.00	12.69	36.36	3.78	532.89	55.45
1985	2,543.19	407.80	16.04	510.27	20.06	91.48	3.60	1,533.64	60.30
1990	4,517.50	393.03	8.70	885.45	19.60	284.61	6.30	2,954.41	65.40
1995	20,524.86	621.05	3.02	4,198.73	20.46	2,295.89	11.19	13,409.19	65.33
1997	25,259.67	696.74	2.76	4,782.55	18.93	2,683.89	10.63	17,096.49	67.68

Note: National Bureau of Statistics of China, *China Statistical Yearbook, 2001*. Beijing: China Statistics Press, 2001, p. 159.

Table 6.6 Total Investment in Fixed Assets by Ownership and Its Changes

(Unit: RMB 100 million, %)

Year	Total investment	State-owned units		Collective-owned units		Individuals economy		Other types of ownership	
		Value	Share	Value	Share	Value	Share	Value	Share
1981	961.0	667.5	69.46	115.2	11.99	178.3	18.55		
1985	2,543.2	1,680.5	66.08	327.5	12.88	535.2	21.04		
1990	4,517.6	2,986.9	66.12	529.5	11.72	1,001.2	22.16		
1991	5,594.6	3,713.9	66.39	697.8	12.47	1,182.9	21.14		
1992	8,080.1	5,498.7	68.05	1,359.4	16.83	1,222.0	15.12		
1993	13,072.3	7,925.9	60.63	2,317.3	17.73	1,476.2	11.29	1,352.9	10.35
1994	17,042.1	9,615.0	56.42	2,758.9	16.19	1,970.6	11.56	2,697.6	15.83
1995	20,019.3	10,898.2	54.44	3,289.4	16.43	2,560.2	12.79	3,271.5	16.34
1996	22,974.0	12,056.2	52.48	3,660.6	15.93	3,211.2	13.98	4,046.0	17.61
1997	25,300.1	13,418.6	53.04	3,873.5	15.31	3,426.8	13.54	4,581.2	18.11

Source: National Bureau of Statistics of China, *China Statistical Yearbook, 2001*. Beijing: China Statistics Press, 2001, p. 158.

6.3 Exploitating Comparative Advantage

The problems in pre-reform China were inadequate incentives and low efficiency. Therefore, the reform was initiated from the micro-management institutions. However, since the traditional economic system was an organic whole, its drawbacks were also intrinsically related to one another. The traditional economic system evolved endogenously from the conflict between the heavy-industry oriented development strategy and the capital-scarce, labour-abundant endowment structure. Therefore, no matter where the reform started and how the reform was carried out, the reform will affect the traditional development strategy. The changes usually began with the incremental resources created in the economic growth and the reallocation of these resources to new sectors. The impact of new incremental resources on the heavy-industry-oriented development strategy has typically affected the non-state-owned sector. For example, the ratio of the non-state-owned sector in total industrial output value increased from 22.4% in 1978 to 76.5% in 2000. At the same time, the ratio of urban employment in the non-state-owned sector increased from 21.7% in 1978 to 48.9% in 2000.

The development of the non-state-owned sector, which came about as a result of resource redistribution, signified that the whole reform and development process was actually a process that the role of the market mechanism was brought into play and China's comparative advantage was utilized. For example, the previously suppressed light industries were boosted by the development of the non-state-owned industrial sector. In 1997, while heavy industries' output value still accounted for 71.7% of the total industrial output value of SOEs, it only accounted for 44.2% of the total industrial output value of the foreign-funded enterprises. The non-state-owned sector accounted for a relatively large proportion of labour-intensive industries. In addition, the non-state-owned sector was inclined toward using labour-intensive and capital-saving technologies. As a result, their capital organic composition was much lower than that of SOEs. For example, in 1997, one unit of industrial-added value produced by the SOEs required 2.67 units of net value of fixed asset.

In comparison, one such unit required 1.04 units by collectively-owned enterprises, 1.85 units by shareholding enterprises, 1.82 units by foreign-invested enterprises, and 1.98 units by Hong Kong-, Macao-, or Taiwan-invested enterprises.[11]

The process of resource redistribution promoted the development of product and factor markets, improved domestic investment structure, and attracted foreign investments. It also led to the expansion of foreign trade and to a series of institutional changes. Some scholars attribute China's economic growth to four sources: the flow of labour forces, efficiency brought about by market growth, foreign trade and the introduction of technology, and domestic investment and the introduction of foreign capital (see Table 6.7). These four sources describe the effects of market development brought about by the reform and by exploitation of China's comparative advantage since the reforms of 1978.

TVEs provide the most appropriate example for our analysis of the impact of comparative advantage. The most widely acknowledged achievements in Chinese economic reform were: first, the adoption of the household responsibility system, which resulted in

Table 6.7 The Composition of China's Economic Growth Rate (Percentage Points, %)

Sources of growth	Contribution
(1) Labour migration	1.50 (16.30)
(2) Market growth	0.38 (4.13)
(3) Foreign trade and the introduction of technology	0.50 (5.43)
(4) Domestic investment and the introduction of foreign capital	6.82 (74.13)
Total	9.20 (100)

Source: Francis A. Lees, *China Superpower: Requisites for High Growth*. New York: St. Martin's Press, 1997, p. 66.

11. National Bureau of Statistics of China, *China Statistical Yearbook, 1998*. Beijing: China Statistics Press, pp. 444–45.

the termination of chronic shortages in agricultural product and laid a solid foundation for economic prosperity and political stability, and second, the vigorous development of TVEs, which thoroughly reversed the history of long-term stagnation in the rural employment structure, drastically accelerated the process of rural industrialization, and began to bring prosperity to rural areas.

TVEs had an increasingly positive effect on China's economy. First, they had already become the major source of increases in state tax revenue since mid-1980s. Between 1985 and 1990, state tax revenue registered a net increase of RMB 77.32 billion, of which RMB 16.69 billion was from TVEs, making up 21.6% of the total. Between 1990 and 1994, state tax revenue increased by RMB 204.21 billion, of which RMB 80.359 billion was from TVEs, making up 39.3% of the total.[12] Official statistical data does not reflect TVEs' real contribution. In fact, TVEs constitute one of the major sources of government off-budget revenue in China. According to some investigations, one-third to two-thirds of off-budget revenue has come from TVEs.[13] TVEs must also purchase inputs according to the market prices. They cannot obtain low-interest loans from the state. Therefore, their gross increase of tax was equivalent to the net increase of tax revenue to the state, whereas the net increase of tax revenue from SOEs was calculated after deducting government subsidies and discounted loan interest.

Second, TVEs have become the major source for new jobs and the major force for the adjustment of China's employment structure. Under the traditional economic system, rural labourers were tied to agricultural sector and economic growth did not bring out changes in employment structure and urbanization. However, after about 20 years of reform, over 120 million peasants have moved into TVEs.

12. National Bureau of Statistics of China, *China Statistical Yearbook, 1993*. Beijing: China Statistics Press, 1993, p. 396; National Bureau of Statistics of China, *China Statistical Yearbook, 1995*. Beijing: China Statistics Press, 1995, pp. 218, 366.
13. Sun Tanzhen and Zhu Gang, "Analysis on China's Finance Outside of the System in the Towns and Villages", *Economic Research*, No. 9 (1993), pp. 38–44.

This is one of the most remarkable changes that have occurred since the reform.[14]

Third, TVEs have become the major force in the growth of rural areas as well as of overall national economic growth. It took the TVEs only 7 years to raise their output value from RMB 100 billion to RMB 1,000 billion, while it took the national economy 31 years to do so. At present, TVEs' output value constitutes the major component of the total output value in rural areas, and its share is still rising. Moreover, the growth of TVEs has also become the major contributing factor to the growth of national economy and its share is also enlarging. From 1985 to 1990, the increase of the GNP in manufacturing and tertiary industries was RMB 709.1 billion, of which RMB 213.4 billion was contributed by TVEs, making up 30.1% of the total. From 1990 to 1994, these two figures were RMB 2,205.1 billion and RMB 1,186.4 billion, respectively, with the TVEs' share standing at 53.8%.[15] This indicates that the TVE has become an increasingly important force in national economic growth. In recent years, the interregional disparity in China has mainly been manifested in the disparity within the rural areas, while the disparity in rural areas arises mainly from the disparity in TVE development. The development of TVEs has thus become crucially important for the income increases of rural people and for the narrowing down of the interregional disparities.

The most crucial point behind TVE development has been TVEs' ability to exploit China's comparative advantage in rich labour forces. Let TVEs' share in the output value of a certain industry divided by that industry's share in total industrial output value, and

14. The number of workers and staff in the TVEs in 1978 was 28.266 million. This number rose to 130.504 million in 1994, a net increase of 102.238 million (see National Bureau of Statistics of China, *China Statistical Yearbook, 1998*, p. 420).

15. In the calculations, the comparative value of the total social output value against its corresponding GDP was used to adjust the output value of the TVEs to the GDP (see National Bureau of Statistics of China, *China Statistical Yearbook, 1993*, p. 50; *China Statistical Yearbook, 1995*, pp. 32, 365).

name the quotient the "leading coefficient of TVEs". With this coefficient, we carry out a correlation analysis with the TVEs' net value of fixed-asset per capita in the corresponding industries. The correlation coefficient is –0.3, while rank correlation is –0.53. This indicates that the TVEs have followed the comparative advantage of the economy, and are inclined to use relatively cheap labour forces while selecting an industry. The correlation analysis of TVE labour distribution and the capital intensity in various industries also reveals a negative relationship, showing that TVEs were concentrated in labour-intensive industries. In addition, in the same industry, the net value of fixed-asset per capita in TVEs was lower than that of SOEs, indicating that TVEs tend to use more labour-intensive technologies. In 1986, for example, the average net value of fixed-asset per capita for the nation's industrial enterprises was RMB 7,510, while that for TVEs was only RMB 1,709, less than one-fourth of the national average.[16]

16. National Bureau of Statistics of China, *China's Industrial Economic Statistical Data*. Beijing: China Statistics Press, 1987, p. 3; National Bureau of Statistics of China, *China Statistical Yearbook, 1987*. Beijing: China Statistics Press, 1987, p. 205.