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INDUSTRIAL DEVELOPMENT REVIEW SERIES

THE PEOPLE'S REPUBLIC OF CHINA

Prepared by the
Regional and Country Studies Branch
Division for Industrial Studies

Preface

This series of industrial development reviews on developing countries is prepared within the framework of UNIDO country studies by the Regional and Country Studies Branch of the Division for Industrial Studies.

The reviews provide a survey and brief description of the respective country's industrial sector, as an information service to relevant sections within UNIDO and other international agencies as well as aid agencies in developed countries concerned with technical assistance to industry. It is expected that the reviews will prove a handy, useful information source for policy-makers in the developing countries as well as for industrial entrepreneurs, financiers and economic researchers.

The reviews draw primarily on information provided by the UNIDO data base and material available from national and international statistical publications. Since up-to-date national statistical data usually are not complete, it is evident that the reviews will need to be updated and supplemented periodically. To supplement efforts underway in UNIDO to improve the data base and to monitor industrial progress and changes on a regular basis, it is hoped that the appropriate national authorities and institutions in the respective countries and other readers will provide UNIDO with relevant comments, suggestions and information. Such response will greatly assist UNIDO in improving and updating the reviews.

This Review is distinct from other Reviews published by the Regional and Country Studies Branch of UNIDO under the Industrial Development Review Series, in the sense that it is somewhat more comprehensive and provides more background information on past and current developments due to the very large size and complexity of the Chinese economy. In spite of this, it must be stressed that this document still remains limited in scope, as its preparation had to be confined to data available at UNIDO headquarters by around mid-1985.

The Review is divided into four parts. Chapters 1 and 2 are analytical in character, giving first a brief overview of the country's economy and its

manufacturing sector and then a more detailed review of the structure and development of its manufacturing industries. Chapter 3 deals with industrial policies, strategies, planning, and institutional framework, while Chapter 4 analyses prospects for manufacturing growth and scope for foreign investment, trade, international co-operation and technical assistance to industry. The Review also contains relevant basic indicators, graphical presentation of manufacturing trends as well as statistical and other appendices relating to the Chinese economy, laws pertaining to foreign investment, joint ventures in operation and China's export performance.

It should be noted that the reviews are not official statements of intention or policy by Governments nor do they represent a comprehensive assessment of the industrial development process in the countries concerned.

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Dates divided by a slash (1970/71) indicate a crop year or a financial year. Dates divided by a hyphen (1970-71) indicate the full period, including the beginning and end years.

References to dollars ($) are to United States dollars, unless otherwise stated.

In tables

Three dots (...) indicate that data are not available or are not separately reported;

A dash (-) indicates that the amount is nil or negligible;

A blank indicates that the item is not applicable;

One dot (.) indicates that there is insufficient data from which to calculate the figure;

Totals may not add precisely because of rounding.

The following abbreviations are used in this document:

AAGR	Average annual growth rate
CCETDC	Coastal Cities Economic and Technical Development Co-operation
CCP	Chinese Communist Party
CITIC	China International Trust and Investment Corporation
CMEA	Council for Mutual Economic Assistance
CPEs	Centrally Planned Economies
DC	Developing Countries
DMECs	Developed Market Economy Countries
GSP	gross social product
GVIAO	gross value of industrial and agricultural output
HK$	Hong Kong dollar
ICOR	incremental capital output ratio
MVA	manufacturing value added
NDT	net domestic product
NMP	net material product
NPC	National People's Congress
PBC	People's Bank of China
PRC	People's Republic of China
RCA	revealed comparative advantage
Rmb	Renminbi
SEZs	Special Economic Zones
SITC	Standard International Trade Classification
TCDC	Technical Co-operation among Developing Countries
UNCTAD	United Nations Conference on Trade and Development
UNIDO	United Nations Industrial Development Organization

THIS REPORT IS BASED ON INFORMATION AVAILABLE AS AT MID-1985.

BASIC INDICATORS 1
The economy

Gross Social Product (GSP)[a]:	$553 billion (1984)						
Population:	1,036 million (end-1984)						
Rural/urban ratio:	79/21						
Population density:	108 persons per km^2 (1984)						
Annual average growth of population:	2.3 per cent (1960-1970) 1.4 per cent (1970-1982)						
Labour force:	460.04 million (1983)						
Adult Literacy rate:	66 per cent (1984)						
Life expectancy:	66 years (1983)						
GNP per capita:	$300 (1983)						
Annual average growth rate of GNP per capita:	5 per cent (1960-1982)						
Average annual growth rate of national income [b] (per cent):	1966-70: 8.3	1971-75: 5.5	1976-80: 6.0	1981: 4.9	1982: 8.3	1983: 9.1	1984: 13

Structure of GSP: (per cent)	1963	1983
Agriculture:	32.8	28.2
Industry:	50.8	55.1
Construction, transport and commerce:	16.4	16.7

Inflation: (per cent)	1980	1981	1982	1983
	7.4	2.6	1.9	2.1

Rate of growth of consumer prices:	3.2 per cent per annum (1979-1983)	
Rate of growth of money supply:	19.0 per cent per annum (1979-1984)	
Currency exchange rate: (Yuan equivalents to $1) [c]	Early 1984: 2	May 1985: 2.8

[a] GSP = the sum of total output value of the "productive" sectors.
[b] National income = the sum of the net output value.
[c] The Chinese currency is called Renminbi (Rmb). It is denominated in Yuan, i.e., one Renminbi denotes one Yuan. One yuan signifies 10 jiao (= 100 fen).

BASIC INDICATORS 2
Resources and transport infrastructure

Resources	
Land area:	9.6 million square kilometres
Agricultural production (1983, million tons):	grain 387.3 mn, cotton 4.6 mn, oilseeds 10.6 mn, sugar cane 31.1 mn
Forest:	11,978 million hectares
Mineral production (1983):	Coal 700.4 mn tons, iron ore 44.7 bn tons, also deposits of uranium, antimony, phosphates, tin and tungsten (largely unexplored)
Energy production (1983):	Coal 715.0 mn tons, crude oil 106.1 mn tons, natural gas 12.2 bn cu.m.
Rate of growth of energy production (annual average per cent, 1979-1983):	coal 3.0 per cent, crude oil 0.4 per cent, natural gas -2.3 per cent
Energy production shares (1983, per cent):	Coal 71.6 per cent, crude oil 21.3 per cent, hydropower 4.8 per cent, natural gas 2.3
Transport	
Roads:	915,000 km
Railway track:	51,000 km (13,000 km double tracked)
Inland waterways:	109,000 km
Internal civil aviation routes:	229,000 km

BASIC INDICATORS 3
Foreign trade and balance of payments

Exports	total value:	$24.98 bn (1984)
	main goods (percentage share of total exports): (1983)	Mineral fuels 21.0, light industrial textile and metal products 19.6, miscellaneous light industrial products 17.0, food 12.6
	main destinations (per cent):	Hong Kong 26.5, Japan 20.6, USA 9.3, Jordan 5.2, Singapore 4.9 (1984)
Imports	total value:	$24.30 bn (1984)
	main goods (percentage share of total imports): (1983)	light industrial textile and metal products 29.4, machinery and transport equipment 18.6, chemicals 14.9, food 14.6, crude materials 11.5
	main origins (per cent):	Japan 31.3 per cent, USA 14.8 per cent, Hong Kong 10.9 per cent, F.R. Germany 4.8 per cent, Canada 4.0 per cent (1984)

Foreign trade with regions (1983):

Region	Exports to (per cent)	Imports from (per cent)
Asia	67.6	40.6
Africa	3.5	1.9
Europe	16.7	25.2
North America	8.7	20.4
Latin America	2.4	7.1
The Oceanian and the Pacific Islands	0.9	3.8

Balance of payments: (current account surplus 1983)	$5 bn
(current account cumulative surplus 1979-1983)	$10.1 bn
Reserves minus gold:	$15.1 bn (1984)
Total foreign debt:	$3.5 bn (mid-1984)

BASIC INDICATORS 4
The manufacturing sector

In 1983:

Manufacturing net output:	$86.9 bn
Manufacturing net output per capita:	$85.6
Employment in manufacturing:	60.2 mn persons
as percentage of total labour force:	12.50 per cent

Composition of gross industrial output value (per cent):	1957	1983
Light industry	55.0	48.5
Heavy industry	45.0	51.5

Net output per manufacturing worker:	$1,497.6

Average annual growth rate of gross output of industry (per cent):	1966-70	1971-75	1976-80
	11.7	9.1	9.2

	1981	1982	1983	1984
	4.1	7.7	10.5	13.6

Trade in manufactures:	
Total value - exports:	$12.60 bn
- imports:	$15.57 bn
Share of manufactures in:	
- total exports:	56.7 per cent
- total imports:	72.8 per cent

BASIC INDICATORS 5
Inter-country comparison of selected indicators

	Unit	Brazil	China, P.R.	Hong Kong	India	Mexico	Rep. of Korea
I. Demographic indicators							
Population (mid-1983)	millions	129.7	1,019.1	5.3	733.3	75.0	40.C
Population growth (1973-83)	per cent per annum	?.3	1.5	2.5	2.3	2.9	1.6
Infant mortality (1983)	per 1000	70	38	10	93	52	29
Area	'000 Km^2	8,512	9,561	1	3,288	1,973	98
Density (1983)	persons per km^2	16	108	5,300	222	38	408
II. Economic indicators							
GDP (1983)	$ billion	254.6	274.6	27.5	168.2	145.1	76.6
GDP per capita (1983)	$	1,963	269	5,187	229	1,935	1,916
GDP growth (1973-83)	per cent per annum	4.8	6.0	9.3	4.0	5.6	7.3
Agriculture (1983)	per cent of GDP	12	37	1	36	8	14
Industry (1983)	per cent of GDP	35	45	30	26	40	39
Manufac-turing (1983)	per cent of GDP	27	31.6a/	24	15	22	27
Services (1983)	per cent of GDP	53	18	62	38	52	47
Exports of goods and non-factor services (1983)	per cent of GDP	8	9	95	6	20	37
Gross domestic investment (1983)	per cent of GDP	21	31	71	25	17	27
External public debt (1983)	per cent of GNP	29.3	1.0	0.8	11.2	49.1	...
III. Industrial indicators							
MVA (1982)	million $ at constant 1975 prices	43,300	83,400	3,679	16,200	30,217	11,492
Share of MVA in GDP (1983)	per cent	27	31.6a/	30	15	22	27
Growth of MVA (1973-83)	Average annual per cent	4.2	9b/	...	4.2	5.5	11.8
MVA share in world manufacturing value added (1981)	per cent	2 41	3.8	0.24	0.91	1.47	0.52
Share of manufactured c/ exports in total exports (1982)	per cent	33.3	55	96.25	56.1d/	10.97	81.30

a/ Share of net manufacturing output in GDP.
b/ Gross industrial output, 1971-80.
c/ SITC 5-8 less (67 + 68).
d/ 1980.

Executive Summary

China is the largest producer of manufactured goods in the developing world, and ranks as the sixth largest contributor to world manufacturing value added (MVA). The country's share in world MVA has increased from 2.9 per cent in 1977 to 4.2 per cent in 1982 - ranking between France (5.1 per cent) and Italy (3.3 per cent). Estimates by UNIDO show that China's share in world MVA grew significantly faster than that of either the developing countries as a group or the centrally planned developed economies, while the share of developed market economies declined. With more than 60 million persons engaged in manufacturing activities, China has the world's largest industrial labour force.

China possesses one of the most diversified industrial structures in the world. She is the world's largest producer of cotton yarn and textiles, third largest producer of cement and sulphuric acid, and ranks among the top six in the production of steel. Notwithstanding substantial variations in growth, the long-term growth rates of the Chinese economy and industrial sector compare favourably in an international historical perspective. China possesses a broad industrial base, with fairly balanced geographical distribution, which could facilitate extensive industrial diversification for the absorption of new technical capabilities and for the production of a wide range of capital and consumer goods.

Quite contrary to the experience of other countries, the share of the service sector in net domestic product declined as per capita income increased during 1957-1982. A relatively rapid pace of industrialization resulted in structural transformation of the Chinese economy. The share of agriculture in total product of society fell from 58.5 per cent in 1949 to 28.2 per cent in 1983, and that of industry surged upward from 25.2 per cent to 55.1 per cent during the same period. The distribution of labour shows that total employment in agriculture remained rather high.

Parallel to the impressive growth of the Chinese economy, the variety of China's exports increased and their structure greatly changed. On the import side, the situation of importing mostly consumer goods has been reversed. Producer goods predominate the present import structure to cope with the requirements of the current pace of structural transformation and rapid growth. China recorded huge trade deficits with many trade partners in 1984. There are indications that China may record one of her largest ever trade deficits in 1985.

China is on the road to pragmatism. The country has been passing through an era of radical restructuring and modernization of the economy. Since 1979, the Chinese industrial sector is being stirred by the steady application of consistent experiments in industrial decentralization largely through organizational autonomy and market mechanism. The basic objective of economic readjustment and reforms is to overcome imbalances and to ensure a fairly steady tempo of advance aiming at quadrupling of gross industrial and agricultural output by the year 2000 when China's population will reach 1.2 billion.

These reforms coincide with a period of rapid economic growth. The major targets of the Sixth Five-Year Plan (1981-85) were achieved two years ahead of time. Economic growth continued to accelerate in 1984, with national income growing at 13 per cent. The value of gross industrial output increased by 13.6 per cent in the same year. A continuing boom in economic growth is among the highlights of statistics released by the Chinese Government in mid-1985.

Whether measured in gross or net output, the long-term growth of the industrial sector has been very impressive by international standards. Heavy industry has continued to grow more rapidly than light industry. The present policies, however, emphasize the need for an acceleration of the growth of light consumer industries. Despite substantial structural changes within the manufacturing sector, the level of productivity has not improved significantly. In view of faster accumulation of capital per worker in many heavy industries, the per capita output increase appears to have resulted from increasing the quantity of factor inputs rather than improving the efficiency of factor input use. Moreover, the decline in output per worker in several industries shows that industrial productivity is low, when compared to productivity levels in industrially advanced countries. According to a recent estimate, a 26 per cent increase in output between 1978 and 1982 required a 37 per cent increase in fixed assets, an 18 per cent increase in working capital and a 16 per cent increase in the number of persons employed.

The Chinese Government believes that stimulating industrial efficiency requires an overhaul of the price system, making it an effective reflector of relative resource scarcities and international opportunity costs. Price rationalization, which is occurring as a result of increased role of market forces as determinants of resource allocation processes, could be accompanied by attempts at strengthening the national planning system. There is also a need for monitoring the process of price formulation in the world markets for China's main exports, in order to enhance China's market penetrating capacity.

Growth in manufactured exports has been high. China had the greatest comparative advantage in textile fabrics, textile yarn, clothing, textile fibres, food manufactures and some chemicals during 1979-81. Chinese heavy industrial branches - machinery and transport equipment - had low international comparative advantage. Moreover, China's comparative advantage remained in those products that have declining shares in the world markets. However, the QUADRUPLE scenario suggests a shift in export composition from textiles and clothing to machinery and metal products.

China's new development strategies encourage the inflow of foreign capital and foreign technology into her economy, particularly into the priority investment areas including Special Economic Zones. A series of legislative measures aims at creating incentives and simplifying administrative procedures to attract foreign investment and joint ventures. Foreign capital and technology are expected to invigorate China's present modernization course, which cannot take place in isolation from external assistance.

It appears that the current pace of industrial expansion may outstrip the available infrastructural facilities. In view of the serious anxiety about shortages of raw materials, energy and transport, the document on the Seventh Five-Year Plan (1986-90) envisages a moderate annual growth rate of 7 per cent during the Plan period, which seems to be compatible with the underlying assumptions of the QUADRUPLE scenario.

China is now overtly seeking foreign collaboration and external economic relations. International agencies can play an important role in stimulating industrial restructuring in China. They can assist China by monitoring changes in market conditions and policies in industrial areas of significance to China. The level of technical assistance requested by China is becoming increasingly advanced and sophisticated. China urgently needs assistance related to various forms of electronics, instrumentation and computer technology and their application to industry. The realization of China's full industrial potential requires that primary emphasis of technical assistance be placed on increasing the efficiency of industrial production and on exchanging research ideas pertinent to economic interdependence between China and other countries.

1. THE CHINESE ECONOMY

1.1 China in world manufacturing

With a share in world manufacturing value added of 4.2 per cent (in 1982), China ranks as the sixth single largest contributor to world MVA - behind the USA (21.1 per cent), the USSR (16.2 per cent), Japan (10.1 per cent), the Federal Republic of Germany (8.2 per cent) and France (5.1 per cent). It ranks ahead of Italy (3.3. per cent), the United Kingdom (2.3 per cent), Brazil (2.3 per cent), Canada (1.9 per cent), Mexico (1.4 per cent) and India (0.87 per cent).[1/] Estimates by UNIDO presented in Table 1 show that China's share in world MVA grew significantly faster than that of either the developing countries taken as a group[2/] or the centrally planned economies of Eastern Europe. The share of the developed market economy countries in world MVA contracted by 4.5 percentage points during this period. Estimates show that Chinese manufacturing output has grown at an average annual growth

Table 1. China's share in world manufacturing value added (MVA),[a/] 1977-1982
(percentage)

Year	China	Developing countries	Developed market economies	Centrally planned developed economies
1977[b/]	2.93	9.75	65.34	21.98
1978[b/]	3.26	9.95	64.61	22.18
1979	3.45	9.85	64.55	22.15
1980	3.73	10.27	63.08	22.92
1981	3.84	10.21	62.70	23.25
1982	4.20	10.70	60.84	24.26

Source: UNIDO Data Base.

a/ US$ values using appropriate exchange rates estimates for the share of industry in net material product were obtained on a current price basis. These were used to estimate the value of net output in industry and an implicit deflator was employed to express these values in 1975 prices: the share of manufacturing in industry was estimated by referring to the share of manufacturing in gross industrial output value. These shares were applied to obtain a share of manufacturing in net industrial output.

b/ The method of calculation for these years differs slightly from that described in footnote a/.

rate of 10 per cent during the 1960s and 1970s.[3/] Among developing countries only the Republic of Korea, Thailand and Nigeria exceeded this performance.[4/]

International comparisons[5/] show that China is the developing world's largest producer of industrial goods and possesses one of the most diversified industrial structures in the world. China is the world's largest producer of cotton yarn and textiles, third largest producer of cement and sulphuric acid and ranks among the top six in the production of steel. In some branches, on the other hand, such as electronics and automobiles China produces a very small proportion of world output.

China has by far the largest industrial labour force in the world. In 1983, 60.2 million persons were employed in the manufacturing sector.[6/] This is roughly equivalent to the combined industrial labour force of North America and Western Europe, and is a third higher than the industrial work force in the USSR and Eastern Europe. Compared with developed countries, labour productivity in China is low.

Table 2 compares the structure of industrial output in China with that in developing countries (DCs), developed market economy countries (DMECs) and the centrally-planned economies (CPEs). The share of heavy industry is generally higher in China than in the developing countries taken as a group. However, heavy industry has a higher share in both developed market economy countries and in centrally planned economies than in China. China has an intermediate manufacturing structure - intermediate in the sense that it is between the developed and developing economies. It is an important third world producer of capital goods. As yet, capital goods are produced primarily for the domestic market while Chinese manufactured exports consist largely of light consumer products - particularly textiles. As the next section will show, exports have been growing rapidly during the recent past and the emergence of China as a major exporter may have far-reaching implications for international trade in manufactures.

Table 2. Structure of industrial output in China: a comparison with economic groupings, 1979
(percentage)

	China	Developed Market Economies	Developing Countries[a/]	Centrally Planned Economies
Food, beverages and tobacco	13.4	11.2	18.7	12.3
Textiles	15.3	3.9	8.8	6.0
Apparel, leather and footwear	3.5	3.5	3.6	6.2
Wood products and furniture	1.4	3.9	2.9	2.9
Chemicals, rubber and plastics	14.5	13.8	13.8	8.6
Petroleum and coal refining	4.2	1.9	9.4	2.1
Non-metallic minerals	4.0	4.2	5.6	6.1
Iron, steel, non-ferrous metals and metals mining	10.6	7.6	7.6	7.5
Machinery, equipment and metal products	32.1	40.2	24.0	43.6
Total	99.0	90.2	94.0	95.3

Sources: 1. For China, World Bank Report No. 3391, CHA App. D, p. 16 (adjustments made for omitting mining and electricity).

2. For DMECs, DCs and CPEs, see UNIDO, Industry in a Changing World, Sales No. E83 11B6, New York, 1983, pp. 71-72 (Paper, printing and publishing industries are omitted and therefore total does not equal 100).

a/ Excluding China.

1.2 The Chinese economic structure

With a population in excess of one billion, China ranks as the most populous country in the world. However, the growth of population has slowed down in recent years from 1.9 per cent during 1957-78 to 1.3 per cent during 1978-82. A decline in population growth coupled with an acceleration in output growth resulted in an impressive growth rate in China's per capita GNP, which increased from $260 in 1979 to $300 in 1983.[7/] The Chinese authorities estimated that per capita national income stood at $223.8 in 1982.[8/]

It is generally agreed that China has achieved relatively high growth rates by international standards. Estimates indicate that over the period

1965-1983 GNP per capita grew at a rate of 4.4 per cent per annum. This compares favourably with an average growth rate of 2.7 per cent achieved by the lower middle-income countries during the same period. Middle-income countries - which had an average GNP per capita five times higher than China in 1983 - grew at the rate of 3.4 per cent. Four upper middle-income countries - Hong Kong, Jordan, Republic of Korea and Singapore - grew at a faster rate in terms of per capita GNP during 1965-1983 than China.[9/]

Table 3 summarizes the growth performance of the Chinese economy. It shows that most rapid growth was achieved in the period of reconstruction following independence in 1949. The goals of restoring agriculture and industrial production at pre-independence peak levels were achieved by 1952. The second highest growth rates were achieved in the period 1963-1965 which followed the "Great Leap Forward" when total production and national income actually declined and agricultural and industrial output remained stagnant.

Table 3. China's economic growth,[a/] 1949-1983
(percentage)

	Total product of society	Gross output of		National income
		Agriculture	Industry	
1949-1952	22.8	14.1	34.8	19.3
1953-1957	11.3	4.5	18.0	8.9
1958-1962	-0.4	-4.3	3.8	-3.1
1963-1965	15.5	11.1	17.9	14.7
1966-1970	9.3	3.9	11.7	8.3
1971-1975	7.3	4.0	9.1	5.5
1976-1980	8.3	5.1	9.2	6.0
1979-1983	7.5	7.9	10.1	7.1
1953-1983	8.0	4.0	9.5	6.2

Source: Statistical Yearbook of China 1984, pp. 21, 26 and 30.

a/ Average annual increase calculated from figures in comparable prices. The Chinese concept of national income and other economic concepts used in China are defined in Appendix A. These concepts are used extensively throughout this Review.

The period 1966-1970 should be divided into two: the period of the Great Proletarian Cultural Revolution, 1966-1968, when the total product of society fell from an index value of 301.8 in 1966 (1952 = 100) to 259.2 in 1968, and the subsequent period of recovery, 1968-1970, by the end of which the total product of society had achieved an index value of 401.1. Growth rates have generally stabilized since the early 1970s and a slight upward trend can be discerned in recent years. Economic growth continued to accelerate in 1984, with real GSP increasing by 13 per cent. The Seventh Plan (1986-90) document envisages an annual average GNP growth rate of 7 per cent in the plan period. Gross industrial output is expected to grow at 7 per cent per annum, slightly lower than 8.6 per cent expected in the Sixth Plan period (1981-85).

Although growth has been high, variations in the growth rate have also been substantial. Furthermore, over the period 1949-1983 the Chinese economy has experienced significant structural changes. The share of agriculture in the total product of society fell from 58.5 per cent in 1949 to 28.2 per cent in 1983. The share of the Chinese industrial sector which comprises extraction of natural resources, processing of farm and sideline products, manufacture and repairing of industrial products, water and gas production, and electricity generation and supply, rose from 25 per cent to 55.1 per cent during the same period.

Table 4 presents estimates of the composition of the total product of society over the period 1949-1983. The share of agriculture in the total product of the society declined from 58.5 per cent in 1949 to 17.1 per cent in 1960. However, as a result of impressive improvement in agricultural productivity the share of agriculture in total product of society increased to 28.2 per cent in 1983. Economic transition in China along the path of industrialization is revealed by the increasing contribution of industry from 25.2 per cent in 1949 to 55.1 per cent in 1983.

Table 5 permits an analysis of output and employment structures by showing the shares of three distinct sectors - agriculture, industry and services - in Net Domestic Product (NDP) and labour force. A sharp rise in industry's share in NDP from 16.8 per cent in 1957 to 43.9 per cent in 1982 indicates the unusually rapid pace of China's industrialization. Within a

Table 4. Composition of total product of society, 1949-1983
(percentage)

Year	Agriculture	Industry	Construction	Transport	Commerce
1949	58.5	25.2	0.7	3.4	12.2
1960	17.1	61.1	9.2	4.9	7.7
1970	27.8	54.8	7.1	3.1	7.2
1978	22.9	59.4	8.3	3.0	6.4
1979	24.8	58.7	8.1	2.7	5.4
1980	25.7	57.6	8.8	2.7	5.2
1981	27.2	56.6	8.1	2.6	5.5
1982	28.0	55.6	8.8	2.6	4.9
1983	28.2	55.1	9.4	2.8	4.5

Source: Statistical Yearbook of China 1984, p. 22.

period of twenty-five years industry's share of NDP increased by about 27 percentage points. In an international historical context the pace of structural change and industrialization in China has been relatively rapid.[10/]

The most distinctive feature suggested by Table 5 is that quite contrary to the experience of other countries, the share of services declined from 24.5 per cent in 1957 to 17.3 per cent in 1982 as per capita income increased. The relatively high share of material sectors in NDP is due to the fact that the material sectors have been expanding faster than the service sector. This is one of the major imbalances in the Chinese economic structure. The distribution of labour force, however, shows that total employment in agriculture remained rather high, at over 70 per cent during 1957-82. It is obvious that rapid growth of the industrial sector did not have a significant impact upon employment creation. In other words, despite a massive infusion of investment in industry, the industry's capacity to create employment has been rather limited.

The most striking development of the post-1978 period has been the rapid growth of Chinese foreign trade. Table 6 shows that total exports increased

Table 5. Output and employment structures, 1957, 1978 and 1982
(percentage)

	1957	1978	1982
Shares in NDP,[a/] (1980 prices)			
Agriculture	58.7	37.9	38.8
Industry	16.8	41.7	43.9
Services	24.5	20.4	17.3
Shares in labour force			
Agriculture	81.2	73.8	70.2
Industry	7.6	15.5	16.3
Services	11.1	10.7	13.5

Source: Yeh K.C., "Macroeconomic Changes in the Chinese Economy during the Readjustment", The China Quarterly, December 1984, p. 702.

a/ Net Domestic Product is broader in scope than the national income concept used by the State Statistical Bureau. NDP includes not only net material product (agriculture, industry, construction, transport and commerce), but also the entire service sector and other kinds of non-material activity.

by a factor of 2.6 while total imports increased by a factor of 2.25 during 1978-83. The ratio of foreign trade to national income[11/] increased from 11.7 per cent in 1978 to 18.4 per cent in 1983. The World Bank estimates an export/GDP ratio of 6.98 per cent for the period 1978-1981.[12/] China has a lower export/GDP ratio than the average for both the low and middle-income developing countries. The ratio is however not significantly different from other large countries such as India - 5 per cent in 1960 and 6 per cent in 1982 - and the United States (9 per cent in 1982).[13/]

There has thus been a clear opening up of the Chinese economy. This "openness" is also evident in the increased flow of foreign investment and assistance to China. Total inflow of foreign capital in the period 1979 to mid-June 1984 amounts to $15.8 billion of which $12.5 billion (almost 80 per cent) was in the form of loan capital. Direct foreign investment is concentrated in joint venture schemes particularly in the field of off-shore oil exploration. China's international financial position has been

Table 6. China's foreign trade, 1978-1983

	Exports (X) (Rmb 100 million)	Imports (M) (Rmb 100 million)	Total Trade (X+M) (Rmb 100 million)	As per cent of total product of society			As per cent of national income		
				X	M	X+M	X	M	X+M
				percentage					
1978	167.7	187.1	355.1	2.4	2.7	5.1	5.5	6.2	11.7
1979	211.7	242.9	454.6	2.7	3.1	5.8	6.3	7.2	13.5
1980	272.4	291.4	563.8	3.2	3.4	6.6	7.3	7.9	15.2
1981	371.2	346.2	717.1	4.1	3.8	7.9	4.4	8.7	18.1
1982	420.0	336.4	756.6	4.2	3.4	7.6	9.8	7.9	17.1
1983	438.3	421.3	860.1	3.9	3.8	7.7	9.4	9.0	18.4

Source: Statistical Yearbook of China 1984.

strengthened by rising foreign reserves - which stood at $15.1 billion in 1984. Foreign debt has also increased and is estimated to have totalled $3.5 billion at the end of June 1984.[14/] The debt to GNP ratio remains, however, among the lowest in the world.

1.3 Recent developments: the new policy initiatives

Towards socialist modernization since 1978: a turning point

Economic development in China has been marked by four broad phases: socialist transformation during 1949-56; socialist construction between 1956-66; cultural revolution between 1966-76; and socialist modernization thereafter. The radical restructuring and modernization of the economy that has been taking place since 1978 continues within the framework of a more pragmatic course through a series of liberalization policies.

Since 1978 the main emphasis has been put on the achievement of far-reaching institutional changes in key sectors of the economy. These institutional changes have taken place against the background of important macro-economic policy reforms. There has been an increase in agricultural procurement prices and the introduction of rationing to increase the efficiency of resource use, changes in the amount and composition of State

capital construction, increases in interest rates and rationalization of their structure, the imposition of restraints on government expenditure to reduce the budget deficit, credit control and the adoption of measures to stimulate exports. Two of the most important effects of these initiatives have been a lowering of the rate of capital accumulation in comparison with the levels of the 1970s, and a dramatic improvement in agricultural terms of trade. Rural incomes have grown more rapidly than urban incomes. Since October 1984 greater emphasis has been placed on achieving fundamental price reforms. This is regarded as essential to make possible an effective substitution of detailed planning and administrative measures by a system of indirect controls.

Production responsibility system in agriculture: a break with the past system

The most important institutional innovation in agriculture has been the introduction of the "responsibility system" which permits peasants to enter into contracts with the State. Production in excess of that stipulated in the contract is sold in free markets. Peasants - both production teams and individual families - have been encouraged to choose profitable crops and if they so desire to switch from farming to fishing or other occupations. The central feature of the responsibility system is its functional separation of ownership, which continues to be vested in the hands of the collectives, and use and control, which is assigned to peasant households or individual teams of producers. The implementation of these reforms has not required the establishment of any new institutions in the countryside or the formal introduction of new regulatory mechanisms.

Over the period 1979-1983, rural incomes have increased f[illegible] 133 per capita to Rmb 309 per capita in current prices. In real ter[illegible]e increase in average rural per capita net income was 98.5 per cent between 1978-1983.[15/] Agricultural output value grew at an average annual rate of 7.9 per cent during 1978-1983 as against 3.2 per cent during 1952-1978.

The reforms within the agricultural sector have not been without problems. There has been a rapid increase in cash crop production, but during the early 1980s there was a switch from grain farming which led to increased grain imports. Grain production, however, has recovered strongly with record harvests in both 1983 and 1984. Yet, Chinese authorities generally accept that a sustaining agricultural growth requires an increase in the agricultural sector's share of capital construction and modernization investment. Also needed is a reduction of the agricultural labour force and its absorption in rural industry, commerce and service sectors. This intersectoral transfer of the labour force is expected to occur primarily through the operation of market forces and investment from non-budgetary sources is also expected to play an important part in financing agricultural modernization. Economic strategy up to the late 1970s in China had concentrated on what has been described as an "extensive growth" pattern - growth fuelled by an increased use of relatively abundant, hitherto untapped human and natural resources.

Industrial reforms: new experiments in decentralization

Success in the agricultural sector encouraged the authorities to extend a modified version of the "responsibility system" to industry. After the Third Plenary of the Chinese Central Committee held in 1979, increased organizational autonomy was extended to a small number of State-owned enterprises. Their number grew rapidly during the 1980s. Despite an improvement in performance and a rise in profitability, serious problems emerged during 1980 and 1981. The Government found it difficult to restrain the growth of capital expenditure by these enterprises or to direct this expenditure into priority programmes.

Investment had to be reduced in key areas - such as energy and transportation - to reduce the budget deficit. The programme of enterprise

reform was suspended in late 1981 and the period 1982-1984 saw a concentration by the Government on macro-economic readjustment. However, recent policies aim at micro-economic adjustment at the factory level. Several State-owned factories began selling stocks to their workers as a means of raising cash and increasing productivity.

These measures have proved effective and industrial growth during 1983 and 1984 has been high. Gross industrial output value increased by 10.5 per cent during 1983. Light industry grew at 8.7 per cent and heavy industry at over 12 per cent. These results were significantly in excess of the 4 per cent growth rate in the value of gross industrial output planned for 1983. The output of primary energy grew by 6.7 per cent but efficiency in energy use remained low. Particularly high growth rates were recorded in the production of transport equipment, walking tractors, mining and power- generating equipment and motor vehicles. Among light industry products, electric goods for household use, beer and detergents had high growth. Profit rates of State enterprises went up by about 6 per cent.[16/] In 1984 growth in the gross value of industrial output exceeded 13 per cent. Heavy industry once again grew faster than light industry, but the growth performance of light industry improved substantially in comparison with 1983. Particularly high growth rates were again recorded in the production of walking tractors and motor vehicles.[17/] Some observers expect industrial growth to slow down as the new reforms are gradually assimilated into industrial practice.[18/] Overall industrial output value rose by 23.1 per cent in the first half of 1985. The current pace of industrial growth could undermine the reform package by causing bottlenecks in the supply of energy raw materials.

In October 1984 the Chinese Communist Party (CCP) announced plans for sweeping reforms in the urban economy. The new reforms aim at extending the organizational autonomy of State enterprises and to encourage industrial competition. Emphasis was placed on linking reward to performance and on the reallocation of management talent to overcome bottlenecks in key industrial branches. The October 1984 decisions also envisage wide-ranging price reforms and hint at a concerted effort at reappraising the industrial wage system. Enterprises were encouraged to rapidly develop an efficient and remunerative incentive system for their employees. The decisions also envisage a "leasing"

or "contracting" out of some small State enterprises to collectives or individuals. Ownership of the "leased" enterprise would continue to be vested in the whole people. In the first half of 1985, State-run Chinese industries have sold off 5,500 small factories and turned management of nearly 52,000 enterprises over to Collectives and individuals.

Trade and investment: externally oriented strategy

The reforms have also emphasized the importance of an expansion of foreign trade. As seen in section 1.2, both exports and imports have grown rapidly since 1978. Export growth rates went down in 1983 but recorded a massive increase of 23 per cent during 1984.[19/] Imports have also been growing rapidly since 1983 - problems of supply and delivery earlier experienced have apparently been sorted out. Some observers expect a re-emergence of a balance-of-trade deficit in 1985. This may at least partly have to be financed by increases in foreign borrowing. Administrative reform has also been instituted with a view to encouraging exports. New foreign trade corporations - such as the China National Textiles Import and Export Corporation and the China National Technical Import Corporation - have been established. They will function as independent accounting units under the general supervision of the Ministry of Foreign Trade.

Since 1978 China has also actively sought to attract foreign investment into the country. Four Special Economic Zones (SEZs) have been established in Shenzhen, Zhuhai, Shantou and Xiamen. Fourteen coastal cities and Hainan Island have also been designated as centres for foreign investment. Joint ventures established in these cities produce for domestic sales and for export. Often they compete with State enterprises. Central economic direction and control is minimized and units enjoy a high level of autonomy. Over the period 1979 to mid-June 1984, China signed 2,900 contracts with foreign investors involving $8 billion; $500 million was pledged in 362 joint ventures, $3.5 billion in 1,372 co-operative enterprises, and $2.4 billion was in offshore joint ventures.[20/] Contract terms are expected to be more attractive than in the past.[21/] Over $300 million had been invested in the SEZs during 1984. In addition, in November 1984 China opened a further 100,000 square miles for offshore oil exploration.

New wave of reforms and readjustment plans[22/]

Most of the reform measures outlined above are likely to be strengthened in the Seventh Five-year Plan (1986-1990). In the new wave of reforms the price system is yet to be seriously tackled. Tentative details of the Plan have been announced. Prime Minister Zhao Ziyang has said that three key priorities for reform during the Plan period will be prices, banking and agriculture. An attempt will be made to consolidate recent gains in growth. During the Plan period there will be a process of decentralization of price control and reduction of agricultural and consumer subsidies.[23/] In order to maintain financial discipline the Plan seeks to further reduce the rate of capital accumulation. The number of new projects undertaken is expected to be below tne Sixth Plan level. Modernization investment on the other hand is expected to increase substantially during 1986-1990. The thrust of China's new reforms and readjustment policies is unmistakably directed toward eliminating losses at State-owned enterprises, and increasing the organizational autonomy of enterprises.

Industrial investment is to receive lower priority during the Seventh Plan period. Modernization investment is to be concentrated in machine-building, metallurgy, chemicals, building materials, textiles and food-processing. The industrial strategy underlying the Seventh Plan is briefly discussed in sections 3.1 and 3.2. The next section presents an overview of the role of the manufacturing sector within the Chinese economy.

1.4 The manufacturing sector: an overview

The paucity of systematic statistical data has made it difficult to provide a detailed and tangible picture of the Chinese manufacturing sector. Chinese statistics on industrial growth are expressed in gross output which includes mining and quarrying.

UNIDO has estimated that manufacturing currently accounts for roughly 85-88 per cent of the gross value of industrial output.[24/] According to the World Bank, manufacturing's contribution to GDP (which is net material production plus social services plus depreciation plus non-material services

plus rent)[25] is estimated at 35 per cent in the late 1970s.[26] The manufacturing sector's share in employment is significantly lower - representing less than 20 per cent of the entire labour force. Manufactured exports, on the other hand, constitute more than 50 per cent of total merchandise exports. In 1983 the ratio of manufactured to total merchandise exports was 56.7 per cent. Manufactured imports represent over 70 per cent of the total import bill.[27] Manufactured exports are in the main light industry goods - textiles, garments and canned food.

Within the industrial sector heavy industry tended to grow faster than light industry until the late-1970s. In 1972 heavy industry accounted for 57.1 per cent in gross industrial output as against 26.4 per cent in 1949. Notwithstanding the preponderance of heavy industry over light industry, the growth of the latter since 1978 has been remarkably rapid. By 1981 the share of heavy industry fell to 48.5 per cent and that of light industry increased to 51.5 per cent. In 1981, when the industrial sector was constrained by severe energy shortages, heavy industry declined by 4.4 per cent, but light industry increased by 14.0 per cent.[28] However, figures pertaining to the composition of gross industrial output for 1983 show that the share of heavy industry tended to outweigh that of light industry.

An important concern of the Government during 1978-83 was to restructure investment. During the period 1978-1983, annual capital accumulation in industry rose by 30.6 per cent; however its share in available income[29] fell from 36.5 per cent in 1978 to 30.0 per cent in 1983.[30] By 1983 light industry's share had gone down to 6.5 per cent compared to 9 per cent in 1980, while that of heavy industry had increased to 41 per cent as against 39 per cent in 1980.[31] However, light industry's share of modernization investment was significantly higher than that of heavy industry in 1983.[32]

Manufacturing enterprises comprise: State-owned enterprises, collective enterprises and industrial enterprises run by production brigades. Since 1979 industrial enterprises owned by individuals have also emerged, although they are less important in manufacturing than in domestic trade and services.

Although the majority of co-operative and individual enterprises are in light industry, almost 60 per cent of their assets are in heavy industrial branches. Even industrial production brigades have a strong presence in some heavy industry activities. It has not been possible to include brigade-run industry in the analysis conducted in chapter 2 due to the paucity of data. It must be stressed that brigade industry has an important role to play in providing employment opportunities as manpower requirements within the agricultural sector contract. Employment in brigade industry was estimated to have reached nearly 10 million by the end of the 1970s. The total labour force in industry then stood at 53.4 million[33/] - brigade enterprises thus accounted for about one-fifth of the industrial labour force.

State industrial enterprises produce about 80 per cent of net manufacturing output, excluding the output of brigade industry. The share of the State industrial enterprises in manufacturing employment is slightly above 50 per cent.

The range of manufactured goods produced in China is wider and more diverse than that in most developing countries. With some exceptions, the output of producer goods grew faster than consumer goods. However, some new consumer goods, e.g., watches, bicycles, sewing machines, etc., registered an above average growth rate in recent years. For years, the Government accorded priority to the development of heavy industries. In an attempt to modernize the steel industry, ten steel plants were called for the construction of two new integrated steel complexes during 1976-1985. Other machinery areas s ted for expansion during the Plan were heavy machinery for coal mines, the petroleum and electrical industries. Although the engineering industry was not singled out for expansion, it has played a crucial role in China's industrialization. In recent years emphasis has been placed on the development of machinery for the production of capital goods for light industry. In an attempt to correct the structural imbalance between heavy and light industries, the Chinese planners shifted the focus from heavy to light industry since 1979. In the supply of finance, raw and semi-finished materials and energy, priority is given to light industry which consists of the textile, food processing, paper making, sugar refining and a wide array of consumer goods industries.

The mainstay of light industry in China is the textile industry, although currently this industry is seriously hampered by weak technical and logistical support and an inadequate supply of replacement parts. The share of China's food industry in gross industrial output value was 12.9 per cent in 1983. The industry has 60,000 enterprises and the products include vegetable oil, sugar, cigarettes, salt, grain products, dairy products, milk product substitutes, beverages, flavouring essences, confectionery, tea, food additives, and edible fungus.

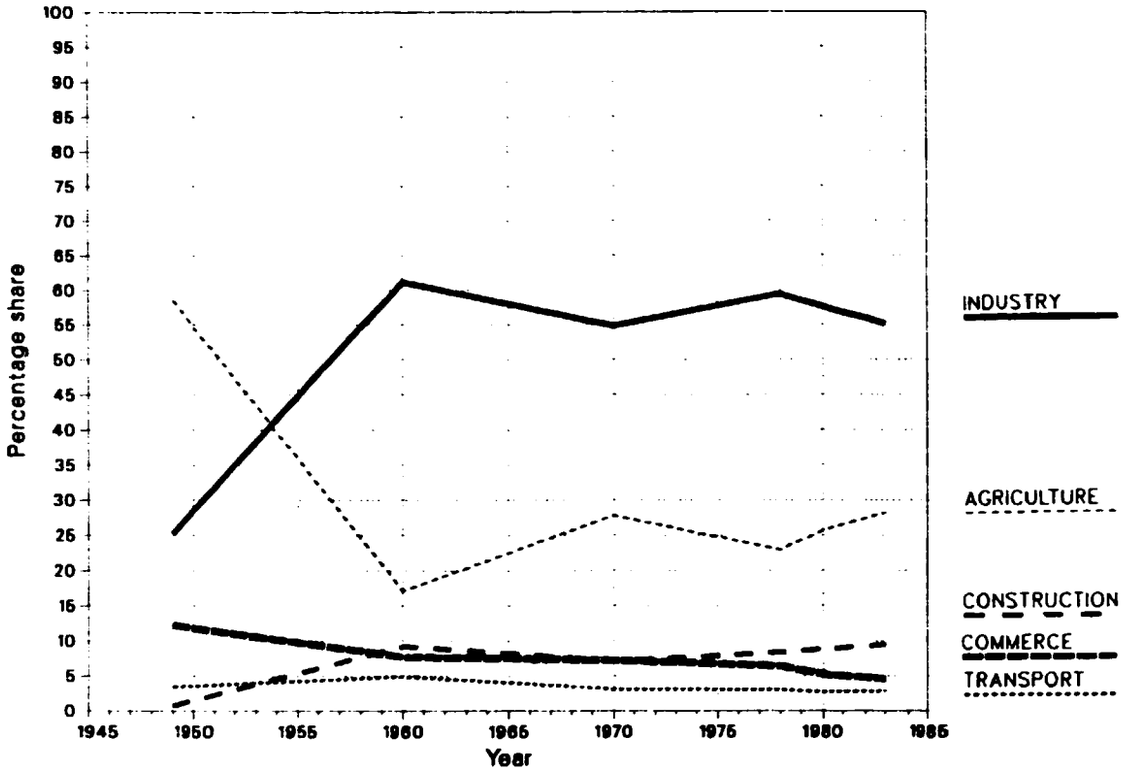
With the adoption of a more open policy and flexible measures new avenues were opened up for the inflow of foreign capital and technology into China in general and priority investment areas in particular. Manufacturing activities in two selected provinces, four Special Economic Zones and 14 open coastal areas are enjoying special rights and privileges regarding foreign trade and investment. Following a reassessment of the 14 coastal cities, the Government has recently decided to accord "priority support" to only four of the 14 cities.

There has been some change in the composition of output, but efficiency of operation seems to be at stake. Labour productivity in the manufacturing sector is low by international standards and relatively modest gains have been recorded in recent years.[34/]

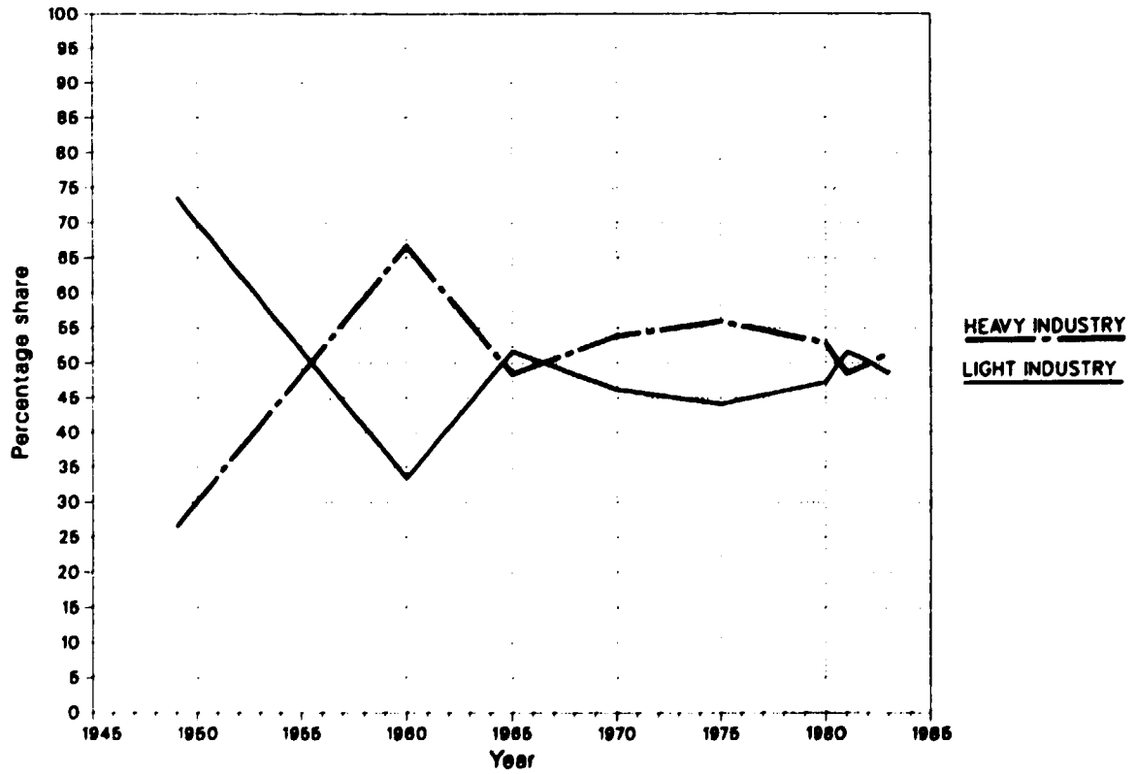
Despite high growth rates registered by many of the industrial enterprises in recent years, several manufacturing enterprises continue to face numerous problems such as low efficiency, high production costs, tight energy supplies, transport constraints, etc. It is widely contended that the current pace of industrial expansion is likely to exert additional strain on the infrastructural facilities.

MANUFACTURING TRENDS

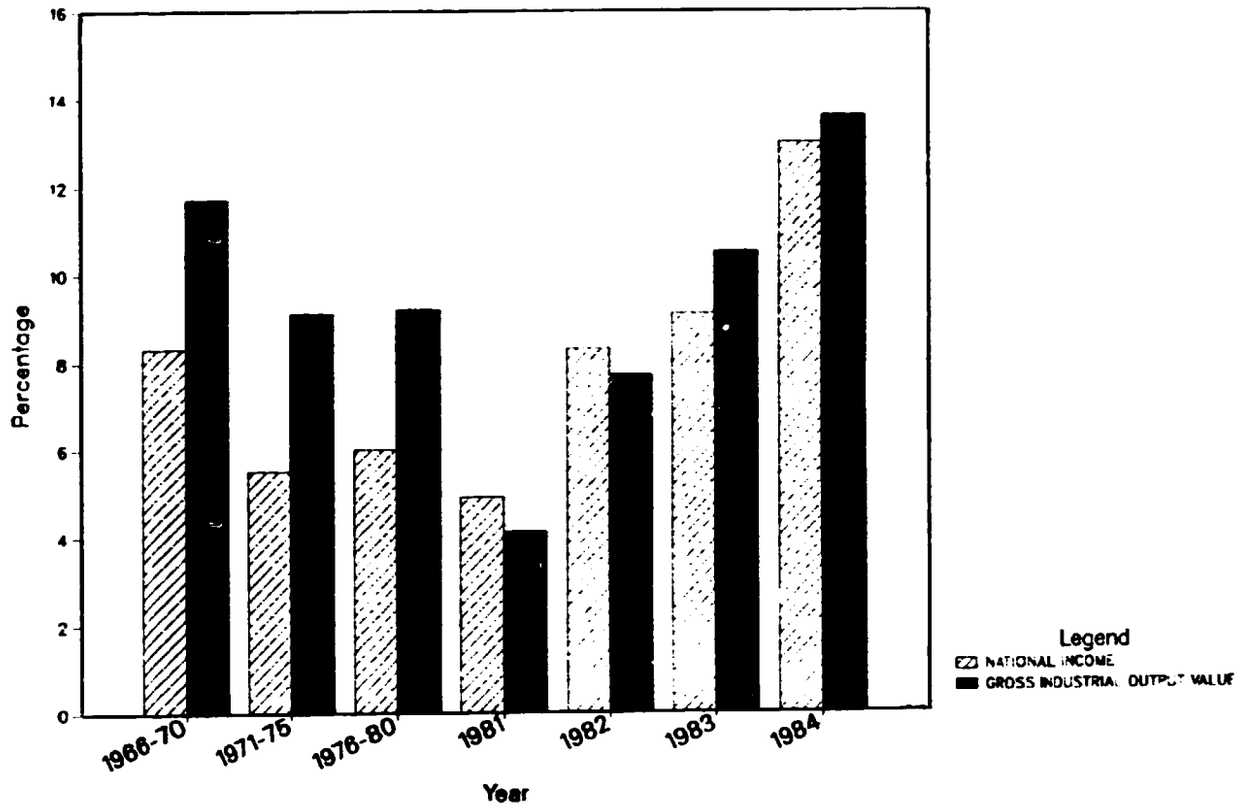
COMPOSITION OF TOTAL PRODUCT OF SOCIETY, 1949-1983



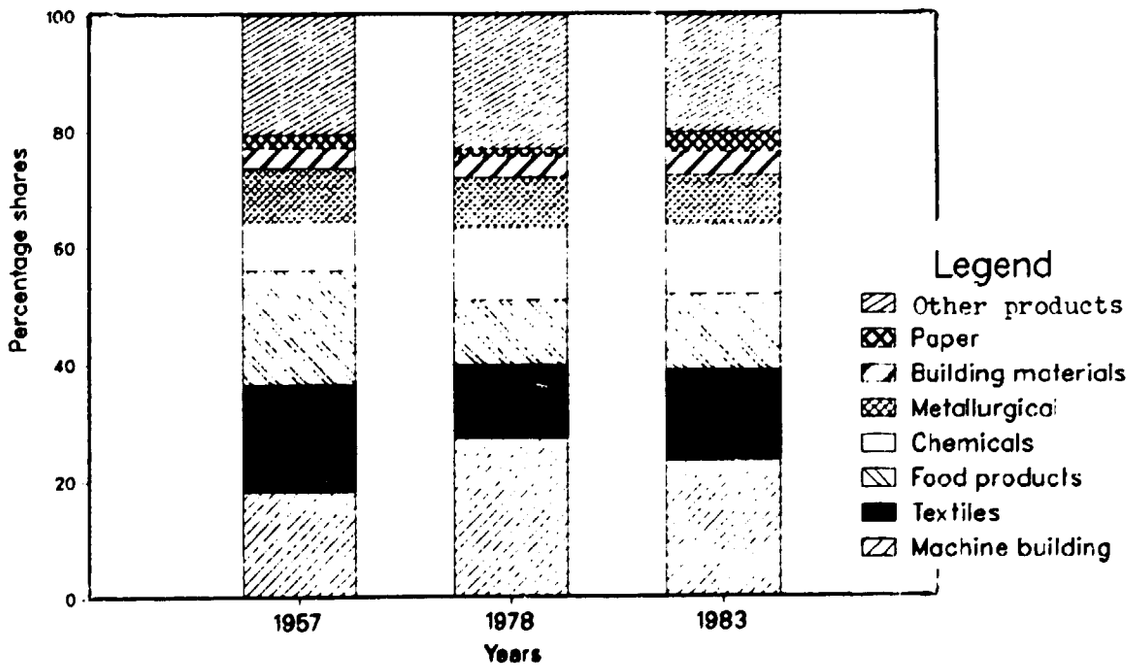
COMPOSITION OF GROSS INDUSTRIAL OUTPUT VALUE,1949-1983



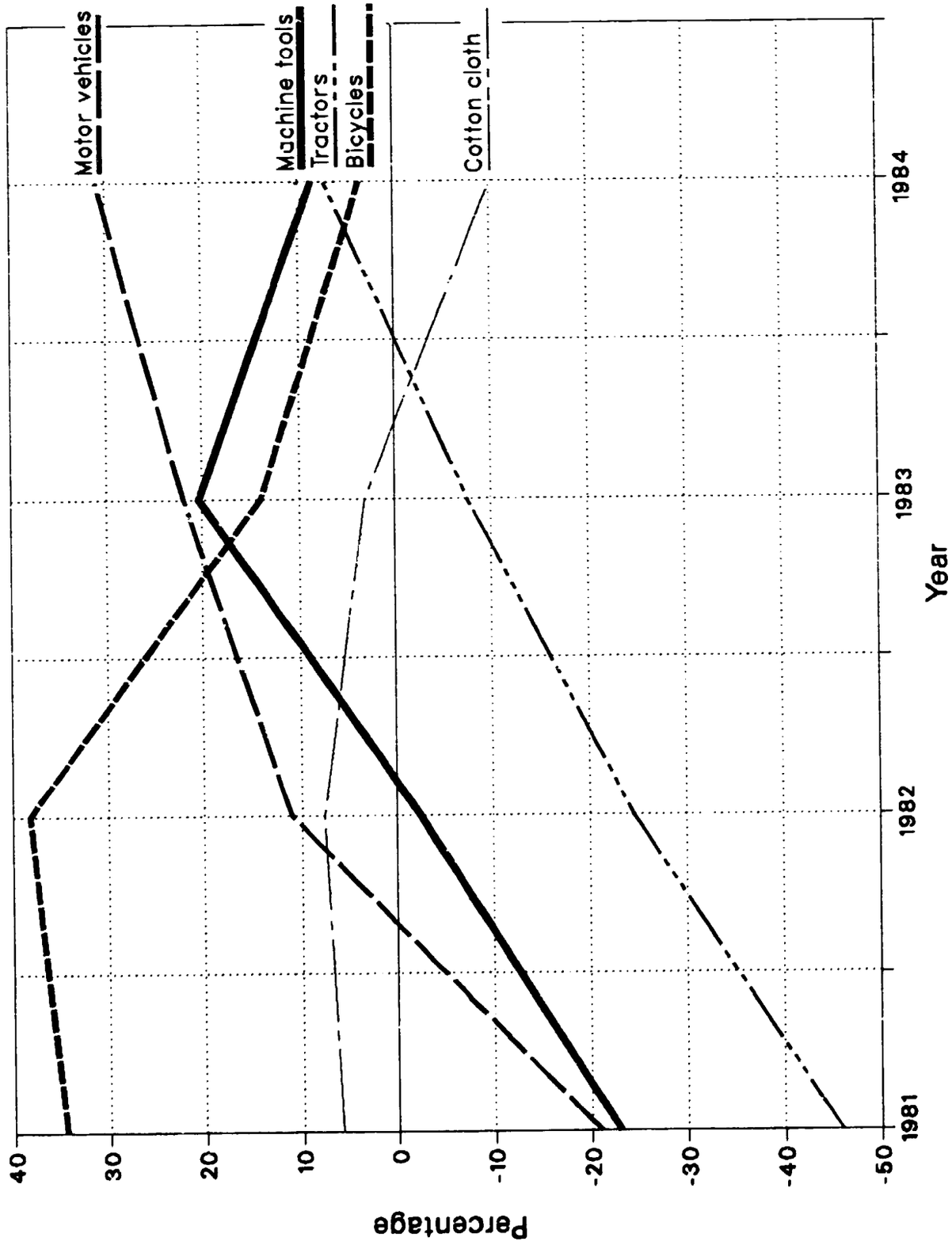
ANNUAL GROWTH RATES OF NATIONAL INCOME AND GROSS INDUSTRIAL OUTPUT VALUE, 1966-1984



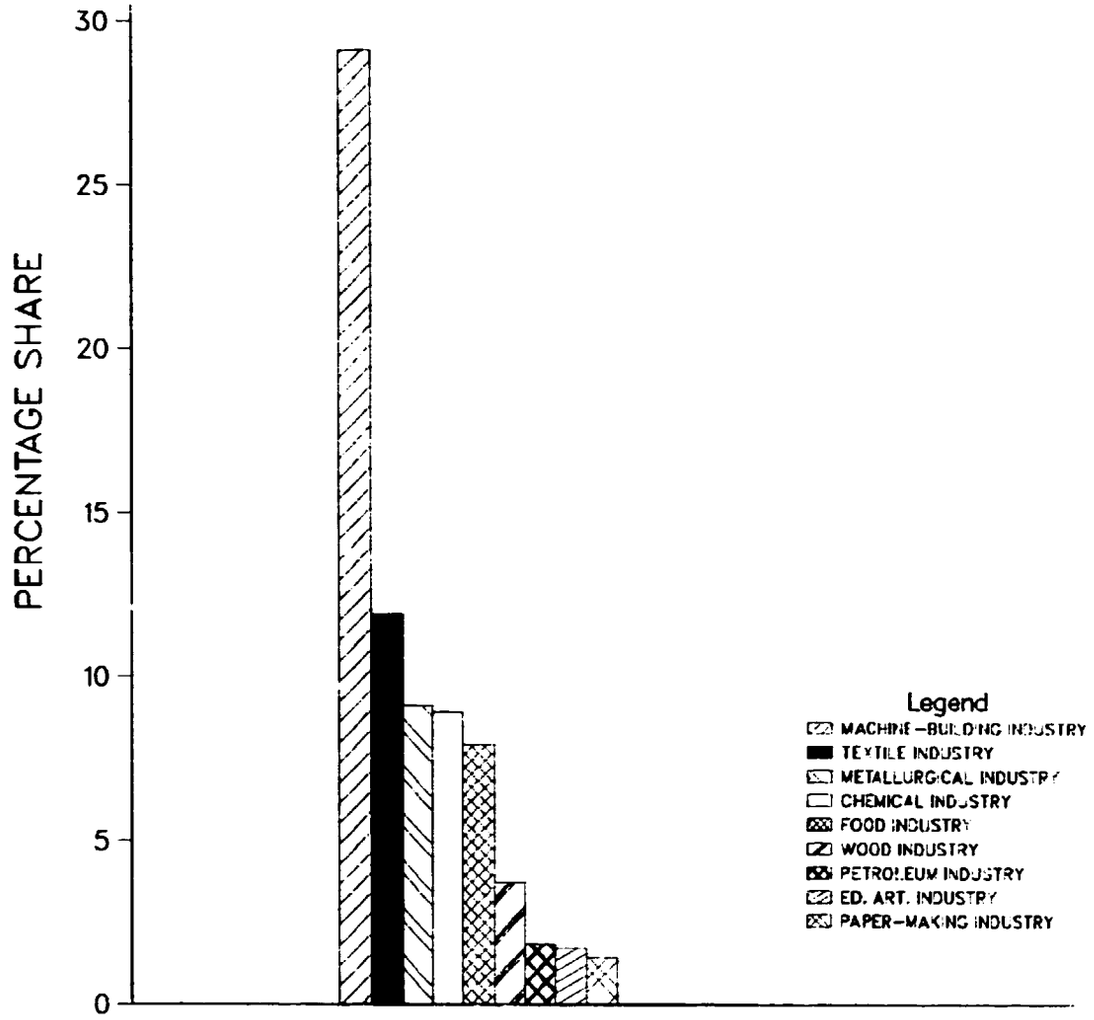
DISTRIBUTION OF GROSS INDUSTRIAL OUTPUT VALUE, 1957, 1978 AND 1983



OUTPUT GROWTH OVER THE PREVIOUS YEAR, SELECTED INDUSTRIAL PRODUCTS, 1981-1984

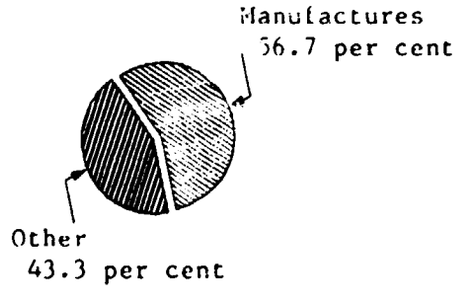


EMPLOYMENT STRUCTURE IN STATE-OWNED ENTERPRISES, 1983

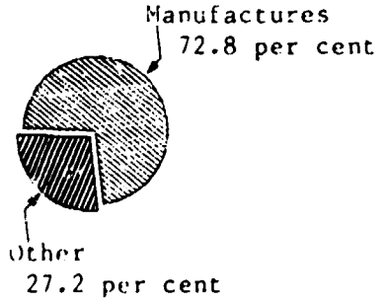


MANUFACTURED EXPORTS AND IMPORTS IN 1983

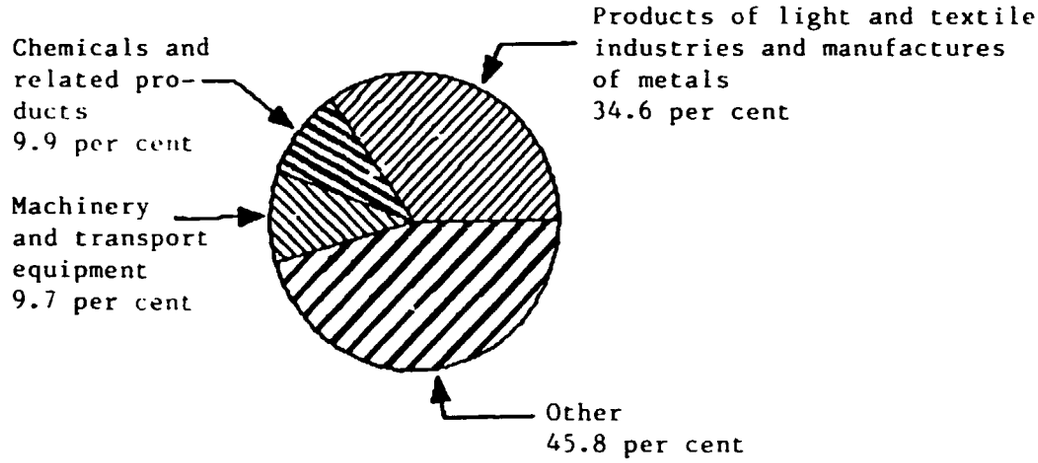
SHARE OF MANUFACTURES IN TOTAL EXPORTS



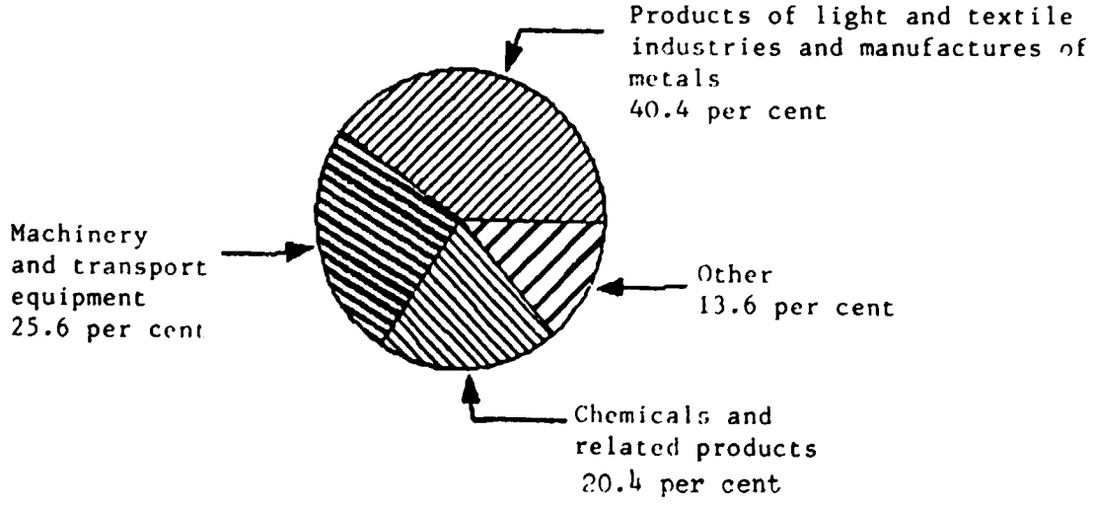
SHARE OF MANUFACTURES IN TOTAL IMPORTS



STRUCTURE OF MANUFACTURED EXPORTS IN 1983



STRUCTURE OF MANUFACTURED IMPORTS IN 1983



2. STRUCTURE AND PERFORMANCE OF THE MANUFACTURING SECTOR

While the focus of Chapter 1 is on macro-economic policies and major developments that shaped the structure and performance of the Chinese economy, Chapter 2 attempts to review the growth and performance of the manufacturing sector. Section 2.1 analyses the long-term industrial growth, which has been remarkably rapid and resulted in substantial structural change within the industrial sector. Section 2.2 summarizes the findings on performance and efficiency and concludes that in general the Chinese industrial sector continues to suffer from operational inefficiency though the renewed emphasis on productivity seems to have created some positive effect on a few industries in recent years. Investment patterns and geographical distribution are analysed in Sections 2.3 and 2.4. Available evidence in Section 2.5 indicates that the degree of dependence on foreign trade today is greater than ever. Section 2.6 addresses itself to a sub-sectoral analysis of the manufacturing sector, with a focus on crucial factors affecting the growth prospects of selected key industries (engineering, building materials, textiles and food industries).

2.1 Growth and structural change[35/]

The growth of industrial output in China has been marked by considerable fluctuations since 1953. Table 7 shows that there was a phenomenal expansion of gross industrial output during 1953-57, but the pace of industrial growth suffered a sharp decline between 1958 and 1962. The industrial sector registered a remarkably fast growth of 17.9 per cent annually during 1963-65 and a two-digit average annual growth rate was maintained until 1970. Since 1970 the industrial growth rate has tended to decelerate. However, recent estimates indicate that industrial growth has gained further momentum in 1984 and 1985. The value of gross industrial output increased by 14 per cent in 1984, and overall industrial output value rose by 23.1 per cent in the first half of 1985. Behind considerable fluctuations in annual growth rates emerges a very impressive long-term growth rate of gross industrial output in China.

This long-term growth has been substantial by international standards. Hidden behind the remarkably rapid growth of gross industrial output are the extensive industrial diversifications. Growth rates generated by major branches of industry are given in Table 7.

Table 7. Average annual rate of increase in gross industrial output value by major branch of industry, 1953-1983
(percentage)

Branch	1953-1957	1958-1962	1963-1965	1966-1970	1971-1975	1976-1980	1979-1983
Gross industrial output value	18.0	3.8	17.9	11.7	9.1	9.2	7.9
Of which:							
Metallurgical industry	29.2	7.4	20.4	8.8	5.3	8.4	5.2
Power industry	20.5	20.7	12.8	11.5	10.9	8.6	6.3
Coal industry	17.1	11.8	0.1	8.8	5.4	4.8	1.9
Petroleum industry	32.7	22.2	27.4	18.5	14.6	7.0	3.0
Chemical industry	31.3	14.4	23.9	17.3	10.4	11.3	9.2
Machine-building industry	29.7	7.6	21.8	15.8	13.6	7.4	7.2
Building materials industry	20.0	-4.5	30.1	9.4	11.5	12.7	8.1
Forest industry	13.7	-4.9	8.1	-1.8	7.5	7.2	4.3
Food industry	13.2	-1.7	11.4	2.4	8.4	8.1	9.3
Textile industry	8.6	-3.3	21.8	8.0	4.2	13.2	12.9
Paper-making industry	19.1	2.5	12.1	3.3	6.4	9.1	6.9

Source: Statistical Yearbook of China 1984, p. 198.

Note: Figures in this Table are at comparable prices.

A more detailed analysis of the period 1970-1981 is summarized in Table 8. It shows that heavy industry grew more rapidly until 1978. Subsequently, the growth rate of light industry has tended to exceed that of heavy industry. Moreover, growth in the heavy industry sector tended to fluctuate significantly more than in light industry. The former recorded a mean growth rate of 5.1 per cent with a standard deviation of 8.6 per cent over the period 1977-1981. The mean growth rate for light industry during this period was 13.25 per cent with a standard deviation of 3.9 per cent. The

year 1981 is of particular interest. Severe energy constraints and sharp restrictions had a direct impact on heavy industry, which registered a negative growth rate of minus 4.4 per cent, while light industry grew by 14.1 per cent.

Table 8. Industrial growth: percentage change per year in gross output, 1970-81
(at 1970 constant prices)

	1970-77	1978	1979	1980	1981
Heavy industry	9.3	15.6	7.7	1.4	-4.4
Light industry	7.8	10.8	9.6	18.4	14.1
Total industry	8.7	13.5	8.5	8.7	4.1
Selected heavy industry products					
Steel	4.2	33.9	8.5	7.7	-4.1
Cement	11.6	17.2	13.3	8.1	5.2
Chemical fertilizer	16.8	20.1	22.6	15.6	0.6
Machine tools	5.2	-7.8	-23.8	-4.0	-23.1
Motor vehicles	5.3	18.9	24.5	19.5	-20.7
Tractors	17.6	14.3	10.7	-22.0	-45.9
Selected light industry products					
Cotton cloth	1.5	8.7	10.2	10.9	5.9
Chemical fibres	9.4	49.9	14.4	38.0	17.1
Television sets	60.2	81.8	157.1	87.5	116.5
Cameras	29.5	-27.5	33.0	56.7	67.0
Bicycles	10.5	15.0	18.2	29.0	34.7
Sewing machines	8.8	14.7	20.6	30.9	35.3
Machine-made paper and paperboard	6.6	16.4	12.4	8.5	0.9

Source: World Bank, China: Recent Economic Trends and Policy Developments, March 31, 1983.

Growth within Chinese manufacturing has been accompanied by substantial structural change. Table 9 presents the branch distribution of gross industrial output value in China during 1957-1983.

Limitations of the data presented in Table 9 are described in the notes.[36/] The Table does not permit an analysis of the changing role of light and heavy industry - as three branches, chemical, wood and wood products and paper, are common to both classifications. The Table does show, however, that industries which are unambiguously "light" - such as food and textiles -

Table 9. Distribution of gross industrial output values, 1957-1983, selected years
(percentage)

	1957[a/]	1968[b/]	1978[c/]	1983[d/]
Metallurgical	9.34	10.7	8.7	8.5
Power	1.410	3.1	3.8	3.6
Coal	2.38	2.6	2.8	2.9
Petroleum	0.911	3.2	5.5	5.0
Chemical	8.25	12.9	12.4	12.0
Machine building	18.22	22.3	27.3	23.4
Building materials	3.37	2.8	3.6	4.0
Forest	5.46	2.9	1.8	1.9
Food	19.6	12.6	11.1	12.9
Textile	18.22	15.8	12.5	15.5
Paper	2.38	1.8	1.3	3.5

Source: Statistical Yearbook of China, various issues.

a/ At 1952 constant prices.
b/ At 1957 constant prices.
c/ At 1970 constant prices.
d/ At 1980 constant prices.

declined in terms of their contribution to the gross value of industrial output during 1957-1978. During the period 1978-1983, on the other hand, these two branches increased their share from 23.6 per cent to 28.4 per cent. Inference about the heavy industry sector is not so clear cut, as they either contain a significant mining component or are common to the "heavy" and "light" classifications. It is, however, clear that structural change has occurred in two distinct phases. Over the period 1957-1978 the share of the consumer goods industries declined - the share of food and textiles fell from 37.8 per cent in 1957 to 23.6 per cent in 1978. The share of heavy industry

rose correspondingly. During 1978-83 light industry grew more rapidly than heavy industry. The period 1975-1982 had seen a reversion of structural trends in accordance with the increased emphasis Chinese policy-makers now place on the growth of light industries to meet expanding consumer demand.

Table 10 presents shares of light and heavy industry in gross industrial output value over the period 1949-1983. These calculations are based on current prices. The share of light industry fell from 73.6 per cent in 1949 to 33.4 per cent in 1960, and rose to a peak of 53.7 per cent in 1968. This reflected the policies adopted during much of the 1960s in the wake of the setbacks suffered during the period of the "Great Leap Forward". The 1970s saw another decline in the share of light industry, the share of which had fallen to 43.1 per cent by 1978. However, the reforms launched in 1979 placed emphasis on a rapid revitalization of light industry. Light industry's share in gross industrial output value rose to 51.5 per cent in 1981. The very high growth rate attained during that year could not be maintained however, and following a successful restructuring of key heavy industrial branches - particularly metallurgical industries and machine building - the share of light industry fell to 50.2 per cent of gross industrial output value in 1982 and to 48.5 per cent in 1983. A rapid expansion of light industry was an important objective of the Sixth Five-year Plan and the trend towards an increasing share of light industry in industrial production is expected to continue during the Seventh Plan period. In both 1983 and 1984 however light industry's share of gross sectoral output actually declined.

Tables 11 and 12 provide more detailed figures on growth and structural change in industry for 1981, 1982 and 1983. According to these estimates gross industrial output value increased at a rate of about 7 per cent during this period - a rate of growth lower than that achieved during the 1970s.[37/] The rate of growth of heavy industry during 1982 was 9.3 per cent, that of light industry was 5.6 per cent. In 1983 the corresponding growth rates were 12 per cent and 8 per cent. This represented a major recovery for the heavy industrial sector and a significant deceleration of the growth of light industry. Tables 11 and 12 show that the highest rates of growth were attained by machinery for production, ceramics, and transport equipment, all classified as heavy industry branches. Among light industries

Table 10. Composition of gross output value of industry, 1949-1983

Year	Proportion of the gross industrial output value (percentage)	
	Light industry	Heavy industry
1949	73.6	26.4
1950	70.7	29.3
1951	67.8	32.2
1952	64.5	35.5
1953	62.7	37.3
1954	61.6	38.4
1955	59.2	40.8
1956	57.6	42.4
1957	55.0	45.0
1958	46.5	53.5
1959	41.5	58.5
1960	33.4	66.6
1961	42.5	57.5
1962	47.2	52.8
1963	44.8	55.2
1964	44.3	55.7
1965	51.6	48.4
1966	49.0	51.0
1967	53.0	47.0
1968	53.7	46.3
1969	50.3	49.7
1970	46.2	53.8
1971	43.0	57.0
1972	42.9	57.1
1973	43.4	56.6
1974	44.4	55.6
1975	44.1	55.9
1976	44.2	55.8
1977	44.0	56.0
1978	43.1	56.9
1979	43.7	56.3
1980	47.2	52.8
1981	51.5	48.5
1982	50.2	49.8
1983	48.5	51.5

Source: Statistical Yearbook of China 1984, p. 23.

Note: Figures in this Table are at current prices.

Table 11. Gross output value by branch of light industry, 1981-1983

Branch	Value (Rmb 100 million)a/			Growth over previous year (per cent)		Composition (percentage)		
	1981	1982	1983	1982	1983	1981	1982	1983
All branches of light industry	2662.89	2814.87	3059.74	5.7	8.7	100.0	100.0	100.0
Of which:								
Food industry:	690.12	755.52	794.25	9.5	5.1	25.9	26.8	26.0
Of which:								
Food and oil	203.98	220.56	232.09	8.1	5.2	7.7	7.8	7.6
Salt-making	19.81	18.57	18.89	-6.3	1.7	0.7	0.7	0.6
Slaughtering and meat processing	117.97	131.54	124.27	11.5	-5.5	4.4	4.7	4.1
Canned food	21.19	24.44	27.08	15.3	10.8	0.8	0.9	0.9
Sugar refining	36.45	40.18	45.20	10.2	12.5	1.4	1.4	1.5
Tobacco manufactures	100.51	109.17	112.78	8.6	3.3	3.8	3.9	3.7
Liquors	52.59	56.21	65.93	6.9	17.3	2.0	2.0	2.2
Textile industry	856.02	866.85	956.04	1.6	10.3	32.1	30.8	31.2
Of which:								
Chemical fibres	53.46	57.65	65.33	7.8	13.3	2.0	2.0	2.1
Cotton textiles	517.91	495.31	539.84	-4.4	8.9	19.4	17.6	17.6
Clothing industry	147.24	141.94	153.46	-3.6	8.1	5.5	5.0	5.0
Leather industry	58.58	55.67	57.01	-4.9	1.9	2.0	2.0	1.9
Paper-making industry	69.40	73.96	81.41	6.6	10.1	2.6	2.6	2.7
Cultural, educational and art articles	121.76	129.37	134.14	6.3	3.7	4.6	4.6	4.4
Of which: Printing	54.59	58.63	63.76	7.4	8.7	2.1	2.1	2.1
Chemical industry	273.44	246.90	273.44	-9.7	10.7	8.4	8.8	8.9
Of which: Chemicals for daily use	48.13	48.48	50.41	0.73	3.9	1.8	1.7	1.6
Machine-building industry: of which:	312.19	342.96	386.24	9.9	12.6	11.7	12.2	12.6
Equipment for household recreational use b/	38.12	35.42	47.08	-7.1	32.9	1.4	1.3	1.6
Metal products for daily use	96.17	106.25	119.34	10.5	12.3	3.6	3.8	3.9
Forest industry	40.03	43.93	46.95	9.7	6.9	1.5	1.6	1.5
Of which: Wood products for household use	26.12	28.68	29.63	9.8	3.3	1.0	1.0	1.0

Source: Statistical Yearbook of China 1984, p. 203.

a/ At 1980 constant prices.
b/ Including TV sets, radio sets, electric gramophones, tape (cassette) recorders, etc.

Table 12. Gross output value by branch of heavy industry, 1981-1983

Branch	Value (Rmb 100 million)a/			Growth over previous year (per cent)		Composition (percentage)		
	1981	1982	1983	1982	1983	1981	1982	1983
All branches of heavy industry	2514.78	2762.58	3104.67	9.9	12.4	100.0	100.0	100.0
Of which:								
Metallurgical industry	456.69	485.23	523.68	6.2	7.9	18.2	17.6	16.9
Of which:								
Ferrous metals	313.78	337.28	364.78	7.8	8.2	12.5	12.2	11.7
Power industry	194.86	207.07	220.23	6.3	6.4	7.7	7.5	7.1
Of which: Hydropower	37.94	43.63	50.95	14.9	16.8	1.5	1.6	1.6
Coal and coke industry	157.26	166.30	178.33	5.7	7.2	6.3	6.0	5.7
Of which: Coal	146.26	155.14	166.64	6.1	7.4	5.8	5.6	5.4
Petroleum industry	282.13	287.98	301.09	2.1	4.6	11.2	10.4	10.0
Of which: Extraction	130.49	132.31	132.34	1.4	0.02	5.2	4.8	4.3
Chemical industry	368.11	412.11	467.79	11.9	13.5	14.6	14.9	15.1
Of which:								
Basic chemical materials	71.76	79.76	90.63	11.1	13.6	2.9	2.9	2.9
Chemical fertilizers	102.86	110.35	122.59	7.3	11.1	4.1	4.0	3.9
Chemical pesticides	16.72	19.22	22.15	14.9	15.2	0.7	0.7	0.7
Organic chemicals	80.72	90.71	98.03	12.4	8.1	3.2	3.3	3.2
Machine-building industry: of which	767.76	882.10	1054.24	14.9	19.5	30.5	31.9	34.0
Agricultural machinery	58.28	64.57	76.95	10.8	19.2	2.3	2.3	2.5
Industrial machinery	190.01	216.77	252.17	14.1	16.3	7.6	7.8	8.1
Transport equipment	124.20	142.33	175.44	14.6	22.9	4.9	5.2	5.7
Other machinery for production	81.03	95.31	119.03	17.6	24.9	3.2	3.5	3.8
Building materials industry: of which:	195.07	222.58	245.44	14.1	10.3	7.8	8.1	7.9
Cement and cement products	72.35	82.28	92.99	13.7	13.0	2.9	3.0	3.0
Bricks, tiles, lime and other building materials	84.42	96.69	101.36	14.5	4.8	3.4	3.5	3.3
Glass	11.66	13.75	15.83	17.9	15.1	0.5	0.3	0.5
Ceramics	5.72	6.97	8.33	21.9	19.5	0.2	0.3	0.3
Non-metallic minerals	10.74	11.77	13.94	9.6	18.4	0.4	0.4	0.4
Forest industry	64.87	68.32	69.11	5.3	1.2	2.6	2.5	2.2
of which: Logging and transport of wood	39.08	39.58	41.05	1.3	3.7	1.6	1.4	1.3

Source: Statistical Yearbook of China 1984, p. 204

a/ At 1980 constant prices.

the highest growth rates were attained by textiles, some food products, metal products for daily use and consumer durables. Negative growth was recorded by salt-making and leather products. No heavy industrial branch recorded a negative growth rate during 1981-83.

Estimates of net output value - a concept close to, though not identical with, value added,[38] have been provided for all independent accounting units in Table 13. These entities account for 90 per cent of the net value produced by all enterprises in China.[39] Net output grew at a slower rate than gross output - 15 per cent over 1981-83 as against 19 per cent for the latter. The net output of heavy industry grew significantly faster than net output of light industry. The fastest growing branches in terms of net value of output were machine building, building materials (glass, ceramics and chemicals). It is interesting to note that some of the light industry branches such as textiles which had high growth rates in terms of gross output had negative growth in terms of net output (i.e. value added). This would indicate that growth in these branches was accompanied by rising industrial costs and/or the existence of less favourable price structures. The findings in Table 13 are, of course, not directly comparable with those of Tables 11 and 12.[40]

The physical output values of major industrial products presented in Table 14 reveal the evolution of key manufacturing trends since 1949. Manufacturing industries are classified into five groups: (1) food, beverages and tobacco; (2) nondurable consumer goods; (3) durable consumer goods; (4) intermediate goods; and (5) capital goods. Over the last three decades, one outstanding characteristic of all these five groups is the substantial expansion in physical output. There are some fast rising industries, such as chemical fibres, yarn, sewing machines, bicycles, wrist watches, television sets, cameras, etc. Most of the heavy industrial products seem to have registered a steady expansion until 1980. The preponderence of heavy industry over light industry in the Chinese industrialization process, as evidenced by growth rate figures presented in the preceding Tables, is corroborated by physical output data presented in Table 14. What is most striking is that declining physical output values of heavy industries seem to be compatible with increasing physical output values of light industries, with a few

Table 13. Net output value of independent accounting enterprises, 1981-1983
(Rmb 100 million)

	Value			Growth over previous year (per cent)	
	1981	1982	1983	1982	1983
Total industry	1668.87	1752.90	1929.74	5.0	10.1
Light industry	752.08	765.58	792.77	1.8	3.6
Heavy industry	916.79	987.32	1136.97	7.7	15.1
Branches					
Metallurgical industries	133.65	144.45	162.17	8.1	12.3
Power industry	111.12	107.27	114.67	-3.5	6.9
Petroleum industry	130.76	130.42	156.35	-0.3	19.9
Chemicals	176.12	196.44	220.97	11.5	12.5
Machine building	349.38	383.70	450.65	9.8	17.4
Building materials	80.24	91.87	102.47	14.5	11.6
Glass	5.38	6.37	8.07	18.4	26.7
Ceramics	2.40	3.01	3.66	25.4	21.9
Forest industry	43.72	48.56	50.41	11.1	3.8
Food industry	179.10	194.96	208.80	8.9	7.1
Textiles	245.11	218.14	208.32	-11.0	-4.5
Cotton textiles	148.68	123.06	110.47	-17.2	-10.2
Clothing	32.00	30.38	32.68	-5.1	7.6
Leather	14.82	13.44	14.01	-9.3	4.2
Paper	60.75	64.09	67.60	5.5	5.5

Source: Statistical Yearbook of China 1983 and 1984.

exceptions, during the early 1980s when manufacturing activities were constrained by severe energy shortages. During 1980-82 consumer durables and nondurables, excepting salt, leather shoes, electric fans, and radio sets, increased their physical output. Conversely, with a few exceptions, intermediate and capital goods either stagnated or declined in the early 1980s. Among the exceptions, the physical output of walking tractors was strikingly high. Total production increased from 0.19 million in 1981 to 0.29 million in 1982, and again to 0.49 million in 1983.

Table 14. Output of major industrial products, 1949-1983

Industrial products	Unit	1949	1960	1970	1980	1981	1982	1983
1. FOOD, BEVERAGES, TOBACCO								
Salt	10 thousand tons	299	1,287	1,109	1,728	1,832	1,638	1,613
Sugar	"	20	44	135	257	317	338	377
Canned food	"	-	11.8	19.3	57.2	68.4	78.5	84.5
Beer	"	-	15	16	69	91	117	163
Cigarettes	10 thousand cases	160	449	783	1,520	1,704	1,885	1,938
2. NONDURABLE CONSUMER GOODS								
Textiles								
Chemical fibres	10 thousand tons	-	1 06	10.09	45.03	52.73	51.70	54.07
Yarn	"	32.7	109.3	205.2	292.6	317.0	335.4	327.0
Knitting wool	tons	0.18	0.95	2.17	5.73	7.65	9.25	10.21
Cloth	100 million metres	18.9	54.5	91.5	134.7	142.7	153.5	148.8
Woollen piece goods	10 thousand metres	544	3,646	5,776	10,095	11,308	12,669	14,291
Gunny bags	100 million	0.10	0.86	1.84	4.10	4.29	5.00	5.51
Silk	10 thousand tons	0.18	0.83	1.67	3.54	3.74	3.71	3.69
Silk textiles	100 million metres	0.50	2.83	4.32	7.59	8.35	9.14	9.99
Synthetic detergents	10 thousand tons	-	1.0	9.3	39.3	47.8	56.9	67.7
Chemical pharmaceuticals	"	-	0.75	2.15	4.01	3.73	4.22	4.80
Leather shoes	10 thousand pairs	-	4,740	4,729	15,745	20,239	18,661	18,361
3. DURABLE CONSUMER GOODS								
Sewing machines	10 thousand	-	88.0	235.2	767.8	1,039.1	1,286.0	1,087.2
Bicycles	"	1.4	176.5	368.8	1,302.4	1,754.3	2,420.0	2,758.2
Wrist watches	"	-	50.5	347.6	2,215.5	2,872.4	3,301.0	3,469.0
Fine aluminum products	10 thousand tons	-	0.32	1.91	5.80	5.68	6.01	6.78
Bulbs	100 million	0.13	2.19	3.86	9.46	9.66	10.73	12.49
Household washing machines	10 thousand	-	-	-	24.5	128.1	253.3	365.9
Electrical fans	"	-	-	-	723.7	1,049.9	918.6	1,045.7
Radio sets	"	0.4	158.7	323.1	3,003.8	4,057.2	1,723.9	1,998.9
Television sets	"	-	0.79	1.05	249.20	539.41	592.01	684.01
Cameras	"	-	17.31	4.04	37.28	62.30	74.23	92.56
4. INTERMEDIATE GOODS								
Pig iron	10 thousand tons	25	2,716	1,706	3,802	3,417	3,551	3,738
Steel	"	15.8	1,866	1,779	3,712	3,560	3,716	4,002
Rolled steel	"	13	1,111	1,188	2,716	2,670	2,902	3,072
Cement	"	66	1,565	2,575	7,986	8,290	9,520	10,825
Plate glass	10 thousand standard cases	108	670	1,053	2,771	3,064	3,546	4,167
Timber	10 thousand cubic metres	567	4,129	3,782	5,359	4,942	5,041	5,232
Soda ash	10 thousand tons	8.8	81.5	107.7	161.3	165.2	173.5	179.3
Calcium carbide	"	0.3	24.3	69.6	152.0	151.3	167.5	180.8
5. CAPITAL GOODS								
Mining equipment	"	0.07	25.19	9.63	16.25	11.49	15.82	20.16
Power generating equipment	thousand kilowatt	-	338.8	291.8	419.3	139.5	164.5	274.0
Metal cutting machine tools	10 thousand	0.16	15.35	13.89	13.36	10.26	9.98	12.10
Motor vehicles a/	"	-	2.26	8.72	22.23	17.56	19.63	23.98
Tractors	"	-	1.16	3.19	9.77	5.28	4.03	3.70
Walking tractors	"		0.12	5.14	21.79	19.89	29.83	49.77
Locomotives	"	-	804	573	512	398	486	589
Railway passenger coaches	"	23	818	576	1,002	1,159	1,153	1,230
Railway freight wagons	"	0.14	2.61	1.38	1.06	0.88	1.06	1.58

Source: Based on Statistical Yearbook of China, 1984.

a/ Including passenger vehicle.

Whether measured in gross or net output values or physical volumes the long-term growth of the Chinese manufacturing sector along the path of extensive diversification has been very impressive. However, with some exceptions, the industrial enterprises in China are generally plagued by inefficiency in the use of factors of production - labour, capital and raw materials.

2.2 Employment, performance and efficiency

Industry's employment share has moved up from 6.7 per cent in 1952 to 15.6 per cent in 1983, with a net gain of 48 million new jobs. In stark contrast, the agricultural sector provided 152 million new jobs during the same period. Despite a massive infusion of investment, industry's capacity to create employment has been rather limited. The State enterprises are the hard core of industrial employment. Table 15 presents recent data on employment in State-owned subsectors of manufacturing. Machine-building industry is the single largest contributor to employment, absorbing around 30 per cent of staff and workers employed in State-owned enterprises. Food, textile, chemical and metallurgical industries account for 37.9 per cent of industrial employment provided by the State-owned units. With a few exceptions, employment growth in heavy industries either stagnated or declined during 1981-83. Employment in chemical fertilizers and agricultural machinery declined by -2.6 per cent and -5.1 per cent respectively as against 2.1 per cent average annual growth rate of total employment in State-owned enterprises during 1981-83. Light industries, excepting leather and paper-making industries, seem to have registered above average growth rate in employment creation. Food and textile industries provided more than a half million new jobs between 1981 and 1983. Employment in petroleum industry grew by 5.5 per cent during the same period.

Table 15. Number of staff and workers in State-owned units by sub-sector of manufacturing, 1981-1983
(10 thousand persons)

Sub-sector	1981	1982	1983
Food industry	256.1	274.4	280.6
Textile industry	389.0	412.1	423.5
Of which: chemical fibres	20.7	21.6	24.6
Clothing industry	15.2	15.7	16.3
Leather industry	20.9	20.9	20.6
Cultural, arts and educational articles	59.1	60.5	62.0
Paper-making industry	49.0	50.4	50.0
Forest industry	131.8	134.0	133.0
Of which: Timber processing	28.4	29.2	29.5
Logging and transport of wood	99.9	101.1	99.4
Chemical industry	307.1	312.9	318.1
Of which: Chemical fertilizers	113.3	112.8	110.5
Chemical pharmaceuticals	33.5	35.3	35.7
Chemicals for daily use	13.5	13.4	13.1
Rubber processing	31.7	34.1	34.2
Plastic processing	13.9	15.1	15.5
Machine-building industry	1,015.1	1,030.9	1,033.5
Of which: Agricultural machinery	107.4	99.3	96.7
Electronic apparatus	101.5	102.5	103.2
Machinery for daily use	47.4	51.5	52.6
Other industries	102.3	105.7	109.8
Of which: Water supply	6.5	7.2	7.7
Metallurgical industry	319.2	323.5	323.2
Petroleum industry	56.9	59.9	63.3
Industry Total a/	3,406.7	3,502.7	3,552.6

Source: Statistical Yearbook of China, 1983 and 1984.

a/ Excluding power, coal and coke industries.

Table 16 shows that the growth in productivity of labour continued its slow pace, and the efficiency with which fixed assets were used continued its downward trend, while the productivity of working capital reversed its long-term trend marginally. According to a recent estimate[41/] a 26 per cent increase in output between 1978 and 1982 required a 37 per cent increase in fixed assets, an 18 per cent increase in working capital and a 16 per cent increase in the average annual number of workers and employees.

Growth in industrial efficiency during the 1960s and 1970s was hampered by the type of control, which was exercised by central planning and administrative authorities over the individual industrial enterprises. Detailed output targets were mandatorily imposed, investment funds were allocated administratively, sales and supplies were arranged by superior

Table 16. Industrial efficiency data relating to fixed assets, working capital and labour, 1957-1982

	Average annual growth (per cent)	
	1957-1978	1978-1982
Gross industrial output value per 100 yuan of fixed assets	-2.0	-2.0
Gross industrial output value per 100 yuan of working capital	-3.0	+1.9
Gross industrial output value per worker and employee	+2.1	+2.2

Source: Rober Michael Field, "Changes in Chinese Industry since 1978", The China Quarterly, December 1984, p. 751.

authorities who also determined prices and santioned new production processes. Enterprises became principally concerned with maximizing output value and did not pay sufficient attention to changing demand requirements. Unsold stock increased at a rapid rate. There was also little incentive for technological innovation.

During 1977-1978, capacity utilization was 66 per cent for the industrial sector as a whole, 50 per cent in iron and steel,[42/] and 50 per cent in the machine industry sector. Chinese sources have reported many constraints on industrial efficiency. A relatively high growth of investment in heavy industry had led to the development of structural imbalances and shortages of electric power, transport and energy created shortfalls in capacity utilization. Over the period 1952-1979 the average construction investment period required in the cement and railway transport sectors increased from 28 to 90 months, and from 11.7 to 28.8 months respectively. Investment required per unit of capacity increased from Rmb 74 per ton to Rmb 114 per ton in the

case of cement, and from Rmb 573,000/km to Rmb 2.47 million/km in terms of trunk railway line construction.

Table 17 reports the results of a survey of major industrial enterprises with respect to changes in per unit costs of iron and steel and non-ferrous metal products. Average costs went up by over 33 per cent over the period 1966-1980. These are large increases for a country which has experienced relatively little price fluctuations. Rising industrial costs have also been influenced by international price trends. The prices of many technological inputs have quadrupled over the last decade - just the period when China began importing technology on a large scale.

Table 17. Rise in cost of products of major iron and steel and non-ferrous metal enterprises, 1966-1980
(Yuan/ton)

	1966	1978	1980	Rate of increase 1980/1966 (per cent)
Iron ore	5	6	6.84	25
Coke	63	66	81.20	29
Pig iron	105	138	161.44	54
Converter steel ingots	228	231	253.9	11.3
Hot-rolled sheet metal	2[illegible]	408	455.51	75.2
Welded steel pipes	408	521	524.27	28.5
Refined copper	2 088	2 489	2 687.66	28.7
Lead	931	900	1 058.37	13.7
Zinc	1 399	1 441	1 403.12	0.3
Alumina	218	199	206.50	-5.3
Tungsten	4 378	5 190	5 974.75	36.5
Molybdenum	7 822	8 285	9 253.92	18.3
No.2 purple sheet copper	6 460	6 428	6 106.73	-5.5
Industrial pure aluminium sheet	2 737	3 792	3 633.70	32.8
Average for 16 iron and steel products				33.2
Average for 18 non-ferrous metal products				46.4

Source: Maruyama A., "The Mechanism of China's Industrial Development", The Developing Economies, Vol. 22, 1982.

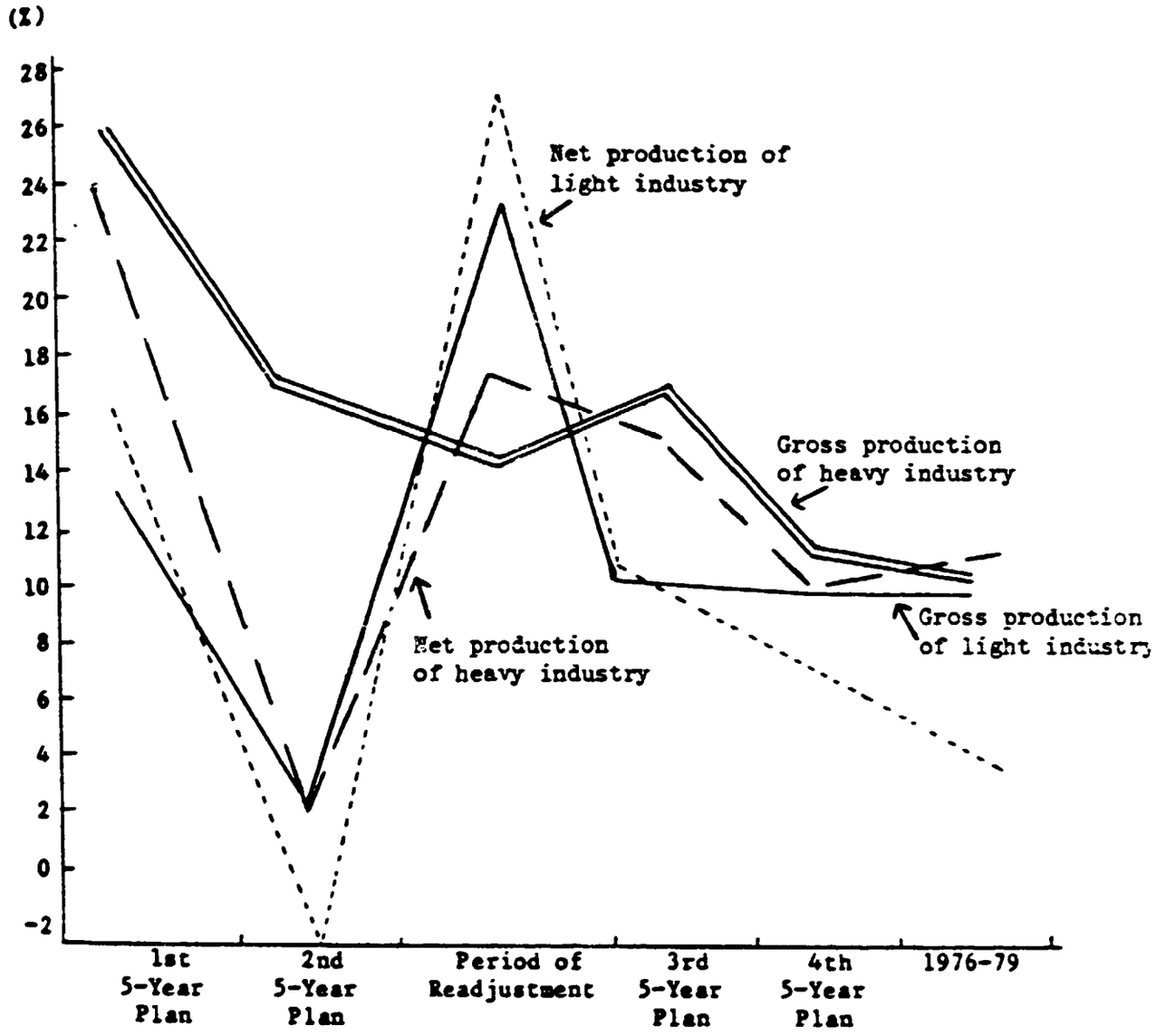
Figure 1 shows that divergencies between gross and net output growth were particularly marked during the period of the "Great Leap Forward". In the Fifth Plan period significant differences emerged between the gross and net output growth rates of light industrial branches. This trend has apparently re-emerged during 1981-83. This reflects increasing unit costs and a rising use of raw materials and intermediaries per unit of output. During the late 1970s heavy industry also suffered from large increases in inventories reflecting an inability to orient production to meet the changed pattern of investment goods requirements.

Table 18 provides recent data on physical output per worker in key manufacturing enterprises. The experience of these enterprises over a two-year period is perhaps inadequate to establish inferences regarding rates of growth of output-per-man or productivity. Though the experience of different enterprises has been far from uniform - some managed to increase their production with a proportionately much smaller contribution from increased manpower, while others required a proportionately greater increase in labour input. Manufacturing enterprises in general suffered a decline in output per worker. However, enterprises engaged in the production of mercury process, electrolytic liquid caustic soda, machine-made paper and paperboards, bicycles, salt, beet sugar and a few metallurgical products experienced an increase in labour productivity in 1983. Mercury process electrolytic liquid caustic soda registered the highest growth in labour productivity (46.7 per cent increase in 1983 over 1982). The incidence of technical progress, as measured by the rates of growth of labour productivity, appears to be the highest in this subsector.

Table 19 presents estimates for financial performance indicators for State-owned independent accounting enterprises. The Table shows that 1982 was a difficult year for these enterprises. Although revenue realized from sales increased by 9 per cent and profits by 3 per cent, the rate of increase in total capital employed was greater than the growth in profits (as well as in total surplus, i.e. profits plus taxes). The gross output to (original) investment ratio declined by 1.4 per cent. The profit to investment ratio declined by 3 per cent. The World Bank had estimated a value of 24.78 per cent for the ratio profits plus taxes to total funds employed in 1979.

Figure 1

Average rate of increase in industrial production



Source: Maruyama, N., "The Mechanism of China's Industrial Development", The Developing Economies (1982), p.451.

Table 18. Labour productivity in output terms of key industrial branches, 1982 and 1983

Item	Unit	1982	1983
Salt	ton/worker.year	145.87	152.80
Cane sugar	ton/worker.year	24.99	24.70
Beet sugar	ton/worker.year	18.34	20.80
Cigarettes	case/worker.year	169.25	166.70
Synthetic detergent	ton/worker.year	37.86	41.30
Cotton yarn	bale/worker.shift	0.182	0.177
Cotton cloth	metre/worker.shift	100.81	100.69
Sulphuric acid	ton/worker.year	754	743
Soda ash (ammonia-soda process)	ton/worker.year	379	372
Soda ash (dual process)	ton/worker.year	486	448
Electrolytic liquid caustic soda (100%)			
- diaphragm process	ton/worker.year	238	234
- mercury process	ton/worker.year	169	248
Synthetic ammonia	ton/worker.year	198	196
Synthetic ammonia - 300,000-ton equipment	ton/worker.year	3,785	3,624
Overall productivity of cement production	ton/person.year	240	252
Overall productivity of crude oil production	ton/person.year	199.7	196.2
Iron smelting, blast furnace	ton/worker.year	1,282	1,387
Steel making - open hearth	ton/worker.year	506	534
- electric furnace	ton/worker.year	187	207
- side-blower converter	ton/worker.year	269	266
- top-blower converter	ton/worker.year	619	635
Machine-made paper and paperboards	ton/worker.year	14.49	15.70
Bicycles	unit/worker.year	250	253
Sewing machines	unit/worker.year	154	143
Wrist watches	unit/worker.year	647	602

Source: Statistical Yearbook of China, 1984.

Table 19 shows that this ratio had declined to 23.84 per cent by 1981 and to 23.45 per cent by 1982. During the period 1979-1982 total capital employed increased from Rmb 348.75 billion to Rmb 414.59 billion, but profits and taxes increased from Rmb 86.4 billion to Rmb 97.2 billion. The situation improved marginally during 1983. Sales rose by 9 per cent and profits by 7 per cent.

Table 19. Principal financial items of State-owned independent accounting industrial enterprises, 1981, 1982 and 1983

	Item	Unit	1981	1982	1983	1982 as per cent of 1981	1983 as per cent of 1982
I.	Number of enterprises		62,065	63,063	63,620	101.6	100.9
II.	Original value of fixed assets (year end)	Rmb100 million	4,032.28	4,374.95	4,767.80	108.5	109.0
	of which for industrial production	Rmb100 million	3,323.02	3,590.24	3,882.49	108.0	108.1
III.	Total funds	Rmb100 million	3,872.98	4,145.92	4,452.49	107.0	107.4
	Net value of fixed assets (year-end)	Rmb100 million	2,709.32	2,914.01	3,161.00	107.6	108.5
	Quota circulating fund[a/]	Rmb100 million	1,163.66	1,231.91	1,291.49	105.9	104.8
IV.	Revenue from sales of products	Rmb100million	3,705.08	4,030.73	4,404.84	108.8	109.3
V.	Gross industrial output value (at 1980 constant prices)	Rmb100 million	3,875.45	4,146.66	4,535.55	107.0	109.4
VI.	Profits and taxes	Rmb100 million	923.29	972.19	1,032.81	105.3	106.2
	Profits	Rmb100 million	579.67	597.66	640.94	103.1	107.2
	Taxes	Rmb100 million	343.62	374.53	391.87	109.0	104.6
VII.	Gross output value per Rmb100 Original value of fixed assets	Rmb	96.11	94.78	95.13	98.6	100.4
VIII.	Profits and taxes per Rmb100 Original value of fixed assets	Rmb	22.90	22.22	21.66	97.0	97.5
IX.	Ratio of profits and taxes to total fund	per cent	23.84	23.45	23.20		
X.	Ratio of profits and taxes to cost	per cent	33.39	31.98	30.94		
XI.	Decrease rate of cost of comparable products[b/]	per cent	-1.17	-0.38	0.24		

Source: Statistical Yearbook 1984, p. 264.

a/ Calculated on basis of average holding of circulating fund of the year.
b/ Minus sign (-) indicates an increase in cost.

However, the rate of growth of total funds employed continued to exceed that of gross profits. The output to investment ratio remained constant and the profits to total capital employed ratio declined by about 3 per cent. Surplus generated per unit of investment declined by a similar proportion.

Using output and profit ratios, Table 20 facilitates an examination of interbranch differences in enterprise performance in 1982 and 1983. Inter-branch performance is highly affected by the existence of price distortions within the economy. The existence of substantial price distortions is widely recognized in China. Reducing these distortions is an important objective of the reforms announced by the Communist Party's Central Committee in October 1984. Cost and tax discrimination as well as a number of other factors lead to the introduction of systematic bias in inter-industry profit differentials. Thus it can safely be conjectured that the current emphasis on the development of consumer goods producing light industry has been an important determinant of the large profit rate differential between light and heavy industry displayed in Table 20. The surplus ratio is currently three times larger in light industry. How much of this difference is accounted for by government policies and planning priorities is not possible to establish.

There exists a positive correlation between the output and the surplus ratio. Firms with high rates of output to fixed assets also had a relatively high surplus to total cost ratio in 1982 and 1983 - indeed the relationship seems to have strengthened in the latter year. Output level differentials could thus be seen as determinants of profit rate differentials.

In general, light industry branches had relatively high output and surplus ratios. These include tobacco manufactures, cotton textiles, food products (taken as a group) and chemicals for daily use. Some light industry branches such as edible oil, clothing and meat processing had high output and low profit ratios. Some heavy industry branches had high profit ratio ranks - organic chemicals, petroleum products - but low output ratios.[43/] Table 20 also shows that while both output and surplus ratios largely stagnated during 1983 for industry as a whole, the performance of heavy industry improved. Heavy industry recorded a growth of 3.2 per cent in terms of the output ratio and a growth of 5 per cent in terms of the surplus ratio.

To entice maximum possible efficiency from enterprises, profit-retention system as a reward for "performance" has been introduced by the Chinese Government in recent years. The following systems are noteworthy:[44/]

Enterprise funds system (1978):

Some enterprises fulfilling plan targets were allowed to retain an amount of profits equivalent to a fixed per cent of the wage bill

Incremental profit system (1979):

Some enterprises were entitled a fixed share of base profits plus 10 to 30 per cent of incremental profits

Profit target system (1981-83):

Retention of a large share of profits above a target profit

Profit sharing system (1981-83):

Sharing profits between the enterprise and the State according to a scale determined by the authority

Profit tax system (1981-83):

Pay taxes rather than sharing profits

These systems which were experimented within different regions seem to have created a positive impact on the performance of Chinese enterprises.

The overall labour productivity of State-owned independent accounting heavy industrial enterprises rose by 16 per cent over 1981-1983. Significant gains were recorded by the machine building, building materials and chemicals industries. On the other hand, the labour productivity of light industries did not increase. Reductions were registered in the textile, leather and clothing industries.

Capacity utilization rates have increased modestly - on average by about 1 per cent - and variations around this mean are also relatively small. Impressive gains have been recorded by the machine building industry and some segments of the building materials and metallurgical industries. The performance of the textile sector has in general been lower. Some important light industries recorded negative growth in productivity. These were food

Table 20. Output and profit (surplus) ratios of State-owned independent accounting units, 1982 and 1983

	Output[a/]		Surplus[b/]	
	1982	1983	1982	1983
Metallurgy	72.52	72.02	15.89	16.80
Power	35.47	34.55	15.54	15.01
Coal and coke	33.04	32.10	2.03	1.97
Petroleum	93.94	86.80	38.73	34.35
Chemical	114.26	118.31	26.81	28.16
Basic chemical	89.38	87.60	21.64	22.18
Fertilizers	55.15	58.90	8.00	10.34
Pesticides	183.65	199.50	19.20	25.23
Organic	134.53	135.32	42.19	41.80
Chemicals daily use	302.51	289.75	67.96	60.65
Machine building	76.21	65.34	13.49	16.33
Agricultural machinery	66.11	77.74	4.20	7.69
Industrial machinery	63.58	70.89	11.14	13.56
Transport equipment	66.87	78.85	9.99	13.26
Other production	79.50	93.02	16.36	20.96
Electronic	92.70	112.87	12.36	19.03
Metal products	231.17	235.87	52.61	53.07
Building materials	60.62	60.55	14.72	15.78
Cement	54.85	54.72	13.63	14.14
Bricks etc.	69.92	68.93	13.35	13.61
Glass	84.57	83.94	31.65	36.80
Ceramics	76.42	74.36	18.84	19.85
Non-metallic	58.46	59.70	11.67	12.65
Forest industry	67.19	63.11	16.18	15.60
Logging	46.14	44.79	12.27	12.69
Food industry	312.52	281.46	83.32	72.11
Food and oil	571.41	554.27	31.67	31.66
Salt making	97.25	97.28	23.13	66.32
Meat processing	912.59	318.48	19.13	9.10
Canned food	266.75	257.20	31.93	25.93
Sugar refining	100.13	97.32	28.22	24.03
Tobacco	1014.39	823.38	835.89	666.84
Liquors	167.14	160.35	65.79	59.67
Textile industry	274.97	241.34	55.07	37.43
Chemical fibres	88.33	72.01	28.49	18.47
Cotton textiles	320.35	305.92	62.52	43.74
Clothing	419.61	381.57	60.95	54.53
Leather	231.10	206.68	32.07	28.32
Paper products	129.35	127.96	17.75	27.46
Paper	106.41	106.34	21.57	21.64
All branches	94.78	95.13	22.22	21.66
Light industry	245.73	226.81	56.53	46.87
Heavy industry	62.62	64.65	14.91	15.63

Source: Statistical Yearbook, 1984, pp. 267-268.

a/ Gross output value per Rmb 100 original value of fixed assets.
b/ Profits and taxes per Rmb 100 original value of fixed assets.

and leather. Turnover and profits by State-owned enterprises expanded by 10.5 per cent in 1984.

The generally satisfactory performance of the industrial sector in recent years encouraged the Government to announce in October 1984 a major programme for "the invigoration of enterprises particularly the large- and medium-sized enterprises owned by the whole people". The purpose of these reforms is to significantly enhance the organizational autonomy of the enterprise. In the words of the Central Committee resolution, "The enterprise should be truly made a relatively independent economic entity and should become a producer and operator of socialist commodity production that is ... responsible for its own profit and loss and capable of transforming and developing itself and (capable of acting) as a legal person with certain rights and duties".[45/]

Events in 1985 promise to press ahead with the economic structural reforms unveiled in October 1984. In the new wave of reforms "social surplus" signifies that portion of profits derived from competitive efforts in improving product quality, technology, management techniques, work habits, firm-specific and manager-specific ingenuity within the framework of greater autonomy directed towards redressing industrial loss and inefficiency. Increasing enterprise autonomy and responsibility have major implications for the pattern of industrial investment and the structure of organizational decision-making.

2.3 Investment patterns

Industrial investment for capital construction in China averaged 42.5 per cent of the total in the First Plan period (1953-57). It increased to 60.4 per cent during the Second Plan period, but declined to about 55 per cent during the next two plans. This decline has continued over the period 1975-1983. In 1983 investment in industrial capital construction represented 47.5 per cent of total capital construction investment.[46/] Table 21 presents estimates of capital construction by different branches of industry. It can be seen that light industry's share in industrial capital construction has fluctuated significantly. It declined over the period 1953-70 and has shown an upward trend till 1981. The most marked increase was recorded in

Table 21. Investment in capital construction by branch of industry, 1953-1983
(Rmb 100 million)

Year	Metallurgical industry	Power industry	Coal industry	Petroleum industry	Chemical industry	Machine building industry	Forest industry	Building materials industry	Textile industry	Food industry	Paper-making industry
1953-1957	46.61	29.78	29.68	11.98	13.61	38.47	6.16	6.33	15.98	10.15	3.79
1958-1962	169.23	88.88	86.98	25.10	55.22	116.87	17.75	23.72	19.78	23.48	9.57
1963-1965	33.94	22.07	25.15	16.44	23.60	24.42	14.08	7.16	7.92	4.00	1.36
1966-1970	98.79	68.60	46.65	38.84	62.20	74.09	15.55	14.63	13.72	9.99	6.98
1971-1975	173.08	129.39	90.74	89.00	95.78	216.76	25.20	30.25	31.93	16.12	7.60
1976-1980	189.69	218.74	136.25	131.42	167.86	178.46	22.25	46.90	73.23	27.98	10.48
Of which: 1978	46.48	50.91	31.80	31.12	31.34	40.81	4.37	9.16	13.38	6.04	2.07
1979	34.72	50.99	31.86	27.07	29.46	36.24	4.94	12.44	14.12	6.06	2.80
1980	32.48	48.14	33.47	33.38	29.61	37.75	7.05	11.74	23.30	8.13	2.91
1981-1985											
1981	27.35	40.14	23.15	27.95	19.02	24.39	6.63	8.79	19.86	9.26	1.91
1982	43.00	46.23	29.85	25.30	25.78	27.12	7.85	11.67	21.16	14.07	1.69
1983	42.47	57.46	40.07	29.02	30.07	26.75	6.42	14.00	17.08	11.28	1.71

Source: Statistical Yearbook of China 1984.

1981 when it amounted to 20 per cent of total capital construction expenditure in industry. During 1982 capital construction investment in heavy industry grew by 24 per cent, but growth recorded in light industry was only 7.5 per cent, hence the share of light industry in industrial capital construction expenditure fell to 17.5 per cent in 1982. In 1983 light industry's share declined further to 13.6 per cent.

Table 21 also shows that there has been relatively little structural change in the interbranch distribution of capital construction investment over the period 1976-1983. The share of some heavy industries experienced a decline. The share of food and textile industries rose significantly. The changes are more pronounced if the 1976-80 averages are compared with the 1981 listing. However, despite the relatively rapid growth of light industry investment during 1980-81 heavy industry continues to account for over 80 per cent of total expenditure on capital construction.

Figures are also available for investments in technical innovation[47/] and transformation by branch of industry in 1981, 1982 and 1983. In 1983 total industrial innovation investment amounted to Rmb 264.34 billion while industrial capital construction expenditure to Rmb 284.18 billion. In 1981 innovation expenditure amounted to Rmb 164.4 billion and capital construction amounted to Rmb 216 billion. The share of innovation (or modernization) investment in total industrial investment is thus seen to have increased.

Table 22 shows that the share of heavy industry in technical innovation investment was significantly higher than that of light industry in 1983. The textile industry ranks as the third highest recipient of innovative investment in 1981, 1982 and 1983. The food industry ranks sixth in 1982 and seventh in 1983 (out of a total of 16 branches specified in Table 22). Investment for modernization in the chemical industry has also been substantial.

Spending priorities proposed in the budget for 1985 indicate that funds for technical innovation will increase by 24 per cent in 1985. Energy and

Table 22. Investment in technical innovation and transformation by branch of industry, 1981, 1982 and 1983

Branch of industry	Investment (Rmb 100 million)			Proportion (National total = 100)		
	1981	1982	1983	1981	1982	1983
National total	224.60	289.78	357.83	100.0	100.0	100.0
All branches of industry	164.41	206.83	264.34	73.2	71.4	73.9
By light and heavy industries						
Light industry	51.95	63.89	77.32	23.1	22.1	21.6
Heavy industry	112.46	142.94	187.02	50.1	49.3	52.3
By branch of industry						
Metallurgical industry	18.66	20.28	25.04	8.3	7.0	7.0
Power industry	8.52	9.31	12.75	3.8	3.2	3.6
Coal industry	14.84	18.33	23.21	6.6	6.3	6.5
Petroleum industry	30.01	43.73	55.00	13.4	15.1	15.4
Coking and coke chemical industry	0.22	0.31	0.43	0.1	0.1	0.1
Chemical industry	17.16	20.93	27.04	7.6	7.2	7.5
Machine-building industry	23.57	29.02	36.29	10.5	10.0	10.1
Building materials industry	5.56	9.06	13.29	2.5	3.1	3.7
Forest industry	2.57	2.97	5.61	1.1	1.0	1.6
Food industry	12.72	18.99	21.80	5.7	6.6	6.1
Textile industry	20.05	23.41	30.78	8.9	8.1	8.6
Clothing industry	0.20	0.24	0.26	0.1	0.1	0.1
Leather industry	1.11	0.97	0.79	0.5	0.3	0.2
Paper-making industry	3.21	2.72	5.53	1.4	1.0	1.0
Other light industries	5.45	6.23	7.85	2.4	2.2	2.2
Other heavy industries	0.56	0.33	0.67	0.3	0.1	0.2

Source: Statistical Yearbook of China 1984, p. 334.

transport will absorb Rmb 44.7 billion capital investment from the State budget and government bank loans.[48/]

Non-budgetary sources have become inceasingly important in the financing of industrial investment. Both the World Bank and the Chinese sources reveal a declining trend of State funds as a source of industrial finance. Bank

lending has often been in excess of planned targets. Thus in 1982 domestic bank credit for capital construction totalled Rmb 7.3 billion - although the Credit Plan approved by the People's Bank of China and the State Council allocated only Rmb 3.5 billion for this purpose.[49/]

The objective of investment strategy in China is not merely rapid growth, but widely spread benefit to all population groups and regions in China. Hence, considerations of size and geographical distribution of enterprises are of critical importance. The next section addresses itself to this issue.

2.4 Size and geographical distribution

International comparisons of size distribution of industrial enterprises show that the proportion of small enterprises in China is quite similar to that of a typical developing or developed country. A classification of industrial enterprises according to size of labour employed reveals that enterprises employing 5-33 workers accounted for 59.2 per cent of total enterprises in 1982. This category of enterprises had a share of 51.7 per cent in India and 56.4 per cent in the UK during the late 1970s. In China around 20 per cent of industrial enterprises comprises those employing 33-75 workers, and enterprises employing 75-189 workers constitute around 10 per cent. Large firms employing more than 189 workers account for less than 10 per cent of total enterprises. A more detailed presentation of number of enterprises by branch of manufacturing during 1981-83 is provided in Table 23. The Table suggests that one third of industrial enterprises concentrate on the production of machinery and building materials. Food industry constitutes around 16 per cent of enterprises. Forest and textile industries had a share of 4.7 per cent each in the total number of 392,500 industrial enterprises in 1983.

Estimates of the regional distribution of gross industrial output value given in Table 24 indicate that industrial output value is widely dispersed in China. The distribution has tended to remain relatively unchanged over the period 1979-1983. This is indicated by the fact that the mean of the 1983 distribution is 3.46 per cent (standard deviation = 2.72) compared to 3.44 per cent (standard deviation = 2.91) for the 1979 distribution. Of the five

Table 23. Number of industrial enterprises by branch of manufacturing, 1981-83

Item	Enterprises (10 thousand)			Proportion (per cent)		
	1981	1982	1983	1981	1982	1983
Metallurgical industry	0.46	0.46	0.48	1.2	1.2	1.2
Petroleum industry	0.03	0.03	0.03	0.1	0.1	0.1
Chemical industry	2.38	2.43	2.52	6.2	6.3	6.4
Of which: basic chemical materials	0.26	0.26	0.27	0.7	0.7	0.7
Chemical fertilizers	0.36	0.36	0.37	0.9	0.9	0.9
Chemical pesticides	0.04	0.04	0.04	0.1	0.1	0.1
Organic chemicals	0.27	0.27	0.28	0.7	0.7	0.7
Chemicals for daily use	0.13	0.13	0.13	0.3	0.3	0.3
Machine-building industry	10.41	10.23	10.16	27.3	26.3	25.9
Of which: Agricultural machinery	0.72	0.68	0.67	1.9	1.7	1.7
Industrial machinery	0.76	0.75	0.76	2.0	1.9	1.9
Transport equipment	0.27	0.26	0.28	0.7	0.7	0.7
Other machinery for production	0.55	0.56	0.60	1.4	1.4	1.5
Electronic apparatus	0.41	0.39	0.39	1.1	1.0	1.0
Metal products for daily use	1.12	1.13	1.10	2.9	2.9	2.8
Building materials industry[a/]	4.85	5.03	5.19	12.7	12.9	13.2
Of which: Cement and cement products	1.16	1.25	1.34	3.0	3.2	3.4
Bricks, tiles, lime and other building materials	3.20	3.28	3.31	8.4	8.4	8.4
Glass	0.07	0.07	0.08	0.2	0.2	0.2
Ceramics	0.05	0.06	0.06	0.1	0.2	0.2
Non-metallic minerals	0.21	0.21	0.23	0.6	0.5	0.6
Forest industry	1.75	1.83	1.83	4.6	4.7	4.7
Of which: Logging and transport of wood	0.17	0.17	0.17	0.4	0.4	0.4
Food industry	5.56	6.01	6.25	14.6	15.5	15.9
Of which: Food and oil	2.48	2.61	2.66	6.5	6.7	6.8
Salt-making	0.08	0.07	0.07	0.2	0.2	0.2
Slaughtering and meat processing	0.25	0.26	0.28	0.7	0.7	0.7
Canned Food	0.05	0.06	0.07	0.1	0.2	0.2
Sugar refining	0.08	0.08	0.08	0.2	0.2	0.2
Tobacco manufactures	0.03	0.03	0.03	0.1	0.1	0.1
Liquors	0.83	0.87	0.88	2.2	2.2	2.2
Textile industry	1.71	1.81	1.84	4.5	4.7	4.7
Of which: Chemical fibres	0.02	0.02	0.02	0.1	0.1	0.1
Cotton textiles	0.51	0.54	0.55	1.3	1.4	1.4
Clothing industry	2.31	2.30	2.22	6.1	5.9	5.7
Leather industry	0.63	0.65	0.64	1.7	1.7	1.6
Paper making and cultural and educational articles	2.00	2.13	2.15	5.2	5.5	5.5
Of which: paper making	0.47	0.47	0.45	1.2	1.2	1.1

Source: Statistical Yearbook of China, 1984.

a/ Excluding glassware or ceramics for daily use.

largest contributors to gross value of industrial output in 1979, two - Shanghai and Liaoning, - experienced a decline in their share of national industrial output value. Collectively, the five leading industrial provinces produced 42.3 per cent of gross value of industrial output in 1979. However, this share fell to 40.7 per cent by 1983. The share of the five smallest contributors to industrial output value - Xizang (Tibet), Ningxia, Qinghai, Xinjiang and Guizhou - rose from 2.3 per cent in 1979 to 2.6 per cent in 1983. Thus the main beneficiaries of the reforms seemed to be the middle-ranking provinces - such as Zhejiang, Hubei and Guangdong. The distribution of light industry output seems to be more concentrated than heavy industry. Zhejiang and Guangdong have seen a relatively rapid growth of light industry in the period 1979-1983.

Table 25 presents estimates of capital construction investments by province in 1983. Although the distributions in Tables 23 and 24 are fairly similar there are some exceptional cases when compared with Table 25. Thus Heilongjiang province - which ranks thirteenth in terms of industrial output contribution, obtains the second largest amount of capital construction investment. The share of Zhejiang province in capital construction investment is surprisingly small. The share of the five top-ranking provinces in terms of contribution to gross value of industrial output is 40 per cent while their share in capital construction investment is 35 per cent. The bottom five provinces accounted for 2.0 per cent of industrial output and 4.5 per cent of industrial capital construction investment in 1983. It is evident therefore that investment allocation is playing an important part in reducing inter-provincial industrial disparities.

New projects located in the industrially less advanced provinces tend to be relatively small. Small projects accounted for 70 per cent of total projects of capital construction located in the bottom five provinces in 1983. The share of small projects in the five top provinces in 1982 was 53 per cent. The share of small enterprises in gross industrial output value of the five bottom provinces was 51 per cent in 1983. The corresponding share of small enterprises in the top five provinces is 7.2 per [illegible] There is some evidence therefore to support the view that [illegible] reform has

Table 24. Gross industrial output value by province, 1979-1983
(per cent of national total)

	1979	1981	1982	1983
Northeast region				
Liaoning	9.1	8.7	8.5	8.4
Jilin	2.7	2.6	2.4	2.7
Heilongjiang	4.6	4.8	3.6	4.7
North region				
Beijing	4.6	4.2	4.0	4.1
Tianjin	3.8	3.9	3.7	3.7
Hebei	4.4	4.2	4.0	4.1
Shanxi	2.3	2.3	2.3	2.5
Nei Monggol (Inner Mongolia)	1.2	1.1	1.2	1.2
East region				
Shandong	6.5	6.6	6.0	6.6
Anhui	2.5	2.5	2.5	2.4
Shanghai	12.9	11.7	11.3	11.0
Jiangsu	8.4	9.0	8.9	9.2
Zhejiang	3.3	4.1	4.0	4.3
Jiangxi	1.7	1.8	1.6	1.7
Fujian	1.5	1.6	1.4	1.6
Central South region				
Henan	3.7	4.0	3.8	3.8
Hubei	4.1	4.8	4.8	5.1
Hunan	3.4	3.4	3.3	3.3
Guangxi	1.6	1.6	1.5	1.5
Guangdong	4.6	4.8	4.8	5.0
Northwest region				
Shaanxi	2.3	2.0	1.9	2.2
Gansu	1.8	1.4	1.4	2.2
Qinghai	0.3	0.2	0.2	0.3
Ningxia	0.3	0.3	0.1	0.4
Xinjiang	0.7	0.8	0.7	0.9
Southwest region				
Sichuan	5.4	5.3	5.3	5.5
Guizhou	1.0	0.9	0.8	1.0
Yunnan	1.3	1.4	1.4	1.5
Xizang (Tibet)	a/	a/	0.01	0.0
Total	100.0	100.0	100.0	100.0

Source: Statistical Yearbook, 1983, p. 227 and World Bank Report No. 4072-CHA (1983), p. 178, and Statistical Yearbook of China 1984, p. 213.

a/ Negligible.

Table 25. Investment in capital construction by sector of national economy and by province, 1983
(Rmb 100 million)

Province	All sectors	Industry	Of which:		Construction and resources prospecting	Of which: Resources prospecting	Agriculture, forestry, water conservancy and meteorology	Of which: Water conservancy
			Light Industry	Heavy Industry				
National total	594.13	282.28	38.75	243.53	13.89	3.36	35.45	21.10
Beijing	26.36	6.68	1.08	5.60	0.97	0.06	1.05	0.52
Tianjin	21.84	5.35	1.46	3.89	0.57	0.04	5.34	5.10
Hebei	26.83	12.63	1.01	11.62	0.74	0.13	2.65	2.47
Shanxi	21.78	14.79	0.81	13.98	0.51	0.09	0.76	0.44
Inner Mongolia	16.89	11.35	0.77	10.58	0.30	0.09	0.70	0.10
Liaoning	27.47	14.97	0.95	14.02	0.47	0.09	0.90	0.45
Jilin	13.30	7.90	0.72	7.18	0.34	0.09	0.62	0.36
Heilongjiang	34.72	24.40	2.42	21.98	0.61	0.08	1.84	0.35
Shanghai	43.01	32.60	3.36	29.24	0.65	0.16	0.52	0.06
Jiangsu	23.97	12.99	4.77	8.22	0.50	0.04	0.80	0.52
Zhejiang	12.50	6.40	1.55	4.85	0.32	0.03	0.76	0.41
Anhui	15.68	8.40	0.63	7.77	0.41	0.03	1.06	0.68
Fujian	11.83	3.60	1.38	2.22	0.28	0.06	0.73	0.24
Jiangxi	12.33	8.62	0.88	7.74	0.18	0.06	0.57	0.18
Shandong	23.88	10.72	0.54	10.18	0.27	0.05	0.75	0.40
Henan	18.72	11.09	0.70	10.39	0.45	0.09	1.36	1.11
Hubei	24.47	12.64	1.71	10.93	0.82	0.05	1.39	0.74
Hunan	12.40	6.02	0.88	5.14	0.40	0.06	0.86	0.49
Guangdong	38.41	10.54	4.16	6.38	0.36	0.06	3.53	1.08
Guangxi	8.72	4.14	1.45	2.69	0.17	0.04	1.00	0.33
Sichuan	30.04	14.75	2.62	12.13	1.14	0.14	1.26	0.82
Guizhou	7.05	3.56	0.48	3.08	0.16	0.03	0.35	0.17
Yunnan	12.01	5.58	1.53	4.05	0.32	0.07	1.13	0.49
Tibet	1.61	0.38	0.04	0.34	0.02	0.01	0.10	0.02
Shaanxi	15.26	7.85	0.42	7.43	0.67	0.13	0.66	0.44
Gansu	9.08	4.78	0.35	4.43	0.33	0.06	1.27	0.78
Quinghai	8.09	5.42	0.11	5.31	0.10	0.05	0.24	0.09
Ningxia	3.19	1.25	0.25	1.00	0.09	0.02	0.64	0.43
Xinjiang	15.57	8.49	1.03	7.46	0.38	0.09	1.22	0.51
N.E.C.	57.12	4.39	0.69	3.70	1.36	1.36	1.39	1.32

Source: Statistical Yearbook of China 1984, p. 316.

been a gradual convergence of industrial structures stimulated both by new investment priorities and the greater emphasis placed on the expansion of domestic trade. The growth of trade among the provinces can play an important part in stimulating development and promoting a more efficient regional division of labour as far as industrial production is concerned.

It is also expected that international trade will contribute to an efficient restructuring of industrial production. A rational industrial location with a focus on balanced regional dispersion requires a dismantling of intra- and inter-regional trade and the development of greater degree of specialization to seize the opportunities offered by the changing structure of China's trade with the rest of the world.

2.5 Exports and imports of manufactures[51/]

Manufactured exports increased in value terms from Rmb 13.49 billion in 1980 to Rmb 24.85 billion in 1983. Manufactured imports grew from Rmb 19.47 billion to Rmb 30.73 billion over the same period. The share of manufactures in total exports rose from 49.7 per cent in 1980 to 56.7 per cent in 1983 - in 1976 this share had been 45.4 per cent. Over the period 1980-83 the share of manufactures in total imports increased from 65.1 per cent to 72.8 per cent.

Product composition

Tables 26 and 27 present estimates of major manufactured export and import commodities by volume and value during 1976-81. Major manufactured export commodities include cotton cloth, silk and satin materials, and paper. The continued dependence on primary exports (including crude oil which in 1983 accounted for almost 22 per cent of total export earnings) and processed manufactures is clearly reflected by China's export profile. As Table 27 shows, main manufactured imports are steel products, chemical fertilizers and other chemicals. Important raw material imports include cotton and polyester fibres.

It has been shown that China has a comparative advantage[52/] in the export of two distinct types of manufactures: labour-intensive manufactures

Table 26. Major manufactured exports, by volume and value, 1976-81

		Volume						Value (in US$ million)				
		1976	1977	1978	1979	1980	1981	1977	1978	1979	1980	1981
Total								7,590	9,745	13,658	18,271	20,893
Canned fruit	('000 tons)	197.8	183.3	222.2	286.2	352.8	369.8	150	202	273	336	336
Beer	('000 tons)	-	20.8	17.9	19.2	25.9	31.1	7	6	6	8	11
Cotton yarn	('000 bales)	146.1	117.5	128.8	133.7	171.1	185.5	52	57	68	86	91
Cotton cloth	(mn metres)	-	771.61	1,095.64	1,108.83	1,086.30	1,173.94	400	580	699	712	745
Filature silks	(tons)	6,483	5,022	8,739	9,040	7,731	5,198	130	255	271	267	152
Silk and satin materials	(mn metres)	115.55	95.22	123.52	145.75	132.25	142.66	136	199	263	253	287
Wollen materials	(mn metres)	8.55	6.63	6.39	12.65	15.63	14.36	26	25	47	65	64
Tea	('000 tons)	61.2	81.8	86.9	106.8	108.0	89.50	158	186	229	254	196
Jute bags	('000)	27,800	24,200	37,550	52,850	109,510	130,650	8	14	23	52	57
Bristles	('000 cases)	139.5	140.8	130.5	174.7	152.2	140.7	59	55	80	68	58
Bristle bruches	('000 dozens)	2,739.6	3,860.0	4,180.0	5,770.0	6,781	9,232	10	14	18	22	26
Carpets, superior quality handmade	('000 sq.m.)	343.8	501.5	740.2	850.4	846.9	1,150.6	38	61	83	90	114
Goat skins	('000 hides)	5,304	6,841	8,160	11,010	9,675	15,102	21	26	53	53	62
Fur mattresses	('000 pieces)	4,076.6	3,028.0	5,090.0	6,350.0	6,872.0	4,810.6	50	65	88	100	73
Paper	('000 tons)	131.5	104.1	134.0	161.2	173.9	191.8	44	57	78	94	103
Sewing machines	('000 units)	336.0	284.0	386.3	496.7	621.0	562.2	12	18	21	26	29
Bicycles	('000 units)	392.8	375.9	302.8	642.1	839.0	1,119.4	13	12	26	35	51
Tyres	('000 sets)	299.5	269.8	289.3	414.8	542.6	388.5	20	20	23	31	22
Machine tools	(pieces)	4,366	4,296	4,803	6,556	7,65[illegible]	7,968	18	22	31	37	32

Source: Ministry of Foreign Trade.

Table 27. Major manufactured imports, by volume and value, 1976-81

		Volume						Value (in US$ million)				
		1976	1977	1978	1979	1980	1981	1977	1978	1979	1980	1981
Total								7,214	10,893	15,675	19,550	19,482
Trucks[a/]	(units)	18,248	14,916	21,872	24,768	22,015	9,896	139	310	450	323	85
Ships and vessels	(units)	13	15	29	47	43	19	162	156	231	230	40
Airplanes	(units)	38	18	13	14	28	7	67	43	25	60	8
Steel products	(mn tons)	4.931	5.256	8.638	8.473	5.006	3.319	1,477	2,698	3,522	2,240	1,362
Chemical fertilizers	(mn tons)	4.5881	6.396	7.333	8.395	10.017	9.306	340	481	655	1,065	1,092
Chemicals		n.a.	n.a.	n.a.	n.a.	950	991	402	530	635	950	991
Agricultural chemicals	('000 tons)	45.1	72	82	82	50	133	60	75	110	78	72
Paper	('000 tons)	151.1	254	364	487	752	762	55	102	173	330	340
Watches	(mn units)	0.7636	0.937	2.197	1.876	3.127	5.447	11	34	31	52	73
Televisions	('000 units)	n.a.	31	89	784	1,605	1,710.8	4	12	82	102	159
Tape recorders	('000 units)	n.a.	n.a.	n.a.	201	361	667	n.a.	n.a.	6	11	13
Sugar	(mn tons)	0.5771	1.598	1.299	1.096	0.912	1.029	342	264	219	294	485
Cocoa	('000 tons)	10.7	12	15	17	15	5.6	31	54	61	46	11
Coffee	('000 tons)	6.3	6	5	4	5	5.8	30	17	11	17	8

Source: Ministry of Foreign Trade.

a/ Includes chassis, trucks, jeeps, trailers, cabs, etc.

Table 28. Trade statistics relating to China's thirty most successful export products in 1976-78

SITC	Description	China's share in World manufacturing trade		Share in China's total manufacturing exports		China's net exports as a percentage of trade		Export performance ratio	
		1976-78	1969-71 to 1976-78 change	1969-71	1976-78	1969-71	1976-78	1969-71	1976-78
656 b/	Made-up articles of textiles	0.27	-0.05	4.38	5.55	0.96	0.97	13.783	20.340
074 a/	Tea and maté	0.15	-0.07	3.10	2.66	1.00	1.00	13.849	17.583
042.2 a/	Rice glazed or polished	0.26	-0.00	6.94	4.20	0.97	0.90	27.304	16.147
571	Explosives and pyrotechnics	0.06	-0.01	0.39	0.84	1.00	1.00	5.362	12.185
652 b/	Cotton fabrics, woven	0.66	-0.06	11.96	8.34	1.00	0.99	16.710	12.692
899 b/	Manufactured articles, n.e.s.	0.39	-0.15	3.64	4.62	1.00	0.97	6.817	11.847
613	Fur skins, tanned or dressed	0.11	0.01	1.02	1.27	1.00	0.99	9.864	11.509
055 c/	Prepared roots or tubers	0.26	-0.01	2.44	2.68	1.00	0.99	9.150	10.378
666 a/	Pottery	0.17	-0.02	0.55	1.72	1.00	1.00	8.911	10.076
842 b/	Fur clothing	0.07	0.02	0.10	0.50	1.00	1.00	2.020	6.889
052 c/	Dried fruit	0.07	-0.02	0.51	0.44	0.94	0.60	6.036	6.343
657 b/	Floor coverings, tapestries	0.36	0.01	1.49	2.21	0.99	1.00	4.271	6.216
687 a/	Tin	0.21	-0.07	1.40	1.01	1.00	1.00	4.972	4.761
831 b/	Travel goods and handbags	0.17	0.03	0.46	0.80	1.00	0.99	3.334	4.604
551 a/	Essential oils	0.15	-0.02	0.92	0.65	0.99	0.97	5.395	4.320
895 b/	Office and stationery supplies	0.13	-0.01	0.66	0.51	0.99	1.00	4.839	3.977
841 b/	Clothing, except fur	0.21	-0.07	6.15	9.56	0.98	0.99	2.445	3.602
053 c/	Preserved fruit	0.30	-0.04	1.20	1.07	1.00	1.00	3.500	3.510
653 b/	Woven textile fabrics, not cotton	1.37	-0.61	4.24	4.24	0.72	0.51	2.144	3.087
696 b/	Cutlery	0.13	-0.04	0.29	0.38	0.92	0.99	1.744	2.946
011-013 a/	Meat and meat preparations	1.62	-0.44	6.66	4.68	1.00	1.00	3.249	2.897
661 b/	Lime, cement and building materials	0.32	0.08	0.91	0.92	1.00	0.87	3.791	2.852
651 b/	Textile yarn and thread	1.17	-0.45	3.44	3.22	0.30	0.34	2.123	2.756
047 a/	Meal and cereal flours	0.02	-0.00	0.06	0.04	1.00	1.00	2.810	2.353
812 b/	Heating and lighting fixtures	0.32	-0.02	0.59	0.70	0.97	0.96	1.709	2.155
048 a/	Cereal preparations	0.27	0.00	0.69	0.59	0.99	1.00	2.562	2.154
851 b/	Footwear	0.77	-0.04	1.13	1.62	1.00	1.00	1.400	2.108
894 b/	Toys and sporting goods	0.66	-0.08	1.07	1.18	0.99	0.99	1.637	2.067
099 c/	Food preparations, n.e.s.	0.22	0.04	0.39	0.43	1.00	1.00	2.131	1.941

Sources: Yeats A., "China's Recent Export Performance," Development and Change, Vol. 15, No. 1, 1984.

a/ Designated by UNIDO as a manufactured product which is natural resource-based in production characteristics.
b/ Designated by the National Bureau of Economic Research as a labour-intensive manufactured good.
c/ Cross-classified by UNIDO and the NBER as a resource-based and labour-intensive product.

on the one hand and natural resource-based manufactures on the other (see Table 28). Export diversification had not been particularly rapid during the 1970s and textiles and food products continue to dominate the export structure. China's comparative advantage[53/] is in products which have experienced declining shares in world trade. As against this, China has the lowest comparative advantage (highest comparative disadvantage) in capital - and technology-intensive products with rapidly growing world trade shares. This makes China's export profile roughly similar to that of India[54/] and dissimilar to that of East Asian newly industrializing countries who have succeeded in substituting technology-intensive manufactures for their traditional labour-intensive exports, and who did not enjoy an advantage in the production of natural resource-based manufactures at an earlier stage of their industrialization. Further, there is no statistical support for the hypothesis that China is evolving along the same general expansion paths that have been followed by other South East Asian countries.[55/]

Table 29 presents China's top exports and imports in 1983 and 1984. The commodity composition covers SITC two-digit industries in the broad definition of manufacturing, i.e., SITC 0-8. Bumper harvests have not only trimmed cereal imports but also allowed China to export some of its surpluses. In 1984 cereals and cereal preparations recorded 142.8 per cent increase over 1983. Exports of textiles and garments, accounting for 24 per cent of total exports, grew by 447 per cent in 1984. Companies selling automobiles, electrical appliances, calculators, and personal computers to China enjoyed a boom year in 1984. Increases in imports of these items ranged from 130 per cent to 500 per cent during 1983-84. More than Rmb 2 billion, up 254 per cent from 1983, was spent on imports of 148,000 trucks and passenger cars. Export and import figures for 1984 must be interpreted with caution as depreciation of the renminbi, which plunged 41 per cent against the US dollar in 1984, distorted trade figures.

Destination and origin of exports and imports

Table 30 classifies Chinese exports and imports according to country destination and sources for 1984. A similar breakdown of manufactured

Table 29. China's top exports and imports, 1983 and 1984
(Rmb millions, exports f.o.b., imports c.i.f.)

SITC Rev.2 Code		1983	1984	1984/83 (% change)
	Export Commodities			
33	Petroleum, petroleum products, and related materials	8,536.56	12,645.14	48.1
65	Textile yarn, fabrics, made-up articles, not elsewhere stated (n.e.s.), and related products	5,731.27	8,173.79	42.6
84	Articles of apparel and clothing accessories	4,063.92	5,895.78	45.1
89	Miscellaneous manufactured articles, n.e.s.	2,032.22	2,746.74	35.2
26	Textile fibres (other than wool tops) and their wastes (not manufactured into yarn or fabric)	1,326.34	2,038.83	53.7
05	Vegetables and fruit	1,588.08	1,842.08	16.0
22	Oil seeds and oleaginous fruit	632.46	1,094.39	73.0
69	Manufacture of metals, n.e.s.	1,018.38	1,057.57	3.8
79	Other transport equipment	718.59	1,029.43	43.3
04	Cereals and cereal preparations	422.70	1,026.11	142.8
07	Coffee, tea, cocoa, spices and manufactures thereof	704.68	1,006.50	42.3
01	Meat and meat preparations	885.62	1,005.79	13.6
29	Crude animal and vegetable materials, n.e.s.	821.76	978.74	19.1
76	Telecommunications, sound recording, reproducing apparatus, and equipment	403.96	757.92	87.6
00	Live animals, chiefly for food	664.78	720.10	8.3
32	Coal, coke, and briquettes	663.83	709.23	6.8
03	Fish, crustaceans and mollusks, and preparations thereof	581.33	678.14	16.7
51	Organic chemicals	597.98	653.03	9.2
52	Inorganic chemicals	518.34	638.57	23.2
54	Medicinal and pharmaceutical products	529.55	608.78	15.0
66	Non-metallic mineral manufactures, n.e.s.	559.31	575.47	2.9
85	Footwear	438.42	565.73	29.0
27	Crude fertilizers and crude minerals (excluding coal, petroleum, and precious stones)	398.80	524.94	31.6
08	Feedstuff (not including unmilled cereals)	389.23	502.27	29.0
	Import Commodities			
67	Iron and steel	6,970.91	9,773.17	40.2
72	Machinery specialized for particular industries	2,718.90	4,784.85	76.1
04	Cereals and cereal preparations	4,855.01	3,992.36	-17.8
56	Fertilizers, manufactured	2,755.71	3,750.24	36.1
78	Road vehicles (including air cushion vehicles)	880.62	2,708.25	207.5
76	Telecommunications and sound recording and reproducing apparatus and equipment	692.15	2,679.07	287.1
58	Artificial resins and plastic materials and cellulose esters and ethers	1,208.33	2,588.30	114.2
68	Non-ferrous metals	3,045.31	2,530.68	-16.9
65	Textile yarn, fabrics, made-up articles, n.e.s. and related products	1,113.20	2,163.32	94.3
75	Office machines and automatic data processing equipment	534.99	1,990.19	272.4
79	Other transport equipment	1,701.53	1,711.46	0.6
24	Cork and wood	1,183.60	1,657.33	40.0
26	Textile fibres (other than wool tops) and their wastes (not manufactured into yarn or fabric)	1,640.87	1,541.78	-6.0
87	Professional, scientific, and controlling instruments and apparatus, n.e.s.	981.61	1,475.87	50.4
51	Organic chemicals	972.15	1,370.86	41.0
77	Electrical machinery, apparatus, and appliances, n.e.s., and electrical parts thereof	458.70	1,357.74	196.0
74	General industrial machinery and equipment, n.e.s., and machine parts, n.e.s.	472.74	972.65	105.7
59	Chemical materials and products, n.e.s.	566.33	762.80	34.7
28	Metalliferous ores and metal scrap	477.79	711.50	48.9
23	Crude rubber (including synthetic and reclaimed)	533.25	704.20	32.1
89	Miscellaneous manufactured articles, n.e.s.	304.27	679.61	123.4
52	Inorganic chemicals	525.91	643.90	22.4
25	Pulp and waste paper	553.00	622.66	12.6
06	Sugar, sugar preparations, and honey	870.10	575.76	-33.8
64	Paper, paperboard, and articles of paper pulp, of paper, or of paperboard	394.41	536.86	36.1

Source: General Administration of Customs of the PRC, China's Customs Statistics, No. 1, 1985.

Table 30. China's major trade partners, 1984
(Rmb millions; Rmb 2.85: US$1)

Country	Total trade	PRC exports(f.o.b) 1984	PRC exports(f.o.b) 1984/83 (Percentage change)	PRC imports(c.i f) 1984	PRC imports(c.i f) 1984/83 (Percentage change)	Trade Balance
Japan	31,363.96	11,946.04	33.3	19,417.92	78.1	-7,471.88
Hong Kong	22,154.82	15,389.38	33.8	6,765.44	99.4	8,623.94
USA	14,548.82	5,375.36	58.2	9,173.46	67.9	-3,798.10
Federal Republic of Germany	4,764.35	1,793.94	5.2	2,970.41	23.9	-1,176.47
Singapore	3,262.92	2,901.58	158.0	361.07	60.1	2,540.78
Canada	3,081.49	591.15	35.9	2,490.34	-20.9	-1,899.19
Jordan	2,995.15	2,995.15	-2.7	66.86	23.0	2,861.43
USSR	2,975.71	1,378.97	117.8	1,596.74	82.6	-217.77
Australia	2,635.12	512.26	42.4	2,122.86	74.5	-1,610.60
UK	1,962.48	772.67	-35.2	1,189.81	7.2	-417.14
Brazil	1,898.65	896.74	25.2	1,001.91	86.3	-105.17
Italy	1,758.42	706.07	53.2	1,052.35	75.0	-346.28
Romania	1,718.25	706.88	22.2	1,011.37	28.1	-304.49
France	1,378.12	538.82	17.7	839.30	-33.5	-300.48
Democratic People's Republic of Korea	1,176.00	533.57	-1.6	642.63	27.3	-108.86
Netherlands	1,132.69	741.45	14.5	391.24	79.0	350.21
Thailand	1,007.40	591.27	53.2	416.13	55.6	175.14
Malaysia	926.94	458.98	24.4	467.96	9.9	-8.98
Syria	828.52	804.80	144.7	23.72	-39.4	781.08
Belgium	806.41	312.23	15.5	494.18	11.1	-181.95
Philippines	745.95	549.22	93.5	196.73	121.0	352.49
Pakistan	712.39	598.27	34.7	114.12	-63.9	484.15
Indonesia	687.44	161.99	68.0	525.45	77.2	-363.46
Spain	658.17	155.41	84.2	502.76	62.1	-347.35
Switzerland	649.72	248.02	53.6	401.70	-11.2	-153.68
Poland	616.48	289.41	-10.8	327.07	65.1	-37.66
Czechoslovakia	610.50	271.26	51.8	339.24	51.7	-67.89
German Democratic Republic	553.07	217.76	86.2	335.31	-9.6	-117.55
Sweden	519.44	141.73	33.5	377.71	32.4	-235.98
Cuba	518.06	219.00	13.7	299.06	-25.0	-80.06
Egypt	498.71	379.05	-6.9	119.66	-10.9	259.39
All countries	119,311.76	57,345.06	32.4	61,966.70	77.1	-4,621.64

Source: General Administration of Customs of the PRC, China's Customs Statistics, No. 1 (1985), Hong Kong, April 1985.

products is not available. The Table shows that Hong Kong, Japan and the US dominate China's trade, accounting for 57 per cent of its imports and 56 per cent of its exports. Exports destined for Singapore, USSR, and Syria increased by more than 100 per cent in 1984. Japan remains China's top supplier. China's imports of Japanese cars, refrigerators, washing machines, and TVs increased by 270-530 per cent in 1984. Japanese goods continued to penetrate the Chinese market, with imports in July up 87 per cent over July 1984.[56/] Recent estimates indicate that in the first half of 1985 China had a trade deficit with Japan of more than $2 billion. US exports to China rose by 68 per cent in 1984. US sales to China may further increase as China shifts its purchases from consumer durables to machinery and technology.

Although export growth has been rapid in the recent past, China's comparative advantage lies in labour-intensive and natural resource-based products with sluggish international markets. It is, therefore, appropriate to emphasize the crucial importance of assessing China's export potential and its implications for the new strategies and reforms. Potential for rapid growth of manufactured exports undoubtedly consists in tapping the richer markets, especially in the OECD countries. A rapid export growth hinges upon many critical factors: healthy economic growth in the OECD countries with no substantial increase in protectionism; product design improvements for both capital and consumer goods; and the updating of industrial technology.

2.6 Sub-sectoral analysis: engineering, building-material, textile and food industries[57/]

Engineering industry (machine-building industry)

The major products of the machine building industry are mining equipment, metallurgical equipment, power-generating equipment, air conditioning electric motors, metal-cutting machine tools, precision machine tools, heavy machine tools, automobiles, trucks, tractors, walking tractors, internal combustion engines and film projectors. Production declined over the period 1979-1981 but in 1982 there was a strong recovery when total value of industrial production within the sector increased by 14.8 per cent. Output of most major products, however, remained lower than that achieved in 1979.

Production of power-generating equipment in 1982 was less than 40 per cent of the 1979 level; 1982 saw an improvement in the performance of enterprises within this sector. The ratio of profits and taxes to investment increased slightly from 8.4 per cent in 1981 to 9.7 per cent in 1982.

New products developed in recent years include: continuous casting systems for steel plants using 1970s technology, with an annual capacity of 150,000 to 300,000 tons of square blooms; high pressure gasifiers with hourly capacity of about 15,000 cubic metres of coal gas, poultry farming installations such as incubators and battery-house control devices, energy-saving devices such as parametric equipment, compressors and transformers, digital process control machine tools, etc. Beginning in 1983 international standards are being applied to a wide range of machine products, particularly those designed as components of energy-saving systems. Improving product quality has been facilitated by increased access to foreign technology. Further rapid growth in technology imports is envisaged as an indispensible basis for modernizing the machine-building industry.

In recent years emphasis has been put on the development of machinery for the production of capital goods for light industry. There has been an increase in the production of machinery for making bicycles, textiles, watches, sewing machines, plywood and fibre board. Machine-building enterprises are offering an extended range of services, including repair and maintenance, and modification of their own product design to suit customer requirements. Machine-building enterprises are now for the first time offering complete turn-key plants to manufacturers of industrial products in China.

The machine-building industry is primarily domestic demand oriented. Only about 300 out of a total of over 3,000 products are currently exported. Exports include ordinary machine tools, bearings, electric motors, diesel engines and digital process control grinders. Complete machine-building plants and transmission and transformation substations have also been exported to some developing countries. Thailand, the Philippines and Pakistan have imported machine-building technology from China in recent years.

The Chinese Government recognizes the need for modernization within the machine-building industry. This is essential for increasing its "market orientedness" - i.e. capacity to meet changing demand requirements - and to expand exports. In 1982, Regulations for Technical Transformation in the Machine-Building Industry were approved. These regulations established procedures for identifying modernization priorities and mechanisms for achieving technical transformation. They provide an impetus for achieving greater vertical and horizontal integration within the industry, involving a merger of existing plants and a rationalization of production and marketing procedures. The total number of enterprises in this branch is very large. State enterprises above the county level numbered 5,604 in 1982. Of these, as many as 1,470 (26 per cent) suffered financial losses in that year. This indicates that there is a great deal of duplication and inefficiency within this branch.

As yet there has been little fundamental change in the managerial system operating within this industry. There has been a partial revival of the "trust" system whereby several enterprises are grouped under a single company. Consolidation is limited by the desire to maintain a regional balance in the distribution of production units and by a lack of experience of successful plant integration in this branch. However, by the end of 1982, 118 uneconomic units had been closed down within the machine-building industry. Mergers had also taken place to promote product specialization.

Although some progress has been made in recent years, the performance of enterprises within the machine-building industry remains below levels achieved in the middle 1960s. The profit and tax to investment ratio was 9.7 per cent in 1982 compared to 25.6 per cent in 1966 and the average turnover of circulating funds was 227 days in 1982 compared to 127 days in 1966. With regard to technology, most of the products are still at the level achieved in the 1950s and 1960s. R and D capacity remains limited and the problem of holding large, unsaleable stocks has yet to be tackled in a comprehensive manner.

Building-materials industry

The building materials industry has enjoyed one of the highest rates of growth within Chinese manufacturing in recent years. There were over 50,000 enterprises in this branch during 1982 - representing 13 per cent of the total number of industrial enterprises in China. The share of the building materials branch in gross industrial output value in 1982 was, however, only 4 per cent. The production units within this branch were widely dispersed with the largest proportion of gross value of output being produced in Jiangsu (provincial share of 13.4 per cent).[58/] The share of the building materials industry in capital construction over the period 1976-1982 was 2 per cent and its share in modernization investment was slightly higher.

Major products include cement, plate glass, fibre glass, ceramics, glazed tiles, bricks, asphalt and tarmac. In 1979 the average strength grade of clinker was No. 600 and that of cement No. 500 (according to China National Standard for dry mortar). Ordinary portland cement and slag cement made up 97.3 per cent of the total cement output; 88 per cent of the energy requirements of the cement industry were supplied by coal. The utilization of industrial waste for manufacturing cement is relatively low.[59/]

In recent years, production has tended to lag behind demand. Readjustment of product mix in many cases - particularly fibre glass production - has contributed to an acceleration of output growth. In general the rate of growth of profit has exceeded the output growth throughout the industry. This is at least partly due to reduced taxes and permission to increase prices of most building materials products. Despite this increase of prices, 25 per cent of all firms in the industry made a loss during the early 1980s. In 1982, the proportion of loss-making firms was about 16.6 per cent - a total of 8,300 establishments. Labour productivity growth within this branch has been relatively modest - less than 2 per cent per year during the early 1980s. However, improvement in the quality of product has continued to take place during this period. The Xiangxiang Cement Plant and the Liaoyang Heavy Machinery Plant have been outstanding performers in the building-materials industry. The latter has benefited from organizational restructuring undertaken in 1980 and 1981.

Actual investment has tended to outstrip planned investment in recent years. In 1982 actual capital construction investment was 15 per cent higher than the Plan target. An important set of key national projects are under construction. The Jidong Cement Plant has been thoroughly modernized. The Ningao Cement Plant and the Qiusibucengao Yanboa Glass Works have been expanded recently. Technological co-ordination has been established among the leading cement manufacturing enterprises to speed up the dissemination of technological findings. Emphasis is being put on a rapid expansion of R and D capacity within the industry. Research advances and technological improvisations are generally the results of Chinese efforts. While the import content of building materials manufacturing is steadily rising, the industry is entirely domestically oriented and does not make a significant contribution to exports.

Further expansion of the building materials industry requires a simultaneous improvement in the levels of factor productivity. An important development in recent years has been the gradual introduction of new building materials - such as frame structures and lightweight board - in construction processes. The labour productivity of construction workers using these new materials is significantly higher than those of workers using brick and concrete structures. The use of the new building materials is energy conserving. Demand for this type of material significantly exceeds its supply. New units for producing such construction materials have been established in nine cities. Production capacity is about 2 million square metres of floor space.

A rapid growth of the building materials industry is needed to meet existing demand, particularly for the development of the new towns all over the country. Shortages are most serious in the case of plate glass and ceramic fixtures. Expansion of production must be accompanied by reduction in costs - particularly energy costs per unit of production. These remain high by international standards. Production costs have risen in recent years. While, as noted earlier, there has been a general improvement in product quality, the quality approval rate of first-class products made by large- and medium-size enterprises declined in 1982. An improvement in performance requires greater emphasis on the process of vertical and horizontal

integration that has proceeded relatively slowly in the building materials industry.

Textiles

The textile industry is among the oldest manufacturing branches established in China. Currently there are about 18,000 enterprises producing textiles in China. Over 22,000 units manufacture items of clothing. The share of the textile industry in gross industrial output value was 15.5 per cent in 1982. Since 1978 the textile industry has grown rapidly. The share of staff and workers in State-owned textile and clothing enterprises to the total number of workers in the sector stood at 15.5 per cent in 1983. Over 4 million persons were employed in the textile industry in that year. The share of the textile industry in capital construction investment was 3.1 per cent over the period 1976-1980. During 1981-1983 this share has risen to over 4 per cent. The share of the industry in modernization investment during these three years exceeded 7 per cent.

Textiles are an important Chinese export item. According to estimates provided by a commercial source, export of textile yarn, fabric and articles represented 9.1 per cent of total Chinese exports in dollar value terms in 1983.[60/] Major textile exports include cotton cloth, polyester cotton cloth, artificial silks and satin, rayon cloth, silk and satins, gunny bags and woollen blankets. Some of these export items have grown rapidly during the 1980s. Efforts are made to expand textile exports. China is supporting developing countries to achieve a favourable revision of the Multi Fibre Agreement (MFA). Negotiations are under way for China's accession to this agreement.

Textile growth has slowed down since 1981. During the period 1979-1981 the textile industry was operating in a seller's market. From 1982 onwards, demand slackened and - what is more significant - a divergence appeared between the product mix supplied and the composition of market demand. Textile products increasingly failed to meet quality, variety, colour and style requirements. Beginning in 1982, the textile industry started to produce a growing unsaleable surplus. This led to a fall in prices and in the

emergence of some competition among the textile enterprises generally, and between textile enterprises based in specific regions. Readjustment of production programmes requires modernization and technical adjustment in production equipment. A large proportion of current equipment is not usable for the efficient production of higher quality textile products. The pressing need for equipment modernization is illustrated by the persistent trend of declining productivity in this industry. In 1982 labour productivity in the textile industry declined by 10.4 per cent and in clothing by 7.4 per cent compared to the previous year.

The industry has sought to meet the requirements for higher quality products by establishing product development offices and textile research centres. Market research to promote product sales is also being increasingly undertaken. There exists an evolving market research network for the national textile industry. Attempts at increased inter-industry linkages have also had some effect. Units involved in spinning, weaving, dyeing and in the production of chemicals, chemical fibres and dyestuffs are being brought together. This has been accompanied by an abolishing of the state purchasing monopoly within the industry. Many production enterprises are now independently involved in commerce and marketing. The range of self-marketed goods has continued to broaden, and includes chemical fibre products, cotton, wool, linen, silk, knit fabrics, sheets and towels and yarn dyed fabrics.

"Direct responsibility systems" for investment and marketing decisions have been introduced at various managerial levels within textile-producing enterprises. Emphasis has also been put on the retraining of the existing work force so as to upgrade its technical ability. New plants - the Yizheag Chemical Fibre Industrial Company, the Liaoyang Petrochemical Fibre Corporation, the Yijang Namie Textile Mill, for example - employ a more advanced production technology and a higher skilled work force. Their capacity for higher quality textile products is therefore greater.

Textile-producing units tend to be regionally concentrated. Five provinces - Liaoning, Shanghai, Jiangsui, Shandong and Hubei - accounted for 57 per cent of total industrial output value of this sector in 1983. The share of the bottom five provinces - Ningxia, Qinghai, Gansu, Tibet and

Guizhou - in the value of total industrial output was 7.8 per cent in that year. Size distribution is relatively widely dispersed and there is significant potential for the growth of both the co-operative enterprise and joint ventures, involving both State-owned enterprises and co-operative units. Such joint units can play an important role in achieving organizational restructuring required by changing conditions in national and international textile markets. Enterprise re-organization and integration within the different sectors of the textile industry must proceed at a rapid pace if the decline in some sectors of this industry is to be halted and the industry is to become internationally competitive, and also capable of catering efficiently to rapidly-changing domestic demand.

Food products

China's food industry has 60,000 enterprises with a total of 2.8 million staff and worker employees. Its major products include vegetable oil, sugar, cigarettes, salt, grain products, dairy products, milk product substitutes, beverages, flavouring essences, confectionery, tea, food additives and edible fungus.

The share of the food products industry in total industrial employment was 8 per cent in 1933. Its share in gross industrial output value was 12.9 per cent in that year. The regional distribution of production within this industry is more even than that of textiles, for example. The five leading provinces - Sichuan, Jiangsu, Shandong, Guangdong and Henan - produced 37 per cent of the gross industrial output value in 1982. The share of the bottom five provinces is, however, only 4 per cent.

The share of the food industry in total industrial capital construction investment was 1.2 per cent during the Fifth Plan period. During 1981-1982, this share increased to about 2.6 per cent. Its share in modernization investment during 1981-1983, however, exceeded 6 per cent. Labour productivity within the food industry is higher than in the textile industry. Productivity growth has, however, been slow in recent years. The output of cured tobacco, refined sugar, beverages, canned foods and meat products has grown relatively rapidly in recent years. Over the period 1976-1980 the food

processing industry grew at an annual average rate of 8.1 per cent - below that of most other light industrial branches. Growth has, however, accelerated in the 1980s. In 1982, for example, food products gross value of output grew by 9.5 per cent, while textiles grew by 1.1 per cent only.[61/] Average annual growth rate in the food products industry is estimated at about 9.3 per cent over the period 1979-1983. The industry is primarily domestic demand oriented. In 1982 export earnings amounted to $400 million - up 8 per cent from the previous year - but still representing only about 1.5 per cent of China's total export earnings.

Since 1979 emphasis has been put on achieving improvements in quality. A number of products - mainly processed vegetables and beverages - have evidenced marked improvement. The most successful enterprises in achieving quality upgrading include the Chongqing Tinned Food Factory, the Jilin Daan Canning Factory, the Yantai Grape Wine Company, the Guangzhou Beer Brewery, and the Jinchang Egg Factory. Production gains have occurred as a consequence of the rapid increase in agricultural supplies which occurred following the introduction of the responsibility system in the countryside. In recent years the food industry has also benefited from increasing imports of foreign technology, and adaptation of successful production and marketing methods. Foreign technology has been extensively used in the modernization of packaging and canning processes. Imported techniques for noodle and bread-making have been introduced, leading to an increase in production capacity, and a reduction of resource use per unit of output.

The vertical and horizontal integration of the food processing industry has progressed very slowly. The food processing industry produces a large number of products in widely dispersed units with management of individual enterprises having little direct contact with their counterparts. Food processing factories tend to be small and are managed by different departments. There thus exists a significant level of functional duplication and executive overlapping. Scattered management at various levels has created many problems. It is essential to develop a co-ordinated management framework and to adopt consistent policies for modernizing the industry. In part, the rapid development of the agricultural sector has propelled the food processing industry with it during the period since 1978. This has led to a postponement

of important decisions concerning structural re-organization within the industry. These difficult decisions nevertheless would need to be taken in the near future to sustain the growth that has been achieved in the last few years. It is to be expected that links with agriculture must be increased, the product range diversified and the product mix adapted to meet changing demand requirements. Resource use could be economized and the possibility of using the residue of some food production processes such as sugar refining should be explored. Finally, scope also exists for identifying food products which have an export potential. They could carefully be targeted to specific markets and a range of policies could be designed to achieve penetration within these markets.

3. THE INDUSTRIAL POLICY FRAMEWORK

3.1 Objectives and strategies

The overriding objective of Chinese economic policy is to achieve a quadrupling of gross national product and to increase per capita GNP to $800 (in 1980 prices) by the year 2000. China's ultimate economic objective is to set the economy on a more pragmatic and modernizing course that seeks to redress inefficiency. Towards this objective, a more rational economic strategy was pronounced at the 5th National People's Congress (NPC) in June and July 1979. The new strategy was summarized in four key catch-words - Readjustment, Reconstruction, Consolidation and Improvement. This policy was reaffirmed by subsequent annual sessions of the NPC when further plans and laws were published. It is now becoming apparent that a series of major reforms of the Chinese economy is under way.

The 1984 Decisions of the 12th Central Committee of the Chinese Communist Party[62/] argued that development is constrained by the existence of "a rigid economic structure that cannot meet the needs of the growing forces of production". The reforms aim at clearly delineating the role of Government in the economic management process, enhancing the autonomy of economic enterprise, expanding commodity production and extending the use of the law of value in regulating production and distribution. Emphasis is also placed on eliminating "absolute egalitarianism" and on re-organizing the wage system on the basis of the principle "to each according to his work". The reforms aim at modifying "a series of interrelated links and aspects of the relationships of production and the superstructure that are not suited to the development of the socialist system".

The 1984 Decisions of the 12th Central Committee of the CCP laid special emphasis on the reform of the organizational structure of State-owned urban enterprises. There is to be a functional separation of ownership and control. Ownership will remain lodged in the hands of the State and its representatives. Control will be increasingly divested to enterprise management. Management is to be made responsible for production, marketing, investment and employment policies, while remaining subordinate to the overall

guidance provided by the Plan. Enterprise performance is to be closely monitored and resource allocation is to be determined by the financial results obtained by individual enterprises. The Decisions of the 12th Central Committee recognize that in order for financial performance to become an accurate reflection of efficient resource utilization, a restructuring of prices in commodity and factor markets is essential. Complementary reforms are required in the planning and labour allocation systems. It is hoped that these reforms can be completed over a period of five years.

Restructuring of prices is to be achieved by redefining the role of planning within the economy. National planning processes will continue to determine wages and prices of State-owned assets such as land, mines, banks, railways, etc. However, the Decisions envisage a reduction of the role of mandatory planning. Most economic activities will come under the scope of guidance, planning or be subject to market forces.

An important objective of economic policy is to foster competition among the enterprises. This is a corollary of the decision to extend various forms of the economic responsibility system to urban enterprises. The incomes of staff and workers are to be linked to an evaluation of performance in meeting contractual obligations. Competition is to be fostered by encouraging the development of collective and individually-owned urban enterprises.

Most of the themes outlined in the October Decisions of the 12th Central Committee are likely to recur in the country's Seventh Five-Year Plan, which is to cover the period 1986-1990. According to initial reports, the Plan will accord priority to the implementation of the reform package contained in the October Decisions. The Plan will concentrate on achieving important changes in the management and administration of the banking and agricultural sectors. Implementation of price restructuring policy is also a top priority. Industrial growth during the Plan period is expected to be significantly lower than that in 1983 and 1984. The economic development programme for 1985 envisaged the targets of 8 per cent industrial growth and 6 per cent agricultural output growth as against two-digit identical growth rates in the two sectors in 1984. An important objective of the Plan is to avoid a general

rise in the rate of inflation. There is some apprehension that across-the-board price increases, in the wake of the reforms, may create financial instability in China. This may have serious implications for continued growth and restructuring within the industrial sector.

3.2 New directions in industrial policy

The speed and direction of new legislations enacted in the first half of 1985 seem to give fresh impetus to the economic structural reforms introduced by the major policy pronouncements since the late 1970s. It appears that industrial planning will become more "indicative" rather than "mandatory." The new reforms aim at introducing a "competitive commodity economy," with decentralization as a common approach to solve the problems of inefficiency. According to official sources, workers' stock ownership in enterprises is now being favourably debated among policy-makers.

Other measures are also being introduced to increase operational flexibility within the industrial system. One of the measures concerns the re-organization of credit-issuing institutions and the increasing use of interest rate structures. Cash transaction systems have been liberalized. Cheque-clearing functions of the banking system are being expanded. Interest rate fluctuations by specialized credit institutions - such as the People's Construction Bank - are now permitted.[63/] Sales of industrial products on the basis of extended credit arrangements have also been legalized. By mid-February 1985, 20,000 State enterprises had been "leased" to individuals and collectives for varying time periods.[64/] Managers of State-owned firms are allowed to sell their stock to the general public. The new development strategy has opened up avenues for the inflow of foreign capital. China is actively seeking collaboration with developed market economies. The Seventh Five-Year Plan emphasizes the importance of modernizing investment to improve utilization of existing capacity rather than setting up new projects. It is expected that during the Plan period Rmb 40 million will be spent on technological modernization of 1,000 enterprises in the main industrial centres. The modernization will concentrate on machine-building, metallurgy, chemicals, electronics, textiles, food processing and other light industries.[65/]

3.3 Role of foreign investment and technology

The inflow of foreign capital and foreign technology on an unprecedented scale since 1979 lends credence to the fact that Chinese modernization cannot take place in isolation from foreign investment and external technological development. With the adoption of liberal policies a trend was set for improving the climate for foreign investment and technology transfer. Table 31 presents the diverse forms and modalities of foreign investment in China. Foreign firms can now operate either as wholly-owned independent foreign enterprises, equity joint ventures, enterprises engaged in the processing and assembling of imported materials, or under co-operative production and technology contracts. Though, in principle, the Chinese policy is to limit foreign investment and technology import to preferred areas where national efforts are inadequately developed, in practice a significant proportion of foreign investment is allowed in light industries and consumer goods industries. New rules introduced in May 1985 forbid foreign firms from putting restrictive articles into contracts.

Source-wise, much of the foreign-capital inflow into China is from Hong Kong. It is widely contended that overseas Chinese living in Hong Kong are primarily responsible for making Hong Kong the single biggest source of origin of foreign capital. Table 32 shows that technology contracts signed with developed market economies were at a high key in 1983. The US, Federal Republic of Germany, Italy and Japan accounted for 81.5 per cent of the total number of technology contracts signed with foreign countries.

Table 33 presents the industry-wise distribution of foreign investment proposals in 1982. A significant proportion of joint ventures concentrates on light and consumer goods industries. In conformity with the latest reforms, which lay emphasis on the development of light industry, a new list of investment proposals seems to accord priority to consumption rather than capital accumulation.[66/]

Among China's 400,000 State-owned enterprises, the 1,600 largest ones, producing about 26 per cent of China's industrial output, will be of special interest to foreign firms. These enterprises benefit most from the newly

Table 31. Forms of foreign investment

	Equity joint venture	Contractual joint venture	Joint development	Compensation trade
Documentation required	Agreement, contracts articles of association	Agreement, contracts, articles of association	Agreement, contracts	Agreement, contracts
Organization and status	A corporation of limited liability with the status of legal entity	(a) A business body with the status of a legal entity or (b) Any other business form without the status of a legal entity, to which each party independently bears its own liability.	A business form without the status of a legal entity, to which each party independently bears its own liability.	Each party to the contract independently bears its own liability.
Rights and obligations	Joint investment, joint operation, mutual share of risks, profits and losses in proportion to the equity share of each party.	As provided for in the contracts entered into by/between Chinese and foreign parties.	As provided for in the contracts entered into by/between Chinese and foreign parties. Generally, at the first stage of exploration, all the risks are borne by the foreign party; at the second stage of development, investment is made by both parties; after production begins, the amount of revenues after deduction of expenses shall be distributed to: (a) The Chinese party, a fixed percentage portion; (b) Both Chinese and foreign parties the amounts to compensate for their capital invested in exploration and development together with accrued interest; (c) The foreign party a certain portion as a reward.	The foreign party sells Chinese party equipment or technology on credit or by means of a loan; The Chinese party repays the foreign party by instalment with the products to compensate for the purchase prices or the loan together with interest; The Chinese party may purchase raw materials itself, or the foreign party make the purchase on commission.
Duration	Varying with different industries; generally 20 years for heavy industry, 10-15 years for light industry, 5-10 years for service and tourist industries.			As provided for in the contracts entered into by/between Chinese and foreign parties.

Table 31. (Continued)

	Equity joint venture	Contractual joint venture	Joint development	Compensation trade
Investment	Both Chinese and foreign parties may use cash (Renminbi or foreign currency), buildings, machinery, equipment and other tangibles, right to use of a land site, industrial and intellectual property rights, know-how and other intangibles as their investment.	Both Chinese and foreign parties may use cash (Renminbi or foreign currency), buildings, machinery, equipment and other tangibles, right to use of a land site, industrial and intellectual property rights, know-how and other intangibles as their investment. Investment by the Chinese party may include natural resources, labour power and manual service. For joint ventures (b) described above, the investment by the Chinese and foreign parties may not take the form of equity capital.	As provided for in the contracts entered into by/between Chinese and foreign parties.	Each party manages its own investment.
Distribution of profit	The residue amount of gross income after deduction of joint venture income tax and three reserve funds is the net profit distributable to the Chinese and foreign parties.	The net profit of joint ventures (a) described above shall be distributed as that of an equity joint venture, while the net profit of joint ventures (b) described above, after deduction of operating expenses, shall be distributed to both Chinese and foreign parties in terms of products, income or profit.	The Chinese party receives at a fixed percentage a portion of products, income or profit. The residue shall be distributed to both Chinese and foreign parties to compensate for their investment together with accrued interest, and to the foreign party a certain portion as a reward.	Each party is entitled to its own profit and liable for its own loss.
Income tax	Joint venture income tax at 30% of gross income; Surtax at 10% of joint venture income tax; Altogether 33% of gross income.	For joint venture (a) described above, 33% of its gross income as in the case of an equity joint venture. For joint venture (b) described above, each of the Chinese and foreign parties pays its own income tax on the profit received (if in terms of product, the product should be represented in terms of Renminbi), at the progressive rates 20-40% of the profit received, plus a surtax of 10% of the income tax.	20-40% at progressive rates of the portion of income received (if in terms of product, the product should be valued in Renminbi).	Nil.
Joint venture income tax levied on the amount repatriated.	10% of the amount repatriated.	For joint venture (a) described above, 10% joint venture income tax shall be levied on the amount repatriated. For joint venture (b) described above, no such tax shall be levied.	Nil.	Nil.

Source: Ministry of Foreign Economic Relations and Trade, Guide to Investment in China, Hong Kong, 1982, pp. 52-53.

granted privileges. They are allowed to have higher depreciation rate, pay less tax, and exercise more autonomy.

It is important to note that a large proportion of foreign investment has been in priority investment areas of China which provide attractive terms and comprehensive scope for flexible foreign operations.

Table 32. Origin of foreign investment and technology contracts approved, 1983

Country of Origin	Value in $10,000	Per Cent	Number	Per Cent
US	3671	19.5	46	21.7
UK	3602	19.1	18	8.5
Federal Republic of Germany	-	-	43	20.3
France	270	1.4	40	18.8
Belgium	3954	21.1	5	2.3
Sweden	-	-	5	2.3
Switzerland	-	-	2	1.0
Canada	-	-	1	0.5
Japan	989	5.2	44	20.7
Hong Kong	6,000	31.9	2	1.0
Australia	-	-	2	1.0
New Zealand	40	0.2	1	0.5
Others	212	1.2	-	-
Total	18,837	100.0	212	100.0

Source: Statistical Yearbook of China, 1984.

Table 33. Industry-wise distribution of foreign investment proposals, 1982

Industry	(1) Projects		(2) Total investment		(3) Value of foreign investment		(4) Share of foreign investment in total Projects Total (Per Cent)	(5) No. of projects with foreign majority equity	Col. 5 as per cent of Col. 1
	Number	(per cent in total)	(Value in $ 10,000)	(per cent in total investment)	(Value in $ 10,000)	(per cent in total foreign investments)			
Light industry	29	(22.3)	3570	(21.8)	19161	(21.4)	53.6	17	58.6
Textile industry	11	(8.5)	8419	(5.1)	3842	(4.3)	45.6	5	45.5
Chemical industry	11	(8.5)	25235	(15.4)	12466	(13.9)	49.4	4	36.4
Machine building industry	19	(14.6)	38821	(23.7)	26221	(29.3)	67.5	4	21.1
Building materials	21	(16.1)	23001	(14.0)	10363	(14.3)	45.0	6	28.6
Meters and instruments	4	(3.1)	1960	(1.0)	610	(0.7)	36.0	-	-
Medical apparatus	3	(2.3)	660	(0.4)	260	(0.3)	39.3	-	-
Metallurgy	11	(8.5)	9276	(5.6)	6267	(7.0)	67.5	7	63.6
Electronics	18	(13.8)	17758	(10.8)	8620	(9.5)	48.5	6	33.3
Forestry	3	(2.3)	3302	(2.0)	1780	(2.0)	53.9	2	66.7
Total	130		163864		89590		54.7	51	39.2

Source: Based on data reproduced in China Economy and Trade, Vol I, No 6, July 15, 1983, pp. 9-11.

3.4 Priority investment areas, with particular reference to Special Economic Zones

Nineteen open areas - including four SEZs in Guangdong and Fujian provinces, 14 coastal cities and Hainan Island - have designed tax and other incentives to attract foreign investment. Many other provincial capitals are in competition with these cities. The open areas are administered by the China Coastal Cities Economic and Technical Development Co-operation (CCETDC). Foreign enterprises are permitted to establish ventures in areas of their choice, subject to State approval. These ventures can take the form of co-operative enterprises, wholly-owned subsidiaries of foreign firms or joint ventures in association with Chinese State or collective enterprises.

Fujian and Guangdong provinces

With the adoption of a more open policy the provinces of Fujian and Guangdong have been authorized by the Central Government to practice "special policies and flexible measures" in their economic activities since 1979. They are recently reported to have the power to sign deals of virtually any size, without reference to the Central Government, provided such deals use no local resources allocated by the State for priority projects in those provinces.[67/]

The priority areas of Fujian's economic development are transportation, light industries and the textile industry, building materials, electronics industries, modernization of its 10,000 existing factories, and the tourist industry. With regard to the modernization of existing factories, Fujian plans to upgrade more than half of its 2,700 State enterprises by the year 1990 and has already prepared over 300 project proposals for this purpose. In addition, more than 80 investment proposals are now ready, mainly for the establishment of new industrial enterprises. The majority of these projects will require foreign participation in various forms.

So far, Fujian has been active primarily in contacting business firms in Asia. As a result, Fujian province has been able to establish 17 joint ventures and 42 co-production projects. The province had absorbed a total of $145 million in funds from foreign investors between 1979 and 1984. In

this connection, it should be noted that the provincial capital, Fuzhou, has recently been declared one of the 14 "open" cities. This means that Fuzhou now enjoys a special status similar to that of a Special Economic Zone (SEZ).

The Special Economic Zones (SEZs)

China established four Special Economic Zones for foreign investment in South China in 1980 - Shantou, Shenzhen and Zhuhai in Guangdong Province and Xiamen (Amoy) in Fujian Province. The Zones are designed to attract foreign capital, technology and expertise by offering tax incentives, tariff free environment and low charges for land and labour.[68/] By June 1985 over 20 per cent of China's total foreign investment had been channelled into these Zones, of which investment from Hong Kong had accounted for 80-90 per cent. These Zones are "special" because: (1) the Zones enjoy special infrastructural facilities; (2) foreign investment is the dominant source of investment within the Zones; and (3) their open system of higher technology and management skills allows the Zones to serve as focal points for technology transfer.

Table 34 summarizes the general features of the four zones. Shenzhen is the largest, with a territory of 327.5 square kilometres. The Shekou Export Processing Zone is a special zone within a Special Zone. Within the SEZs are four other areas for concentrated industrial development. In addition, intensive property and commercial developments are under way at Lowu, the border crossing to Hong Kong, which is also designated as the SEZs' financial and commercial core. The major portion of the land of the SEZs is to be devoted to agricultural, tourist and residential projects.

According to its Twenty-Year Development Outline, the Shenzhen SEZ will have a population of 800,000 by the year 2000 and by then its per capita income is expected to rise from the present level of $500 to $3,132. It will then be a highly industrialized economy with a per capita industrial output value of $8,824. To achieve these aims, Shenzhen must maintain an average growth rate in industrial output value of 28.8 per cent and an average per capita income growth rate of 24.6 per cent. The level of accumulated

Table 34. The four SEZs in China, 1984

Name	Total area (sq.km)	Names of industrial processing zones	Area (sq.km)	Port zone (sq.km)	Agri-cultural zone (sq.km)	Date started
Shenzhen[a/]	327.5	Shekou	1.3			Jan.1980
		Liantang	1.7			
		Bagualing	0.6			
		Shangbu	10.0			
		Shuipu	0.4			
Zhuhai[b/]	15.2	Middle zone	3.0	2.63		Jan.1980
Shantou[b/]	13.3	Longhu	1.6	1.70	10.0	Jan.1980
Xiamen[b/]	123.0	Huli	2.5			Oct.1980

Source: Sit V. "The Special Economic Zones of China: A New Type of Export Processing Zone?", The Developing Economies, Vol. 23, No. 1 (March, 1985), p. 77.

a/ According to the plan, out of 327.5 sq.km., 98 sq.km. is used for industrial and other purposes.

b/ Recently revised to present size.

foreign investment will have to increase from the $1.3 billion of 1982 to $7.2 billion by the turn of the century.

The Zhuhai SEZ is much smaller than Shenzhen. Its 15.2 square kilometres is split into three separate zones along the border with Macau, with the middle zone (about 3 square kilometres) to be developed into an export industrial zone. The other two zones will be used mainly for property (residential) and recreational developments.

The Shantou SEZ has been extended to cover 13.3 square kilometres, including an expanded export processing zone of 1.6 square kilometres, a port zone of 1.7 square kilometres, and an agricultural zone for commercial and export production of 10 square kilometres.

The Huli export processing zone is part of an enlarged Xiamen SEZ (123 square kilometres). The construction of Huli is to be in two stages taking ten years to complete. It will be an export industrial area with a projected 200 factories and a total manufacturing employment of some 30,000. There will also be a service sector with 6,000-7,000 workers.

Of the four SEZs, Shenzhen is the most advanced in terms of development. Shenzhen is being generally copied by the other SEZs which are still in very early stages of construction. Hence, to gain insight into the situation of the SEZs and to evaluate their impact and growth prospects, Shenzhen can be taken as an example.

The primary purpose of the creation of the SEZs was to encourage an inflow of foreign technology. Attractive manufacturing investment was thus given priority within the SEZs. However, as Table 35 shows, over 50 per cent of investment in Shenzhen up to 1983 went into non-manufacturing activities - in 1980 this proportion had been as high as 90 per cent. Investment patterns in Shenzhen and Zhuhai seem to be heavily influenced by developments within Hong Kong and Macao.

Total investment in Shenzhen increased from HK$ 120 million in 1979 to HK$ 1,130 million in 1983. Its major investment projects in the past four years have been mainly concentrated in the following areas: (a) activities formerly in Hong Kong which moved to Shenzhen because of comparative factor advantages (land and labour in particular); (b) manufacturing in which Hong Kong provides the market for the final or semi-manufactured products; (c) activities or products that are highly in demand but limited in supply in Hong Kong (e.g. certain types of recreational establishments). Even in manufacturing investments, there is danger that Shenzhen may become Hong Kong's dumping ground for labour-intensive or otherwise undesirable

industries. Shenzhen would need to find new ways and means to attract the sort of investment which will bring the modern technology that China wants. New means to attract industrial investments are the more necessary as the total foreign capital that will be attracted into the zone will substantially shrink with the de-emphasis on property and tourist development projects, a phenomenon already demonstrated in 1981-83 in the wake of the Hong Kong real estate slump.

Table 35. Categories of foreign investment in Shenzhen SEZ, (up to end of 1983)

	Investment	
	(Actual amount in HK$ million)	Per cent of total
Industrial	1,299	43.6
Property	789	26.4
Tourism and recreation	151	5.1
Commerce, restaurant, and service	225	7.5
Transport and communications	37	1.2
Agriculture and fishery	45	1.5
Others	435	14.6
TOTAL	2,981	99.9

Source: As in Table 34, p. 80.

In order to boost Shenzhen's attractiveness to foreign capital, a number of new measures have been taken since 1983. First, the land rents for industrial use have been lowered by 10-20 per cent and the tax holiday for some industries is being extended to five years after commencement of production. Second, there are more liberal rules governing the access of SEZ products to the Chinese domestic market. Third, efforts are being made to promote joint venture and co-operative projects between foreign investors and well-established Chinese enterprises.

Shenzhen's manufacturing employment has grown from about 5,000 persons in 1978 to around 25,000 in 1983 and its gross manufacturing output has increased

from Rmb 60 million to Rmb 720 million in the same period. Among the factories with foreign capital participation, electronics factories figure prominently. By the end of 1983 the SEZs contained 62 electronics factories employing 13,000 workers. In terms of employment, this represents a large increase from 1982 when, at the end of that year, only 4,700 workers were employed in the industry. Electronics is now being regarded as the prime industry for active promotion of foreign participation.

Despite this rapid development, total foreign investment attracted to these zones remains inadequate in terms of China's needs. The contribution of SEZ based production units to exports is also limited - only a third of gross industrial output produced within the SEZs is actually exported. Foreign investment remains concentrated in labour-intensive branches, reflecting a lack of trained manpower and relatively limited infrastructural facilities existing in the zones. Income tax reductions and broader tax exemptions for priority investments were announced in November 1984 in order to attract further foreign capital.

Investment within the Special Economic Zones is governed by a different set of regulations. They are generally administered by municipal authorities, although the Shekou Industrial district is jointly administered by the Ministry of Communications in Beijing and the local municipality. In all cases, however, the municipal administrations are guided by both provincial and national level governing bodies. There is a relatively fluid division of labour between municipal, provincial and central administrations as far as regulating economic life in the Special Economic Zones is concerned. This has often been cited as a cause for anxiety and confusion by foreign businessmen wishing to take advantage of opportunities in the SEZs.

Fourteen open coastal cities

It was announced in April 1984 that 14 cities along the entire coastline of China had been designated as "open coastal cities" and, together with Hainan Island, given the power to offer the same incentives and conditions for investment as the SEZs.

The fourteen cities from north to south are: Dalian, Qinhuangdao, Tianjin, Yantai, Qingdao, Lianyungang, Nantong, Shanghai, Ningbo, Wenzhou, Fuzhou, Guangzhou, Zhanjiang and Beihai. Local approval limits are: $30 million for Shanghai and Tianjin, $10 million for Dalian and $5 million for each of the others. Special areas have been designated in the 14 cities as Economic and Technical Development Zones (ETDZ) to concentrate funds on importing advanced technology, joint ventures, cooperative enterprises, foreign-financed enterprises, and jointly-funded research institutes to develop new technology and high-grade consumer goods.

Following a reassessment of the 14 coastal cities, the Government has recently made a significant shift of emphasis. It appears that a decision has been taken to focus attention on only four of the 14 cities. "Priority support" will go to select four: Shanghai, Tianjin, Guangzhou (Canton) and Dalian. The other 10 cities will slow down the signing of contracts with foreign investors. The narrowing of the priority support shows China's pragmatic approach to correct unforeseen problems emerging within the priority investment areas.

Institutional re-organization is likely to be a major policy concern during the Seventh Plan period when a lower rate of production growth is envisaged for manufacturing industry. The structure of institutional organization within the industrial sector is described in the next section.

3.5 Institutional infrastructure, industrial organization and foreign investment administration

The highest organ of State power in China is the National People's Congress (NPC). The State Council is the executive organ of the NPC. Political authority is widely dispersed and there is an intricate network of people's councils at the provincial, county and town levels. Since 1978 these bodies have become increasingly involved in economic administration.

Primary responsibility for economic administration lies with the State Council, which has established a number of special commissions and ministries. Following a major restructuring in 1982, the number of ministries

and commissions subordinate to the State Council was reduced from 52 to 39. A number of ministries and commissions - including the ministries of electric power, water conservation, commerce, food and foreign trade, and commissions dealing with capital construction, agriculture, energy and machine building - were either merged or abolished. Other ministries and commissions were subjected to internal re-organization.[69] The purpose of the reforms was to rationalize the administrative structure, thereby enhancing its operational efficiency.

The State Economic Commission and the State Planning Commission are primarily responsible for the co-ordination and implementation of industrial policy. The State Planning Commission draws up and adjusts annual production and investment plans. It also prepares medium- and long-term plans. It is the final authority for the approval of specific projects. The State Economic Commission is responsible for plan execution in the industrial sectors and for establishing programme priorities. In 1982, the Commission on Capital Construction was broken up and merged with the State Planning and the State Economic Commissions. This has enhanced the role of these bodies within the industrial management system. The influence of the Ministry of Finance and the People's Bank of China - and its specialized financial subsidiaries - is likely to increase as the use of credit expands on the one hand, and market forces are allowed to play a larger role in the determination of commodity and factor prices on the other. The recently established State Commission for Restructuring the Economic System is likely to determine the pace at which industrial re-organization and restructuring is to be pursued in China. The State Scientific and Technological Commission provides research support to manufacturing industry in its quest for rapid modernization. Finally, the Ministry of Commerce and the Ministry of Foreign Economic Relations and Trade play a role in the regulation of industrial activity in China.

The following ministries are directly involved in the supervision and management of the manufacturing sector:

1. Ministry of Metallurgical Industries;
2. Ministry of Machine-Building Industries;
3. Ministry of Nuclear Industry.

4. Ministry of Aviation;
5. Ministry of Electronics Industry;
6. Ministry of Ordinance Industry;[70/]
7. Ministry of Petroleum Industry;
8. Ministry of Chemical Industry;
9. Ministry of Textile Industry;
10. Ministry of Light Industry.

Industrial enterprises are also linked to other ministries. There is a tendency of vertical integration within ministries - so that the Metallurgical and Chemical Ministries have their own mining operations and the Textile Ministry is responsible for textile machinery-producing units. The Ministry of Agriculture is responsible for overseeing the commune and brigade industry. The Ministry of Light Industry organizes the production of pulp and paper, daily use machinery (bicycles, sewing machines, watches, etc.), ceramics, food products, leather products, chemicals for daily use, ready-made garments, furniture, machinery for use in light industry, metal hardware and plastic products. The heavy industry ministries tend to be more compact and specialized. The wide diversification of ministerial interests occurred as a result of the policy of encouraging self-reliance popular in the 1960s and 1970s. Rationalization of the industrial structure is leading to the merger of duplicating units and to a more narrowly focused functional distribution of ministerial responsibilities.

Supervision of industrial enterprises is also exercised by provincial governments, regional industrial boards, counties, even neighbourhood street committees. Often two or more agencies jointly supervise the functioning of an industrial enterprise. Since 1978 there has been a tendency to increase the role of local and municipal authorities in the management of industrial enterprises. The Government is also keen to increase worker participation in enterprise management and many proposals in this regard have been considered. Concern has also existed about the need to reduce the involvement of bureaucratic channels in the taking of operational decisions. This has in practice meant both an increase in the autonomy of enterprise managers and in the relative authority of municipal and civic administrators, particularly in

matters relating to the sanctioning of new investments and changes in enterprise functions. Higher levels of centralization continue to persist in the heavy industrial branches. In general, however, there is less incentive for enterprise management to act as if their unit was merely the subsidiary of a central ministry. Collective and individual enterprises are less subject to bureaucratic guidance and supervision than State-owned enterprises.

Extending the "responsibility system" to the urban centres has led to the formation of joint enterprises involving State industrial enterprises and rural collectives. These subcontract labour-intensive processes to the collectives, thus stimulating the growth of rural industry. Holding companies are also being established. These are designed as industrial corporations with management responsibilities spanning a wide range of industrial enterprises. Mergers between industrial units have also taken place, with the prime objective to avoid duplication. Some enterprises with longstanding financial problems and entrenched organizational procedures which contributed significantly to a wastage of resources have been closed down.

The increased autonomy granted to industrial enterprises has been guaranteed by a new and fast-developing set of industrial and commercial legislations. Since the late 1970s the following important laws have been promulgated in China: the Economic Contract Law, the Trad arks Law, Regulations Governing the Registration of Industrial and Commercial Enterprises and Rules of Policy about Non-agricultural Individual Economy in Cities and Towns.[71/] The purpose of these laws is to establish the legal rights and duties of industrial enterprises and to define their corporate personality. The observance of these laws is monitored by the State General Administration for Industry and Commerce, which is an organ of the State Council and charged with the responsibility of implementing these laws and drawing up new regulations and policies. This body is also assigned the duty of supervising the activity of the individually-owned enterprises in commerce and industry.

There is a growing body of legislation governing the operations of foreign subsidiaries and joint venture operations in China. A number of organizations have also been given the responsibility of controlling and supervising foreign investment in China. These include:

(i) The Ministry of Foreign Economic Relations and Trade

The Ministry takes charge of all matters relating to planning and control of State foreign trade and foreign economic co-operation. Its main functions include: the implementation of the State foreign economic and trade policy; initiation of various forms of international economic activities; development of foreign trade; co-operation with third world countries in economic and technical aid; absorption and utilization of foreign capital; importation of advanced technology, etc.

The following bureaux have been set up within the Ministry of Foreign Economic Relations and Trade:

Bureau of Legal Affairs - in charge of drafting and examining laws and regulations concerning foreign economic relations and trade and other legal matters;

Bureau of Foreign Trade - in charge of administration of foreign trade;

Bureau of Import and Export - in charge of import and export business, controlling and co-ordinating the business of import and export corporations;

Bureau of Aid to Foreign Countries - in charge of foreign economic aid affairs;

Bureau of Economic Co-operation - in charge of undertaking engineering projects, labour co-operation and establishment of joint ventures in foreign countries;

Bureau of Foreign Investment - formed by merging the former Foreign Investment Department and Government Loan Office of the Foreign Investment Commission. It takes charge of controlling different forms of utilization of foreign capital and projects under loans by foreign governments and international financial institutions;

Bureau of Technical Imports and Exports - in charge of import and export of foreign technology, and complete sets of equipment;

Bureau of International Liaison - in charge of economic technical co-operation with the United Nations and other international organizations, and administering non-compensatory aids from foreign countries.

(ii) Controlling organizations in provinces, municipalities and autonomous regions

Departments have been set up in the people's governments of provinces, municipalities and autonomous regions to control foreign investment. Despite the fact that they vary in name, such as foreign economic commission, import and export controlling commission or import and export office, they are, administratively, under local people's governments and are all directed by the Ministry of Foreign Economic Relations and Trade.

The provincial, municipal and autonomous regional people's Governments may, in consideration of local conditions, examine and approve foreign loans and compensation trade of small- and medium-size up to a certain limit, provided the overall arrangement under national planning would not be affected. Some small-size joint ventures with Chinese and foreign investment may be approved by these governments under the authorization of the Ministry of Foreign Economic Relations and Trade.

(iii) Controlling organizations within Ministries

Generally, all the Ministries of Industry authorize their foreign affairs department or planning departments to control foreign investments.

(iv) The State General Administration of Foreign Exchange Control

The administration is an organization directly under the State Council for controlling foreign exchange, with its branch offices in the provinces, municipalities and autonomous regions. It performs the functions of controlling foreign exchange in accordance with the "Provisional Regulations for Foreign Exchange Control of the People's Republic of China".

(v) The General Administration for Industry and Commerce of the People's Republic of China.

The General Administration for Industry and Commerce of the People's Republic of China is a State organ dealing with economic affairs. Directly led by the State Council, it supervises the business activities of industrial

and commercial enterprises in China. Local administrative bureaux for industry and commerce are set up in the provinces, municipalities and autonomous regions.

The main departments under the General Administration for Industry and Commerce are: the Market Control Bureau, the Registration Bureau for Enterprises, the Trademark Bureau, the Department of Economic Contracts, the Department of Economic Supervision, the Department of Collective and Individual Economy, the Advertisement Office, and two research institutes - the Trademark Designing Research Institute and the Advertisement and Decoration Research Institute.

The functions of the above units are as follows:

The Market Control Bureau draws up policies and regulations on market management; controls and supervises the free markets in urban and rural districts.

The Registration Bureau for Enterprises investigates and draws up regulations regarding the registration and control of all industrial and commercial enterprises and other economic organizations, registers the establishment of the above-mentioned enterprises and organizations; and of foreign investment enterprises, equity joint ventures with Chinese and foreign investment, contractual joint ventures, joint ventures with investment by Chinese enterprises and Hong Kong or Macao compatriots or overseas Chinese; controls and supervises the business activities of these enterprises and the representative offices in China of foreign enterprises, companies and other economic organizations.

The Trademark Bureau investigates, examines and registers trademarks and protects the exclusive right of use of registered trademarks according to relevant Chinese laws; supervises the quality of products through trademark control.

The Department of Economic Contracts investigates and draws up regulations governing economic contracts; inspects and supervises the

implementation of economic contracts; settles by conciliation or arbitration disputes arising from the implementation of economic contracts.

The Department of Economic Supervision upholds the State plans; maintains market order; stops mismanagement in commodity circulation; cracks down speculation, profiteering and ther illegal operations. It is only recently that the existence of a "parallel economy" run by profiteers and black marketeers has been recognized with any frankness in China. The present Chinese leadership is aware of the urgent need to overcome "economic crime" that has varied in magnitude in recent years.

The Department of Collective and Individual Economy investigates and draws up regulations governing collective and individual enterprises; controls such enterprises in conjunction with relevant departments or organizations.

The Advertisement Office draws up regulations governing the control of advertisements and exercises such control.

(vi) China International Trust and Investment Corporation (CITIC)

China International Trust and Investment Corporation (CITIC) is an international finance corporation engaged mainly in taking in foreign capital and handling investment in trust.

The Corporation is a State-owned enterprise operating under the direct supervision of the State Council. The scope of its business is:

(1) Under commission of foreign investors to bring them together with Chinese corporations, enterprises and other economic organizations and help them enter into short- and long-term joint venture agreements and contracts; to give consultation and provide information on setting up joint ventures to carry out short- and long-term technical co-operation;

(2) Under commission of various ministries and local administrations in China to get into contact with foreign investors and to raise funds and import advanced technology and up-to-date equipment for carrying out short- and long-term technical co-operation;

(3) For a particular project to take the responsibility for organizing negotiations between interested parties; at the request of either one of the parties or both parties to provide consultation on legal and accounting matters; to co-ordinate between the Chinese and foreign parties;

(4) If requested by both parties, to invest in the project concerned as a separate party;

(5) To invest overseas or to co-operate with foreign enterprises in industrial production by making use of foreign resources.

Furthermore, the Corporation accepts in trust moneys from foreign investors and from overseas Chinese for investment or for other purposes with the assurance of paying back the capital and interest accrued thereto. It is also allowed to finance domestic projects by floating debentures in foreign money markets in its own name or on behalf of other Chinese enterprises.

The Corporation has been granted the right to import equipment and materials required by the joint ventures and to export the products produced by foreign firms in which it has equity interest. The Corporation is permitted to manage and use at its own discretion the funds in foreign currencies obtained from its business operation.

The Corporation is empowered to authorize the stationing of representatives in China of foreign corporations with which it has business connections.

The highest organ of authority of the Corporation is the Board of Directors which consists of a chairman, a vice chairman, five executive directors and 39 directors, all nominated by the State Council. The Board is representative of a wide range of interests. Among its members are vice governors of provinces, vice mayors, government department heads, lawyers, accountants, academics, and former Chinese businessmen. The Board also includes influential personages from commercial circles in Hong Kong and Macao. The Corporation has its head office in Beijing and a branch office in Hong Kong.

The banking reforms of 1979-1981 gave considerable opportunity to industrial enterprises for enhancing their financial autonomy and called for a redefinition also of the role of the banks which have in recent years become sources for the provision of both fixed and working capital in the form of interest-bearing loans. Increasing use of corporate taxation - in lieu of State profit appropriation - is also being made with the same end in view.

The following new financial institutions have been established in recent years:

- The People's Bank of China (PBC), now a fully-fledged Central Bank, is charged with the responsibility of gradually shifting from a grant to a loan and credit system of investment financing;
- The Industrial and Commercial Bank of China which has taken over the PBC's commercial activities;
- The Bank of China which is responsible for foreign exchange transactions;
- The People's Construction Bank of China which has been established for managing capital construction investment in the productive sectors of the economy;
- The China Investment Bank which lends for investments requiring foreign exchange.

According to a new legislation enacted in December 1984 the four foreign banks will conduct foreign exchange transactions with joint ventures involving non-Chinese partners or wholly foreign-owned firms. Deposit rates will be similar to current account rates in China, but lending rates will be determined by negotiation, thus opening up the scope for profit-making. It is generally believed that this new legislation paves the way for a rapid expansion of the services foreign banks are allowed to offer in China. Chinese officials believe that liberalizing procedures governing foreign banking operations in China will contribute to a significant increase in the inflow of foreign capital to China and part of it can be used to finance industrial development.

Financial autonomy is only one aspect of the re-emergence of a mixed economy in China. The urban economy includes State enterprises, collective

enterprises and urban industrial enterprises representing the socialist subsidiary economy. According to one estimate collective enterprises in urban areas account for 20 per cent of the total output value of industry and employ one-third of all industrial employees. These enterprises as well as State-owned units have enjoyed significant organizational autonomy. The Government has encouraged enterprises to develop contractual relations with each other. This allows China to take advantage of the structure of her industrial sector. Many small-scale industries "cluster" around larger and more modern enterprises. In 1979 the Government sought to strengthen these linkages by popularizing the example of the "Changzhou dragons" - each dragon consisting of contractually-linked State-owned and collective enterprises around one or two products. These links maximized co-ordination and integration within the industrial system. Such an investment strategy can also contribute towards improving the regional distribution of industrial activity in China.

4. INDUSTRIAL GROWTH PROSPECTS AND SCOPE FOR FOREIGN INVESTMENT, TRADE AND INTERNATIONAL CO-OPERATION

4.1 Prospects for growth and structural change

The Chinese objective of quadrupling production and income by the end of this century[72/] is ambitious but in principle attainable. Quadrupling the gross output of agriculture and industry would raise national income to a level of $800 per head (at 1980 prices) by the year 2000. This would mean an annual GNP of $1,000 billion in the year 2000 when China's population will reach 1.2 billion. On the eve of achieving this ambitious target China will resume sovereignty over Hong Kong. It appears to be a suitable addition to the Chinese economy which is now being stirred by the steady application of consistent policies towards gradual introduction of industrial incentives largely through the use of the market mechanism.

The basic objective of invigorating the domestic economy and opening to the outside world is to provide a solid foundation for China's endeavour to approach the level of developed countries by the middle of the next century. The following analysis of industrial growth prospects is confined mainly to the industrial implications of quadrupling the Gross Value of Industrial and Agricultural Output (GVIAO) by the year 2000.

A quadrupling of the total product of society using 1952 as a base took 18 years and was achieved in 1970; a quadrupling of national income, again using 1952 as a basis, was achieved after 25 years - in 1977. A quadrupling of gross industrial output value was achieved over a 13-year period (1952-1965) and again over a 16-year period (1965-1981).[73/] The major targets of the Sixth Five-Year Plan (1981-85) were reached two years ahead of time and the targets envisaged for 1984 have been surpassed. Historical and recent trends therefore suggest that China is capable of achieving the task she has set for herself in the 20-year period from 1981 to 2000.

A development path postulated by the World Bank[74/] indicates that, assuming a level of investment efficiency similar to the average in Japan during 1950-80 and in all middle-income countries during 1960-82, China could

attain the envisaged quadrupling of national income. With an investment growth rate of 26 per cent, gross value of industrial and agricultural output would quadruple. If industry would grow at 7 per cent rather than 8 per cent, national income would less than quadruple. However, China would also have the option of maintaining the investment rate at 30 per cent, which would cause national income to grow one percentage point faster than the target rate and it would slightly more than quadruple. In the Bank's view increasing investment efficiency requires according greater priority to the service sector. Such a strategy would accelerate the pace of commercialization within the Chinese economy and reduce the scope for mandatory planning.

Glimpses of three alternative projections

This section attempts to outline three alternative projections - named QUADRUPLE, MODERATE and BALANCE - propounded by the World Bank.[75/] These projections spell out a fairly wide range of possibilities and reveal a number of issues. Using both Western and Chinese measures of national income, these projections present alternative growth rates and the composition of both total final demand and household consumption over the period 1981-2000 (see Table 36).

In the QUADRUPLE scenario under specific assumptions, GDP (Western measure) grows at a rate of 6.6 per cent and NMP (Chinese measure) at 6.3 per cent per annum. This postulated growth rate appears to be consistent with the Government's envisaged growth rate. The minimum required growth rate for per capita GDP, to reach $830 in 2000, is 5.5 per cent per year. The Chinese measure of national income per capita grows slightly slower - 5.2 per cent - because the relative size of the nonmaterial service sectors increases. The saving rate was deliberately chosen so as to attain the target of quadrupling GVIAO during 1980-2000. The required domestic savings rate is 29 per cent, although the investment rate is closer to 30 per cent for most of the period because of foreign borrowing. This is higher than China's average investment rate in 1952-82 (28 per cent), but lower than the 1970-82 average (32 per cent). It is also quite close to Chinese projections of the investment rate needed to quadruple GVIAO in 1980-2000 (26-29 per cent), though somewhat

higher, perhaps because QUADRUPLE assumes more of an increase - over China's past levels - in capital requirements in agriculture, energy and transport.

The MODERATE scenario projects a relatively less optimistic picture. The assumption of lower efficiency causes significantly slower growth. The growth rates of national income and of GVIAO are reduced by rather more than one percentage point, and per capita GDP rises to only $670 by 2000. The projected MODERATE growth rate of national income per capita is almost exactly what China achieved in 1952-82 (4.0 per cent by the Chinese measure).

In the BALANCE scenario, with greater weight given to the service sector, the savings rate was deliberately chosen to attain the same growth rate of per capita GDP as in QUADRUPLE, in line with the Government's long-term objectives. The Chinese measure of national income in BALANCE grows only slightly slower than in QUADRUPLE, because most of the increase is in materially productive services (commerce and business services). GVIAO, however, grows significantly slower, because the greater share of services means smaller shares for agriculture and - especially - industry. Partly as a result, but also because of the assumed reductions in use of circulating capital and materials within individual sectors, the same growth rate of national income as in QUADRUPLE is attained in BALANCE with less investment - 26 per cent of national income. The increase in consumption that this makes possible is divided proportionately between public consumption and household consumption (which in real per capita terms in the year 2000 is 9 per cent higher than in QUADRUPLE).

To illustrate the possibility of faster growth, a variant of BALANCE was constructed, with the savings rate increased to the same level as in QUADRUPLE. Per capita GDP in this projection increases at an annual average rate of 6.5 per cent (one percentage point higher than in QUADRUPLE and BALANCE, though still slightly below the 6.8 per cent of 1979-84), and reaches $990 by the year 2000. GVIAO in this variant of BALANCE more than quadruples (growth of 7.4 per cent p.a.), with a commensurate increase also in energy and materials use.

Table 36. Aggregate growth rates and structure of final demand, 1981-2000

A. AGGREGATE GROWTH RATES
(Annual average percentages, at 1981 prices)

	QUADRUPLE	MODERATE	BALANCE
National Income			
GDP (Western measure)	6.6	5.4	6.6
NMP (Chinese measure)	6.3	5.1	6.2
National Income Per Capita			
GDP	5.5	4.3	5.5
NMP	5.2	4.1	5.1
Gross Value of Industrial and Agricultural Output	7.2	6.0	6.4

B. STRUCTURE OF FINAL DEMAND
(percentages)

	1981	2000		
		QUADRUPLE	MODERATE	BALANCE
Shares of National Income (Expenditure) a/				
Investment	28(29)	29(29)	29(28)	26(26)
Public consumption	15(10)	15(9)	15(10)	16(10)
Household consumption	56(61)	56(62)	56(62)	59(64)
Shares of Household Consumption b/				
Food (incl. processed food)	55	48	49	44
Manufactures	24	29	28	25
Services (incl. commerce)	18	20	20	27
Fuel, electricity, transport	3	4	4	4

Source: World Bank, China: Long-term Issues and Options, Report No. 5206-CHA, May 1985.

a/ Figures outside parentheses are Western measures, inside parentheses are Chinese measures. The Western measures may not add up to 100 because of external trade imbalances.

b/ On Western basis, at 1981 producer prices, with all commercial margins included in services.

On the other hand, if internal or external misfortunes were adversely to affect China's savings rate or investment efficiency, growth could be slower than in MODERATE. In addition, it is possible that all three projections may have underestimated the backlog of past investment needs - especially in transport and in housing (the estimates for electricity are more reliable) - in which case their savings and investment rates would be too low, or their growth rates too high, or some combination of the two. In any event, experience in China and elsewhere (including Eastern Europe) strongly suggests the need for cautious planning: the fluctuations and inefficiency caused by setting unrealistically high growth targets are usually much more serious than the problems caused by unrealistically low growth targets, which can be gradually adjusted upward.

Structural change

In all three projections the share of food declines: in QUADRUPLE and MODERATE the reduction is unusually small, mainly because of rapidly increasing consumption of animal products; BALANCE is more normal by international standards. In QUADRUPLE and MODERATE, most additional nonfood consumption is manufactures, although expenditure on housing and miscellaneous personal services also grows quite rapidly. In BALANCE, consumption of services (including retail commerce) grows unusually rapidly, to bring China faster into line with the usual pattern of structural change. The share of household income spent on manufactures thus increases slowly; but because aggregate consumption increases faster, real per capita consumption of manufactures in BALANCE in 2000 is only 5 per cent less than in QUADRUPLE.

4.2 Industrial implications of growth targets

The World Bank's projection envisages about 8 per cent growth rate of gross industrial output in QUADRUPLE. This is in line with the Chinese most recent projected growth rates. Heavy industry is expected to grow slightly faster (8.1 per cent) than light industry (7.9 per cent). Machinery is the fastest growing heavy industry (9.1 per cent), followed by chemicals (8.8 per cent), metallurgy (7.0 per cent) and coal and petroleum (4.8 per cent). Within light industry, the fastest growing sector is food processing (8.7

per cent). Wood, paper and miscellaneous manufacturing are expected to grow by 8.4 per cent. Textile and clothing are the slow growing light industries (7.1 per cent).

The relatively fast growing heavy industries are expected to benefit from an increase in investment demand, intermediate demand and partly from foreign demand. Household and public consumption also partly account for high growth rates in selected heavy industries. Among the light industries, textile industry grows slowly, partly because consumer demand grows only slightly faster than income, and partly because textiles exports would grow relatively slowly - despite 6 per cent growth per year in real terms. As regards efficiency of investment it is assumed that capital-output ratio in the Chinese industrial sector would be equal to the average of the past 30 years,[76/] with reforms checking the upward tendency of performance and efficiency.

Primary emphasis of the new reforms is placed on increasing economic efficiency by holding down investment and raising factor productivity. Experience within the industrial sector during the past five years has shown this to be a difficult task. Capital construction investment has remained high and in three of these years the heavy industrial branches have grown faster than light industry.

Recent experiments in the industrial sector reveal that the enterprise performance criterion has gradually shifted toward one which resembles that of market-oriented economies. In this context the experience of China's Asian neighbours would seem, however, highly suggestive. Recent empirical evidence[77/] on sources of manufacturing efficiency demonstrates that the major sources of manufacturing efficiency in China's Asian neighbours stem from innovative activities by wealth accumulators (represented by net worth-assets ratio) and the economy of capital use (capital turnover ratio). The variable net worth-assets ratio yields the strongest statistical significance in the Province of Taiwan's enterprises compared with those of Japan and Republic of Korea. The inference of this recent study shows that wealth-maximizing opportunities could be stronger than that provided by performance-determined incomes and wages. The experience of China's Asian

neighbours also suggests that rate of profit over capital assets bears no correlation with the size of enterprises, and total productivity improves faster in smaller-scale enterprises than in larger ones for all three economies, namely, Japan, the Republic of Korea and the Province of Taiwan. Such a performance seems to be more relevant to the Chinese industrial sector which is characterized by the preponderance of small industries over the large ones.

Profit-motive under the current enterprise-rationalization reforms may entail problems which would require special policy measures for solution. They include:

(a) Labour shedding by over-staffed enterprises may add to the unemployment problem;
(b) Price raising by enterprises whose output price has been suppressed for long before the current reform measures can add to the inflationary problem;
(c) Rewarding more efficient enterprises through higher retention of profits could create income distribution problem;
(d) Gradual restructuring of relative prices is needed to reflect true scarcity value of goods and services.

Towards price restructuring

It is now widely recognized that proceeding with reforms depends crucially upon a major restructuring of the price system in China. This is necessary both to induce industrial enterprises to make the "right" policy choices and to augment the effectiveness of the use of macroeconomic levers - such as interest rates, taxes and tariffs. Price reform is likely to be a major concern during the period of the Seventh Five-Year Plan (1986-1990). It is envisaged that the introduction of major changes in relative prices may lead to a significant reduction in industrial growth rates.

The problems of the re-establishment of the pricing system as a means for regulating socialist commodity production have been widely analysed in the centrally planned economies of Eastern Europe. In Hungary - where the rehabilitation of the price mechanism is relatively advanced among the CMEA

group of countries - a general application of the principle of marginal cost pricing is usually defended on the grounds that it will lead to surplus maximization.[78] In this view, prices reflecting the existence of relative resource scarcity initiate and sustain the process of innovation necessary for increasing the technological advancement and enhancing the international competitiveness of the socialist economy.

The rehabilitation of the pricing system as a determinant of the pattern of the social allocation of values requires to be supplemented by two other major policy initiatives. A rational price system can lead to increased economic efficiency if complementarity in objectives pursued by individual enterprises and by the State is enhanced. In China increased emphasis is being put not only on reforming the relationship between the State and the enterprises but also on reforming the relationship between the workers and the management of the enterprises themselves. Some Chinese economists have argued that while "the national economy as a whole should be mainly regulated through the Plan, the micro-economy (the enterprise and the economic unit) should be regulated through the market".[79]

In an empirical study of two Chinese manufacturing enterprises following the 1979 experimental reforms in expanding organizational autonomy, it was found "that the objective of Chinese enterprises is to maximize income and benefits of workers."[80] The enterprise sought a maximization of net output and a reduction in the rate of transfer of surplus to the State. Although the emergence of a system of rational pricing would perhaps enhance the capacity to increase net output, one can be less certain about its impact on an enterprise's willingness to bear social costs - reflected for example in profit remittances to the State. A difference of orientation and interests between the organizers and managers of the national economy and the workers of a specific industrial enterprise is thus clearly possible. Rationalizing the price structure - that is increasing its capacity to better reflect relative resources scarcities - would therefore need to be accompanied by the development of compensatory mechanisms for inducing individual enterprises to forego the advantages of "free-riding" and avoiding social costs. Since market imperfections can never be fully eliminated, scope for compensation mechanism always exists when resource allocation is determined primarily by market forces.

Problems may also arise if international prices are used as a basis for price reform in China. These prices represent the static opportunity cost of obtaining any tradeable product. Since price formation in international oligopolistic markets is strongly influenced by bargaining processes, there is a strong temptation to use policy mechanisms for exerting pressure to influence price formation. Moreover, a re-alignment of domestic prices in accordance with relative international values is likely to have an impact on the structure of consumer preferences. Import liberalization has the capacity to systematically "feed" a growth in the import elasticity of demand. It is essential that the decision to make a fuller use of international values in price formation calculations within the Chinese industrial sector be accompanied by two sets of policy initiatives. Measures could be adopted to restrain the growth of an imbalance between the expansion of output and imported inputs in specific manufacturing branches. Secondly, an attempt could be made to systematically monitor international product markets - particularly technology imports - with a view to approximately ascertaining the price formation process in these markets and the scope for avoiding monopolistic prices. This will make it possible to evolve bargaining strategies - perhaps in association with other developing countries - which can in the medium run progressively reduce the scope for monopolistic practices in these product areas.

Towards industrial restructuring

The industrialization process is generally associated with structural change. As shown earlier, the Chinese industrial sector has achieved considerable success in changing the composition of output, but has not yet improved operating efficiency significantly. In recent years, the policy on industrial structure has focused its emphasis on light industry. In the past, over-emphasis on local self-sufficiency had sacrificed the benefits of specialization and had led to the duplication of investment projects. Recent pragmatic policies attempt to cope with the dynamic changes in the degree of specialization and pattern of production. An analysis of the future pace of industrialization in terms of industrial restructuring could be in the context of macro-economic policy issues and emerging problems.

Restructuring China's industrial sector is a complex task and the success of the exercise depends crucially on avoiding major macro-economic imbalances while the process is under way. Price restraint during 1979 and 1980 had been achieved by reducing capital construction investment and the size of the budget deficit.[81/] The budget deficit as a proportion of national income had been reduced from 5.1 per cent in 1979 to 0.9 per cent in 1983.[82/] The budget deficit is expected to be even lower in 1984. On the other hand, money supply growth has been rapid in recent years - it averaged 17 per cent per annum over the period 1979-1983 (highest level 23.7 per cent in 1981).[83/] It has been estimated that money supply growth during 1984 has been about 15 per cent higher than in 1983.[84/] This would suggest an upward trend in money supply growth since 1982. Recent reports also suggest that there has been a reduction in private savings and an upsurge in consumer demand following the October 1984 decisions of the Central Committee. This is likely to increase inflationary pressure within the economy.[85/]

According to Prime Minister Zhao, price changes are expected to be greatest in the field of energy and energy products. A rapid growth of the energy sector and a sustained rationalization of energy usage is a vitally important determinant of the pace of industrial development in China. Production has been rising rapidly during 1984 but the supply position remains very tight. Total energy production rose by about 7 per cent during 1984. Oil output rose at a similar rate and oil exports are likely to have increased by over one third. However, the rate of growth of industrial production continued to exceed that of energy production in 1984.[86/] The document on the Seventh Five-Year Plan (1986-1990) accords top-priority to energy. By 1990, China's power generation will be 550 billion kwh, up 47 per cent from the 1984 level. Output targets for coal, crude oil, and s roducts in 1990 are one billion, 150 million, and 44 million metric to pectively.[87/] Foreign participation has been actively sought by Chinese authorities to develop the energy sector. Foreign investment has also been welcomed in a wide and growing range of industrial and manufacturing branches.

According to available statistics on industrial energy use, industrial share of total energy consumption is 70 per cent, of which 60 per cent goes to heavy industry and 10 per cent to light industry. Within heavy industry,

30 per cent is accounted for by the metal processing and chemical industries. The present emphasis of light industry over heavy industry may bring about a reduction in energy consumption. China could save more from the changes of industrial structure than from conservation improvement. Future improvement in infrastructural facilities may create major consequences for demand for energy. Since China's energy supply cannot be optimistic, industrial restructuring that facilitates an efficient pattern of industrial energy use will be a desired element in the restructuring process.

4.3 Prospects for foreign investment and exports

Foreign investment

While structural complexities of foreign investment vary, foreign investment contracts involve a regulated inflow of capital, production equipment and/or technical know-how. The Chinese partner normally contributes land, factory buildings, renminbi funds, labour and other services. Some of these arrangements call for joint management (for example, all joint-equity ventures plus many co-production deals); a few are operating under 100 per cent foreign ownership (for example, some co-production schemes); and still others are entirely Chinese-run enterprises with foreign investors serving the advisory role and supplying technical know-how, equipment and/or raw materials (for example, all compensatory trade and processing).

The creation of SEZs and priority investment areas coupled with reasonably favourable legal-institutional framework and the offering of concessions and investment incentives have undoubtedly heightened the volume of foreign investment to some degree. Nevertheless, foreign enterprises operating in China seem to be hampered by a number of constraints which are not likely to disappear in the short run.[88/] Low productivity of labour and an underdeveloped infrastructure stand as formidable obstacles. Government's numerous pronouncements since 1979 seem to attack these problems in earnest to facilitate the flow of foreign investment capital to aid China's modernization programme.

Export prospects in terms of revealed comparative advantage

It seems that China's manufacturing export prospects continue to exist in the area of light industrial products. In order to test this, the exercise undertaken by Yeats for the period 1969-1978 was repeated for the period 1978-1981.[89/] The results of the exercise show that China had the greatest comparative advantage in the export of products such as textile fabrics, textile yarn, clothing, textile fibres, food manufactures and some chemicals. China's international competitiveness as an exporter of chemical products increased significantly over the period under study. On the other hand, Chinese heavy industrial branches - machinery and transport equipment - had low international comparative advantage and this did not change significantly during the 1970s in terms of broad product categories.[90/] Several engineering products - ship and boat components, telecommunication equipment and radioactive equipment - did however register substantial gains. However, they still remain significantly behind the labour-intensive light manufactured products in which China has a high international comparative advantage. As liberalization proceeds, exporting firms will find it useful to concentrate on this latter product group. It is therefore reasonable to expect China to continue to specialize in relative labour and natural resource-intensive manufactures, unless the Government embarks on a deliberate policy of heavily subsidising high technology exports.

Export promotion needs a coherent policy because analysis has shown that China's comparative advantage lies in product groups which face declining world markets - this is true of both product areas in which China has a strong international comparative advantage, such as textiles and light chemicals, and of product areas in which her international competitiveness is improving (metal products and machine parts).

Desired shift in export composition

The desired shift in export composition pertinent to the QUADRUPLE scenario calls for a change from textiles and clothing (because they are subject to increasing protectionist barriers) to machinery and metal products - presumably those with expanding world demand. It is to be realised that if

China was able to do this successfully she would come into direct competition with East Asian countries, such as the Republic of Korea and Singapore. Though China could benefit from substantial difference in wage structure, the existing export profile of China is very different from that of these countries and there is no indication that this difference is being reduced over time.[91/] If China does become a major developing country exporter of technology-intensive manufactures, she is likely to compete against other countries. Protectionist barriers in these markets could substantially limit export gains, and intensified competition among developing countries exporters can lower prices significantly in world markets.

One important category not discussed so far is that of technology exports - as distinct from exports of capital goods. China has been a major third world technology exporter - in the form of project exports, consultancy exports, licencing and direct and joint venture investments. Technology exports are generally concentrated in areas with mature production technology, requiring relatively modest marketing infrastructure and not very large investment outlays. China in effect specializes in the export of technologies for the development of infrastructure projects on the one hand and intermediate goods on the other.

Recent policies exercise selectivity in permitting technology imports. In recent years China has sought to increase technology exports and as the next section argues, there exists significant scope for achieving this objective in the context of enhanced technical co-operation within the third world.

4.4 China's role in technical co-operation among developing countries (TCDC)

Since the late 1970s China has made extensive efforts to increase its participation in industrial ventures in developing countries.[92/] Chinese international contractors signed a total of 307 contracts during 1982 of which 201 were for projects and 126 were for the provision of labour services. The total value of these contracts was estimated at $508 million. Over the period 1979-1982 a total of 806 contracts had been signed involving projects in 46

countries. About 400 contracts had been completed by the end of 1982. Projects have been undertaken in the fields of highway, bridges and building construction, well drilling, horticulture, geological exploration, waterway dredging and the establishment and operation of power stations. The most rapidly expanding area is that of labour services contracts. It is estimated that 50,000 Chinese are currently working abroad. The main objectives pursued in seekig these contracts are increasing Chinese access to advanced technology and acquisition of work experience, promotion of Chinese capital goods exports, augmenting foreign exchange earnings and promoting South-South co-operation in order to strengthen collective self-reliance.

Despite the rapid growth of international contracting work, China's share of the world market is estimated at less than 1 per cent and China faces competition for Middle East construction contracts from other developing countries in Asia, notably India, Pakistan, the Philippines, the Republic of Korea and Thailand. The Chinese Government has paid special attention to the task of strengthening its international contracting corporations - 28 such corporations had been established by the end of 1982. The main focus of Chinese international contracting work seems to be in the Middle East, and in North and Central Africa. The scope of contracting work has increased since 1979 and includes surveying, design, construction, supply of equipment and installation, besides the provision of labour services. The proportion of skilled workers and technical workers involved in project maintenance has also increased over time. Interest in recent years has also been expressed in increasing Chinese participation in the design and implementation of industrial training programmes in the developing world.

Supplementing the international project contract work has been the renewed interest in revitalizing China's economic aid programme. Net aid from China "declined steadily over the period 1976-1982".[93/] In 1983 net aid disbursed rose by 8.3 per cent in nominal terms and was equivalent to $65 million. This incorporates a grant element of 75 per cent. A quarter of Chinese aid is allocated to African countries. Aid agreements have been completed with 77 developing countries. About 2,000 students from the developing countries are currently studying in China. China is showing increasing flexibility in aid management in recent years. It has agreed to

reschedule loan arrangements with Tanzania, the Yemen Arab Republic, Zaire and Zambia. Chinese aid funded projects have since 1983 been open to investment from the recipient countries.94/

Chinese aid financed projects are spread over a wide range of areas including water conservation, chemicals, textiles, machinery, construction, agriculture and public health. Chinese authorities estimate that over 1,000 projects have been financed over the last 30 years.95/ Continuing maintenance services after project completion is emphasized in China's technical assistance strategy. Technical assistance is also provided in the form of training programmes in co-operation with United Nations agencies - these represent an important component of China's multilateral assistance programme. Training facilities have been offered in the fertilizer, transport, petrochemical and power generating industries in recent years.

Efforts have also been made since 1980 to improve aid management and administration. An important development has been the introduction of an "investment responsibility system" whereby individual contracting partners and firms are given sole responsibility for project management, thereby reducing the need for bureaucratic work and frequent ministerial references. Results, according to Chinese assessments, have been positive to date.96/

China is the third world's largest non-CPEC aid donor and technical assistance source.97/ There exists considerable scope for an expansion of China's role in this field. Aid in 1984 is also likely to have exceeded the 1983 level in nominal terms. Moreover, China has shown a keen interest in using multilateral channels for administering its aid and technical assistance programmes. The United Nations agencies and other multilateral agencies can play an important role in the development of industrial co-operation between China and other developing countries.

China's industrial experience is of continuing relevance to other developing countries as well. The transfer of technology in the field of agricultural machinery and pharmaceuticals - the introduction of walking tractors and herbal medicines for example - from China to African and South Asia countries may prove exceptionally beneficial. The multilateralization of

China's technical assistance programme can increase the pace and enhance the scope of such intra-south technical co-operation.

4.5 Role of multilateral aid and UNIDO technical assistance to industry

Multilateral assistance

Multilateral technical assistance in China through the UN system totalled $85.676 million in 1984. Industry had a share of $3.743, accounting for only 4 per cent of total multilateral assistance in 1984.

China has substantial requirements for technical assistance co-operation in a broad range of areas. Such assistance can play an important role in fulfilling the major objectives of the Seventh Plan. As far as the industrial sector is conerned the Plan stresses the need for:

(a) modernization and upgrading of industry;
(b) fresh impetus to the production of consumer goods; and
(c) establishment of informations industry.

The Plan is likely to concentrate on modernization investment within existing enterprises. Foreign technology will be used for the modernization of industry and a variety of investment forms will be experimented with in order to optimize the scale of technology transfer to China during the Plan period.[98/]

International technical assistance could therefore concentrate on projects for the technical transformation of existing enterprises, training programmes for technical personnel in consumer goods and the establishment of a viable industrial information network on a national basis. Existing research centres established with United Nations assistance - such as the Beijing Information Processing and Training Centre for International Co-operation, the Agricultural Machinery Testing Centre, the Regional Research and Development Centre for Small Hydro-Power Generation, etc. - can be

strengthened to enhance China's contribution to TCDCs as well as to upgrading technical experience in domestic industry.

United Nations agencies - such as UNIDO, UNCTC and UNCTAD - can in principle provide a framework for a systematic monitoring of international technology markets and an analysis of changes in the policies and organizational structure of leading technology suppliers. Such a service can be particularly useful to China, especially during the period in which technological modernization remains an overriding concern.

International agencies can also play a role in enhancing co-operation between the leading developing countries producing and utilizing technology goods. A sharing of information, techniques and experiences of countries such as China, India, the Republic of Korea, Brazil, Mexico and Egypt can contribute significantly to enhancing the developing countries' international technology markets and in stimulating more trade in manufactures within the developing world, thus laying the basis of a more efficient division of labour and avoiding unnecessary duplication in this field.

Finally, it must be stressed that a realization of China's full industrial potential requires that primary emphasis be placed on increasing the efficiency of industrial production and management processes. The present Chinese leadership is fully aware of this need - hence the emphasis on technical transformation rather than new capital construction in industry. International agencies could orient their assistance programmes so that they contribute to the achievement of this objective. Work in two areas seems of considerable relevance. Firstly, Chinese manufactured exports need to be rapidly upgraded to international standards. Technical expertise should be provided on an expanded scale to help China in this task. Secondly, the development of management and accountancy training facilities could also be given high priority. As organizational autonomy grows and as flexible financial and credit policies are institutionalized, a large number of senior and middle level industrial workers will have to rapidly acquire managerial skill. Chinese leadership envisages the completion of the process of emergence of a new leadership in key enterprises by the end of 1985[99/] and has formulated plans for the rapid training of large numbers of directors,

chief engineers, chief economic managers and chief accountants. International agencies thus face a challenging task in this respect. The development of a crash programme for the rapid transmission of managerial and accountancy training to key personnel in leading industrial enterprises ought to be an important constituent of a technical assistance programme executed by the United Nations agencies in China.

UNIDO technical assistance to industry

With about 82 projects totalling $14.1 million, approved and executed by end-1984 under UNDP or UNIDO auspices, UNIDO represents one of the largest UN executing agencies for the technical assistance programmes in China. Technical assistance to industry under UNDP accounted for 99.8 per cent of multilateral technical assistance provided through the UN system in 1984. Appendix F provides the details of the approved and/or operational technical co-operation projects of UNIDO as of April 1985.

In preparation for the next Country Programme, within the context of the Programming Cycle of 1986-1990 with strong emphasis on industrial sector, UNDP requested UNIDO to field two programming missions. The general observations[100/] covering 21 projects reveal the complexities of technical assistance to industry. The level of technical assistance requested by China is becoming increasingly advanced and sophisticated. Advanced electronics and computers related technologies are permeating practically all industries and, hence, are an important and essential part of many of the technical assistance projects. This trend is expected to continue. China urgently needs assistance related to various forms of electronics, instrumentation and computer technology and their application to industry.

Machines, equipment, machine tools, durable consumer goods, appliances, transportation equipment and agricultural equipment, are more advanced than industrial chemicals, plastics, fine chemicals, dyes and pigments, process chemicals, etc. Among the processing industries, metallurgical industry stands as a single exception due to the high level of technical progress that

has already entered into its productive process. In the food industry modern food additives and introduction of processed food have priority importance.

In the process of Chinese modernization, exchange of research ideas would be helpful in their problem solving. The Centre for Socio-Economic Information Analysis of China has shown interest in UNIDO-PRC co-operation in research. The Centre explores the possibility of linking their data base with the UNIDO data base to exchange the results of simulation analyses on mutually agreed research projects. The Centre has already expressed its willingness to co-operate with UNIDO on studies concerning industrial development and global interdependence issues.

NOTES

1/ Figures for 1982 supplied by UNIDO and adjusted by including China's share in world MVA.

2/ Excluding China.

3/ World Bank Report No.3393-CHA (1981), p. 11.

4/ The case of Nigeria is explained by the oil boom of the 1970s.

5/ See e.g. Maruyama, A.: "The mechanism of China's Industrial Development", The Developing Economies, vol. 22, No. (1982), pp. 437-371, and Malenbaum, W.: "Modern Economic Growth in India and China 1950-1980", Economic Development and Cultural Change, vol. 31 (October 1982), pp. 45-84.

6/ Statistical Yearbook of China 1984. This includes those employed in brigade industry.

7/ World Bank, World Development Report 1984.

8/ Statistical Yearbook of China, 1984, p. 29. Assuming an exchange rate of $1 = Rmb 1.89 in 1982.

9/ World Bank, World Development Report 1985, pp. 174-175.

10/ By comparison, industry's share in Great Britain rose by 11 percentage points over a period of 40 years during 1801-41, and it took Japan 45 years (1878-1923) to bring about an increase of 22 per cent. For brief explanation, see Yeh K.C., "Macroeconomic Changes in the Chinese Economy during the Readjustment", The China Quarterly, December 1984.

11/ National income is here treated as identical with net output.

12/ World Bank Report No.4072-CHA, pp. 126. For the derivation of GDP from net output, see pp. 104-108.

13/ World Development Report 1984, pp. 228-229. This table gives a 1982 export-GDP ratio of 10 per cent for China. Our own estimate would be somewhat lower.

14/ EIU Quarterly Review China IV, 1984, p. 24.

15/ Li, C. and Zhang, Z.: "Changes in the Livelihood of the Chinese People", Hanaggi, 21 October 1984.

16/ Figures are from Communique of the State Statistical Bureau of the People's Republic of China on the Fulfilment of China's 1983 Plan, 29 April 1984 (mimeo), p. 589.

17/ Financial Times, 12 February 1985.

18/ "China to Slow Expansion of Industry", International Herald Tribune, 15 November 1984.

19/ Far Eastern Economic Review, 21 March 1984.

20/ EIU China Quarterly Review, 1984 IV, p. 24.

21/ Financial Times, 22 November 1980.

22/ Events are moving fast and series of reforms and readjustment plans are being constantly launched during the current phase of development. The cut-off date which circumscribes the analysis in this Review is roughly speaking mid-1985. Analysis based on time series data covers the period 1952-1983.

23/ "China to Slow Expansion of Industry", International Herald Tribune, 15 November 1984.

24/ UNIDO, Industrial Development Survey (forthcoming).

25/ World Bank Report No.3393-CHA, 1981, Annex A.

26/ World Bank Report No.3393-CHA, 1981, Annex D, p. 11.

27/ Communique on the Fulfilment of China's 1983 Plan, pp. 16-17.

28/ Robert Michael Field, "Changes in Chinese Industry since 1978", The China Quarterly, December 1984.

29/ Which is not equal to national income due to statistical discrepancies (see Appendix A).

30/ Statistical Yearbook 1984, pp. 34-35.

31/ Statistical Yearbook 1984, p. 308.

32/ Statistical Yearbook 1984, p. 334.

33/ World Bank Report No.3393-CHA (1981), pp. 15-17.

34/ World Bank Report No.3393-CHA (1981), p. 821.

35/ Analysis of growth and structural change draws mainly upon information published in the Statistical Yearbook of China for 1984. Two important data limitations must be noted at the outset. First it has not been possible to provide estimates of net output and value added at a branch level - although net output estimates of independent accounting industrial enterprises have been reported. It has also not been possible to separate the mining and manufacturing component of the gross output value of some industrial branches. Some implications of this limitation are drawn out in the discussion of structural change in this section and attempts are made to incorporate some modifications.

36/ Generalizations based on Table 9 have limited value because four different base years are used in the constant price calculations. Moreover comparison is also complicated by the existence of significant interbranch price differentials: new industrial products tend to be assigned relatively high prices. Furthermore, it has been argued that there is a higher degree of multiple counting in the estimation of gross value of output in the heavy industries than in the branches of light industry. World Bank Report No.3391-CHA, Appendix, p. 3.

Another difficulty arises from the fact that the Standard List of Production Branch Classification, according to which industrial activities are categorized, has been revised on four occasions since 1953. In 1958 and 1965, major revisions were made; the mining sector was added to metallurgical industries and the chemical industry sector was unified. In the latest revision the category "Other industries" (category 12 in the 1972 classification) was incorporated within heavy and light industrial branches in a way which is not specified in either the Statistical Yearbook 1984 or the Almanac of China's Economy in 1983. Thus it is likely that product classifications have changed over the years. It is also possible that the compilers of the Statistical Yearbook 1984 might have provided for and reconciled these changes in the table on page 224 on which Table 9 is based. Whether or not this is the case is not specified in that publication.

Finally, it is important to note that because of the combining of mining and manufacturing output in Chinese industrial statistics, international comparability is also reduced. The World Bank estimated that in 1979 "probably no more than 11 per cent of the total gross output came from mining, timber extraction, electric power, gas and piped water while about 89 per cent came from manufacturing". Report No.3391-CHA, Appendix D, p. 6. On the basis of these estimates it can be seen that in 1979 mining accounted for roughly 6.8 per cent of the gross value of output in the petroleum industry and 5.5 per cent of that of non-metallic minerals. Coal products accounted for only 4 per cent of the gross value of output in the coal industry. The mining and manufacturing component of the metallurgical industry could not be separated on the basis of these estimates.

37/ This largely reflects a reduction in the relative price of industrial products. Industrial prices are estimated to have declined by about 1 per cent during the 1970s. The Statistical Yearbook of China also provides time series estimates of the contribution of industry to national income. This represents the net output of the industrial sector - a concept close to, though not identical with, sectoral value added. These estimates are, however, provided at current prices and thus not directly comparable with the gross output estimates presented earlier. In general they show a marginally lower growth performance.

38/ Net output is the sum of taxes, profits, wages and interest and management fees. Depreciation is not included. The wages of non-material producing workers is also included. This definition is taken from World Bank: China: Socialist Economic Development, Annex D, Industry, Report No.3391, Washington, 1981, p. 4. The Statistical Yearbook 1984 does not give a definition of net industrial output.

39/ See Statistical Yearbook 1983, pp. 467-469.

40/ Some of the significant differences in the growth estimates of Tables 11 and 12 on the one hand and Table 13 on the other arise from the difference in the population of enterprises from which these estimates have been derived.

41/ For detailed analysis, see Robert Michael Field, "Change in Chinese Industry since 1978", The China Quarterly, December 1984.

42/ In terms of crude steel production capacity.

43/ The relatively weak association between output and surplus ratios (particularly in 1982) can be explained by covariation between output and profit rate which is relatively weak. This can partly be explained by the fact that output is an imperfect measure of sales - it includes items added to stocks and inventories and also wastage. Sales figures which may be expected to have a better relationship with surplus are however not given in the Statistical Yearbook of China.

44/ For empirical investigation into the sources of manufacturing efficiency in selected Asian countries and their implications for China's current phase of reforms, see Youngil Lim, Sources of Manufacturing Efficiency: Some Evidence from Asian Economies and Implications Related with Current Reforms in the People's Republic of China, paper presented at the International Academic Symposium on Economy and Management, Beijing, 2-8 June 1985.

45/ Decision of the Central Committee of the Communist Party of China on Reform of the Economic Situation. Adopted by the 12th Central Committee at its Third Plenary Session, 20 October 1984, p. IV.

46/ Statistical Yearbook 1984, pp. 324-325.

47/ For definitions of capital construction, investment innovation and total industrial investment, see Appendix A.

48/ Business China, April 25, 1985.

49/ Based on figures published by the People's Bank of China on sectoral allotment of funds.

50/ World Bank Report No.4897-CHA, p. 3.

51/ It is difficult to give an accurate estimate of the proportion of manufactured exports and imports in total Chinese trade. China's exports and imports can roughly be classified as industrial goods, including both manufactures and minerals, which create many classification ambiguities.

52/ Yeats, A., "China's Recent Export Performance", Development and Change, Vol. 15, No. 1 (1984), pp. 1-22. Up-dated version is given in Appendix G.

53/ Defined as RCAii - (Xii/Xi).(Xiw/Xew). Xii is the value of country i's exports of commodity j. Xi is its total export. Xwi = world exports of j, Xew = total world exports. Yeats, op. cit., p. 5.

54/ See UNIDO, Industrial Development Review Series: India, IS/547, July 1985.

55/ Yeats, op. cit., pp. 13-14.

56/ Financial Times, Thurday, August 29, 1985.

57/ The primary source of information for this section is Xue, M., Almanac of China's Economy in 1983, Modern Cultural Co., Hong Kong, 1983.

58/ Tibet had the lowest share of 0.05 per cent.

59/ Li Jingsing and Zhang Zhihus: The General Introduction of the Cement and Concrete Products in China, UNIDO, ID/WG.347/45, 16 November 1981, pp. 3-4.

60/ EIU: China Quarterly Review, IV, 1984, p. 2

61/ In volume terms the production of the textile sector declined in 1982 compared to 1981.

62/ Decision of the Central Committee of the Communist Party of China on Reform of the Economic Structure, adopted by the 12th Central Committee at its Third Plenary session, 20 October 1984, p. 111. All referenced quotations in this section are from this document.

63/ For some details of some recent change in banking practices and policies, see "Another Modernization", Far Eastern Economic Review, 10 January 1985.

64/ International Herald Tribune, 14 February 1985.

65/ EIU, China Quarterly Economic Review, IV, 1984, p. 13.

66/ Data relating to tentative project proposals for negotiations at UNIDO sponsored Fujian Investment Promotion Meeting, 25-29 November 1985, are presented in Appendix E.

67/ The Hong Kong and Shanghai Corporation, Business Profile Series: The People's Republic of China, June 1985.

68/ Details may be gleamed from the Regulation of SEZs, announced in August 1980.

69/ Ministry of Foreign Economic Relations and Trade, Guide to Investment in China, Economic Information and Agency, Hong Kong, 1982, pp. 6-7.

70/ Ministries 3 to 6 are also primarily machine-building industries and were so designated before the reform. The Ministry of Space Industry is in a similar position.

71/ Gong, X.: "China's Supervision over Industry and Commerce" in Xue, M. (ed.): Almanac of China's Economy in 1983, Modern Cultural Co. Ltd., Hong Kong, p. 576.

72/ In comparison to 1980 levels.

73/ These figures are very rough estimates based on indices in the Statistical Yearbook 1983, pp. 14, 17 and 23.

74/ World Bank, China: Long-Term Issues and Options, Report No. 5206-CHA, May 1985.

75/ The outline of three alternative projections and their underlying assumptions presented in this section are mainly extracts from the World Bank Report No. 5206-CHA, May 1985.

76/ Based on estimates of sectoral capital stocks in 1981.

77/ Youngil Lim, Sources of Manufacturing Efficiency: Some Evidence from East Asian Economies and Implications Related with Current Reforms in the People's Republic of China, May 1985.

78/ Slkos-Nagy B., "The Role of the Law of Values in Socialist Economy," Eastern European Economics (1984), pp. 78-95.

79/ Su Xing, "China's Planned Economy and the market" in Su Xing Studies in Economic Readjustment in China 1978-1981, Centre for Asian Studies, Australian National University 1982, p. 24.

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81/ Su Xing, "Price Stabilization in China" in Su Xing, Studies in Chinese Economic Readjustment 1979-1981, ANU 1982, pp. 33-34.

82/ Lloyds Bank, China: Economic Report 1984, p. 1.

83/ Lloyds Bank, China: Economic Report 1984, p. 1.

84/ EIU, China: Quarterly Economic Review IV, 1984, pp. 23-24.

85/ "Chinese Grapple with Uncertainties", International Herald Tribune, 27 November 1984.

86/ Statistics from EIU China: Quarterly Economic Review IV, 1984, pp. 21-23.

87/ Business China, September 26, 1985.

88/ For identification of constraints inhibiting foreign investment, see WU, F.; "Realities Confronting China's Foreign Investment Policy", The World Economy, Vol. 7, No. 3 (1984).

89/ Reported in Appendix G.

90/ I.e. when comparison is undertaken at a two-digit level.

91/ Yeats presents evidence on this by comparing China's RCA pattern with that of a number of South and South Asian countries for the period 1969-71 and 1971-78. Yeats, A., "China's Export Performance Development and Change" (1984), pp. 13-17.

92/ See for example "The Chinese View of the Third World", South, February 1982, p. 31.

93/ Development Assistance Committee, Development Co-operation 1984, Paris, OECD, 1984, p. 120.

94/ Ibid., p. 121.

95/ Almanac 1983, p. 512.

96/ Ibid., 1983, p. 516.

97/ In 1983 Indian aid equalled $104 million, whereas Chinese aid equalled $65 million, about $70 million of Indian aid was earmarked for Bhutan and Nepal - both of which are Indian dependencies. See D.A.C. Development Co-operation 1984, p. 121.

98/ See Resident Representative's Note on the Preparation of China's Second UNDP Country Programme 1986-1990, 28 January 1984, p. 5.

99/ Decisions of the 12th Central Committee on Economic Reform, October 1984, p. XIV.

100/ China: Report of the UNIDO Mission Concerning Formulation and Projects for the 1986-1990 Programming Cycle, 10-26 March 1985.

APPENDIX A

STATISTICAL AND ECONOMIC CONCEPTS CURRENTLY IN USE IN THE PEOPLE'S REPUBLIC OF CHINA[1/]

1/ Extracts from Statistical Yearbook of China, 1984.

Appendix A

Statistical and Economic Concepts

Labour force employed in the national economy

Labour force employed in the national economy comprises all those who engage themselves in social labour and receive payment for their work or derive their income from business. These include workers and staff members on the payroll of state or collective enterprises in city and town, individual workers in city and town, workers of collective-owned units and individual workers in the countryside (but not including those working as temporary or contract workers who have been covered in the category of "staff and workers"). Excluded are those waiting for employment and for college enrolment, as well as those who engage themselves in household chores.

Labour force employed in rural people's communes (townships)

They are population of communes (townships) who regularly take part in social labour and receive payment therefrom. These include able-bodied or semi-able-bodied workers engaged in farming, forestry, animal husbandry, sideline occupation and fishery of the commune, brigade and team, as well as in enterprises run by townships. Also included are outgoing temporary and contract workers and individual workers.

Number of staff and workers

Staff and workers refer to those who work in enterprises and institutions owned by the state or by collective in city and town, and those working in government agencies and people's organizations, and receive payment therefrom, including managerial personnel working in administrative organs in communes (townships) and paid by the state. They do not include retired staff and workers, labourers working in rural communes (townships), production brigades and teams and in township-run enterprises and institutions and receiving income therefrom. Also excluded are individual workers in cities and towns.

Mineral reserves

It refers to year-end reserves of proven deposits of minerals (including industrial deposits and prospective deposits) minus the amount already exploited and underground loss.

Ownership by the whole people and collective ownership

Ownership by the whole people (synonymous with state-owned) refers to enterprises or institutions in which the means of production is owned by the people as a whole. Also classified in this category are government organs and people's organizations at all levels.

Collective ownership is one of the forms of economic ownership in China, in which the means of production is owned by the collective. It includes farming, forestry, animal husbandry, sideline occupations and fishery run by various rural economic entities, as well as enterprises and institutions run by townships (communes) and by villages (production brigades and teams). Also included are the collective enterprises and institutions run by cities, counties and towns and the neighbourhood committees.

Total product of society

Also called global social product, it refers to all products, in value terms, produced by the following five material production sectors: agriculture, industry, construction, transport and commerce (catering and supply and marketing of materials included). In the social production, material products are produced directly by sectors of agriculture, industry and construction, while transport and commerce sectors also create and add value to the products by continuing the process of material production. The sum total of gross output value by these five sectors makes the total product of society.

Total product of society is an indicator reflecting the total results of material production of a country in a given period. In physical terms, it can be divided as means of production and means of subsistence. In value terms,

it refers to 1) transferred value of materials consumed during the process of production; 2) value newly created by workers, including value of necessary products which is equivalent to payment received by workers, and value of surplus products created for the society.

Total product of society differs from the concept of gross national product (GNP) used by capitalist countries not only in theoretical basis, but also in calculation methods. (1) Total product of society excludes net income from services provided by non-material sectors, such as culture, education, public health, scientific research, public services (barbers', public baths, photo studios, hotels, etc.), government agencies, police, armed forces. However, they are included in the gross national product. (2) Consumption of raw materials, materials, fuels and power in the process of material production is included in the total product of society, but excluded in the gross national product (depreciation of fixed assets is included in both). Due to the difference in the calculation of total product of society and of gross national product, method for calculating China's national income also varies from that of capitalist countries.

National income

National income refers to the newly created value in a given period by workers engaged in material production sectors of the country. It is the sum of net output value of agriculture, industry, construction, transport and commerce, obtained by deducting material consumption of those sectors from the total product of society. In China, two approaches are used in calculating national income: (1) The production approach. By this approach, national income is taken as the sum total of net output, in value terms, of the material production sectors. National income is therefore obtained by subtracting the value of material consumption (for instance, the raw materials, materials, seeds, fertilizer, fuels and power consumed in production and the depreciation of fixed assets used in production) from the gross output value. (2) The distribution approach; by which national income, according to the concept of primary distribution, is equal to the sum of payment received by workers in the material production sectors plus profits, taxes and interest in these sectors.

Excluded are non-material production sectors such as the service trades, educational, scientific research, cultural, and public health departments, as well as military and government administrations. These sectors are an indispensable part of social development as a whole, because they render services that are conducive to the people's livelihood and society's material production. But since they are not directly involved in the material production, they are not taken into account in the calculation of the national income.

Through the process of distribution and redistribution, the available portion of the national income is further broken down into two parts: the consumption fund and the accumulation fund.

Consumption fund

Consumption fund is that part of the national income represented by expenditure by individuals as personal consumption and that by the public as public consumption. Its material formation is the total expenditure on consumer goods by individuals and the public plus the wear and tear of non-productive fixed assets, including residential houses, during a year.

Personal consumption includes consumer goods used by individuals in their daily life, such as food, clothing, durable household consumer goods, daily necessities, cultural, educational and medical goods, water, electricity, fuels, the wear and tear of houses, as well as material consumption by cultural and service undertakings which directly serve the residents (cinemas, theatres, barbers', public baths, public transportation enterprises, etc.)

Public consumption refers to expenditures on fuels, power, office articles, books and equipment used by government administrations, national defence, cultural, education, health and scientific undertakings, non-profit institutions in economic construction sectors, people's organizations and other non-production units. Also included is the wear and tear of buildings occupied by those units.

Accumulation fund

Accumulation fund is that part of the national income which is used for expanded reproduction, non-productive construction and increase of productive and non-productive stock of the society. Its materials formation is the newly added fixed assets of material and non-material sectors (less depreciation of the total fixed assets) and the newly acquired circulating fund in kind by the material sectors during the year. The accumulation fund can be further divided, in accordance with purpose, into that of productive and non-productive; or by its physical form, into accumulation of fixed assets and of circulating fund.

Productive accumulation includes newly added fixed assets of productive use (deducted by the wear of these assets during the year) in material production sectors and the increase in circulating assets held by enterprises, such as stock of materials, fuels, semi-finished goods, means of production (finished), stock by commercial departments, reserve of materials and so on.

Non-productive accumulation covers newly added fixed assets of non-productive use and residential buildings (all deducted by wear and tear during the year), as well as the increase in stock of consumer goods held by industrial enterprises or commercial departments.

Accumulation rate is the proportion of accumulation fund, in percentage terms, to the available portion of national income of the year.

Current prices, constant prices, comparable prices

Current prices refer to the actual prices in a reference period, e.g. ex-factory prices of industrial products, purchasing prices paid by government for farm products, retail prices set by the commercial departments. Volume indicators expressed in value terms, like total product of society, gross output value of industry and agriculture, national income and investment in fixed assets, are sometimes calculated at the actual prices of the year. Figures at current prices connect various indicators of the national economy and facilitate the monitoring of economic efficiency and striking of overall

balances between production and circulation, between production and distribution and between production and consumption.

Since statistics in value terms calculated at current prices include price fluctuations in different years, they cannot reflect real quantity changes of production if one wants to make comparison between figures of various years. It is necessary, therefore, to eliminate the influence of price fluctuations and to use comparable prices when calculating increase rate in order to obtain a correct dynamics of economic developments.

By comparable prices we mean that when comparing the indicators, in value terms, of different years, changes in prices are deducted to show exactly the changes in quantity. Comparable prices are used in calculation by: (1) Multiplying the amount of products by their constant prices, or (2) Conversion by using price index.

By constant prices we mean calculating the value of products of different years by using the average price of a given year of the same products as the constant price. After the birth of New China, in accordance with the changes in prices, the State Statistical Bureau of the People's Republic of China has at four different times issued nationally unified constant prices for industrial and agricultural products: the 1952 constant prices were used for the period between 1949 and 1957; the 1957 constant prices for the period between 1957 and 1971; the 1970 constant prices for the period between 1971 and 1980; and the 1980 constant prices were put into use since 1981.

The index of total product of society, index of gross output value of industry and agriculture and the index of national income adopted in the Yearbook are calculated by using comparable prices. If the increase in output value of a certain year is to be calculated, the index can be used directly for comparison.

For instance, if the gross output value of industry and agriculture of 1983 as percentage of that of 1957 is to be calculated, taking indexes from the table on page 24, we have:

$$\frac{1,138.5}{167.8} = 6.78 \text{ times, namely } 678.5\%$$

The same applies to the comparison of any other years.

Average annual rate of increase

Two methods have been adopted in China to calculate the average rate of increase. The more commonly used one is the "level" method otherwise known as the geometric mean method. The average annual rate of increase (or decrease) is obtained by comparing the level of the last year of a period with that of the base year.

The other method is called the "accumulative" method, also known as the algebraic mean method or the equation method. By this method, the average annual rate of increase (or decrease) is obtained by comparing the sum total of levels of every year within a period with that of the base year. For specific calculation, please refer to Table of Average Increase Rates published by the China Financial and Economic Publishing House.

Under normal conditions, results obtained with the two methods are approximate to each other. However, when the economic development is under course of sharp rise and fall, the results may differ greatly.

The geometric mean method is used in the Yearbook for the calculation of increase rates. The increase rates between years do not include the base year. For instance, the average annual increase rate for the 34 years after 1949 will take 1949 as base year, but it is indicated as the average annual increase rate of the period 1950-1983.

Different periods of planning

The 34 years since 1949 are sometimes grouped into several "periods". They are: the period of rehabilitation - 1950-1952; the first Five-Year-Plan period - 1953-1957; the second Five-Year-Plan period - 1958-1962; the third Five-Year-Plan period - 1966-1970; the fourth Five-Year-Plan period - 1971-1975; the fifth Five-Year-Plan period - 1976-1980. The sixth Five-Year-Plan period starts with 1981.

Gross output value of industry

Industry in China comprises (1) Extraction of nature resources, such as mining, sunning salt, felling trees (not including hunting and fishing); (2) Processing of farm and sideline products, such as rice husking, wheat milling, wine making, oil pressing, cotton ginning, silk reeling, animal slaughtering, medicinal herbs processing; (3) Manufacture of industrial products, such as steel making, iron smelting, steel rolling, coke making, chemicals manufacturing, machine building, timber processing, spinning and weaving, printing and dyeing, dress making, paper making; (4) Repairing of industrial products such as machinery and means of transport; (5) Water and gas production and electricity generation and supply.

The gross output value of industry is the total volume of industrial products in value terms which reflects the total achievements and overall scale of industrial production during a given period. It is calculated with the "factory" method, including the value of the finished products in storage that are up to the standards (full pricing for products using either the factory's own material or the customer's material), and the value of industrial services rendered to other units by contract. No double calculations are to be made within the same enterprises. However, they do occur among different enterprises.

Starting from 1958, only processing charges instead of the whole costs of products are taken for calculating the gross output value of cotton ginning, rice husking, wheat milling, animal slaughtering and sewing performed by the rural people's commune; output value of mechanized fishing and of industry by production brigades and teams are included into the output value of agriculture.

Light industry, heavy industry

Light industry, in general, produces consumer goods and consists of two categories:

(1) Industries using farm products as raw materials, including cotton, wool, bast and silk weaving and sewing, leather and leatherware, pulp and papermaking, and foodstuffs. These industries use farm products as basic raw materials.

(2) Industries using non-agricultural products as raw materials, including the manufacture of metal products for daily use, household machines, electronic and electrical apparatus, chemicals for daily use, chemical fibre and fabrics, salt, glass and ceramics for daily use and processing of fuel for daily use and so on.

Heavy industry usually produces the means of production. It provides various sectors of the national economy with the necessary material and technical basis, and consists of the following two branches:

(1) Mining and felling industry - extraction of petroleum, coal, metal and non-metal ores and timber felling.

(2) Manufacturing industry - Processing industry in heavy industry including raw materials industry such as smelting and processing of metals, coke making and coke chemistry, chemical materials and building materials; power and fuel industry such as power generation, petroleum and coal processing; machine building industry which equips sectors of the national economy; industry producing means of agricultural production, for instance, chemical fertilizers and pesticides.

The repairing trades that serve heavy industries belong to the scope of heavy industry, otherwise they belong to light industry.

The output value of light and heavy industries is also calculated with the "factory" method. Under normal conditions, if the major products of an industrial enterprise belong to light industry products, the gross output value of that enterprise is classified wholly into the light industry, and the same principle applies to heavy industry.

Independent accounting industrial enterprises

An industrial enterprise can be classified as independent or non-independent accounting enterprise according to whether it possesses independent administrative management and independent financial accounting.

The following three criteria are necessary for an independent accounting industrial enterprise: (1) Possessing an independent administrative organization; (2) Being able to account independently for its profits and losses and prepare independent financial balance sheets; (3) Being empowered to sign contracts with other units and having an independent bank account. Any independent accounting industrial enterprise, either single or combined is to be treated as a basic reporting unit in preparing statistics.

Large, medium and small enterprises

There are two criteria for distinguishing among large, medium and small enterprises.

(1) The annual production capacity of the enterprises. For instance, a steel complex that puts out one million tons of steel or more annually is considered large, between 100,000 and one million tons, medium, and below 100,000 tons, small. A cotton mill that has 100,000 and more spindles is large, between 50,000 and 100,000, medium, and below 50,000, small. There are different standards for enterprises turning out different products.

(2) Enterprises that are not eligible for the above production capacity criterion are to be delineated by the size of the original value of their fixed assets.

Major financial indicators of industrial enterprise

(1) Original value of fixed assets refers to the original value of all the fixed assets owned by industrial enterprises, calculated at the cost paid at purchasing or constructing the said assets. The sources from which the fixed assets are acquired include those taken over after 1949, those completed

and put into use through capital construction, those made available by the enterprises themselves through technical updating and transformation.

(2) Net value of fixed assets is obtained by deducting depreciation over the years from their original value of fixed assets.

(3) Quota circulating fund refers to the circulating fund in physical forms held by industrial enterprises during production and circulation, including the following: stock of raw material, material, fuel, spare parts, packing material and low-cost non-durable goods; work pieces and semi-finished products; as well as stock of finished products.

(4) Total fund is the sum of net value of fixed assets plus quota circulating fund.

(5) Decrease rate of cost of comparable products.

Comparable products refer to products which were in mass production in the previous year and are still in production in the reporting year, and their comparability is based on the brands, specifications and functions of the products. Therefore, if production technology and technical conditions of certain products have been improved, but their brands, specifications and functions remain unchanged, the products should be treated as comparable. Cost of comparable products is the sum of expenditure by the enterprise in producing comparable products and it forms part of the total costs of the enterprises in the production of all its products. The decrease rate of cost of comparable products is generally obtained by dividing costs of comparable products of the year by the quantity of comparable products of the year multiplied by unit cost of the previous year, i.e.:

Decrease rate of cost of comparable products (per cent)

$$= \left(1 - \frac{\text{costs of comparable products of the year}}{\text{volume of comparable products of the year} \times \text{unit cost of previous year}} \right) \times 100$$

The positive figure of this rate indicates decrease in costs of comparable products and the negative result shows an increase in costs.

Labour productivity of industrial enterprises

It refers to the average output per person of staff and workers in industrial enterprises. At present, gross output value and the average of staff and workers of an industrial enterprise are used to calculate labour productivity, and the formula for the calculation is:

$$\text{Overal' labour productivity} = \frac{\text{gross output value of industry}}{\text{average number of staff and workers}}$$

For the convenience of comparison of labour productivity between different years, the labour productivity of the years before 1981 has been adjusted on the basis of 1980 constant prices.

Investment in fixed assets

Investment in fixed assets is an important means for the renewal of fixed assets and for expanding reproduction. Through construction and purchase of fixed assets, we can continuously absorb advanced technology and equipment, readjust the nation's economic structure and regional distribution of productive forces, so as to strengthen the national economy. It is of great significance to the socialist modernization process of the country.

As a comprehensive indicator reflecting the scale and uses of investment in fixed assets, the investment in fixed assets shows the amount of work done in construction and purchase of fixed assets, expressed in money terms. In accordance with China's planning management system, investment in fixed assets of state-owned units consists of two parts: investment in capital construction and that in technical updating and transformation. The investment of the whole society (total investment) also includes investment of collective-owned units and investment in housing by individuals in urban and rural areas.

The investment in fixed assets of state-owned units can be further divided, by source of funds, into state budget investment, investment from funds raised by localities, departments or enterprises, and investment from

domestic loans; or by purpose of projects, as productive or non-productive construction.

Investment in capital construction

Capital construction refers to construction, expansion, transformation and restoration projects of all sectors of the national economy, as well as purchases and installation of equipment. It involves construction of factories, mines, railways, bridges, harbours, water conservancy facilities for farmland, stores, living quarters, schools and hospitals, and the purchase of machinery and equipment, vehicles, ships and planes. Statistics on capital construction in the Yearbook only cover construction of state-owned units. Construction of collective units in urban and rural areas and private construction are not included. Also excluded are technical updating and transformation projects.

The investment in capital construction shows the amount of work done in capital construction in money terms, or the scale and progress of capital construction during a certain period of time. It is a comprehensive indicator, to be obtained by multiplying the actual progress of the project and the budget price (the price adopted during the preparation of the budget for a project's working drawing). Building materials that have not yet been used and equipment not yet installed are excluded.

The accomplished investment in capital construction differs from financial appropriations for capital construction in that the former is the volume of work done, to be calculated at the budget price, while the latter is the actual amount of money allocated. Distinction should be made in using these two indicators.

It is necessary to classify the total investment in various ways in order to facilitate the study from different aspects on how the investment is used.

(1) By source of funds: state budget funds and self-raised funds.

State budget funds are included in the state plan for capital construction and allocated from the state budget. Self-raised funds are

appropriations made by local financial departments and specialized departments at all levels, enterprises and institutions.

(2) By purpose: productive construction and non-productive construction.

Productive construction is that which is intended for material production or that which directly serves material production. It includes construction for industry, construction, prospecting of geological resources, agriculture, transport, post and telecommunications, commerce, and supply of means of production. Non-productive construction refers to residential buildings, scientific research institutions, cultural, educational and public health undertakings, public utilities and other administrative organs that cater to the cultural and material needs of the people.

(3) By nature of work: capital construction comprises constructing and installing work, purchase of equipment and other investments.

Constructing and installing work refers to the cost of civil engineering, mine tunnelling and water conservancy, as well as that of equipment installation. Purchase of equipment includes the cost of purchased or self-made equipment, tools and instruments which accord with the standards of fixed assets. Other investments include management expenses of the construction units, surveying and designing expenses, land purchase costs, and other costs which are not covered in the above two categories.

(4) By size of projects:

The size (large, medium or small) of a project is decided by the designed production capacity of the project or the total sum of investment, according to the "Standards for the Large, Medium and Small Projects" promulgated by the government. This regulation was revised five times - in 1958, 1962, 1972, 1977 and 1979 - in order to improve management and to better reflect the scale of construction. Therefore, the figures given for projects of different sizes in different years are not entirely comparable.

(5) By sectors of the national economy:

In this respect, the invested projects are classified to different sectors according to their major products or the main purposes of the projects, irrespective of administrative systems to which they belong. For instance, machine building factories and schools set up by the Ministry of Metallurgical Industry have to come under the category of the machine-building industry and that of educational institutions respectively.

Investment in technical updating and transformation

Technical updating and transformation refer to projects or purchase by state-owned enterprises and institutions to renew or modernize their existing fixed assets (excluding major repairs or maintenance). The investment in technical updating and transformation show, in value terms, the amount of work done in these aspects. According to China's present practice, the distinction between capital construction and technical updating and transformation is made on the following two criteria: (1) Items of investment covered by the state plan for capital construction are to be regarded as investment in capital construction, and those included in the state plan for technical updating and transformation projects are to be regarded as investment in technical updating and transformation. (2) Investment in projects outside the state plan is to be decided on the nature of projects. Capital construction projects will cover new construction or expansion projects, whereas reconstruction, updating and transformation projects, as well as move of enterprises and restoring projects are to be included under the investment in technical updating and transformation.

Newly added fixed assets through capital construction

Under this item are the costs of completed buildings and equipment, tools and instruments, put into operation or turned over to use according to the standards for fixed assets, as well as other investments contributing to fixed assets. The investment in purchases of equipment, tools and instruments which do not accord with the standard for fixed assets, training expenses, expenditure incurred in the movements of constructing units, investment on

projects which were later abandoned and some other expenses which are reimbursed after verification are not counted in newly added fixed assets. The ratio of newly added fixed assets to the volume of investment is called the rate of fixed assets turned over to use.

Imports, exports

One channel of statistics on imports and exports are from foreign trade departments. Exports refer to the value of Chinese commodities exported to other countries and to Hong Kong and Macao, calculated at f.o.b. prices, whereas imports refer to the value of commodities purchased from foreign countries and from Hong Kong and Macao calculated at c.i.f. prices.

Exports and imports include transit commodities which are treated as imports on arrival at China's ports or frontier, and as exports on leaving. If the said commodities are trans-shipped without entering China's territory, they will be treated both as imports and exports upon trans-shipment at the value stipulated in contracts.

From 1981, import and export statistics derived from customs are also given. Exports refer to the value of goods exported at f.o.b. prices after customs clearance, and imports are that of imported goods at c.i.f. prices upon customs approval.

Revenue

(1) Enterprises income

This part of the revenue comprises profits plus basic depreciation costs of fixed assets and institutional incomes turned over to the state by state-owned enterprises and institutions of the different sectors of the national economy.

(2) Revenue from taxes

It refers to revenue from industrial and commercial tax, industrial and commercial income tax, salt tax, customs duties, agricultural and animal-

breeding tax, tax on slaughtering animals, tax on trading in animals, tax on trading at the market, as well as penalties and payments of overdue tax.

General indexes of prices

They are the general index of retail prices. general index of the cost of living prices of workers and staff, general index of purchasing prices of farm and sideline products, and general index of retail prices of industrial products sold in rural areas.

In China there are several ways in pricing commodities, including list prices of state-owned commercial departments, prices at the trade markets (fair trade), the negotiated prices and the increased prices for the above-quota purchase of farm and sideline products. Therefore, apart from the indexes of list prices, it is necessary to compile the general retail price index and the general index of the cost of living prices of workers and staff, both of which include list retail prices, negotiated prices and trade market prices, as well as the general purchasing price index that includes list purchasing prices, negotiated purchasing prices and the increased prices for above quota purchase of farm and sideline products. The actual values of sales or purchases at different prices are taken as the weights in the calculation of general price indexes.

(1) The index of the list retail price is calculated by the formula of weighted arithmetic mean. The weights used are adjusted annually based on data of actual retail sales. The markets and items of commodities selected for calculation have been on the increase. At present more than 140 cities and 230 county towns are selected as the basic units for data collection; 450 items of commodities in the cities and 400 in the county towns are included in the calculation. The price of a standard commodity from each item of products is adopted in the calculation.

(2) The list prices index of the cost of living of workers and staff members was calculated, prior to 1952, with a weighted mean price on a fixed quantity (total value method). The formula of weighted arithmetic mean was used between 1953 and 1956. After 1957, the index of the cost of living

prices is based on the city retail prices index and the service prices index. Currently 500 kinds of commodities and service items are chosen for the calculation.

(3) Index of list purchasing prices for farm and sideline products is calculated with the weighted harmonic mean method based on the total value of purchases during a given reporting period. Number of products involved in the current calculation totals 260, in 25 groups of 11 categories.

(4) The parity price ratio of industrial and agricultural products is calculated by using purchasing prices of agricultural products and rural retail prices of industrial products.

(5) Mixed average retail prices of major commodities and mixed average purchasing prices of major agricultural products: the former is obtained by dividing the value of retail sales of all brands of commodities belonging to one category by their quantity, and the latter, by dividing the total value of purchased farm and sideline products by the quantity of purchases. Fluctuations reflected in mixed average prices are caused by both changes in prices and changes in consuming or purchasing patterns of products of different quality. The mixed average prices are used in preparing balance sheets of the national economy but not for the calculation of price indexes.

Total wage bill, average wage

Total wage bill refers to the total wage payment made to the workers and staff members during a certain period of time by enterprises, institutions and administrations of the state ownership and of collective ownership in towns and cities. It includes time wage, piece rate wage (including payment for overfulfiling work quota), and payment in other forms - bonuses, subsidies, overtime pay and supplementary wages.

Average wage is obtained by dividing the total wage bill of a year by the average number of workers and staff on the payroll of the year.

Welfare funds and labour insurance funds

They are expenses paid by enterprises, institutions and government organs for medical care, allowances for living expenses, expenses on recreation activities, sports and propaganda, subsidies for agricultural production and sideline occupations, expenses and subsidies for public welfare facilities, other welfare expenses, as well as labour insurance expenses like retirement pensions, funeral expenses and pensions for the family of the deceased.

APPENDIX B

STATISTICAL OVERVIEW OF THE CHINESE ECONOMY[1/]

1/ Reproduced from Statistical Yearbook of China, 1984, by photographic process, pp. 3, 4, 12-18, 20, 26, 30, 108, 232-237, 250-259, 262-270, 329-330, 383-387, 459, 418-421 and 543.

Table B-1. Population and natural resources, 1983

Item	Unit	1983
I. Population[2]		
Year-end population	10 thousand	102,495
Population density	person/km^2	107
II. Land area		
Surface area of the country	10 thousand km^2	960 (about 14,400 million mu)
Percentage of various land areas to total surface area		
Mountains	%	33
Plateaus	%	26
Basins	%	19
Plains	%	12
Hills	%	10
III. Climate		
Annual average precipitation	millimeter	630
Annual volume of precipitation	100 million m^3	60,000
Percentage of various climate zones to total surface area:		
Moisture climate zone (Aridity<1.0)	%	32
Semi-moisture climate zone (Aridity 1.0–1.5)	%	15
Semi-arid climate zone (Aridity 1.5–2.0)	%	22
Arid climate zone (Aridity>2.0)	%	31
IV. Forests		
Forest area	10 thousand hectares	11,525 (about 1,730 million mu)
Forest-covering rate	%	12.0
Forest growing stock	100 million m^3	102.6
V. Prairies		
Prairie area	10 thousand hectares	31,908 (about 4,790 million mu)
Of which: Utilizable area	10 thousand hectares	22,434 (about 3,370 million mu)

Table B-1. (Continued)

Item	Unit	1983
VI. Hydrology and water conservancy		
Annual flow of rivers	100 million m^2	26,144
Of which: Zhujiang valley	100 million m^3	3,070
Changjiang (Yangtze River) valley	100 million m^3	9,793
Huaihe valley	100 million m^3	530
Huanghe (Yellow River) valley	100 million m^3	560
Haihe valley	100 million m^3	284
Songhuajiang valley	100 million m^3	759
Zhejiang, Fujian Provinces	100 million m^3	2,001
Tibet Autonomous Region	100 million m^3	3,590
Fresh water area (3)	10 thousand hectares	1,664 (about 250 million mu)
Of which: Cultivable area	10 thousand hectares	503 (about 75 million mu)
Of which: Cultivated area	10 thousand hectares	305 (about 46 million mu)
Hydropower resources (3)	100 million KW	6.76
Of which: Developable resources	100 million KW	3.79
Area of marine fishing	10 thousand square nautical miles	81.8 (4,200 million mu)
Cultivable area in marine water	10 thousand hectares	49.2 (7.38 million mu)
Of which: Cultivated area	10 thousand hectares	16.3 (2.44 million mu)
Coastline of mainland	km	18,000
VII. Mineral resources		
Coal reserves	100 million tons	7,276
Iron ore reserves	100 million tons	467.6

Note: 1) Figures in this table, except that of land area and forest, do not include Taiwan Province.

2) Including servicemen.

3) These are figures obtained from statistical checks during previous years, and are therefore subject to further census and survey.

Table B-2. Main indicators of the national economy, 1952-1983

Item	Unit	1952	1957	1965	1978	1983
I. Population						
Year-end population	10 thousand	57,482	64,653	72,538	96,259	102,495
II. Labour force employed in national Economy (year-end)	10 thousand person	20,729	23,771	28,670	39,856	46,004
Of which: Staff and workers	10 thousand person	1,603	3,101	4,965	9,499	11,515
III. Index of total product of society (1952=100)	%	100.0	170.9	258.2	725.8	1,074.6
Of which: Index of gross output value of agriculture and industry (1952=100)	%	100.0	167.8	268.3	779.0	1,138.5
IV. National income						
1. Index of national income(1952=100)	%	100.0	153.0	197.5	453.2	639.4
2. Accumulation rate	%	21.4	24.9	27.1	36.5	30.0
V. Agricultural production						
1. Index of gross agricultural output value (1952=100)	%	100.0	124.8	137.1	229.6	335.9
2. Output of major farm products						
Grain	10 thousand tons	16,392	19,505	19,453	30,477	38,728
Cotton	10 thousand tons	130.4	164.0	209.8	216.7	463.7
Oil-bearing crops	10 thousand tons	419.3	419.6	362.5	521.8	1,055.0
Sugar cane	10 thousand tons	711.6	1,039.2	1,339.1	2,111.6	3,114.1
Beet roots	10 thousand tons	47.9	150.1	198.4	270.2	918.2
Tea	10 thousand tons	8.2	11.2	10.1	26.8	40.1
Fruits	10 thousand tons	244.3	324.7	323.9	657.0	948.7
Afforested area	10 thousand hectares	108.5	435.5	342.6	449.6	632.4
Pork beef and mutton	10 thousand tons	338.5	398.5	551.0	856.3	1,402.1
Aquatic products	10 thousand tons	167	312	298	466	546
VI. Industrial production						
1. Index of gross industrial output value (1952=100)	%	100.0	228.6	452.9	1,601.6	2,340.1
Light industry	%	100.0	183.2	344.7	970.6	1,651.2
Heavy industry	%	100.0	310.7	651.0	2,780.4	3,571.3

Table B-2. (Continued)

Item	Unit	1952	1957	1965	1978	1983
2. Output of major industrial products						
Cloth	100 million metres	38.3	50.5	62.8	110.3	148.8
Machine-made paper and paperboards	10 thousand tons	37	91	173	439	661
Sugar	10 thousand tons	45	86	146	227	377
Bicycles	10 thousand	8.0	80.6	183.8	854.0	2,758.2
Sewing machines	10 thousand	6.6	27.8	123.8	486.5	1,087.2
Wrist watches	10 thousand		0.04	100.8	1,351.1	3,469.0
Coal	100 million tons	0.66	1.31	2.32	6.18	7.15
Crude oil	10 thousand tons	44	146	1,131	10,405	10,607
Electricity	100 million kwh	73	193	676	2,566	3,514
Steel	10 thousand tons	135	535	1,223	3,178	4,002
Rolled steel (final products)	10 thousand tons	106	415	881	2,208	3,072
Cement	10 thousand tons	286	686	1,634	6,524	10,825
Timber	10 thousand m^3	1,233	2,787	3,978	5,162	5,232
Metal-cutting machine tools	10 thousand	1.37	2.80	3.96	18.32	12.10
3. Index of overall labour productivity of state-owned independent accounting industrial enterprises (1952=100)	%	100.0	152.1	214.6	266.0	311.9
4. Principal financial items of state-owned independent accounting industrial enterprises						
Original value of fixed assets (year-end)	Rmb100 million	148.8	334.6	1,040.0	3,193.4	4,767.8
Total fund	Rmb100 million	146.8	330.3	1,037.3	3,273.0	4,452.5
Net value of fixed assets (year end)	Rmb100 million	100.8	239.8	777.2	2,225.7	3,161.0
Quota circulating fund	Rmb100 million	46.0	90.5	260.1	1,047.3	1,291.5
Profits and taxes	Rmb100 million	37.4	115.1	309.2	790.7	1,032.8
VII. Transport, posts and telecommunications						
1. Volume of freight traffic(1)	100 million ton-km	762	1,810	3,463	9,829	14,044
Railways	100 million ton-km	602	1,346	2,698	5,345	6,646
Highways	100 million ton-km	14	48	95	274	1,084
Waterways	100 million ton-km	146	416	670	3,779	5,788
Civil aviation	100 million ton-km		0.1	0.3	1.0	2.3
Petroleum and gas pipelines	100 million ton-km				430	524

Note: 1) Including freight transported by vehicles c han those specialized in transportation and commun

Table B-2. (Continued)

Item	Unit	1952	1957	1965	1978	1983
2. Volume of passenger traffic	100 million person-km	248.4	496.3	697.1	1,743	3,095
Railways	100 million person-km	201	361	479	1,093	1,776
Highways	100 million person-km	22.7	88.1	168.2	521	1,106
Waterways	100 million person-km	24.5	46.4	47.4	101	154
Civil aviation	100 million person-km	0.2	0.8	2.5	28	59
3. Cargo handled at principle seaports	10 thousand tons	1,440	3,727	7,181	19,834	24,952
4. Service revenue of posts and telecommunications	Rmb100 million	1.64	2.94	6.28	11.65	22.26
Letters delivered	100 million	8.09	16.41	21.76	28.35	35.21
Newspapers and magazines circulated	10 thousand copies	1,363	3,264	5,621	11,250	22,933
VIII. Investment in fixed assets of state-owned units						
1. Total investment in fixed assets	Rmb100 million	43.56	151.23	216.90	668.72	951.96
Of which: Investment in capital construction	Rmb100 million	43.56	143.32	179.61	500.99	594.13
2. Newly increased fixed assets through capital construction	Rmb100 million	31.14	133.92	168.09	372.30	453.10
Rate of fixed assets turned over to use	%	71 5	93.4	93.6	74.3	76.3
3. Index of overall labour productivity of state-owned constructing units (1952=100)	%	100.0	123.8	133.5	173.6	241.3
IX. Domestic trade						
1. Total value of retail sales	Rmb100 million	276.8	474.2	670.3	1,558.6	2,849.4
2. Volume of retail sales of major commodities						
Grain	10 thousand tons	2,961	3,724	3,682	4,750	7,095.0
Edible vegetable oil	10 thousand tons	76.5	103.0	74.0	87.5	260.0
Pork	10 thousand tons	170.4	176.5	277.7	467.5	797.5
Sugar	10 thousand tons	47.1	87.9	112.2	315.6	443.9
Cloth	100 million metres	30.8	42.9	44.4	76.9	105.4
Sewing machines	10 thousand	10.0	25.1	89.7	439.8	1,019.1
Bicycles	10 thousand	33.5	84.7	176.2	809.6	2,620.7
Wrist watches	10 thousand	38.5	107.6	189.1	1,388.1	3,898.0
Radio sets	10 thousand	2.0	26.4	83.6	1,388.9	3,074.5

Table B-2. (Continued)

Item	Unit	1952	1957	1965	1978	1983
X. Foreign trade						
Total value of exports and imports(1)	Rmb100 million	64.6	104.5	118.4	355.1	860.1
Exports(1)	Rmb100 million	27.1	54.5	63.1	167.7	438.3
Imports(1)	Rmb100 million	37.5	50.0	55.3	187.4	421.8
XI. Public finance						
Revenue	Rmb100 million	183.7	310.2	473.3	1,121.1	1,249.0
Expenditure	Rmb100 million	176.0	304.2	466.3	1,111.0	1,292.5
XII. Price indexes						
General index of purchasing prices of farm and sideline products	%	100.0	120.2	154.5	178.8	264.2
General index of retail prices	%	100.0	108.5	120.4	121.6	139.3
General index of cost-of-living prices of staff and workers	%	100.0	109.6	120.3	125.3	146.3
XIII. Wages of staff and workers						
Total wage bill of staff and workers in state-owned units	Rmb100 million	68	156	235	469	748
Average annual wage of staff and workers in state-owned units	Rmb	446	637	652	644	865
XIV. Education and culture						
Institutions of higher learning		201	229	434	598	805
Students enrolled in institution of higher learning	10 thousand	19.1	44.1	67.4	85.6	120.7
Students enrolled in secondary specialized schools	10 thousand	63.6	77.8	54.7	88.9	114.3
Students enrolled in regular secondary schools	10 thousand	249.0	628.1	933.8	6,548.3	4,397.7
Students enrolled in primary schools	10 thousand	5,110	6,428	11,621	14,624	13,578
Newspapers issued	100 million copies	16.1	24.4	47.4	127.8	155.1
Magazines issued	100 million copies	2.04	3.15	4.41	7.62	17.69
Books published	100 million copies	7.86	12.75	21.71	37.74	58.04
XV. Public health						
Hospital beds	10 thousand	16.0	29.5	76.6	185.6	211.0
Professional medical personnel	10 thousand	69.0	103.9	153.2	246.4	325.3
Of which: Doctors	10 thousand	42.5	54.7	76.3	103.3	135.3

Note: 1) 1983 figures are from customs data while figures for other years were provided by the former Foreign Trade Ministry.

Table B-3. Main indicators of the national economy - increase rate, 1952-1983

Item	1983 as % of 1952	1983 as % of 1978	1983 as % of 1982	Average annual increase %	
				1953 -1983	1979 -1983
I. Population	178.3	106.5	100.9	1.9	1.3
II. Labour force employed in national economy	221.9	115.4	102.9	2.6	2.9
Of which: Staff and workers	218.3	121.2	102.1	6.6	3.9
III. Total product of society	1,074.6	148.1	109.9	8.0	8.2
Of which: Gross output value of agriculture and industry	1,138.5	146.1	110.2	8.2	7.9
IV. National income	639.4	141.1	109.1	6.2	7.1
V. Agricultural production					
1. Gross agricultural output value	335.9	146.3	109.5	4.0	7.9
2 Output of major farm products					
Grain	236.3	127.1	109.2	2.8	4.9
Cotton	355.6	214.0	128.9	4.2	16.4
Oil-bearing crops	251.6	202.2	89.3	3.0	15.1
Sugar cane	437.6	147.5	84.4	5.1	9.7
Beet roots	1,916.9	339.8	136.8	10 0	27.7
Tea	489.0	149.6	100.8	5.3	8.4
Fruits	388.3	144.4	123.0	4.5	7.6
Pork beef and mutton	414.2	163.7	103.8	4.7	10.4
Aquatic products	326.9	117.2	105.8	3.9	3.2
VI. Industrial production					
1. Gross industrial output value	2,340.1	146.1	110.5	10.1	7.9
Light industry	1,651.2	170.1	108.7	9.5	11.2
Heavy-industry	3,571.3	128.4	112.4	12.2	5.1
2. Output of major industrial products					
Cloth	388.5	134.9	96.9	4.5	6.2
Machine-made paper and paper-boards	1,786.5	150.6	112.2	9.7	8.5
Sugar	837.8	166.1	111.5	7.1	10.7
Bicycles	34,477.5	323.0	114.0	20.7	26.4
Sewing machines	16,472.7	223.5	84.5	17.9	17.4
Coal	1,083.3	115.7	107.4	8.0	3.0
Crude oil	24,106.8	101.9	103.9	19.4	0.4

Table B-3. (Continued)

Item	1983 as % of 1952	1983 as % of 1978	1983 as % of 1982	Average annual increase %	
				1953 –1983	1979 –1983
Electricity	4,813.7	136.9	107.2	13.3	6.5
Steel	2,964.4	125.9	107.7	11.6	4.7
Rolled steel (final product)	2,898.1	139.1	105.9	11.5	6.8
Cement	3,785.0	165.9	113.7	12.4	10.7
Timber	424.3	101.4	103.8	4.8	0.3
Metal cutting machine tools	883.2	66.0	121.2	7.3	-8.0
Overall labour productivity of state-owned independent accounting industrial enterprises	311.9	117.3	107.6	3.7	3.2
VII. Transport					
Volume of freight traffic	1,843.0	142.9	107.6	7.9	7.4
Volume of passenger traffic	1,246.0	177.6	112.8	8.[illegible]	12.2
VIII. Total investment in fixed assets of state-owned units	2,183.5	142.4	112.6	10.5	7.3
Of which: Investment in capital construction	1,363.9	118.6	106.9	8.8	3.5
IX. Total value of retail sales	1,029.3	182.8	110.9	7.8	12.8
X. Total value of exports and imports	1,331.4	242.2	111.4	8.7	19.4
Exports	1,617.3	261.4	105.8	9.4	21.2
Imports	1,124.8	225.1	117.9	8.1	17.6
XI. Public finance					
Revenue	679.9	111.4	111.1	6.4	2.2
Expenditure	734.4	116.3	112.1	6.6	3.1
XII. General index of retail prices	139.3	114.5	101.5	1.1	2.7
XIII. Average wage of workers and staff in state-owned units	193.9	134.3	103.5	2.2	6.1
XIV. Students enrolled in institutions of higher learning	631.9	141.0	104.6	6.1	7.1
Students enrolled in secondary specialized schools	179.7	128.6	110.0	1.9	5.2
XV. Hospital beds	1,318.8	113.7	102.7	8.7	2.6
Professional medical personnel	471.4	132.0	103.5	5.1	5.7
Of which: Doctors	318.4	131.0	103.5	3.8	5.5

Table B-4. Principal relations in national economy, 1952-1983
(at current prices)

	1952	1957	1978	1983
1. Proportion of agriculture, light industry and heavy industry in the gross output value of agriculture and industry				
Agriculture	56.9	43.3	27.8	33.9
Light industry	27.8	31.2	31.1	32.1
Heavy industry	15.3	25.5	41.1	34.0
2. Proportion of light and heavy industries in gross industrial output value				
Light industry	64.5	55.0	43.1	48.5
Heavy industry	35.5	45.0	56.9	51.5
3. Proportion of various activities in gross agricultural output value (1)				
Farming (crop cultivation)	83.1	80.6	67.8	62.2
Forestry	0.7	1.7	3.0	4.1
Animal husbandry	11.5	12.9	13.2	15.5
Sideline occupations	4.4	4.3	14.6	16.2
of which: Village-run industry			11.7	11.8
Fishery	0.3	0.5	1.4	2.0
4. Proportion of accumulation and consumption in national income available				
Accumulation	21.4	24.9	36.5	30.0
Consumption	78.6	75.1	63.5	70.0
5. Proportion of productive and non-productive projects in capital construction				
Investment in productive projects	66.9	73.3	79.1	58.3
Investment in non-productive projects	33.1	26.7	20.9	41.7
of which: Housing projects	10.3	9.3	7.8	21.1
6. Proportion of agriculture and light and heavy industry in capital construction (2)				
Investment in agriculture	13.4	8.3	10.6	6.0
Investment in light industry	9.3	7.7	5.8	6.5
Investment in heavy industry	29.5	42.8	48.7	41.0
7. Proportion of energy, transport, posts and telecommunications in capital construction (2)				
Investment in energy industry	10.0	15.4	22.7	21.3
Investment in transport, posts and telecommunications	17.5	14.4	13.6	13.1
8. Financial revenue as % of national income (3)	29.5	34.2	37.2	25.9
9. Appropriations for capital construction as % of financial expenditure	26.5	40.7	40.7	29.6
10. Expenditure on culture, education, public health and science as % of financial expenditure	7.7	9.1	10.1	17.3

Note: 1) 1952 and 1957 figures are at 1957 constant prices, 1978 figures are at 1970 constant prices and 1983 figures at current prices of the year.

2) Investments are classified according to sectors of national economy.

3) Excluding foreign borrowings as financial revenue.

Table B-5. Indexes of national income, 1949-1983

Year	Index		Year	Index	
	1952=100	The preceding year=100		1952=100	The preceding year=100
1949	58.9		1966	231.0	117.0
			1967	214.3	92.8
1950	70.1	119.0	1968	200.4	93.5
1951	81.8	116.7	1969	239.1	119.3
1952	100.0	122.2	1970	294.7	123.3
1953	114.0	114.0	1971	315.3	107.0
1954	120.6	105.8	1972	324.5	102.9
1955	128.3	106.4	1973	351.4	108.3
1956	146.4	114.1	1974	355.2	101.1
1957	153.0	104.5	1975	384.7	108.3
1958	186.7	122.0	1976	374.4	97.3
1959	202.1	108.2	1977	403.6	107.8
1960	199.2	98.6	1978	453.2	112.3
1961	140.0	70.3	1979	484.9	107.0
1962	130.9	93.5	1980	515.9	106.4
1963	144.9	110.7	1981	541.2	104.9
1964	168.8	116.5	1982	586.1	108.3
1965	197.5	117.0	1983	639.4	109.1

Average annual increase (%)

1953-1957	8.9	1971-1975	5.5
1958-1962	-3.1	1976-1980	6.0
1963-1965	14.7	1953-1983	6.2
1966-1970	8.3	1979-1983	7.1

Note: 1) Figures in this table are at comparable prices.

Table B-6. Indexes of gross output value of agriculture and industry, 1971-1983
(the preceding year = 100)

Year	Gross output value of agriculture and industry	Gross agricultural output value	Gross industrial output value	Of the gross industrial output value	
				Light industry	Heavy industry
1971	112.2	103.1	114.9	106.5	121.4
1972	104.5	99.8	106.6	106.2	107.0
1973	109.2	108.4	109.5	110.6	108.7
1974	101.4	104.2	100.3	102.7	98.4
1975	111.9	104.6	115.1	113.0	116 8
1976	101.7	102.5	101.3	102.4	100.5
1977	110.7	101.7	114.3	114.3	114.3
1978	112.3	109.0	113.5	110.8	115.6
1979	108.5	108.6	108.5	109.6	107.7
1980	107.5	103.9	108.7	118.4	101.4
1981	104.6	106.6	104.1	114.1	95.3
1982	108.7	111.0	107.7	105.7	109.8
1983	110.2	109.5	110.5	108.7	112.4
Average annual increase (%)					
1953-1957	10.9	4.5	18.0	12.9	25.4
1958-1962	0.6	- 4.3	3.8	1.1	6.6
1963-1965	15.7	11.1	17.9	21.2	14.9
1966-1970	9.6	3.9	11.7	8.4	14.7
1971-1975	7.8	4.0	9.1	7.7	10.2
1976-1980	8.1	5.1	9.2	11.0	7.8
1953-1983	8.2	4.0	10.1	9.5	12.2
1979-1983	7.9	7.9	7.9	11.2	5.1

Note: 1) Figures in this table are at comparable prices.

Table B-7. Total product of society, 1949-1983
(Rmb 100 million)

Year	Total product of society	Agriculture	Industry	Construction	Transport	Commerce
1949	557	326	140	4	19	68
1950	683	384	191	13	19	76
1951	820	420	264	24	24	88
1952	1,015	461	349	57	35	113
1953	1,241	510	450	85	42	154
1954	1,346	535	515	82	48	166
1955	1,415	575	534	86	50	170
1956	1,639	610	642	146	56	185
1957	1,606	537	704	118	60	187
1958	2,138	566	1,083	202	90	197
1959	2,548	497	1,483	235	121	212
1960	2,679	457	1,637	248	131	206
1961	1,978	559	1,062	90	76	191
1962	1,800	584	920	74	62	160
1963	1,956	642	993	97	66	158
1964	2,268	720	1,164	151	72	161
1965	2,695	833	1,402	177	91	192
1966	3,062	910	1,624	197	102	229
1967	2,774	924	1,382	155	86	227
1968	2,648	928	1,285	132	83	220
1969	3,184	948	1,665	222	99	250
1970	3,800	1,058	2,080	271	117	274
1971	4,203	1,107	2,375	311	128	282
1972	4,396	1,123	2,517	323	136	297
1973	4,776	1,226	2,741	335	144	330
1974	4,859	1,277	2,730	376	142	334
1975	5,379	1,343	3,124	437	160	315
1976	5,433	1,378	3,158	435	155	307
1977	6,003	1,400	3,578	462	179	384
1978	6,846	1,567	4,067	569	205	438
1979	7,642	1,896	4,483	645	209	409
1980	8,531	2,180	4,897	767	247	440
1981	9,071	2,460	5,120	747	254	490
1982	9,963	2,785	5,506	912	286	474
1983	11,052	3,121	6,088	1,034	313	496

Note: 1) Figures in this table are at current prices.

Table B-8. Output of industrial products, 1982 and 1983

Item	Unit	1982	1983	1983 as % of 1982
Chemical fibres	10 thousand tons	51.70	54.07	104.6
Of which: Synthetic fibres	10 thousand tons	37.53	40.20	107.1
Yarn(1)	10 thousand tons	335.4	327.0	97.5
Of which: Pure cotton yarn	10 thousand tons	251.8	229.2	91.0
Cloth(2)	100 million metres	153.5	148.8	96.9
Of which: Pure cotton cloth	100 million metres	101.3	90.4	89.2
Knitware (cotton yarn equivalent)	10 thousand tons	63.53	61.42	96.7
Towels	100 million	12.84	12.97	101.0
Hose	10 thousand pairs	83,437	72,690	87.1
Knitting wool	10 thousand tons	9.25	10.21	110.4
Of which: Pure wool	10 thousand tons	1.77	2.04	115.3
Woollen piece goods	10 thousand metres	12,669	14,291	112.8
Of which: Pure woollen piece goods	10 thousand metres	4,677	5,496	117.5
Blankets	10 thousand	1,379	1,622	117.6
Gunny bags	100 million	5.00	5.51	110.2
Silk	10 thousand tons	3.71	3.69	99.5
Silk textiles	100 million metres	9.14	9.99	109.3
Machine-made pulp	10 thousand tons	421.11	458.91	109.0
Machine-made paper and paper-boards	10 thousand tons	589	661	112.2
Sewing machines	10 thousand	1,286.0	1,087.2	84.5
Bicycles	10 thousand	2,420.0	2,758.2	114.0

Note: (1) Including pure and blend cotton yarn, pure chemical-fibre yarn, but excluding cotton thread, substitute fibre yarn and hand-made yarn.

(2) Including pure and blend cotton cloth, pure chemical-fibre cloth and canvas, but excluding substitute fibre cloth, hand-woven cloth and cord fabric.

Table B-8. (Continued)

Item	Unit	1982	1983	1983 as % of 1982
Watches	10 thousand	3,313.2	3,478.1	105.0
Of which: Wrist watches	10 thousand	3,301.0	3,469.0	105.1
Clocks	10 thousand	2,278.8	1,492.5	65.5
Household enamelware	10 thousand tons	13.39	14.08	105.2
Of which: Enamel basins	10 thousand	6,822	7,071	103.6
Enamel mugs	10 thousand	8,129	9,068	111.6
Household ceramics	100 million pieces	38.6	37.8	97.9
Of which: For export	10 thousand pieces	89,124	79,148	88.8
Fine aluminium products for daily use	10 thousand tons	6.01	6.78	112.8
Of which: Pots and pans	10 thousand	3,096	3,186	102.9
Pressure cookers	10 thousand	70.96	96.58	136.1
Glassware for daily use	10 thousand tons	249.32	269.54	108.1
Thermos bottles	10 thousand	14,327	13,831	96.5
Fountain pens	10 thousand	15,230	12,871	84.5
Of which: Quality fountain pens	10 thousand	129	84	65.1
Ballpens	10 thousand	27,431	29,106	106.1
Pencils	100 million	34.6	36.3	104.9
Bulbs	100 million	10.7	12.5	116.8
Synthetic detergent	10 thousand tons	56.9	67.7	119.0
Soap	10 thousand tons	85 15	86.47	101.6
Of which: Toilet soap	10 thousand tons	7.48	7.07	94.5
Toothpaste	10 thousand tubes	96,748	104,059	107.6
Matches	10 thousand cases	2,508	2,795	111.4
Batteries(flashlight battery equivalent)	100 million	38 43	42.25	109.9
Salt	10 thousand tons	1,638	1,613	98.5
Sugar	10 thousand tons	338	377	111.5
Cigarettes	10 thousand cases	1,885	1,938	102.8
Canned food	10 thousand tons	78.5	84.5	107.6

Table B-8. (Continued)

Item	Unit	1982	1983	1983 as % of 1982
Beer	10 thousand tons	117	163	139.3
Dairy products	ton	99,703	112,194	112.5
Of which: Milk powder	ton	61,982	75,493	121.8
Monosodium glutamate	ton	51,683	60,976	118.0
Edible vegetable oil	10 thousand tons	345.33	359.95	104.2
Chemical pharmaceuticals	10 thousand tons	4.22	4.80	113.7
Plastic products	10 thousand tons	166	191	115.1
Leather (ox-hide equivalent)	10 thousand pieces	3,776	3,576	94.7
Leather shoes	10 thousand pairs	18,661	18,361	98.4
Rubber shoes	10 thousand pairs	43,171	46,153	106.9
Clothes	10 thousand pieces	98,546	100,331	101.8
Household refrigerators	10 thousand	9.99	18.85	188.7
Household washing machines	10 thousand	253.3	365.9	144.5
Electric fans	10 thousand	918.6	1,045.7	113.8
Radio sets	10 thousand	1,723.9	1,998.9	116.0
Of which: Transistors	10 thousand	1,641.9	1,966.1	119.7
Television sets	10 thousand	592.01	684.01	115.5
Of which: Colour sets	10 thousand	28.81	53.11	184.3
Recorders	10 thousand	347.1	497.7	143.4
Cameras	10 thousand	74.23	92.56	124.7
Computers	set	243	414	170.4
Pocket calculators	10 thousand	178.84	370.84	207.4
Movie film (35mm equivalent)	10 thousand metres	19,408	18,844	97.1
Coal(1)	100 million tons	6.66	7.15	107.4
Crude oil (2)	10 thousand tons	10,212	10,607	103.9

Note: (1) Including anthracite, bituminous coal and lignite, but excluding bone coal.
(2) Including natural and synthetic crude oil.

Table B-8. (Continued)

Item	Unit	1982	1983	1983 as % of 1982
Gasoline	10 thousand tons	1,114.4	1,264.4	113.5
Diesel fuel	10 thousand tons	1,716.3	1,903.5	109.0
Natural gas	100 million cubic metres	119.3	122.1	102.3
Electricity	100 million kwh	3,277	3,514	107.2
Of which: Hydropower	100 million kwh	744	864	116.1
Pig iron	10 thousand tons	3,551	3,738	105.3
Steel	10 thousand tons	3,716	4,002	107.7
Rolled steel final products (1)	10 thousand tons	2,902	3,072	105.9
Of which: Heavy rails	10 thousand tons	63.48	78.37	123.5
Light rails	10 thousand tons	26.65	27.53	103.3
Ordinary rolled steel, large	10 thousand tons	89.07	61.67	72.6
Ordinary rolled steel, medium	10 thousand tons	295.16	269.61	91.3
Ordinary roll steel, small	10 thousand tons	690.57	743.24	107.6
Quality rolled steel	10 thousand tons	249.58	294.74	118.1
Wire rod	10 thousand tons	414.07	445.39	107.6
Thick steel plate	10 thousand tons	3.19	2.70	84.6
Medium-thick steel plate	10 thousand tons	362.29	388.40	107.2
Thin steel plate	10 thousand tons	308.35	316.74	102.7
Silicon steel sheet	10 thousand tons	35.71	43.85	122.8
Strip steel	10 thousand tons	79.71	81.25	101.9
Seamless steel pipe	10 thousand tons	101.19	115.11	113.8
Ferroalloy	10 thousand tons	88.9	108.8	122.4
Machine-made coke	10 thousand tons	3,311	3,451	104.2
Iron ore (final product)	10 thousand tons	10,732	11,339	105.7
Cement	10 thousand tons	9,520	10,825	113.7
Plate glass	10 thousand standard cases	3,546	4,167	117.5
Timber(2)	10 thousand cubic metres	5,041	5,232	103.8
Sulphuric acid	10 thousand tons	817.5	869.6	106.4

Note: (1) Steel reprocessed has been deducted.

(2) Referring to those which have been logged out.

Table B-8. (Continued)

Item	Unit	1982	1983	1983 as % of 1982
Soda ash	10 thousand tons	173.5	179.3	103.3
Caustic soda	10 thousand tons	207.3	212.3	102.4
Synthetic ammonia	10 thousand tons	1,546.3	1,677.1	108.5
Chemical fertilizers for agriculture use(1)	10 thousand tons	1,278.1	1,378.9	107.9
Of which: Nitrogenous	10 thousand tons	1,021.9	1,109.4	108.6
Phosphate	10 thousand tons	253.7	266.6	105.1
Chemical pesticides	10 thousand tons	45.7	33.1	72.4
Ethylene	10 thousand tons	56.49	65.37	115.7
Calcium carbide (equivalent)	10 thousand tons	167.5	180.8	107.9
Plastics	10 thousand tons	100.3	112.1	111.8
Synthetic rubber	10 thousand tons	13.60	16.89	124.2
Outer tyres	10 thousand	864	1,271	147.1
Mining equipment	10 thousand tons	15.82	20.16	127.4
Metallurgical equipment	10 thousand tons	3.82	3.88	101.6
Petroleum equipment	10 thousand tons	9.32	10.07	108.0
Chemical industry equipment	10 thousand tons	6.32	6.96	110.1
Power generating equipment(2)	10 thousand kw	164.5	274.0	166.6
Alternate motors(3)	10 thousand kw	2,420	2,868	118.5
Transformers(4)	10 thousand kva	3,143	4,228	134.5
Pumps	10 thousand	156.51	185.12	118.3
Metal-cutting machine tools(5)	10 thousand	9.98	12.10	121.2
Forging and pressing equipment	10 thousand	4.62	4.38	94.8

Note: (1) Calculated on the basis of 100% effectiveness.

(2) Referring to those with generating capacity of 500 kw and over, including water turbogenerators, turbogenerators and gas turbines.

(3) Referring to general alternate current motors and special motors, with power capacity of 0.5 kw and over.

(4) Referring to copper-wire and aluminium-wire transformers of 5 kva and over.

(5) Excluding bench drillers, grinders and polishers.

Table B-8. (Continued)

Item	Unit	1982	1983	1983 as % of 1982
Motor vehicles(1)	10 thousand	19.63	23.98	122.2
Of which: Trucks	10 thousand	12.18	13.71	112.6
Motorcycles	10 thousand	19.4	25.5	131.4
Rolling bearings	10 thousand sets	25,624	27,790	108.5
Tractors(2)	10 thousand	4.03	3.70	91.8
Walking tractors	10 thousand	29.83	49.77	166.8
Internal combustion engines (commodity)	10 thousand hp	2,296	2,899	126.3
Internal combustion engines for agricultural irrigation and drainage	10 thousand hp	271.4	345.5	127.3
Combine harvesters		4,630	1,953	42.2
Rubber-wheeled hand carts	10 thousand wheels	1,277	1,188	93.0
Locomotives		486	589	121.2
Railway passenger coaches		1,153	1,230	106.7
Railway freight wagons	10 thousand	1.06	1.58	149.1
Steel ships for civilians use	10 thousand tons	102.5	129.4	126.2

Note: (1) Including trucks, chassis of trucks (for sales), cross-country vehicles, cars, and wagons, buses, coaches turned out with chassis produced in the same factories.

(2) Referring to both wheel and crawler tractors with a haulage capacity of 20 horsepower and over. Tractors which are refitted into bulldozers turned out in the same factories are deducted.

Table B-9. Quality of products of key industrial enterprises, 1982 and 1983

Item	Unit	1982	1983
I. Coal industry			
Commodity coal - ash content	%	20.91	20.31
- waste rock content	%	0.45	0.40
Washed coal - ash content	%	10.32	10.31
- moisture capacity	%	11.60	11.51
II. Petroleum industry			
Moisture capacity of crude oil shipped from fields	%	0.37	0.32
Rate of petroleum products up to standard	%	99.99	100.00
III. Power industry			
Rate of standard cycle current	%	98.42	96.96
IV. Metallurgical industry			
Rate of product up to standard			
— pig iron, blast furnace	%	99.94	99.95
— steel ingots, open hearth	%	97.95	98.37
— steel ingots, electric furnace	%	99.41	99.43
— steel ingots, side-blow converter	%	99.20	99.26
— steel ingot, top-blow converter	%	98.45	98.72
— rolled steel	%	98.73	98.98
Coking yield rate, all coke	%	76.99	77.08
Metallurgical coke as percent of all coke	%	93.87	93.77
Coke — ash content	%	13.72	13.81
— sulphur content	%	0.69	0.68
Iron ore concentrate grade	%	62.52	62.13

Table B-9. (Continued)

Item	Unit	1982	1983
V. Chemical industry			
Grade of phosphate rock	%	27.8	27.7
Rate of sulphuric acid up to standard	%	100	100
Rate of soda-ash up to standard (ammonia-soda process)	%	100	100
Effective P_2O_5 content of calcium superphosphate	%	14.31	14.07
Rate of urea up to standard	%	97.18	98.34
Average Acetylene generation of calcium carbide	litre/kg	293	294
Rate of product up to standard			
--electrolytic liquid caustic soda (diaphragm process)	%	100	100
— polyvinyl chloride	%	99.25	99.22
— tyres	%	99.75	99.75
— low density polyethylene	%	98.37	98.47
Rate of first grade product			
— butadiene rubber	%	98.37	99.07
— chloroprene rubber	%	98.93	99.19
Rate of product up to standard			
— glacial acetic acid	%	99.98	100
— pure benzene	%	100	100
VI. Machine building industry			
Reject rate of iron castings	%	8.55	9.99
Acceptance rate of principal piece parts and items through sample inspection	%	95.21	96.13
VII. Building materials industry			
Average grade of cement	grade	595	598
Rate of ex-factory cement up to standard	%	99.97	99.96
Rate of first grade plate glass	%	78.94	82.50
VIII. Forest industry			
Rate of first grade timber	%	80.7	80.1
Rate of first and second grade products — plywood	%	88.4	89.6
ibreboard	%	83.0	87.8

Table B-9. (Continued)

Item	Unit	1982	1983
IX. Textile industry			
Rate of viscose fibres up to standard	%	98.58	98.76
Rate of synthetic fibres up to standard	%	98.49	98.97
Rate of top grade cotton yarn	%	98.86	98.77
Rate of first grade product put into storage			
— cloth	%	95.92	95.52
— printed and dyed cloth	%	88.94	87.66
— worsted woollen piecegoods	%	93.49	92.46
— knitting wool	%	92.22	92.56
Rate of mulberry silk up to standard	%	97.09	97.02
Rate of first grade silk textiles put into storage	%	91.00	89.78
X. Light industry			
Rate of final product — newsprint	%	92.7	92.5
— relief printing paper	%	86.8	87.7
Quality score — sewing machines	score	88.9	89.5
— bicycles	score	89.0	91.4
— wrist watches	score	90.4	91.3
Rate of product up to standard — ordinary bulbs	%	89.0	89.3
— cigarettes	%	99.3	99.2
Intervallic lighting time of size A battery	minute	1,022	1,049
Rate of product up to standard — ceramics for export	%	71.7	67.9
— thick leather	%	98.6	98.6
— thin leather	%	98.3	98.4
Rate of first grade polished aluminium pots and pans	%	65.0	66.6

Table B-10. Consumption of materials in key industrial enterprises, 1982 and 1983

Item	Unit	1982	1983
I. Coal industry			
Timber consumption in coal production	m^3/10 thousand tons	90.9	83.7
Explosive consumption in coal production	kg/10 thousand tons	3,117	2,994
Rolled steel consumption in coal production	ton/10 thousand tons	12.45	11.43
Compositive electricity consumption of coal enterprises	kwh/ton	35.88	36.35
Washed coal recovery rate	%	52.49	54.08
II. Petroleum industry			
Crude oil used in field by oil enterprises	%	1.50	1.50
Loss of crude oil in oil field	%	2.29	2.30
Electricity consumed in oil (gas) production	kwh/ton	42.96	45.08
Electricity consumed in crude oil processing	kwh/ton	39.49	34.59
Fuel oil consumed in oil processing	kg/ton	22.57	19.24
III. Power industry			
Standard coal consumption in power generation (1)	gram/kwh	404	400
Standard coal consumption in power supply(1)	gram/kwh	438	434
Electricity consumed by power plants(1)	%	6.32	6.21
Of which: Thermal-power plants	%	7.71	7.78
Hydropower plants	%	0.209	0.234
Transmission loss(2)	%	8.64	8.53
IV. Metallurgical industry			
Iron ore consumed in iron-smelting	kg/ton	1,814	1,830
Fuel consumption in iron-smelting (Coke ratio equivalent)	kg/ton	577	575
Coke consumption in iron-smelting (Coke ratio)	kg/ton	538	535
Pig iron and scrap consumption for steel-making by open hearth	kg/ton	1,095	1,095
Of which: Pig iron consumption	kg/ton	772	768
Pig iron and scrap consumption for steel-making by electric furnace	kg/ton	1,037	1,034
Of which: Pig iron consumption	kg/ton	118	113
Pig iron and scrap consumption for steel-making by side-blow coverter	kg/ton	1,173	1,171
Of which: Pig iron consumption	kg/ton	1,038	1,077

Note: (1) Referring to power plants with generating capacity of 6,000 kw and over.
(2) Referring to power plants with generating capacity of 500 kw and over.

Table B-10. (Continued)

Item	Unit	1982	1983
Pig iron and scrap consumption for steel-making by top-blow converter	kg/ton	1,148	1,143
Of which: Pig iron consumption	kg/ton	1,027	1,017
Wet coal consumed for coke making	kg/ton	1,427	1,431
Electricity consumption for steel-making by electric furnace	kwh/ton	643	625
Electricity consumption for ferro-silicon production	kwh/ton	8,421	8,996
D.C. consumption in electrolytic aluminium process	kwh/ton	16,108	15,633
Alumina consumed in electrolytic aluminium process	kg/ton	1,963	1,956
Metal recovery rate in ore dressing			
— Copper	%	86.3	87.1
— Lead	%	86.4	86.0
— Zinc	%	88.4	88.5
— Nickle	%	74.4	82.2
— Tin	%	56.8	58.6
— Tungsten	%	83.9	83.7
— Molybdenum	%	84.3	83.8
Metal recovery rate in smelting			
— Copper	%	97.1	97.2
— Lead	%	95.1	95.4
— Zinc	%	94.5	95.3
— Nickle	%	82.0	82.0
— Tin	%	96.8	96.7
V. Chemical industry			
Coke and anthracite consumption for synthetic ammonia(1)	kg/ton	1,314	1,301
Electricity consumption for synthetic ammonia	kwh/ton	1,434	1,406
Natural gas consumption for synthetic ammonia(2)	million kcal./ton	9.93	9.89
Electricity consumption for synthetic ammonia(2)	kwh/ton	14.69	14.86
Coke consumption for calcium carbide	kg/ton	575	558
Electricity consumption for calcium carbide	kwh/ton	3,518	3,479
D.C. consumption for electrolytic caustic soda			
— diaphragm process	kwh/ton	2,448	2,397
— mercury process	kwh/ton	3,200	3,182
Pyrate ore consumption for sulphuric acid	kg/ton	988	987

Note: (1) Referring to coke/anthracite with 84% of carbon content.
(2) Referring to 300,000 ton equipment.

Table B-10. (Continued)

Item	Unit	1982	1983
Electricity consumption for sulphuric acid	kwh/ton	88	91
Calcium carbide consumption for polyvinyl chloride	kg/ton	1,466	1,452
Phosphate rock consumption for calcium superphosphate	kg/ton	3,701	3,701
Sulphuric acid consumption for calcium superphosphate	kg/ton	2,492	2,547
Ethylene consumption for low density polyethylene	kg/ton	1,054	1,054
Propylene consumption for polypropylene	kg/ton	1,171	1,150
Butadiene consumption for butadiene rubber	kg/ton	1,039	1,035
Calcium carbide consumption for chloroprene rubber	kg/ton	3,135	3,107
Acetaldehyde consumption for glacial acetic acid	kg/ton	773	772
Crude benzene consumption for pure benzene	kg/ton	1,517	1,472
VI. Machine building industry			
Electricity consumption in electric furnace smelting	kwh/ton	822.0	781.0
Coke consumption in metal casting	kg/ton	120.9	138.2
Utilization ratio of rolled steel	%	65.4	65.8
VII. Building materials industry			
Standard coal consumption in cement production	kg/ton	207.62	206.01
Compositive electricity consumption in cement production	kwh/ton	100.00	100.90
Standard coal consumption for plate glass	kg/weight case	30.55	30.10
Soda ash consumption for plate glass	kg/weight case	9.73	9.72
Electricity consumption for plate glass	kwh/weight case	3.71	3.49
Electricity consumption for glass fibre	kwh/ton	4,392	4,273
VIII. Forest industry			
Sawlog-roundwood rate	%	88.2	88.6
Timber-sawlog rate	%	69.6	70.2
IX. Textile industry			
Standard coal consumption for viscose fibre			
— short staple	ton/ton	2.57	2.66
— long staple	ton/ton	9.93	10.21

Table B-10. (Continued)

Item	Unit	1982	1983
Electricity consumption for viscose fibre			
— short staple	kwh/ton	2,131	2,161
— long staple	kwh/ton	10,085	9,744
Sulphuric acid consumption for viscose fibre			
— short staple	kg/ton	950	931
— long staple	kg/ton	1,320	1,411
Caustic soda consumption for viscose fibre			
— short staple	kg/ton	850	663
— long staple	kg/ton	830	856
Cotton consumption in yarn spinning(1)	kg/ton	1,067	1,067
Electricity consumption in yarn spinning	kwh/ton	1,862	1,894
Yarn consumption in cloth weaving	kg/100 metres	15.63	16.63
Electricity consumption in cloth weaving	kwh/100 metres	21.00	21.70
Caustic soda consumption in cloth dyeing and printing	kg/100 metres	1.78	1.67
Standard coal consumption in cloth dyeing and printing	kg/100 metres	40.06	41.60
X. Light industry			
Timber consumption for unbleached chemical wood pulp	m^3/ton	4.6	4.6
Caustic soda consumption for unbleached chemical wood pulp	kg/ton	464	465
Timber consumption for machine-made wood pulp	m^3/ton	2.5	2.5
Electricity consumption for machine-made wood pulp	kwh/ton	1,482	1,467
Electricity consumption for news-print	kwh/ton	495	528
Pig iron used for household sewing machine	kg/unit	32.8	32.3
Rolled steel used for bicycle	kg/unit	28.1	27.4
Copper used for alarm clocks	kg/10 thousand	1,691	1,733
Tungsten filament used for bulb (15-40 W)	metre/piece	1.32	1.29
Standard coal consumption for household pottery and porcelain products	ton/ton	1.8	1.6
Oxhide used for thick leather	ton/ton	0.89	0.91
Hogskin used for thick leather	ton/ton	1.85	1.93
Tannin extract used for thick leather	kg/ton	790	770

Note: (1) Chemical-fibre yarn included.

Table B-11. Utilization of machinery and equipment and related items of key industrial enterprises, 1982 and 1983

Item	Unit	1982	1983
I. Coal industry			
Stripping-extraction ratio	m^3/ton	6.37	6.30
Average monthly production per stopping face	ton	11,150	11,643
Average monthly footage per tunnelling face	metre	101.02	102.44
Tunnelling-output rate	metre/10 thousand tons	179.78	175.66
Opening-up output rate	metre/10 thousand tons	23.80	22.73
II. Petroleum industry			
Utilization ratio of oil wells	%	91.14	91.95
III. Power industry(1)			
Average capacity utilization	hour	5,007	5,101
Hydropower	hour	3,708	4,104
Thermal power	hour	5,542	5,513
IV. Metallurgical industry			
Utilization coefficient, sinter furnace	ton/m^2 furnace-hour	1.27	1.29
Operating ratio, sinter furnace	%	73.75	76.06
Utilization coefficient, blast furnace	ton/m^3 24 hours	1.548	1.591
Open hearth — utilization coefficient	ton/m^2 24 hours	8.37	8.90
— roof campaign	heat	390	377
— average heat time	hour/minute	7.25	7.15
— operating ratio	%	76.57	78.41
Electric furnace — utilization coefficient	ton/10^6VA 24 hours	16.50	17.88
— average heat time	hour/minute	3.52	3.48
— operating ratio	%	77.00	81.97

Note: (1) Referring to power plants with generating capacity of 500 kw and over.

Table B-11. (Continued)

Item	Unit	1982	1983
Side-blow converter — utilization coefficient . . .	ton/nominal ton 24 hours	35.59	35.20
— life span of furnace lining .	heat	260	323
— average heat time	minute	48	48
— operating ratio	%	69.34	70.61
Top-blow converter — utilization coefficient . . .	ton/nominal ton 24 hours	16.94	18.08
— life span of furnace lining .	heat	521	541
— average heat time	minute	34	34
— operating ratio	%	47.40	50.58
Operating ratio, rough rolling mill	%	53.33	60.89
V. Chemical industry			
Sulphuric acid (100%); catalyst volume utilization coefficient	ton/m^3 day	3.53	3.53
Soda ash: carborization tower volume utilization coefficient (ammonia-soda processes)	ton/m^3 day	0.80	0.80
Soda ash: carbonization tower volume utilization coefficient (dual process)	ton/m^3 day	0.55	0.51
Synthetic ammonia:			
— gas producer utilization coefficient	m^3/m^2 day	19,296	18,207
— catalyst volume utilization coefficient	ton/m^3 day	33.34	32.53
Urea: synthetic tower utilization coefficient . . .	ton/m^3 day	7.05	7.07
VI. Machine building industry			
Output per ton of forging hammer capacity	ton	194.0	223.0
Utilization ratio of metal-cutting machine tools .	%	49.1	48.2
VII. Building materials industry			
Output of rotary kilns	ton/hour	2,620	2,811
Output of cement mills	ton/hour	4,355	4,549

Table B-11. (Continued)

Item	Unit	1982	1983
Operating ratio of rotary kilns	%	83.26	83.62
Operating ratio of cement mills	%	67.82	67.82
Capacity of plate glass melting furnace	kg/m^2 day	1,338	1,371
VIII. Forest industry			
Average annual collection of wood per tractor	m^3	4,401	4,503
Average annual volume of wood transported			
— per truck	m^3	4,607	4,985
— per forest locomotive	m^3	29.330	29.505
IX. Textile industry			
Yarn output per thousand spindles (mixed average)	kg/hour	24.69	24.13
Utilization ratio of ring-spinning equipment	%	97.84	94.65
Cotton cloth output per loom (mixed average)	metre/hour	3.97	3.84
Utilization ratio of looming equipment	%	98.98	96.27
Operating ratio of looming equipment	%	94.21	93.28
Knitting wool output per thousand spindles	kg/hour	67.25	57.24
Per comber output, woollen piecegoods	meter/hour	2.28	2.22
Per loom output-woollen piecegoods (plain colour blankets excluded)	metre/hour	3.25	3.17
— plush	metre/hour	3.68	3.44
— camel hair cloth	metre/hour	13.35	12.80
— jacquard blankets	banket/hour	1.15	1.25
— gunny bags (mixed average)	bag/hour	12.15	11.92
— ramie textiles	metre/hour	3.68	3.38
— silk textiles	metre/hour	2.24	2.19

Table B-12. Principal financial items of State-owned independent accounting industrial enterprises, 1982 and 1983

Item	Unit	1982	1983	1983 as % of 1982
I. Number of enterprises		63,063	63,620	100.9
II. Original value of fixed assets (year-end)	Rmb100 million	4,374.95	4,767.80	109.0
Of which: For industrial production	Rmb100 million	3,590.24	3,882.49	108.1
III. Total fund	Rmb100 million	4,145.92	4,452.49	107.4
Net value of fixed assets (year-end)	Rmb100 million	2,914.01	3,161.00	108.5
Quota circulating fund(1)	Rmb100 million	1,231.91	1,291.49	104.8
IV. Revenue from sales of products	Rmb100 million	4,030.73	4,404.84	109.3
V. Gross industrial output value (at 1980 constant prices)	Rmb100 million	4,146.66	4,535.55	109.4
VI. Profits and taxes	Rmb100 million	972.19	1,032.81	106.2
Profits	Rmb100 million	597.66	640.94	107.2
Taxes	Rmb100 million	374.53	391.87	104.6
VII. Gross output value per Rmb100 Original value of fixed assets	Rmb	94.78	95.13	100.4
VIII. Profits and taxes per Rmb100 original value of fixed assets	Rmb	22.22	21.66	97.5
IX. Ratio of profits and taxes of total fund	%	23.45	23.20	
X. Ratio of profits and taxes to cost	%	31.98	30.94	
XI. Decrease rate of cost of comparable products(2)	%	-0.38	0.24	

Note: (1) Calculated on basis of average holding of circulating fund of the year.
(2) Minus sign (-) indicates an increase in cost. Similarly in the following tables.

Table B-13. Principal financial items of State-owned independent accounting industrial enterprises, 1952-1983

Year	Original value of fixed assets	Total fund			Profits and taxes		
		Total	Net value of fixed assets	Quota circulating fund	Total	Profits	Taxes
1952	148.8	146.8	100.8	46.0	37.4	28.3	9.1
1957	334.6	330.3	239.8	90.5	115.1	79.5	35.6
1962	855.4	892.6	657.3	235.3	135.0	76.3	58.7
1965	1,040.0	1,037.3	777.2	260.1	309.2	217.0	92.2
1970	1,462.0	1,545.1	1,033.3	511.8	472.1	311.0	161.1
1975	2,428.3	2,569.0	1,716.3	852.7	582.7	363.4	219.3
1976	2,621.8	2,774.4	1,846.4	928.0	535.5	317.1	218.4
1977	2,882.2	2,985.2	2,011.3	973.9	633.9	384.5	249.4
1978	3,193.4	3,273.0	2,225.7	1,047.3	790.7	508.8	281.9
1979	3,466.7	3,487.6	2,378.6	1,109.0	864.4	562.8	301.6
1980	3,730.1	3,663.7	2,528.0	1,135.7	907.1	585.5	321.6
1981	4,032.3	3,873.0	2,709.3	1,163.7	923.3	579.7	343.6
1982	4,375.0	4,145.9	2,914.0	1,231.9	972.2	597.7	374.5
1983	4,767.8	4,452.5	3,161.0	1,291.5	1,032.8	640.9	391.9

Note: Statistics in this table cover industrial enterprises under the administration of non-industrial departments, and they differ from the figures from Ministry of Finance.

Table B-13. (Continued)

Year	Profits per Rmb100 of original value of fixed assets	Profits and taxes per Rmb100 of funds	Profits and taxes per Rmb100 of net value of fixed assets	Profits per Rmb100 of gross output value	Gross output value per Rmb100 of original value of fixed assets	Quota circulating funds per Rmb100 of gross output value	Costs per Rmb100 of revenue from sales
1952	19.0	25.5	37.1	14.2	134	23.1	69.9
1957	23.8	34.8	48.0	17.1	139	19.4	68.1
1962	8.9	15.1	20.5	12.5	71	38.7	76.5
1965	20.9	29.8	39.8	21.3	98	25.5	69.0
1970	21.3	30.6	45.7	18.2	117	29.9	69.6
1975	15.0	22.7	34.0	14.2	105	33.4	73.6
1976	12.1	19.3	29.0	12.6	96	36.9	74.8
1977	13.3	21.2	31.5	13.5	99	34.2	74.1
1978	15.9	24.2	35.5	15.5	103	32.0	72.5
1979	16.2	24.8	36.3	15.8	103	31.0	72.4
1980	15.7	24.8	35.9	15.5	101	30.1	73.7
1981	14.4	23.8	34.1	15.0	96	30.2	74.6
1982	13.7	23.5	33.4	14.4	95	29.7	75.4
1983	13.4	23.2	32.7	14.1	95	28.5	75.8

Table B-14. Principal financial items of State-owned independent accounting industrial enterprises, 1983

Branch of Industry	Original value of fixed assets (year-end)	Total fund			Profits and taxes
		Total	Net value of fixed assets	Quota circulating fund	
All branches	**4,767.80**	**4,452.49**	**3,161.00**	**1,291.49**	**1,032.81**
By light and heavy industry					
Light industry	896.12	1,084.88	641.20	443.68	420.05
Heavy industry	3,871.68	3,367.61	2,519.80	847.81	612.76
By branch of industry					
Of which: Metallurgical industry	675.76	591.88	456.59	135.29	113.52
Of which: Ferrous metals	500.93	441.93	345.39	96.54	90.26
Power industry	602.03	426.49	410.85	15.63	90.34
Of which: Hydropower	130.44	102.30	100.17	2.13	14.90
Coal and coke industry	459.44	324.68	289.62	35.07	9.05
Of which: Coal	446.49	315.01	281.14	33.87	7.65
Petroleum industry	349.66	220.84	178.60	42.24	120.10
Of which: Extraction	258.60	150.31	123.71	26.60	52.53
Chemical industry	476.91	453.92	323.39	130.52	134.28
Of which: Basic chemical materials	81.32	65.93	51.45	14.48	18.04
Chemical fertilizers	196.54	172.98	139.69	33.29	20.33
Chemical pesticides	9.99	11.13	6.57	4.56	2.52
Organic chemicals	87.20	82.22	58.46	23.77	36.45
Chemicals for daily use	15.12	20.65	10.41	10.24	9.17
Machine-building industry	1,134.09	1,249.55	736.47	513.08	182.96
Of which: Agricultural machinery	79.73	86.53	52.56	33.98	6.13

Table B-14. (Continued)

Branch of Industry	Original value of fixed assets (year-end)	Total fund			Profits and taxes
		Total	Net value of fixed assets	Quota circulating fund	
Industrial machinery	280.15	303.52	171.61	131.91	38.00
Transport equipment	196.49	219.55	127.35	92.20	26.05
Other machinery for production	81.49	95.61	52.16	43.45	17.08
Electronic apparatus	100.20	125.12	69.61	55.51	19.07
Metal products for daily use	18.26	22.58	12.23	10.35	9.69
Building materials industry(1)	191.54	170.12	132.94	37.18	30.22
Of which: Cement and cement products	105.92	93.58	75.14	18.44	14.98
Bricks, tiles, lime and other building materials	39.10	35.01	26.85	8.15	5.32
Glass	12.58	11.44	8.87	2.56	4.63
Ceramics	7.76	7.21	5.09	2.13	1.54
Non-metallic minerals	11.86	10.64	7.74	2.89	1.50
Forest industry	111.98	105.49	81.32	24.17	17.47
Of which: Logging and transport of wood	85.73	76.08	62.84	13.24	10.88
Food industry	223.41	278.16	166.75	111.41	161.09
Of which: Food and oil	34.55	31.51	26.22	5.29	10.94
Salt-making	17.13	15.19	11.71	3.48	11.36
Slaughtering and meat processing	25.27	30.56	17.81	12.75	2.30
Canned food	9.37	13.67	6.84	6.82	2.43
Sugar refining	43.62	41.39	33.46	7.93	10.48
Tobacco manufactures	13.39	32.92	10.42	22.50	89.29
Liquors	35.04	48.86	27.64	21.22	20.91
Textile industry	315.40	397.86	228.83	169.02	118.04
Of which: Chemical fibres	79.68	82.12	66.62	15.50	14.72
Cotton textiles	150.52	184.44	99.49	84.96	65.83
Clothing industry	6.51	9.97	4.58	5.40	3.55
Leather industry	11.37	18.85	7.86	10.99	3.22
Paper making and cultural, educational and arts articles	101.82	100.06	67.06	33.01	27.96
Of which: Paper making	61.17	57.26	39.74	17.53	13.24

Note: (1) Excluding glassware or ceramics for daily use.. Similarly in the next table.

Table B-14. (Continued)

Branch	Gross output value per Rmb 100 original value of fixed assets	Profits and taxes per Rmb 100 original value of fixed assets	Profits and taxes per Rmb 100 of total fund	Profits and taxes per Rmb 100 of revenue from sales	Decrease rate of cost of comparable products (%)
All branches	**95.13**	**21.66**	**23.20**	**30.94**	**0.24**
By light and heavy industry					
Light industry	226.81	46.87	38.72	29.85	0.71
Heavy industry	64.65	15.83	18.20	31.73	-0.05
By branch of industry					
Of which:					
Metallurgical industry	72.02	16.80	19.18	31.24	-0.61
Of which: ferrous metals	68.62	18.02	20.42	33.67	-0.76
Power industry	34.55	15.01	21.18	63.77	-5.38
Of which: Hydropower	26.23	11.42	14.57	109.55	-1.10
Coal and coke industry	32.10	1.97	2.79	5.42	-1.24
Of which: Coal	30.80	1.71	2.43	4.87	-1.03
Petroleum industry	86.80	34.35	54.38	71.62	-0.92
Of which: Extraction	51.07	20.31	34.95	76.92	-2.95
Chemical industry	118.31	28.16	29.58	31.64	0.19
Of which: Basic chemical materials	87.60	22.18	27.36	32.63	-2.54
Chemical fertilizers	58.90	10.34	11.75	19.02	-0.55
Chemical pesticides	199.50	25.23	22.64	15.63	0.84
Organic chemicals	135.12	41.80	44.33	43.47	0.36
Chemicals for daily use	289.75	60.65	44.41	32.67	0.83
Machine-building industry	85.34	16.13	14.64	25.14	3.81
Of which: Agricultural machinery	77.74	7.69	7.08	11.46	5.72

Table B-14. (Continued)

Branch	Gross output value per Rmb 100 original value of fixed assets	Profits and taxes per Rmb 100 original value of fixed assets	Profits and taxes per Rmb100 of total fund	Profits and taxes per Rmb100 of revenue from sales	Decrease rate of cost of comparable products (%)
Industrial machinery	70.89	13.56	12.52	24.56	2.69
Transport equipment	78.85	13.26	11.87	20.75	3.68
Other machinery for production	93.02	20.96	17.86	31.69	3.89
Electronic apparatus	112.87	19.03	15.24	25.11	9.36
Metal products for daily use	235.87	53.07	42.91	32.39	2.11
Building materials industry	60.55	15.78	17.76	29.76	-0.93
Of which: Cement and cement products	54.72	14.14	16.01	26.80	-1.06
Bricks, tiles, lime and other building materials	68.93	13.61	15.20	24.30	-1.13
Glass	83.94	36.80	40.47	58.53	-2.54
Ceramics	74.36	19.85	21.36	36.67	1.24
Non-metallic minerals	59.70	12.65	14.10	28.09	2.52
Forest industry	63.11	15.60	16.56	23.45	-0.92
Of which: Logging and transport of wood	44.79	12.69	14.30	24.95	-0.97
Food industry	281.46	72.11	57.91	37.77	-0.14
Of which: Food and oil	545.27	31.66	34.72	10.42	1.05
Salt-making	97.26	66.32	74.79	207.50	2.07
Slaughtering and meat processing	318.48	9.10	7.53	2.66	-0.64
Canned food	257.20	25.93	17.78	12.20	2.55
Sugar refining	97.32	24.03	25.32	31.79	-3.31
Tobacco manufactures	823.38	666.84	271.23	218.85	0.68
Liquors	160.30	59.67	42.80	50 06	-2.20
Textile industry	241.34	37.43	29.67	22.08	0.48
Of which: Chemical fibres	72 01	18.47	17.92	35.25	-6.35
Cotton textiles	30..92	43.74	35.69	20.53	-1.28
Clothing industry	381.57	54.53	35.61	17.89	9.31
Leather industry	206.68	28.32	17.08	15.87	0.45
Paper-making and cultural, educational and arts articles	127.96	27.46	27.94	31.30	1.08
Of which: Paper-making	106.3!	21.64	23.12	26.06	1.24

Table B-15. Principal financial items of collective-owned independent accounting industrial enterprises, 1975-1983

Year	Original value of fixed assets (Rmb100 million)	Profits and taxes (Rmb 100 million)		Gross output value [1] (Rmb 100 million)	Profits per Rmb100 of original value of fixed assets (Rmb)	Gross output value per Rmb100 of original value of fixed assets (Rmb)	Profits per Rmb100 of gross output value (Rmb)
		Total	Of which: Profits				
1975	149.2	88.2	65.4	508.0	43.8	340.5	12.9
1978	284.2	125.3	90.5	776.4	31.8	273.2	11.7
1979	337.1	129.7	91.5	839.4	27.1	249.0	10.9
1980	396.7	148.8	103.6	1,002.0	26.5	255.3	10.4
1981	463.0	151.8	98.8	1,054.4	21.3	227.7	9.4
1982	535.4	162.1	101.8	1,156.7	19.0	216.0	8.8
1983	611.2	194.0	124.9	1,313.4	20.4	214.9	9.5

Note: (1) Gross output value of 1975-1980 are at 1970 constant prices and that of 1981-1983 at 1980 constant prices.

Table B-16. Principal financial items of collective-owned independent accounting industrial enterprises, 1983

Item	Unit	Total of collective-owned enterprises	Of which: township industry	Of the collective-own industry:	
				Light industry	Heavy industry
I. Number of enterprises		284,434	178,916	180,708	103,726
II. Original value of fixed assets (year-end)	Rmb100 million	611.21	239.40	311.28	299.93
Of which: For industrial production	Rmb100 million	523.05	207.92	267.85	255.20
III. Total fund	Rmb100 million	818.39	283.85	447.30	371.09
Net value of fixed assets (year-end)	Rmb100 million	447.11	182.85	231.23	215.88
Quota circulating fund	Rmb100 million	371.28	101.00	216.07	155.21
IV. Revenue from sales of products	Rmb100 million	1,143.44	360.18	684.71	458.73
V. Gross industrial output value (at 1980 constant prices)	Rmb100 million	1,313.38	406.39	816.17	497.21
VI. Profits and taxes	Rmb100 million	194.03	70.04	104.91	89.12
Profits	Rmb100 million	124.87	48.89	61.44	63.43
Taxes	Rmb100 million	69.16	21.15	43.47	25.69
VII. Gross output value per Rmb 100 Original value of fixed assets	Rmb	214.88	169.75	262.20	165.78
VIII. Profits and taxes per Rmb100 original value of fixed assets	Rmb	31.75	29.26	33.70	29.71
IX. Ratio of profits and taxes to total fund	%	23.71	24.68	23.45	24.02

Table B-17. Overall labour productivity of State-owned independent accounting industrial enterprises, 1949-1983

Year	Labour Productivity (1) (Rmb/person-year)	Index (1952=100)
1949	3,016	72.1
1952	4,184	100.0
1957	6,362	152.1
1962	4,817	115.1
1965	8,979	214.6
1978	11,130	266.0
1979	11,838	282.9
1980	12,080	288.7
1981	11,863	283.5
1982	12,133	290.0
1983	13,049	311.9

Note: (1) Labour productivity prior to 1980 has been readjusted on the basis of index.

Table B-18. Index of overall labour productivity of State-owned independent accounting industrial enterprises by branch of industry, 1957-1983

Branch	1957	1965	1978	1983
Average of all branches	**152.1**	**214.6**	**266.0**	**311.9**
Of which:				
Metallurgical industry	208.2	303.1	233.6	272.1
Power industry	156.3	248.9	386.0	336.3
Coal industry	150.8	98.9	110.8	107.0
Petroleum industry	174.9	317.7	624.3	513.5
Chemical industry	231.7	501.2	552.4	755.5
Machine building industry	199.5	287.4	404.0	497.7
Building materials industry	171.7	313.5	328.1	392.0
Forest industry	98.6	95.9	79.7	81.0
Food industry	141.7	162.5	158.2	174.9
Textile industry	114.5	169.9	209.7	224.8
Paper-making industry	174.5	209.1	155.4	156.4

Table B-19. Newly increased production capacity through capital construction, 1953-1983

Year	Iron ore mining (10 thousand tons)	Iron smelting (10 thousand tons)	Steel making (10 thousand tons)	Coal mining (10 thousand tons)	Installing capacity of power generating equipment (10 thousand kw)	Petroleum extraction(1) (10 thousand tons)	Natural gas tapping (100 million m^3)	Sulphuric acid (10 thousand tons)	Synthetic ammonia (10 thousand tons)	Chemical fertilizer (10 thousand tons)	Soda ash (10 thousand tons)	Caustic soda (10 thousand tons)	Plastics (10 thousand tons)
1953-1957	1,643.4	338.6	281.6	6,376	246.9	131.2		29.2	13.7	9.24	19.2	8.1	
1958-1962	2,186.0	1,344.0	1,273.0	14,920	863.8	816.6	14.1	124.6	42.0	66.88	36.9	26.8	3.75
1963-1965	379.8	6.2	80.5	2,392	215.3	674.6	11.9	63.7	78.6	125.71	16.6	5.7	0.20
1966-1970	3,590.1	1,068.2	652.7	6,806	860.4	2,777.0	28.8	152.0	244.4	204.16	17.0	34.0	18.70
1971-1975	4,494.6	903.3	597.9	8,121	1,743.2	4,104.2	103.2	219.4	429.2	372.38	16.4	30.2	7.50
1976-1980	2,097.0	360.0	588.0	6,493	1,929.0	3,975.3	118.1	95.6	592.4	473.55	18.9	30.5	53.71
Of which: 1978	115.0	143.8	112.5	1,151	504.8	999.6	32.0	22.0	95.7	83.52	0.5	6.2	1.00
1979	462.0	153.0	210.0	1,393	465.1	800.0	18.3	11.1	93.9	82.21	11.5	6.5	11.15
1980	274.0		70.8	829	287.1	574.7	8.8	15.5	33.0	27.94	4.4	7.9	1.96
1981-1985													
1981	475.0			1,373	263.7	518.9	6.2	3.5	37.5	32.28		0.7	0.10
1982	310.0	25.0	18.0	820	294.3	636.5	6.3	9.7	72.5	65.31		0.9	2.00
1983	30.0	17.0	6.0	1,852	446.6	810.8	2.1		11.7	8.25		0.5	0.75

ote: (1) Including newly increased production capacity through technical updating, transformation and other investment.

Table B-19. (Continued)

Year	Felling and transport of timber (10 thousand m^3)	Cement (10 thousand tons)	Chemical fibres (10 thousand tons)	Cotton yarn weaving spindles (10 thousand)	Bicycles (10 thousand)	Sewing machines (10 thousand)	Wrist Watches (10 thousand)	Kinescopes (10 thousand)	Machine-refined sugar (10 thousand tons)	Salt (10 thousand tons)	Machine-made paper and paper boards (10 thousand tons)	Railway lines newly put into operation (km)	Highways constructed (km)	Handling capacity of sea ports (10 thousand tons)
1953-1957	409.0	261.3	0.50	201.0	50.0	7.4			62.0	151.3	24.9	4,162	83,403	835
1958-1962	649.4	1,173.6	0.87	295.5	50.2	40.8	52.0		109.7	644.7	112.7	6,120	37,047	1,599
1963-1965	274.9	222.1	4.27	57.8	35.4	24.7	39.0		22.5	16.3	9.8	1,099	12,629	425
1966-1970	415.9	1,533.0	1.23	322.0	68.0	40.0	46.0		20.0	200.0	90.3	3,894	31,223	1,191
1971-1975	611.6	1,128.3	12.40	94.3	67.4	36.0	307.4		44.4	150.0	35.0	4,866	40,065	4,805
1976-1980	361.4	1,119.6	26.26	190.5	240.5	259.2	622.4	15	72.1	159.7	34.7	3,776	40,344	5,321
Of which: 1978	77.8	189.1	2.80	25.0	38.8	18.3	28.0		12.1	19.7	3.5	1,296	10,578	657
1979	89.2	273.8	8.33	54.0	29.0	52.7	89.0		22.6	44.4	11.2	289	4,956	336
1980	49.8	288.8	6.03	76.1	113.9	103.8	255.6	15	11.3	52.1	10.7	1,008	3,036	524
1981-1985														
1981	29.8	154.4	6.73	51.0	99.0	61.3	73.0	162	17.4	32.4	4.4		1,554	236
1982	33.3	236.8	2.91	51.0	38.0	40.0	176.0	168	34.6	30.6	5.9	31	751	2,000
1983	44.7	345.7	5.13	31.2		21.0	68.0	50	33.1	15.0	9.2	601	1,462	1,773

Table B-20. Labour force employed by sector of the national economy, 1983

Sector	Total	Staff and workers in state-owned units	Staff and workers in collective-owned units in cities and towns	Individual labourers in cities and towns	Collective and individual labourers in rural areas
I. Absolute figure (10 thousand persons)					
All sectors	**46,004**	**8,771**	**2,744**	**231**	**34,258**
Industry	6,023	3,552	1,574	24	873
Construction and resources prospecting	1,481	695	302	1	483
Agriculture, forestry, water conservancy and meteorology	32,510	803	62		31,645
Transport, posts and telecommunications	906	526	215	4	161
Commerce, catering trade, service trade and supply and marketing of materials	2,012	1,201	405	200	206
Scientific research, culture, education, public health and social welfare	1,700	1,199	112	1	388
Government agencies and people's organizations	646	576	15		55
Others	726	219	59	1	447
II. Proportion: All sectors = 100					
Industry	13.1	40.5	57.4	10.4	2.5
Construction and resources prospecting	3.2	7.9	11.0	0.4	1.4
Agriculture, forestry, water conservancy and meteorology	70.7	9.1	2.3		92.4
Transport, posts and telecommunications	1.9	6.0	7.8	1.8	0.5
Commerce, catering trade, service trade and supply and marketing of materials	4.4	13.7	14.8	86.6	0.6
Scientific research, culture, education, public health and social welfare	3.7	13.7	4.1	0.4	1.1
Government agencies and people's organizations	1.4	6.6	0.5		0.2
Others	1.6	2.5	2.1	0.4	1.3

Table B-21. Average annual wage of staff and workers in State-owned units by sector of national economy, 1952-1983

Year	Average wage of all sectors	Industry	Construction and resources prospecting	Agriculture, forestry, water conservancy and meteorology	Transport, posts and telecommunications	Commerce, catering and service trades and supply and marketing of materials	Civil public utilities	Science, culture, education and public health	Banking and insurance	Government agencies and people's organizations
1952	446	515	564	375	583	360	634	368	458	376
1953	496	576	591	433	643	381	650	392	498	423
1954	519	597	612	459	648	403	672	422	521	451
1955	534	600	612	461	645	443	610	448	532	479
1956	610	674	698	498	746	490	661	548	586	597
1957	637	690	744	501	752	529	651	580	613	631
1958	550	526	595	471	673	489	642	557	586	639
1959	524	514	554	411	627	454	589	542	583	631
1960	528	538	581	365	618	449	564	519	543	615
1961	537	560	596	362	620	455	582	519	553	605
1962	592	652	705	392	702	494	631	542	559	626
1963	641	720	775	421	760	550	672	574	604	658
1964	661	741	765	433	762	581	683	596	614	688
1965	652	729	730	433	774	579	687	598	624	684
1966	636	689	644	428	755	57[illegible]	697	583	620	660
1967	630	701	672	426	754	563	696	578	620	681
1968	621	689	654	419	740	561	667	577	630	681
1969	618	683	661	418	734	561	660	564	611	680
1970	609	661	650	419	709	553	660	555	588	678
1971	597	635	662	426	709	539	655	554	604	668
1972	622	650	714	423	723	585	702	598	616	679
1973	614	640	715	436	714	568	680	582	602	659
1974	622	648	710	483	713	571	675	582	629	661
1975	613	644	704	460	699	562	639	574	609	645
1976	605	634	696	459	684	555	621	566	602	636
1977	602	632	695	459	677	552	623	559	622	635
1978	644	683	748	492	733	587	652	582	643	662
1979	705	758	814	548	808	641	694	620	675	690
1980	803	854	923	636	906	723	789	741	760	807
1981	812	852	948	654	909	736	803	759	787	819
1982	836	864	982	676	934	745	823	837	797	827
1983	865	878	1,023	713	959	764	876	873	820	927

Table B-22. China's foreign trade with selected countries and regions, 1982 and 1983

Country or region	Total		Exports		Imports	
	1982	1983	1982	1983	1982	1983
Grand total	**7,720,226**	**8,601,516**	**4,143,305**	**4,383,271**	**3,576,921**	**4,218,245**
Asia	**4,088,036**	**4,679,434**	**2,770,424**	**2,963,701**	**1,317,612**	**1,715,733**
Of which:						
Afghanistan	1,063	1,525	419	1,473	644	52
Bahrain	2,671	6,695	2,671	2,130		4,565
Bangladesh	22,071	17,703	16,769	12,966	5,302	4,737
Brunei	850	754	841	750	9	4
Burma	8,793	9,412	5,950	6,269	2,843	3,143
Kampuchea	572	171	105	119	467	52
Cyprus	1,706	1,194	1,648	1,194	58	
Democratic People's Republic of Korea	111,256	104,713	53,488	54,252	57,768	50,461
Hong Kong	1,228,371	1,489,567	980,140	1,150,251	248,231	339,316
India	33,138	14,589	19,182	11,549	13,956	3,040
Indonesia	37,032	39,299	8,642	9,642	28,390	29,657
Iran	23,968	52,992	7,918	52,984	16,050	8
Iraq	24,438	9,023	23,045	6,935	1,393	2,088
Japan	1,648,944	1,986,679	910,321	896,198	738,623	1,090,481
Jordan	249,643	306,397	248,646	300,964	997	5,433
Kuwait	25,192	29,476	20,918	19,625	4,274	9,851
Laos	1,280	915	5		1,275	915
Lebanon	5,588	5,799	5,587	5,798	1	1
Macao	51,179	56,329	49,214	53,180	1,965	3,149
Malaysia	63,804	79,478	34,217	36,893	29,587	42,585
Maldives	39	88	39	88		
Mongolia	778	865	421	441	357	424
Nepal	4,648	5,619	4,015	5,062	633	557
Oman	2,110	1,884	2,110	1,877		7
Pakistan	65,020	75,993	38,149	44,411	26,871	31,582
Philippines	70,287	37,287	44,407	28,386	25,880	8,901
Qatar	11,105	9,653	1,506	1,149	9,599	8,504
Saudi Arabia	36,287	33,273	34,400	29,574	1,887	3,699

Table B-22. (Continued)

Country or region	Total		Exports		Imports	
	1982	1983	1982	1983	1982	1983
Singapore	139,088	135,012	119,493	112,460	19,595	22,552
Sri Lanka	8,392	7,596	7,047	4,592	1,345	3,004
Syria	14,263	36,799	13,597	32,885	666	3,914
Thailand	96,743	65,338	31,412	38,597	65,331	26,741
Turkey	8,148	5,940	300	739	7,848	5,201
United Arab Emirates	15,039	13,578	15,039	13,576		2
Arab Republic of Yemen	61,614	16,133	61,255	16,133	359	
People's Democratic Republic of Yemen	7,475	10,556	7,475	10,539		17
Africa	**288,456**	**237,472**	**222,203**	**156,556**	**66,253**	**81,916**
Of which:						
Algeria	34,166	20,066	33,488	19,834	678	232
Angola	119	101	114	101	5	
Benin	4,622	2,516	4,622	2,516		
Burundi	1,044	554	1,044	554		
Cameroon	23,837	1,719	23,124	1,719	713	
Canary Islands	1,704	1,144	1,704	1,144		
Central Africa	229	370	69	99	160	271
Ceuta	407	283	407	283		
Congo	2,688	2,625	2,292	2,625	396	
Djibouti	1,214	1,304	1,214	1,304		
Egypt	56,545	54,149	44,754	40,724	11,791	13,425
Ethiopia	934	869	751	768	183	101
Gabon	584	353	584	353		
Gambia	2,538	2,459	2,538	2,459		
Ghana	4,258	944	145	458	4,113	486
Guinea	473	900	473	851		49
Guinea-Bissau	388	966	209	418	179	548
Ivory Coast	3,686	3,515	2,675	2,428	1,011	1,087
Kenya	2,653	2,478	2,513	1,760	140	718
Liberia	2,495	9,992	2,491	9,559	4	433
Libya	36,321	16,055	32,269	9,243	4,052	6,812

Table B-22. (Continued)

Country or region	Total		Exports		Imports	
	1982	1983	1982	1983	1982	1983
Madagascar	3,752	2,289	1,839	816	1,913	1,473
Mali	2,054	1,688	1,379	753	675	935
Mauritania	4,469	3,980	4,469	3,980		
Mauritius	2,820	3,047	2,820	3,047		
Morocco	15,699	14,996	9,383	6,607	6,316	8,389
Mozambique	1,003	439	881	419	122	20
Niger	1,079	780	1,079	780		
Nigeria	8,165	4,800	7,353	3,281	812	1,519
Reunion	1,106	1,752	445	518	661	1,234
Rwanda	1,937	2,712	1 937	2,712		
Senegal	6,408	4,269	5,960	3,884	448	385
Seychelles	196	96	196	96		
Sierra Leone	1,142	691	779	691	363	
Somalia	4,195	2,638	3,586	1,737	609	901
Sudan	16,086	15,801	8,603	5,911	7,483	9,890
Tanzania	6,616	2,620	2,567	2,590	4,049	30
Togo	3,351	3,310	3,351	3,053		257
Tunisia	8,545	8,279	4,125	4,451	4,420	3,828
Uganda	259	274	237	267	22	7
Upper Volta	898	1,162	898	889		273
Zaire	5,943	21,261	1,719	7,866	4,224	13,395
Zambia	9,473	14,390	596	266	8,877	14,124
Zimbabwe	538	966	5	23	533	943
Europe	**1,325,982**	**1,793,031**	**607,063**	**733,608**	**718,919**	**1,059,423**
Of which:						
Belgium	58,016	71,505	26,475	27,043	31,541	44,462
Denmark	15,425	37,746	7,062	8,073	8,363	29,673
United Kingdom	107,116	230,333	58,139	119,305	48,977	111,028
Federal Republic of Germany	328,943	410,192	146,309	170,446	182,634	239,746
France	97,036	172,046	52,963	45,771	44,073	126,275
Ireland	2,007	2,814	1,092	1,280	915	1,534

Table B-22. (Continued)

Country or region	Total		Exports		Imports	
	1982	1983	1982	1983	1982	1983
Italy	104,384	106,249	44,457	46,097	59,927	60,152
Luxembourg	492	2,541	449	165	43	2,376
Netherlands	71,897	86,595	55,419	64,731	16,478	21,864
Greece	4,640	5,493	4,301	4,431	339	1,062
Portugal	2,216	3,237	662	503	1,554	2,734
Spain	27,336	39,463	10,018	8,438	17,318	31,025
Austria	10,775	15,923	1,707	2,813	9,068	13,110
Bulgaria	11,910	15,921	4,279	4,749	7,631	11,172
Czechoslovakia	49,653	40,235	13,959	17,873	35,694	22,362
Finland	13,694	16,170	5,648	5,279	8,046	10,891
German Democratic Republic	38,885	48,772	13,209	11,696	25,676	37,076
Gibraltar	223	146	223	146		
Hungary	14,196	13,080	4,999	5,591	9,197	7,489
Iceland	494	210	183	210	311	
Malta	470	419	470	419		
Norway	11,425	13,117	3,986	3,591	7,439	9,523
Poland	48,236	52,263	35,719	32,450	12,517	19,813
Romania	132,938	136,809	52,621	57,857	80,417	78,952
Sweden	25,413	39,138	11,791	10,619	13,622	28,519
Switzerland	52,618	61,404	20,744	16,145	31,874	45,259
USSR	73,549	150,743	27,310	63,302	46,239	87,441
Yugoslavia	13,604	13,306	2,691	2,721	10,913	10,585
Latin America	**285,852**	**400,892**	**122,370**	**105,164**	**163,282**	**295,728**
Of which:						
Argentina	29,315	129,555	1,028	798	28,287	128,757
Barbados	325	243	325	243		
Bermuda	1		1			
Bolivia	173	282	173	282		
Brazil	96,503	125,400	71,582	71,609	24,921	53,791
Chile	17,087	36,374	2,476	1,771	14,611	34,603
Colombia	1,172	1,243	361	169	811	1,074

Table B-22. (Continued)

Country or region	Total		Exports		Imports	
	1982	1983	1982	1983	1982	1983
Commonwealth of Dominica	21	32	21	32		
Cuba	72,515	59,143	22,039	19,267	50,476	39,876
Curacao	542	206	542	206		
Dominican Republic	384	371	384	371		
Ecuador	2,301	928	1,071	636	1,230	292
Guatemala	7,422	259	300	250	7,122	9
Honduras	325	236	325	236		
Jamaica	163	40	163	40		
Mexico	12,728	8,760	2,614	1,170	10,114	7,590
Montserrat	10				10	
Nicaragua	3,324	1,837	14	5	3,310	1,832
Panama	10,544	4,181	10,532	3,499	12	682
Paraguay	2,161	1,464	357	262	1,804	1,202
Peru	21,651	19,400	1,794	891	19,857	18,509
Puerto Rico	130	237	127	237	3	
El. Salvador	272	2,689	204	231	68	2,458
Surinam	873	711	873	711		
Trinidad and Tobago	1,459	1,184	1,459	1,184		
Uruguay	565	4,172	223	89	342	4,083
Venezuela	2,939	1,404	2,939	557		847
North America	**1,412,293**	**1,242,231**	**365,817**	**381,037**	**1,046,476**	**861,194**
Canada	267,880	356,221	32,327	41,306	235,553	314,915
United States	1,144,413	886,010	333,490	339,731	810,923	546,279
The Oceanian and the Pacific Islands	**252,564**	**203,340**	**50,405**	**43,314**	**202,159**	**160,026**
Of which:						
Australia	214,746	157,586	42,127	35,962	172,619	121,624
Fiji	3,045	2,367	961	1,030	2,084	1,337
New Zealand	30,176	33,874	5,964	4,970	24,212	28,904
Papua New Guinea	4,103	8,517	859	905	3,244	7,612
Others	**60,769**	**45,116**	**52**	**891**	**60,717**	**44,225**

Table B-23. Total revenue by source, 1950-1983

Year	Enterprise income		Taxes			Debts and borrowings(2)	Other income
	Total(1)	Of which: income of industrial enterprises	Total	Of which:			
				Industry and commerce	Agriculture		
1950	8.7	4.4	49.0	23.6	19.1	3.0	4.5
1951	30.5	12.1	81.1	47.5	21.7	8.2	13.3
1952	57.3	21.5	97.7	61.5	27.0	9.8	19.0
1953	76.7	27.8	119.7	82.5	27.1	9.6	16.9
1954	99.6	40.1	132.2	89.7	32.8	17.2	13.4
1955	111.9	48.8	127.5	87.3	30.5	22.8	9.9
1956	134.3	52.6	140.9	101.0	29.7	7.2	5.1
1957	144.2	59.3	154.9	113.1	29.7	7.0	4.1
1958	189.2	94.1	187.4	141.8	32.6	8.0	3.1
1959	279.1	154.4	204.7	157.0	33.0		3.3
1960	365.8	215.8	203.7	160.6	28.0		2.8
1961	191.3	80.4	158.8	120.5	21.7		6.0
1962	146.2	85.1	162.1	124.8	22.8		5.3
1963	172.7	129.6	164.3	131.0	24.0		5.3
1964	212.9	164.3	182.0	145.3	25.9		4.6
1965	264.3	216.5	204.3	165.5	25.8		4.7
1966	333.3	268.0	222.0	179.3	29.6		3.4
1967	218.5	163.2	196.6	157.4	29.0		4.3
1968	166.7	120.0	191.6	147.4	30.0		3.0
1969	285.7	203.1	235.4	191.3	29.6		4.7
1970	379.0	280.6	281.2	232.1	32.0		2.7
1971	428.4	316.4	312.6	268.2	30.9		3.7
1972	445.7	327.8	317.0	275.1	28.4		3.9
1973	457.0	346.4	349.0	301.4	30.5		3.7
1974	407.3	298.0	360.4	307.0	30.1		15.4
1975	400.2	333.1	402.8	348.0	29.5		12.6
1976	338.1	296.3	408.0	353.7	29.1		30.5
1977	402.4	326.3	468.3	400.9	29.3		3.8
1978	572.0	440.4	519.3	451.3	28.4		29.8
1979	492.9	451.2	537.8	472.7	29.5	35.3	37.2
1980	435.2	448.2	571.7	501.4	27.7	43.0	35.3
1981	353.7	415.9	629.9	538.4	28.4	73.1	32.8
1982	296.5	397.1	700.0	600.0	29.4	83.9	43.6
1983	240.5	398.6	775.6	643.8	32.8	79.4	153.5

Note: (1) Total enterprise income for the years 1980-1983 is less than the income of industrial enterprises. This is due to the relatively heavy losses by foreign trade enterprises and grain enterprises.

(2) Including income from foreign borrowings and that from government domestic bonds, etc.

Table B-24. Composition of revenue by source, 1950-1983
(Total revenue = 100)

Year	Enterprise income		Taxes			Debts and borrowings	other income
	Total	Of which: income of industrial enterprises	Total	Of which:			
				Industry and commerce	Agriculture		
1950	13.4	6.8	75.1	36.2	29.3	4.6	6.9
1951	22.9	9.1	60.9	35.6	16.3	6.2	10.0
1952	31.2	11.7	53.2	33.5	14.7	5.3	10.3
1953	34.4	12.5	53.7	37.0	12.2	4.3	7.6
1954	38.0	15.3	50.4	34.2	12.5	6.5	5.1
1955	41.1	17.9	46.9	32.1	11.2	8.4	3.6
1956	46.7	18.3	49.0	35.1	10.3	2.5	1.8
1957	46.5	19.1	49.9	36.5	9.6	2.3	1.3
1958	48.8	24.3	48.3	36.6	8.4	2.1	0.8
1959	57.3	31.7	42.0	32.2	6.8		0.7
1960	63.9	37.7	35.6	28.1	4.9		0.5
1961	53.7	22.6	44.6	33.8	6.1		1.7
1962	46.6	27.1	51.7	39.8	7.3		1.7
1963	50.5	37.9	48.0	38.3	7.0		1.5
1964	53.3	41.1	45.6	36.4	6.5		1.1
1965	55.8	45.7	43.2	35.0	5.4		1.0
1966	59.7	48.0	39.7	32.1	5.3		0.6
1967	52.1	38.9	46.9	37.5	6.9		1.0
1968	46.2	33.2	53.0	40.8	8.3		0.8
1969	54.4	38.6	44.7	36.3	5.6		0.9
1970	57.2	42.3	42.4	35.0	4.8		0.4
1971	57.5	42.5	42.0	36.0	4.1		0.5
1972	58.1	42.8	41.4	35.9	3.7		0.5
1973	56.4	42.8	43.1	37.2	3.8		0.5
1974	52.6	38.0	45.4	39.2	3.8		2.0
1975	49.1	40.8	49.4	42.7	3.6		1.5
1976	43.5	38.1	52.6	45.5	3.8		3.9
1977	46.0	37.3	53.6	45.8	3.4		0.4
1978	51.0	39.3	46.3	40.3	2.5		2.7
1979	44.7	40.9	48.7	42.8	2.7	3.3	3.3
1980	41.8	41.4	52.7	46.2	2.6	4.0	0.8
1981	32.5	38.2	57.8	49.4	2.6	6.7	0.3
1982	26.4	35.3	62.3	53.4	2.6	7.4	1.3
1983	19.3	31.9	62.1	51.6	2.6	6.4	12.2

Table B-25. Total expenditure by function, 1950-1983
(Rmb 100 million)

Year	Total	Of which:					
		Appropriations for capital construction	Technical Updating and transformation and trial-production in enterprises	Additions to circulating fund of enterprises	Culture, education, science and public health	National defence	Administration
1950	68.1	12.5			5.0	28.0	
1951	122.5	27.0			10.6	52.6	
1952	176.0	46.7		18.6	13.5	57.8	14.5
1953	220.1	70.3		13.8	19.0	75.4	17.5
1954	246.3	84.3	1.8	26.3	19.7	58.1	18.3
1955	269.3	88.5	3.1	30.8	19.8	65.0	18.7
1956	305.7	139.6	2.5	10.8	23.9	61.2	24.2
1957	304.2	123.7	2.3	20.8	27.8	55.1	21.7
1958	409.4	229.4	0.8	25.7	28.6	50.0	21.6
1959	552.9	302.3	2.2	54.3	36.5	58.0	26.6
1960	654.1	354.5	2.6	67.5	50.5	58.0	28.0
1961	367.0	110.2	2.7	29.4	41.2	50.0	26.8
1962	305.3	55.7	14.7	47.8	36.7	56.9	21.7
1963	339.6	80.2	18.3	36.7	38.0	66.4	23.5
1964	399.0	123.8	20.9	23.4	43.3	72.9	25.2
1965	466.3	158.5	25.2	27.6	45.6	86.8	25.3
1966	541.6	191.0	27.5	40.3	51.7	101.0	25.9
1967	441.9	161.3	10.3	29.1	48.6	83.0	22.8
1968	359.8	117.9	5.7	12.0	41.0	94.1	22.9
1969	525.9	206.2	10.7	26.6	41.0	126.2	24.8
1970	649.4	298.4	14.8	31.2	43.7	145.3	25.3
1971	732.2	309.6	26.4	35.3	52.3	169.5	30.9
1972	766.4	309.1	25.5	43.0	62.0	159.4	34.6
1973	809.3	317.2	25.5	53.8	69.9	145.4	35.6
1974	790.8	312.8	27.2	44.8	76.5	133.4	36.9
1975	820.9	327.0	31.5	41.8	81.3	142.5	38.8
1976	806.2	311.3	34.3	45.4	85.5	134.5	41.0
1977	843.5	300.9	39.5	65.7	90.2	149.0	43.3
1978	1,111.0	451.9	63.2	66.6	112.7	167.8	49.0
1979	1,273.9	514.7	72.0	52.1	132.1	222.7	56.9
1980	1,212.7	419.4	80.5	36.7	156.3	193.8	66.8
1981	1,115.0	330.6	65.3	22.8	171.4	168.0	70.9
1982	1,153.3	309.2	69.0	23.6	197.0	176.4	81.6
1983	1,292.5	382.8	78.7	12.9	223.5	177.1	102.2

Table B-26. Composition of expenditure by function, 1950-1983
(Total expenditure = 100)

Year	Appropriations for capital construction	Technical updating and transformation and trial-production in enterprises	Additions to circulating fund of enterprises	Culture, education, science and public health	National defence	Administration
1950	18.4			7.4	41.1	
1951	22.1			8.6	43.0	
1952	26.5		10.6	7.7	32.8	8.3
1953	32.0		6.3	8.7	34.2	8.0
1954	34.2	0.7	10.7	8.0	23.6	7.4
1955	32.9	1.1	11.4	7.4	24.1	7.0
1956	45.7	0.8	3.5	7.8	20.0	7.9
1957	40.7	0.8	6.8	9.1	18.1	7.1
1958	56.0	0.2	6.3	7.0	12.2	5.3
1959	54.7	0.4	9.8	6.6	10.5	4.8
1960	54.2	0.4	10.3	7.7	8.9	4.3
1961	30.0	0.7	8.0	11.2	13.6	7.3
1962	18.2	4.8	15.7	12.0	18.7	7.1
1963	23.6	5.4	10.8	11.2	19.6	6.9
1964	31.0	5.2	5.9	10.9	18.3	6.3
1965	34.0	5.4	5.9	9.8	18.6	5.4
1966	35.3	5.1	7.4	9.5	18.7	4.8
1967	36.5	2.3	6.6	11.0	18.8	5.2
1968	32.8	1.6	3.3	11.4	26.1	6.4
1969	39.2	2.0	5.1	7.8	24.0	4.7
1970	45.9	2.3	4.8	6.7	22.4	3.9
1971	42.3	3.6	4.8	7.2	23.2	4.2
1972	40.3	3.3	5.6	8.1	20.8	4.5
1973	39.2	3.2	6.7	8.6	18.0	4.4
1974	39.6	3.4	5.7	9.7	16.9	4.7
1975	39.8	3.8	5.1	9.9	17.4	4.7
1976	38.6	4.3	5.6	10.6	16.7	5.1
1977	35.7	4.7	7.8	10.7	17.7	5.1
1978	40.7	5.7	6.0	10.1	15.1	4.4
1979	40.4	5.6	4.1	10.4	17.5	4.5
1980	34.6	6.6	3.0	12.9	16.0	5.5
1981	29.7	5.9	2.1	15.4	15.1	6.4
1982	26.8	6.0	2.1	17.1	15.3	7.1
1983	29.6	6.1	1.0	17.3	13.7	7.9

Table B-27. Inter-country comparison of growth rate of industrial production, 1966-1982

Country	Average growth per annum 1966-1982 (%)	Average growth per annum 1979-1982 (%)	1981 growth rate over 1980 (%)	1982 growth rate over 1981 (%)	1983 growth rate over 1982 (%)
World total	**4.5**	**1.7**	**0.5**	**0.8**	
China	9.5	7.2	4.1	7.7	10.5
United States	2.5	-1.2	2.4	- 7.8	6.6
Japan	7.4	3.1	2.8	0	3.6
Federal Republic of Germany	2.8	0.2	- 1.7	- 2.6	0.2
United Kingdom	0.9	-1.2	- 3.7	2.1	7.1
France	3.5	0	- 2.6	- 1.8	
Italy	3.8	1.9	- 2.3	- 1.6	
Canada	3.0	-1.4	1.7	-10.2	
Australia	2.2	-0.7	0	- 8.9	
USSR	6.3	3.2	4.0	2.3	3.8
German Democratic Republic	5.8	4.4	4.7	3.8	4.6
Czechoslovakia	5.5	2.7	2.4	1.6	2.7
Poland	5.9	-3.0	-11.2	- 2.7	6.7
Hungary	4.8	1.4	2.5	2.5	1.0
Yugoslavia	6.4	4.0	3.6	0	1.3
Romania	10.3	4.5	2.8	0.6	4.8
India	4.3	3.8	9.5	4.3	
Mexico	6.8	7.0	7.1	- 1.9	
Brazil	7.6	1.2	-19.0	13	

Foreign data sources: (1) Monthly Bulletin of Statistics, Feb. and Mar. 1984, UN.
(2) Communiques on fulfilment of national economic plans of related countries, 1983.

APPENDIX C

LEGAL FRAMEWORK GOVERNING FOREIGN INVESTMENT AND JOINT VENTURES IN CHINA

Appendix C.1

I. The Law of the People's Republic of China on Joint Ventures Using Chinese and Foreign Investment

Adopted on July 1, 1979 at the Second Session of the Fifth National People's Congress; Promulgated on July 8, 1979

Article 1

With a view to expanding international economic co-operation and technological exchange, the People's Republic of China permits foreign companies, enterprises, other economic entities or individuals (hereinafter referred to as foreign participants) to incorporate themselves, within the territory of the People's Republic of China, into joint ventures with Chinese companies, enterprises or other economic entities (hereinafter referred to as Chinese participants) on the principle of equality and mutual benefit and subject to authorization by the Chinese Government.

Article 2

The Chinese Government protects, by the legislation in force, the resources invested by a foreign participant in a joint venture and the profits due him pursuant to the agreements, contracts and articles of association authorized by the Chinese Government as well as his other lawful rights and interests.

All the activities of a joint venture shall be governed by the laws, decrees and pertinent rules and regulations of the People's Republic of China.

Article 3

A joint venture shall apply to the Foreign Investment Commission of the People's Republic of China for authorization of the agreements and contracts concluded between the parties to the venture and the articles of association of the venture formulated by them, and the commission shall authorize or

reject these documents within three months. When authorized, the joint venture shall register with the General Administration for industry and Commerce of the People's Republic of China and start operations under license.

Article 4

A joint venture shall take the form of a limited liability company.

In the registered capital of a joint venture, the proportion of the investment contributed by the foreign participant(s) shall in general not be less than 25 per cent.

The profits, risks and losses of a joint venture shall be shared by the parties to the venture in proportion to their contributions to the registered capital.

The transfer of one party's share in the registered capital shall be effected only with the consent of the other parties to the venture.

Article 5

Each party to a joint venture may contribute cash, capital goods, industrial property rights, etc., as its investment in the venture.

The technology or equipment contributed by any foreign participant as investment shall be truly advanced and appropriate to China's needs. In cases of losses caused by deception through the intentional provision of outdated equipment or technology, compensation shall be paid for the losses.

The investment contributed by a Chinese participant may include the right to the use of a site provided for the joint venture during the period of its operation. In case such a contribution does not constitute a part of the investment from the Chinese participant, the joint venture shall pay the Chinese Government for its use.

The various contributions referred to in the present article shall be specified in the contracts concerning the joint venture or in its articles of association, and the value of each contribution (excluding that of the site) shall be ascertained by the parties to the venture through joint assessment.

Article 6

A joint venture shall have a board of directors with a composition stipulated in the contracts and the articles of association after consultation between the parties to the venture, and each director shall be appointed or removed by his own side. The board of directors shall have a chairman appointed by the Chinese participant and one or two vice-chairmen appointed by the foreign participant(s). In handling an important problem, the board of directors shall reach decision through consultation by the participants on the principle of equality and mutual benefit.

The board of directors is empowered to discuss and take action on, pursuant to the provisions of the articles of association of the joint venture, all fundamental issues concerning the venture, namely, expansion projects, production and business programmes, the budget, distribution of profits, plans concerning manpower and pay scales, the termination of business, the appointment or hiring of the president, the vice-president(s), the chief engineer, the treasurer and the auditors as well as their functions and powers and their remuneration, etc.

The president and vice-president(s) (or the general manager and assistant general manager(s) in a factory) shall be chosen from the various parties to the joint venture.

Procedures covering the employment and discharge of the workers and staff menbers of a joint venture shall be stipulated according to law in the agreement or contract concluded between the parties to the venture.

Article 7

The net profit of a joint venture shall be distributed between the parties to the venture in proportion to their respective shares in the

registered capital after the payment of a joint venture income tax on its gross profit pursuant to the tax laws of the People's Republic of China and after the deductions therefrom as stipulated in the articles of association of the venture for the reserve funds, the bonus and welfare funds for the workers and staff members and the expansion funds of the venture.

A joint venture equipped with up-to-date technology by world standards may apply for a reduction of or exemption from income tax for the first two to three profit-making years.

A foreign participant who re-invests any part of his share of the net profit within Chinese territory may apply for the restitution of a part of the income taxes paid.

Article 8

A joint venture shall open an account with the Bank of China or a bank approved by the Bank of China.

A joint venture shall conduct its foreign exchange transactions in accordance with the Foreign Exchange Regulations of the People's Republic of China.

A joint venture may, in its business operations, obtain funds from foreign banks directly.

The insurances appropriate to a joint venture shall be furnished by Chinese insurance companies.

Article 9

The production and business programmes of a joint venture shall be filed with the authorities concerned and shall be implemented through business contracts.

In its purchase of required raw and semi-processed materials, fuels, auxiliary equipment, etc., a joint venture should give first priority to Chinese sources, but may also acquire them directly from the world market with its own foreign exchange funds.

A joint venture is encouraged to market its products outside China. It may distribute its export products on foreign markets through direct channels or its associated agencies or China's foreign trade establishments. Its products may also be distributed on the Chinese market.

Wherever necessary, a joint venture may set up affiliated agencies outside China.

Article 10

The net profit which a foreign participant receives as his share after executing his obligations under the pertinent laws and agreements and contracts, the funds he receives at the time when the joint venture terminates or winds up its operations, and his other funds may be remitted abroad through the Bank of China in accordance with the foreign exchange regulations and in the currency or currencies specified in the contracts concerning the joint venture.

A foreign participant shall receive encouragements for depositing in the Bank of China any part of foreign exchange which he is entitled to remit abroad.

Article 11

The wages, salaries or other legitimate income earned by a foreign worker or staff member of a joint venture, after payment of the personal income tax under the tax laws of the People's Republic of China, may be remitted abroad through the Bank of China in accordance with the foreign exchange regulations.

Article 12

The contract period of a joint venture may be agreed upon between the parties to the venture according to its particular line of business and circumstances. The period may be extended upon expiration through agreement between the parties, subject to authorization by the Foreign Investment Commission of the People's Republic of China. Any application for such extension shall be made six months before the expiration of the contract.

Article 13

In cases of heavy losses, the failure of any party to a joint venture to execute its obligations under the contracts of the articles of association of the venture, force majeure, etc., prior to the expiration of the contract period of a joint venture, the contract may be terminated before the date of expiration by consultation and agreement between the parties and through authorization by the Foreign Investment Commission of the People's Republic of China and registration with the General Administration for Industry and Commerce. In cases of losses caused by breach of the contract(s) by a party to the venture, the financial responsibility shall be borne by the said party.

Article 14

Disputes arising between the parties to a joint venture which the board of directors fails to settle through consultation may be settled through conciliation or arbitration by an arbitral body of China or through arbitration by an arbitral body agreed upon by the parties.

Article 15

The present law comes into force on the date of promulgation. The power of amendment is vested in the National People's Congress.

II. Regulations of the People's Republic of China on the Registration of Joint Ventures Using Chinese and Foreign Investment

Promulgated by the State Council of the
People's Republic of China on July 26, 1980

Article 1

The present regulations are worked out in accordance with stipulations laid down in the "Law of the People's Republic of China on Joint Ventures Using Chinese and Foreign Investment" and for the purpose of registering such ventures to protect their legitimate operations.

Article 2

A joint venture using Chinese and foreign investment should, within one month after being approved by the Foreign Investment Commission of the People's Republic of China, register with the General Administration for Industry and Commerce of the People's Republic of China.

The General Administration for Industry and Commerce authorizes the administrative bureaus for industry and commerce in the provinces, municipalities and autonomous regions to register joint ventures using Chinese and foreign investment in their localities. Licenses for operations shall be issued to the said joint ventures after examination by the General Administration for Industry and Commerce of the People's Republic of China.

Article 3

In applying for registration, a joint venture using Chinese and foreign investment should produce the following documents:

1. The document of approval issued by the Foreign Investment Commission of the People's Republic of China;

2. The agreement on the joint venture reached by the various parties involved, the contract and the articles of association of the venture, in both Chinese and foreign languages and each in triplicate; and

3. A duplicate of the license and other documents issued by the departments concerned under the government of the country (or region) from which the foreign participants in the joint venture come.

Article 4

In applying for registration of a joint venture using Chinese and foreign investment, a registration form, in triplicate, shall be filled in Chinese and foreign languages. Items to be registered include the name of the venture, its address, scope of production and business, forms of production and business, registered capital of the parties concerned, chairman and vice-chairmen of the board of directors, general manager and deputy general managers or general director and deputy directors of the plant, the number and date of approval on the document, the size of the entire staff, and the number of foreign workers and staff members.

Article 5

A joint venture using Chinese and foreign investment is regarded as having officially been established the day when a license for its operation is issued to it, and the legitimate production and business shall be protected by the law of the People's Republic of China.

An unregistered enterprise shall not be permitted to go into operation.

Article 6

A joint venture using Chinese and foreign investment shall, by producing the license for its operation, open an account with the Bank of China or another bank approved by the Bank of China, and register with the local tax bureau for payment of taxes.

Article 7

In cases where a joint venture using Chinese and foreign investment desires to move to a new site, shift its production, increase or cut or transfer the registered capital, or extend the contract period, the said venture shall, within one month after approval by the Foreign Investment Commission of the People's Republic of China, register the changes with the Administrative Bureau for Industry and Commerce in the province, municipality or autonomous region where it is located.

In cases where changes to other items are effected, the said venture shall have to forward at the end of the year a written report about these changes to the Administrative Bureau for Industry and Commerce in the province, municipality or autonomous region where it is located.

Article 8

In registering or getting its changes registered, a joint venture using Chinese and foreign investment shall pay the registration fee or the fee for getting its changes registered, the sum of which is to be fixed by the General Administration for Industry and Commerce of the People's Republic of China.

Article 9

A joint venture using Chinese and foreign investment, upon the expiration of the contract period of the venture or desirous of terminating the contract before its expiration date, shall upon production of the document of approval issued by the Foreign Investment Commission of the People's Republic of China register for the nullification of the contract with the Administrative Bureau for Industry and Commerce in the province, municipality or autonomous region where it is located. The license of the said venture shall be handed in for cancellation after examination by the General Administration for Industry and Commerce of the People's Republic of China.

Article 10

The General Administration for Industry and Commerce of the People's Republic of China and the Administrative Bureaus for Industry and Commerce in the provinces, municipalities and autonomous regions are authorized to supervise and inspect the joint ventures using Chinese and foreign investment in the areas they govern. In cases of violations of the present regulations, the violator shall be given a warning or be fined in accordance with the varying degrees of seriousness in each specific case.

Article 11

The present regulations come into force on the date of promulgation.

III. Regulations of the People's Republic of China on Labour Management in Joint Ventures Using Chinese and Foreign Investment

Promulgated by the State Council of the People's Republic of China on July 26, 1980

Article 1

Labour management problems concerning joint ventures using Chinese and foreign investment (hereinafter referred to as joint ventures) should be handled in accordance with the regulations, in addition to the pertinent stipulations in Article 6 of the "Law of the People's Republic of China on Joint Ventures Using Chinese and Foreign Investment."

Article 2

Matters pertaining to employment, dismissal and resignation of the workers and staff members, tasks of production and other work, wage and awards and punishment, working time and vacation, labour insurance and welfare, labour protection and labour discipline in joint ventures shall be stipulated in the labour contracts signed.

A labour contract is to be signed collectively by a joint venture and the trade union organization formed in the joint venture. A relatively small joint venture may sign contracts with the workers and staff members individually.

A signed labour contract must be submitted to the labour management department of the provincial, autonomous regional or municipal people's government for approval.

Article 3

The workers and staff members of a joint venture either recommended by the authorities in the locality in charge of the joint venture or the labour management department, or recruited by the joint venture itself with the

consent of the labour management department, should all be selected by the joint venture through examination for their qualification.

Joint ventures may run workers' schools and training courses for the training of managerial personnel and skilled workers.

Article 4

With regard to the surplus workers and staff members as a result of changes in production and technical conditions of the joint venture, those who fail to meet the requirements after training and are not suitable for other work can be discharged. However, this must be done in line with the stipulations in the labour contract and the enterprise must give compensation to these workers.

The dismissed workers and staff members will receive assignments for other work from the authorities in charge of the joint venture or the labour management department.

Article 5

The joint venture may, according to the degree of seriousness of the case, take action against those workers or staff members whose violations of the rules and regulations of the enterprise have resulted in certain bad consequences. Punishment by discharges must be reported to the authorities in charge of the joint venture and the labour management department for approval.

Article 6

With regard to the dismissal and punishment of workers and staff members by the joint venture, the trade union has the right to raise an objection if it considers them unreasonable, and send representatives to seek a solution through consultation with the board of directors. Should the consultation fail to arrive at a solution, the matter will be handled in accordance with the procedures set forth in Article 14 of the present regulations.

Article 7

When workers and staff members of a joint venture, on account of special conditions, submit resignation to the enterprise through the trade union in accordance with the labour contract, the enterprise should give its consent.

Article 8

The wage level of the workers and staff members in a joint venture will be determined at 120 to 150 per cent of the real wages of the workers and staff members of state-owned enterprises of the same trade in the locality.

Article 9

The wage standards, the forms of wages paid, and bonus and subsidy systems are to be discussed and decided upon by the board of directors.

Article 10

The bonuses and welfare funds drawn by the joint venture from the profits must be used as bonuses, awards and collective welfare and should not be misappropriated.

Article 11

A joint venture must pay for the Chinese workers' and staff members' labour insurance, cover their medical expenses and various kinds of government subsidies in line with the standards prevailing in state-owned enterprises.

Article 12

The employment of foreign workers and staff members and their dismissal, resignation, pay, welfare and social insurances and other matters concerned should all be stipulated in the employment contracts.

Article 13

Joint ventures must implement the relevant rules and regulations of the Chinese Government on labour protection and ensure safety in production and civilized production. The labour management department of the Chinese Government is authorized to supervise and inspect their implementation.

Article 14

Labour disputes occurring in a joint venture should first of all be solved through mutual consultation. If consultation fails to arrive at a solution, either party or both parties may request for arbitration by the labour management department of the people's government of the province, autonomous region or municipality where the joint venture is located. Either party that disagrees to the arbitration may file a suit at the people's court.

Article 15

The right of interpretation of the present regulations belongs to the State Bureau of Labour of the People's Republic of China.

Article 16

The regulations come into force on the date of promulgation.

IV. Excerpts from the Accounting Regulations of the PRC for Joint Ventures Using Chinese and Foreign Investment

Promulgated March 4, 1985 by the
Ministry of Finance

Article 1

The present regulations formulated to strengthen the accounting work of joint ventures using Chinese and foreign investment, in accordance with the provisions laid down in "The Law of the People's Republic of China on Joint Ventures Using Chinese and Foreign Investment," "The Income Tax Law of the People's Republic of China Concerning Joint Ventures with Chinese and Foreign Investment," and other relevant laws and regulations.

Article 2

These regulations are applicable to all joint ventures using Chinese and foreign investment (hereinafter referred to as joint ventures) established within the territory of the People's Republic of China (PRC).

Article 11

The joint ventures shall adopt the debt and credit double entry bookkeeping.

Article 14

In principle, a joint venture shall adopt renminbi as its bookkeeping base currency. However, a foreign currency may be used as the bookkeeping base currency upon mutual agreement of the participants of a joint venture.

If actual receipts or disbursements of cash, bank deposits, other cash holdings, claims debts, income, and expenses, etc. are made in currencies other than the bookkeeping base currency, records shall also be made in the currencies of actual receipts or disbursements.

Article 20

The participants of a joint venture shall contribute their share of capital in the amount, ratio, and mode of capital contribution within the stipulated time limit as provided in the joint venture contract. The accounting for paid-in capital by a joint venture shall be based on the actual amount contributed by each of its participants.

The foreign currency contributed by a foreign participant shall be converted into renminbi or further converted into a predetermined foreign currency at the exchange rates quoted on the day of the cash payment by the State Administration of Foreign Exchange Control of the PRC (hereinafter referred to as the State Administration of Foreign Exchange Control - SAFEC). Should the cash renminbi contributed by a Chinese participant be converted into foreign currency, it shall be converted at the exchange rate quoted by the SAFEC on the day of the cash payment.

(2) For investment in the form of buildings, machinery, equipment, materials, and supplies, the amount shown on the examined and verified itemization list of the assets as agreed upon by each participant and the date of the receipt of the assets shall be the basis of accounting according to the joint venture contract.

(3) For investment in the form of intangible assets, i.e., proprietary technology, patents, trademarks, copyright and other franchises, etc., the amount and date as provided in the agreement or contract shall be the basis of accounting.

(4) For investment in the form of the right to use sites, the amount and date as provided in the agreement or contract shall be the basis of accounting.

The capital contributed by each participant shall be recorded into the accounts of the joint ventures as soon as they are received.

Article 25

In a joint venture using renminbi as the bookkeeping base currency, its foreign currency deposits, foreign currency loans, and other accounts denominated in foreign currency shall be recorded not only in the original foreign currency of the actual receipts and payments, but also in renminbi converted from foreign currency at an ascertained exchange rate (using the exchange rate quoted by the SAFEC).

All additions of foreign currency deposits, foreign currency loans and other accounts denominated in foreign currencies shall be recorded in renminbi converted at recording exchange rates, while deductions shall be recorded in renminbi converted at book exchange rates. Differences in the renminbi amount resulting from the conversion at different exchange rates shall be recognized as "foreign exchange gains or losses" (hereinafter referred to as "exchange gains or losses").

The recording exchange rates for the conversion of foreign currency to renminbi may be the rate prevailing on the day of recording the transaction or on the first day of the month, etc. The book exchange rate may be calculated by the first-in-first-out method, or by the weighted average method, etc. However, for the decrease of accounts denominated in a foreign currency, the original recording rate may be used as book rate. Whichever rate is adopted, there shall be no arbitrary change once it is decided. If any change is necessary, it must be approved by the board of directors and disclosed in the accounting report.

The difference in renminbi resulting from the exchange of different currencies shall also be recognized as exchange gains or losses.

The exchange gains or losses recognized in the account shall be the realized amount. In case of exchange rate fluctuations, the renminbi balances of the foreign currency accounts shall not be adjusted.

Article 26

In a joint venture using a foreign currency as its bookkeeping base currency, its renminbi deposits, renminbi loans, and other accounts denominated in renminbi shall be recorded not only in renminbi but also in the foreign currency converted from renminbi at the exchange rate adopted by the enterprise. Differences in the foreign currency amount resulting from the conversion at different exchange rates shall also be recognized as exchange gains or losses, as stipulated in Article 25.

A joint venture using a foreign currency as bookkeeping base currency shall compile not only annual accounting statements in the foreign currency but also separate accounting statements in renminbi translated from the foreign currency at the end of a year. However, the joint venture's renminbi bank deposits, renminbi bank loans, and the other accounts denominated in renminbi shall still be accounted for in their original renminbi amounts, and be combined with the other items converted into renminbi from foreign currency. The differences between the original renminbi amount of the renminbi items and their renminbi amount from currency translation shall not be recognized as foreign exchange gains or losses, but shall be shown on the balance sheet with an additional caption as "currency translation difference."

Article 29

The receipt, issuance, requisition, and return of the inventories of a joint venture shall be processed in a timely manner through accounting procedures according to the actual quantity and shall be itemized in the subsidiary ledger accounts, with established columns for quantities and amounts, so as to strengthen the inventory control. The merchandise, materials, etc. in transit shall be accounted for through subsidiary ledgers and their condition of arrival shall be inspected frequently. For those goods which do not arrive in due time, the relevant departments shall be urged to take action. As to those goods that have arrived but have not yet been checked or taken into storage, their acceptance test and warehousing procedures shall be carried out in a timely manner.

Article 45

The joint ventures shall maintain complete original records, practice norm control, adhere strictly to the procedures of measuring, checking, receiving, issuing, requisitioning, and returning of goods and materials, and strengthen the control of and accounting for cost and expenses.

Article 48

A joint venture shall summarize all the expenses incurred in the course of production or operation by specifying cost and expense items.

(1) The production cost items of an industrial joint venture shall generally be classified into: direct materials, direct labour, and manufacturing overhead. A joint venture may set up additional items for fuel and power, outside processing costs, special instruments, etc., according to its actual needs.

Manufacturing overhead refers to those expenses arising from organizing and controlling production by workshop and factory administrative departments, including expenses for salaries and wages, depreciation, repairs and maintenance, materials consumed, labour protection, water and electricity, office supplies, travel, transportation, insurance, and so on.

Selling and general administrative expenses of an industrial joint venture shall be accounted for separately and shall not be included in the production cost of products.

Selling expenses refer to those expenses incurred in selling products and attributable to the enterprise, including expenses for transportation, loading and unloading, packaging, insurance, travelling, commission, and advertising, as well as salaries and wages and other expenses of specifically established selling organs, etc.

General and administrative expenses include company headquarters expenses (salaries and wages, etc.), labour union dues, interest expenses (less

interest income), exchange losses (less exchange gains), expenses of board of directors' meetings, advisory fees, entertainment expenses, taxes (including urban building and land tax, license tax for vehicles and vessels, etc.), amortization of organization expenses, expenses for staff and workers' training, research and development expenses, fees for the use of site, fees for the transfer of technology, amortization of intangible assets, and other administrative expenses.

(2) Expenses of the commercial enterprises incurred in the course of operation include purchasing expenses, selling expenses, and administrative expenses.

Purchasing expenses include those expenses incurred in the process of purchasing merchandise such as expenses for transportation, loading and unloading, packaging, insurance, reasonable loss during transit, selecting, and sorting before warehousing.

Selling expenses include those expenses incurred in the course of merchandise sales and attributable to the joint venture, such as expenses for transportation, loading and unloading, packaging, insurance, travelling, commission, advertising, salaries and wages, and other sales organ expenses.

Administrative expenses include those expenses incurred in the course of merchandise storage, and the expenses of the enterprise's administrative departments, such as expenses for salaries and wages, depreciation, repairs and maintenance, materials consumed, labour protection, office supplies, travel, transportation, insurance, labour union dues, interest expenses (less interest income), exchange losses (less exchange gains), expenses of board of directors' meetings, advisory fees, entertainment, taxes, fees for the use of the site, staff and workers' training, and other administrative expenses.

(3) Expenses of the service-trade enterprises incurred in the course of operation include operating expenses and administrative expenses.

The operating expenses include various expenses incurred in business operations and may be summarized separately for different kinds of services.

The administrative expenses include various expenses incurred for the administration of the enterprise.

Joint ventures other than the above-mentioned types shall account for their expenses with reference to the above provisions.

Article 49

A joint venture must distinguish the cost and expenses of the current period from that of the ensuing period. Neither accrual nor amortization shall be made arbitrarily. The cost and expenses of different internal departments shall be distinguished from each other and shall not be mixed up. An industrial joint venture shall distinguish the cost of work in process from the cost of finished goods and the cost of one product from that of another. Neither the cost of work in process nor the cost of finished goods shall be arbitrarily increased or decreased.

Article 57

The profit distributable by a joint venture shall be the excess of its net profit over income tax payable and the required provisions of reserve fund, staff and workers' bonus and welfare fund, and enterprise expansion fund. It shall be distributed to the participants of the joint venture in proportion to their shares of contributed capital if the board of directors decides to make the distribution.

The reserve fund may be used as a provisional financial cushion against the possible loss of a joint venture. The staff and workers' bonuses and welfare fund shall be restricted to the payment of bonuses and collective welfare for staff and workers. The enterprise expansion fund may be used to acquire fixed assets or to increase the working capital in order to expand the production and operation of the joint venture.

Article 64

On submitting its annual accounting statements, a joint venture shall attach a descriptive overview of its financial condition, primarily explaining:

(1) condition of production and operation;

(2) condition or realization and distribution of profit;

(3) condition of changes in capital and its turnover;

(4) condition of foreign exchange receipts and disbursements and their equilibrium;

(5) condition of the payment of industrial and commercial consolidated tax, income tax, fee for the use of the site, and fee for the transfer of technology;

(6) condition of overage, shortage, deterioration, spoilage, damage, and write-off of different properties and supplies; and

(7) other necessary issues to be explained.

On submitting quarterly statements, the joint ventures shall also explain special conditions, if any.

Source: Business China, July 11, 1985.

V. Economic Contract Law of the People's Republic of China Involving Foreigners

Adopted at the 10th Session of the Standing Committee of the Sixth National People's Congress, March 12, 1985

CHAPTER 1. General provisions

Article 1

This law is enacted to protect the legitimate rights and interests of the parties to economic contracts for deals involving foreign businesses and to promote our country's foreign economic relations.

Article 2

This law applies to economic contracts (hereinafter referred to as contracts) between enterprises, or other economic institutions, of the People's Republic of China and their foreign counterparts or individuals. However, international transport contracts shall be excluded.

Article 3

In making contracts, the principle of equality and mutual benefit, and of reaching unanimity through consultation shall be followed.

Article 4

In making contracts, the laws of the People's Republic of China shall be observed, and its social and public welfare shall not be harmed.

Article 5

The parties to a contract may seek settlement to disputes in accordance with laws of their choosing, applicable to such disputes. If the parties make no such choice, the law of the country most closely related to the contract

shall apply. Contracts for joint ventures, cooperative management, and prospecting and development of natural resources operating within the boundary of the people's Republic of China, are subject to the laws of the People's Republic of China.

In the absence of relevant stipulations in the laws of the People's Republic of China, international norms shall apply.

Article 6

If the relevant laws of the People's Republic of China conflict with international treaties to which the People's Republic of China is a signatory or a party, the international treaty stipulations shall apply. However, articles to which the People's Republic of China have declared reservations shall be excluded.

CHAPTER 2. The making of contracts

Article 7

A contract will be established when the parties reach agreement on the articles in writing and sign their names. If an agreement is reached through letters, cables, or telexes, the contract will be established only when a letter of affirmation is signed, provided a party to the contract requests the signing of such a letter.

A contract will be established only when it is approved by the government of the People's Republic of China if such an approval is required by the laws or administrative decrees of the People's Republic of China.

Article 8

The appendix to a contract is a component of the contract.

Article 9

A contract that contradicts the laws of the People's Republic of China or its social or public welfare is invalid.

The validity of a contract will not be affected if the articles of the contract contradicting the laws of the People's Republic of China or its social or public welfare are removed or corrected through consultation by the parties.

Article 10

A contract is invalid if it is established by means of deception or coercion.

Article 11

A party to a contract responsible for the invalidation of the contract, has the obligation to compensate the other party for the losses resulting from the invalidation of the contract.

Article 12

In general, a contract shall contain the following provisions:

(1) Titles or names, nationalities, and addresses of main offices or residences of the parties involved;

(2) Date and place the contract was signed;

(3) Type of contract, and category and scope of the contract objectives;

(4) Technical terms, quality, standards, specifications, and number of contract objectives;

(5) Time limit, place, and method for fulfiling the contract;

(6) Price conditions, sum of payment, payment method, and various additional expenses;

(7) Transferability of the contract and conditions for transfer;

(8) Compensation and other responsibilities for violating the contract;

(9) Ways for solving contract disputes; and

(10) The language used in the contract and its effectiveness.

Article 13

The parties to a contract must agree on a limit to the risks that are involved in fulfiling the contract objectives. When necessary, they should agree on the scope of insurance for the contract objectives.

Article 14

When a contract requires continuous fulfilment over a long period, the parties involved should agree on the term of validity. They may also agree on conditions for prolonging or terminating the period of validity.

Article 15

The contracting parties may agree on a guarantor. The guarantor shall be responsible for fulfilment of responsibilities that have been agreed upon.

CHAPTER 3. Fulfilment of contracts and responsibility for violating contracts

Article 16

When a contract is established in accordance with the law, it shall be legally binding. The parties involved should fulfil the obligations of the contract. Neither side shall make unauthorized changes to or terminate the contract.

Article 17

When one party has concrete proof that the other party has failed to fulfil a contract, it may temporarily suspend fulfiling the contract but must promptly inform the other party of its action. But when the other party provides full guarantee that it will fulfil the contract, the former should fulfil the contract. Without concrete proof that the other party has failed to fulfil the contract, the party that suspends fulfiling a contract should be held responsible for violating resporsibility of the contract.

Article 18

When one party fails to fulfil a contract or fails to meet the conditions agreed upon for fulfiling a contract, it will have violated the contract, and the other party will have the right to ask the former to compensate for the loss suffered or to take other remedial measures. If the remedial measures are not sufficient to compensate for the loss suffered by the other party, the other party may ask for a further compensation for its loss.

Article 19

The compensation made by the party that violates a contract should equal the loss suffered by the other party, but should not exceed the possible loss anticipated at the time the contract was signed should one party violate the contract.

Article 20

The contracting parties may agree in the contract on the amount of compensation one party should pay the other if the former should violate the contract; or they may agree on a method for calculating the amount of compensation for the loss caused by one party that violates the contract.

The amount of payment for violation agreed upon in the contract should be regarded as the compensation for the loss caused by the party violating the

contract. However, when the amount of payment for violation is too high or too low for the loss caused by the violator of the contract, either party may appeal to an arbitration agency or a court of law for an appropriate reduction or increase of the amount.

Article 21

When both parties violate a contract, they should both share the responsibility.

Article 22

When one party suffers a loss because the other party fails to fulfil a contract, the former should promptly take proper measures to prevent the loss from increasing. When the former fails to do so, it has no right to ask for compensation for the increased portion of the loss.

Article 23

When one party fails to make payments or meet other additional expenses on time, as agreed upon in a contract, the other party has the right to ask the former to pay interest on the delayed payments. The method for calculating interest payment may be agreed upon in the contract.

Article 24

The parties concerned shall be exempted from all or part of the responsibilities for failure to fulfil all or part of the contract obligations if the failure is caused by a force majeure.

If one party fails to fulfil the contract within the prescribed time due to a force majeure, it shall be exempted from the responsibilities for the delay during the period when the effects of the aftermath of the force majeure continue.

A force majeure is an event that cannot be anticipated at the time of the signing of the contract by the parties concerned, an event of which the occurrence and aftermath are neither avoidable nor surmountable.

The limits of a force majeure may be defined in the contract.

Article 25

If one party cannot fulfil all or part of the contract obligations due to a force majeure, it shall inform the other party in good time to reduce any possible loss to the latter, and it shall produce, within a reasonable time, proof supplied by the proper authorities.

CHAPTER 4. Transfer of contract

Article 26

If one party wants to transfer all or part of the contract rights and obligations to a third party, it must obtain the consensus of the other party.

Article 27

If a contract was signed with the approval of a state organ as required by the law or administrative regulations of the People's Republic of China, the transfer of its rights and obligations shall be approved by the organ that approved its signing. An exception is a contract signed with state approval that contains an otherwise clause or clauses.

CHAPTER 5. Changes, discontinuance, and termination of contract

Article 28

Contract terms may be changed after the parties concerned, through consultation, agree to the changes.

Article 29

One party has the right to inform the other party to discontinue the contract if any of the following situations exist:

(1) The other party's violation of the contract has seriously affected the economic interests anticipated at the time of the signing of the contract;

(2) The other party has failed to fulfil the contract within the original prescribed time, and fails to fulfil the contract again within a reasonably extended period;

(3) None of the contract obligations can be fulfiled due to a force majeure; or

(4) The conditions set in the contract for its discontinuance have appeared.

Article 30

The stipulations set in Article 29 may be applied to discontinue a part or parts of a contract if the contract contains several parts which are independent of each other.

Article 31

The contract is terminated if any of the following situations exist:

(1) The contract has been fulfiled according to prescribed terms;

(2) An arbitration body or court has ruled for termination of the contract; or

(3) Both parties have agreed, through consultation, to terminate the contract.

Article 32

The notice or agreement on changes in or discontinuance of a contract shall be in writing.

Article 33

If a contract was signed with the approval of a state organ as required by the law or administrative regulations of the People's Republic of China, any major changes in it shall be approved by the organ that approved its signing, and the discontinuance of it shall be reported to the organ that approved its signing for record purposes.

Article 34

The change, discontinuance, or termination of a contract does not affect the right of one party to demand compensation for loss from the other party.

Article 35

The terms set for settling disputes in the contract shall remain valid after the discontinuance or termination of the contract.

Article 36

The terms for settling accounts and checking up on assets set in the contract shall remain valid after the discontinuance or termination of the contract.

CHAPTER 6. Settlement of disputes

Article 37

In the case of a dispute over the contract, the parties concerned shall do everything possible to settle it through consultation or through mediation by a third party.

If the parties do not want to settle their dispute through consultation or third-party mediation, or the consultation or mediation fails, they may submit the case to Chinese or other arbitration bodies according to related terms in the contract or according to a written agreement on arbitration reached after the dispute happens.

Article 38

The parties concerned may bring their dispute to the people's court if no arbitration clauses are included in the contract and they fail to reach a written agreement on arbitration after the dispute arises.

CHAPTER 7. Supplementary articles

Article 39

The deadline for submitting a case of dispute over a commodity purchase or sales contract to a court or an arbitration body shall be four years, beginning on the day when the party concerned knows, or should know, that its rights and interests are violated. The deadline for submitting cases of dispute over other contracts to a court or an arbitration body shall be prescribed by law.

Article 40

The contracts for Chinese-foreign joint ventures, Chinese-foreign cooperative enterprises, or Chinese-foreign cooperation in exploration and development of natural resources which are executed in the People's Republic of China and approved by state organs, may continue to be fulfiled according to the contract terms in spite of new legal provisions.

Article 41

This law may be applied to contracts signed before it is put in force if the parties concerned reach a mutual consent through consultation.

VI. Interim Provisions for Collection of Industrial and Commercial Consolidated Tax and Business Income Tax from China-Based Foreign Companies

Issued on May 14, 1985 by the
Ministry of Finance

In accordance with the provisions of Articles 2 and 8 of the Industrial and Commercial Consolidated Tax Act, Article 1 of the Income Tax Law Concerning Foreign Enterprises and Articles 2 and 4 of the Detailed Rules and Regulations for Implementation thereof, and Article 9 of the Interim Provision of the State Council concerning the administration of permanent representative offices of foreign enterprises, and the relevant provisions of the tax treaties that the Chinese government has concluded with foreign governments, the following provisions shall be made regarding the collection of taxes from permanent representative offices:

I. Permanent representative offices, engaged in such activities as conducting market surveys, providing business information and business liaison, consultation and other services on behalf of their home office, shall be exempted from the industrial and commercial consolidated tax and enterprise income tax, provided they do not receive proceeds for their operations or services as such.

Permanent representative offices, appointed by enterprises within Chinese territory to act as agents mainly outside the territory of China, shall be exempted from taxes on the income derived thereof.

II. The following proceeds and income of permanent representative offices are taxable:

A. Commissions, rebates, and fees received by permanent representative offices on behalf of their home office for engaging in business as agents outside the territory of China for other enterprises, or for liaison, negotiation, and middleman services within Chinese territory.

B. Payments by scheduled installments or in accordance with the volume of commissioned services, made to permanent representative offices by their clients, including their home offices, for conducting market surveys, business liaison, information, or consultation services within Chinese territory.

C. Commissions, rebates, and fees received by permanent representative offices for engaging in business within Chinese territory, as the agents of other enterprises, or for liaison or negotiation of middleman services for economic and trade transactions between other enterprises.

III. Where the amount of commission received by permanent representative offices for general liaison or middleman services is specified in the contracts, the taxes shall be assessed on the amount specified therein. Where the amount is not specified in the contracts and no accurate documentation is available so that the amount of commission cannot be exactly fixed, local tax authorities may, by referring to the general commission rate, determine an appropriate amount of commission on the basis of the business volume realized and assess the taxes accordingly. In cases as mentioned in (A) of Article 11 of the provisions, where one part of the agency's services is performed by its home office outside the territory of China, permanent representative offices shall declare and present relevant certificates and documents to the local tax authorities for the purpose of assessing the amount of commission taxable in China.

IV. Where the commissions, rebates, and fees received by permanent representative offices for agency or middleman services fall into the categories of taxable items listed in the table of taxable items and tax rates of the Industrial and Commercial Consolidated Tax Act, the industrial and commercial consolidated tax shall be levied at a reduced rate of 5 per cent. In cases where the enterprise income tax shall be levied, the tax shall be assessed on the taxable income calculated exactly from documents provided by the taxpayer as to costs and expenses; where no such documentation is available, the tax shall be assessed on the taxable income calculated on the basis of an appropriate rate of profit, provisionally determined at 15 per cent of the business proceeds, in accordance with the provision of Article 24

of the Detailed Rules and Regulations for the Implementation of the Income Tax Law Concerning Foreign Enterprises.

V. "Enterprise," as used in the aforementioned provisions, encompasses "corporation," "company," and "economic organization."

VI. The Ministry of Finance shall be responsible for the interpretation of the provisions.

VII. The aforementioned provisions shall be in force as of January 1, 1985.

VII. Excerpts from Regulations Governing Foreign Banks and Joint Chinese-Foreign Banks in Special Economic Zones of The People's Republic of China

Article 2

In these Regulations, "foreign banks" means the branches set up in the special economic zones by banks, the head offices of which are located in foreign countries or the Hong Kong and Macao regions and which have been registered in accordance with local laws. "Foreign banks" also applies to banks with foreign capital the head offices of which are located in the special economic zones and which have been registered in accordance with the laws of the People's Republic of China.

In these Regulations, "joint Chinese-foreign banks" means banks jointly operated in the special economic zones by banks or financial institutions with foreign capital in conjunction with banks or financial institutions with Chinese capital.

Article 4

For the establishment of a foreign or joint Chinese-foreign bank in a special economic zone, an application shall be filed with the People's Bank of China, which shall examine and consider the application in the light of the needs of the economic growth of the special economic zone concerned and on the principle of equality and mutual benefit.

The branches of the People's Bank of China in the special economic zones shall exercise control and supervision over foreign and joint Chinese-foreign banks.

The State Administration of Exchange Control issues licenses for foreign exchange operations to foreign and joint Chinese-foreign banks.

Article 5

An application for the establishment of a foreign and joint Chinese-foreign bank shall be made in accordance with the following provisions:

I. A bank with foreign capital that wishes to set up a branch in a special economic zone shall file an application through its head office and furnish the following documents and data:

1. A written application signed by the chairman or general manager of the bank with the authorization of its board of directors and certified by a notary public, embodying the name of the branch to be set up, the amount of operating funds allocated to it by the head office, a brief personal history and a letter of authorization in regard to each of the chief responsible officers and the kinds of business applied for;

2. Articles of association, a list of the members of the board of directors, and the balance sheets, profit and loss statements, and business reports for the three years preceding the application;

3. A copy of the business license issued by the competent authorities of the country or region where the bank is located; and

4. A written guarantee from its head office guaranteeing responsibility for taxes and liabilities.

II. An application for the establishment of the head office of a foreign bank in a special economic zone shall be filed by the foreign investors, along with the following documents and data:

1. A written application for the establishment of a foreign bank which shall include the name of the head office to be set up, registered capital and paid-in capital, a list of the chief responsible officers, and the kinds of business applied for;

2. Articles of association;

3. A list of the chairman, vice-chairmen, and members of the board of directors nominated by the investors; and

4. A statement of the investors' assets and liabilities, along with a certification by a notary public.

III. An application for the establishment of a joint Chinese-foreign bank in a special economic zone shall be filed jointly by the investing parties, along with the following documents and data:

1. A written application for the establishment of the joint bank, including the name of the joint bank to be set up, the names of the joint parties, registered capital and paid-in capital, the proportions of equity capital contributed by the joint parties, a list of the chief responsible officers nominated, and the kinds of business applied for;

2. A feasibility report jointly prepared by the parties concerned;

3. The drafts of the agreement, contract and articles of association of the joint parties; and

4. A list of the chairman, vice-chairmen and members of the board of directors of the joint bank nominated by the joint parties.

IV. Foreign and joint Chinese-foreign banks in a special economic zone that intend to set up additional branches within the same zone shall apply to the branch of the People's Bank of China in the same zone for approval.

A Chinese version shall be attached where the documents and data indicated in Section I of this article are in a foreign language.

Article 6

Based on the application, the People's Bank of China may grant its approval to foreign and joint Chinese-foreign banks to engage in part or all of the following business operations:

1. Granting loans in local and foreign currencies and discounting bills;

2. Inward remittances from foreign countries and the Hong Kong and Macao regions, and foreign exchange collections;

3. Settlement of export transactions and outward documentary bills;

4. Exchange in foreign currencies and foreign currency bills;

5. Local and foreign currency investments;

6. Local and foreign currency guarantees;

7. Buying and selling of stocks and securities;

8. Trust, safe deposit box, credit investigation, and consultation services;

9. Outward remittances by overseas Chinese enterprises, foreign enterprises, Chinese-foreign joint ventures and Chinese-foreign cooperative enterprises, and settlement of import transactions and inward documentary bills;

10. Local and foreign currency deposits and overdrafts by overseas Chinese enterprises, foreign enterprises, Chinese-foreign joint ventures and Chinese-foreign cooperative enterprises; and local and foreign currency deposits and overdrafts by foreign nationals, overseas Chinese, and Chinese compatriots in Hong Kong and Macao;

11. Handling foreign exchange deposits and loans in foreign countries and the Hong Kong and Macao regions; and

12. Other business operations.

Article 7

A foreign bank's head office or a joint Chinese-foreign bank in a special economic zone shall have a registered capital in foreign exchange of no less than the equivalent of Renminbi 80 million and a paid-in capital of no less than 50 per cent of the registered capital; and the branch office of a foreign bank in a special economic zone shall hold operating funds allocated to it by its head office in an amount of foreign exchange of no less than the equivalent of Rmb 40 million.

The paid-in capital or the operating funds of a foreign or joint Chinese-foreign bank shall be fully in hand within 30 days from the date its establishment is approved, and this shall be certified by an accountant registered in the People's Republic of China.

Article 9

The loans granted by a foreign bank's head office or a joint Chinese-foreign bank in a special economic zone to any enterprise in the same zone shall not exceed 30 per cent of the aggregate of the bank's paid in capital and reserve funds; and its total investment in the special economic zone shall not exceed 30 per cent of the aggregate of its paid-in capital and reserve funds.

Article 10

The exchange and settlement between the local currency and foreign currencies by a foreign and joint Chinese-foreign bank shall be effected in accordance with the exchange rates quoted by the State Administration of Exchange Control and in pursuance of the pertinent regulations.

The interest rates applied by a foreign and joint Chinese-foreign bank to local or foreign currency deposits, loans, overdrafts, and bill discounts within a special economic zone shall be fixed by reference to those prescribed by the branch of the People's Bank of China in the same zone.

Article 11

A foreign or joint Chinese-foreign bank accepting local or foreign currency deposits within a special economic zone shall keep on deposit with the branch of the People's Bank of China in the same zone a reserve fund against its deposits.

Article 12

A foreign or joint Chinese-foreign bank shall submit to the branch of the People's Bank of China in the special economic zone concerned, the following business reports:

1. A balance sheet as at the end of the previous month, to be submitted before the tenth of each month;

2. An analytical statement of deposits and loans, an analytical statement of outward and inward remittances and settlement of import and export transactions, and an analytical statement of investment items for the previous quarter; and

3. The balance sheet, profit and loss statement, and statement of the balances of accounting items for the previous year, along with an audit report by an accountant registered in the People's Republic of China, to be submitted before the end of March of each year.

Article 14

The profit that a branch of a foreign bank makes after paying taxes in accordance with the law may be remitted abroad.

Concerning the profit that a foreign bank head office or a joint Chinese-foreign bank in a special economic zone makes: after deductions for taxes, the reserve fund, workers' bonuses, welfare fund, and enterprises development fund in accordance with the pertinent regulations, the portion to be distributed to foreign investors may be remitted abroad.

The foreign staff and workers and the Hong Kong and Macao staff and workers of a foreign and joint Chinese-foreign bank may remit abroad their wages, salaries and other legitimate earnings after paying taxes in accordance with the law.

Article 16

The branches of the People's Bank of China in the Special Economic Zones are empowered to issue a warning or impose a fine on any foreign or joint Chinese-foreign bank acting in contravention of these Regulations or other financial regulations, according to the seriousness of each case; if there is objection to the measure meted out, an appeal may be made to the People's Bank of China for its decision.

In particularly serious cases, the foreign or joint Chinese-foreign bank may be ordered to stop its business operations or even to dissolve its institution.

Article 17

These Regulations shall also apply to banks or financial institutions with overseas Chinese capital, Hong Kong capital or Macao capital.

APPENDIX D

List of Foreign Joint Ventures in China

Sino-foreign Joint Venture	Location	Chinese Enterprise	Foreign Enterprise/Partner
Beijing Air Catering Co. Ltd.	Beijing	Beijing Regional Administration of the General Administration of Civil Aviation of China	China Air Catering Co., (HK) Ltd.
Great Wall Hotel	Beijing	China International Travel Service, Beijing Branch	U.S. Pacific Development and Construction Co. (USA)
Jianguo Hotel	Beijing	China International Travel Service, Beijing Branch	Zhong Mei Hotel Development Venture Ltd. Hong Kong
China Computer World Publishing and Servicing Company	Beijing	Ministry of Electronic Industry Co. Technical Information Center	C.W. Communications/Inc. (USA)
China Orient Leasing Co. Ltd.	Beijing	China International Trust and Investment Corp. Beijing Machinery and Electric Equipment Corp.	Orient Leasing Co., Ltd (Japan)
China Petroleum Logging Dresser Atlas Cooperation Service Company	Beijing	China National Offshore Oil Corporation	Dresser Atlas Division of Dresser Industries Inc. (USA)
China Schindler Elevator Co., Ltd.	Beijing Shanghai	China Construction Machinery Corp.	Schindler Holding AG (Switzerland) Jardine Schindler Far East Holdings (HK)
Shanghai United Wooltex Corp., Ltd.	Shanghai	Shanghai Textile Industry Bureau Wool and Jute Textile Industry Corp	UNI-Shanghai Wooltex Ltd. (HK)
Shanghai Cosfra Ltd.	Shanghai	Shanghai Daily Chemicals Corp.	Florasynth Inc. and Cintco Inc. (USA)
Sunshine Paper Industries Ltd.	Shenzhen	Shanghai Paper Industry Corp.	Cartegena Industrial Co., Ltd. (HK)
Shanghai Foxboro Co., Ltd.	Shanghai	Shanghai Instrument Industry Co.	Foxboro Co. (USA)
Sino-American Shanghai Squibb Pharmaceuticals Ltd.	Shanghai	Shanghai Pharmaceutical Industrial Corp.	E.R. Squibb & Sons Inc. (USA)
Sino-French Joint Venture Winery Ltd.	Tianjin	Tianjin Wine Making Co.	Remy Martin (Far East) Ltd. (France)
Jin Hua Watch Dial Factory Co., Ltd.	Tianjin	Watch Dial Factory, Tianjin	Wahing Water Dial Factory Ltd. (HK)
Tianjin Synthetic Padding Joint Manufacturer Ltd.	Tianjin	No. 6 Garments Factory, Tianjin Tianjin Economic Development Corp.	Encectrade Ltd: (HK)
China Otsuka Pharmaceutical Co., Ltd.	Tianjin	China National Pharmaceutical Industry Corp.	Otsuka Pharmaceutical Co., Ltd. (Japan)
Tianjin Li-Ming Cosmetics Co., Ltd.	Tianjin	Tianjin No. 1 Household Chemicals Factory	Wella AG (West Germany)
China Tianjin Otis Elevator Co. Ltd.	Tianjin	Tianjin Lift Co.	Otis Elevator Co. (USA)
China Geco Geophysical Co., Ltd.	Tianjin	China National Offshore Oil Corp.	Geophysical Co. AS (Norway)
Nanning-Jones Co., Ltd.	Nanning	Nanning Agricultural, Industrial and Commercial Complex of Nanning City	Henry Jones Ltd. of Melbourne, Victoria, Australia
East Horizon Optical Manufactory, Ltd.	Yin County, Zhejiang	The Bureau of Commune Enterprise, Yin County, Zhejiang Province The Bureau of Foreign Trade, Yin County	Fada Spectacles Manufacturing Co. (HK)
Xihu (West Lake) Rattan Works Co., Ltd.	Hanzhou	Zhejiang Furniture and Sundry Goods Industrial Corp.	Sing Yee Co. (HK)

Sino-foreign Joint Venture	Location	Chinese Enterprise	Foreign Enterprise/Partner
China Jianghai Wood Products Co., Ltd.	Wuxi, Jiangsu Province	China National Light Industrial Products Import & Export Corp., Jiangsu Branch Wuxi General Furniture Factory	Victory Brothers & Co. (HK) Victoros Group Inc. (Philippines)
China Nantong-Rikio Co., Ltd.	Nantong, Jiangsu Province	China International Trust and Investment Corp. Nangong Second Light Industry Bureau	Rikio Co., Ltd. (Japan)
Sino-Swedish Pharmaceutical Corp. Ltd	Wuxi	China National Pharmaceutical Industry Corp.	Swedish Pharmaceutical Industry Consortium
Shandong Enterprises Ltd.	Qingdao	Luxing Trading Co., Ltd., Shandong Province	Hok Hing Hong Co., Ltd. (HK)
Yan Hua Standard Battery Plant Co., Ltd.	Shijiazhuang	Shijiazhuang No. 3 Radio Factory	Standard Cell Ltd. (HK)
Shenmei Daily Use Products Co., Ltd.	Shenyang	Shenyang Daily Use Metals Industrial Corp.	Gillette Co. (USA)
Parker-Hubei Seals Co., Ltd.	Wuhan	Automobile Industry Corp., Hubei Province	Parker Hannifin Corp. (USA)
Guangdong Hunan Qiangfeng Co., Ltd.	Changsha	Guangdong Trust and Investment Corp. Hunan Meat & Aquatic Products Co.	Fu Zhouqiang (Thailand)
"Spring's Flower" Fashionable Co., Ltd.	Guiyang	Guiyang Shirt Factory	Fengshun Trading Co. (HK)
Lanzhou-Guanghui Color Photographing & Printing Co.	Lanzhou	Service Company of Lanzhou City	Guanghui Trading Company of HK
Xiniang Tianshan Woollen Spinning & Knitting Co., Ltd.	Urumqi	Urumqi Woollen Spin Factory	Hong Kong Tianshan Woolter Ltd.
Foshan Electronic Co., Ltd.	Foshan, Guangdong Province	No. 4 Foshan Radio Factory	TPI Products Ltd. (HK)
TTK Electrical Appliances Ltd.	Huiyang, Guangdong	Guangdong Huiyang District Electrical Industry Corp.	Yiu Wor Electrical Co., Ltd. (HK)
Guangmei Foods Co., Ltd.	Guangzhou	International Trust and Investment Corp. Guangzhou Foodstuffs Industry Corp.	Bestrice Foods Co. (USA)
Scientific Instruments Ltd.	Guangzhou	Guangzhou Watch and Clock Industrial Co.	System Data Semiconductor Ltd. (HK)
Haven Automation Guangzhou Co., Ltd.	Guangzhou	Guangzhou Ocean Shipping Co. Wenchong Shipyard	Haven Automation International Ltd. (UK)
Kong Ming Wah Kiu Electronic Factory	Shenzhen	Sahe Enterprise Co.	Kong Wah Electronic Enterprise Ltd.
Chun Wang Oxygen Ltd.	Shenzhen	China Merchangs Steam Navigation Co., Ltd. (CMSN)	Hong Kong Independent Company Ltd.
Sunhing Restaurant	Shenzhen	Lo Wu District Union Corp. (Shenzhen)	Hsiang Yi Investment Co., Ltd. (HK)
Friendship Restaurant	Shenzhen	Catering Services Co.	Hoi Tung Co., Ltd. (HK)
Guangdong Provincial Guang Ming Overseas Chines Electronic Ltd.	Shenzhen	Guangdong Provincial Overseas Chinese Enterprises Co.	Hong Kong Kong Wah Electronic Enterprises Ltd.
Guangming Pig Farm	Shenzhen	Guangdong Provincial Overseas Chinese Enterprises Corp.	Philippines Overseas United Co., Ltd.
China Swiss Engineering Ltd.	Shenzhen	CMSN	Edward Keller (HK)
Hua Yuan Seafood Restaurant	Shenzhen	The Real Estate Co. of the Shekou Industrial Zone, CMSN	Hua Hai Development Co., Ltd. (HK)
China International Marine Containers Ltd.	Shenzhen	CMSN	The East Asiatic Co., Ltd. (Denmark)
CMSN Shekou Quarry	Shenzhen	Real Estate Co. of Shekou Industrial Zone	Y.C.Y. & Co., Ltd.

Sino-foreign Joint Venture	Location	Chinese Enterprise	Foreign Enterprise/Partner
Sino Master Steel LTd.	Shenzhen	CMSN	Tony Sze Sun Sun Sen Fa Enterprises Ltd. (HK)
Shunfa Electric Co., Ltd.	Shenzhen	Fushun Enterprises Ltd.	Cingia Enterprises Ltd. (HK)
Jiang Hua Marine & Engineering Ltd.	Shenzhen	CMSN	A. Fai Engineering Enterprise Co., Ltd. (HK) Kong & Halvoksen Investment Co., Ltd. (HK)
The China Excelsior Aluminium Factory Ltd.	Shenzhen	CMSN	Excelsior Metallurgical Works Co., Ltd. (HK)
Construction Machinery Factory	Shenzhen	Shenzhen Municipal Industry Bureau	Tung Cheong Tai Construction Co. (HK)
Shekou Industrial Zone Shopping Center	Shenzhen	Shekou Industrial Zone	Chung Kin Development Co., Ltd. (HK)
Duty Free Shop of Shekou Industrial Zone	Shenzhen	Trading Company of Shekou Industrial Zone	Hai Luen Co. (HK)
Aero Precision Mold Manufacturing Co.	Shenzhen	Guangzhou Division, China National Aero Technology Import & Export Corp.	Catec Industrial Ltd. (HK)
China Swiss Chemicals Co., Ltd.	Shenzhen	Beijing Chemical Works	China Swiss Engineering Ltd. (HK)
Plastic Knitting Factory Guangfu Polymer Company	Shenzhen	Guangzhou Chemical Industrial Co.	Freedom & Company (HK)
Esso Petroleum China Ltd.	Shenzhen	Shenzhen Municipal Petrochemical Industry Guangdong Trust & Investment Corp.	Exxon Corp. (HK)
Feoso Wirz Jin Du Station	Shenzhen	Shenzhen Municipal Petrochemical Industry	Hong Kong Oriental
Mikon Petroleum Supply Station	Shenzhen	Shenzhen Municipal Petrochemical Industry	Great River Trading Co. (HK)
Polymer Factory Guangfu Polymer Company	Shenzhen	Guangzhou Chemical Industrial Factory	Freedom & Company (HK)
The Hong Kong and Shanghai Furniture Corp., Ltd.	Shenzhen	CMSN The Shanghai Furniture Co.	Hoi Wah & Co. (HK)
Catering Services	Shenzhen	Shekou Industrial Zone	Good View Investment Co. (HK)
Hwa Thai Enterprise Co. (China) Ltd.	Shenzhen	Shenzhen Special Economic Zone Development Company	Hwa Thai Enterprise Co. (HK) Ltd.
Man Yuen Construction Co.	Shenzhen	Shenzhen Nantou Office	Chuen Yuen Construction Co. (HK)
Chun On Building & Finishing Contractor	Shenzhen	Shautoujiao Enterprises Co.	Wai On Building & Finishing Contractor (HK)
Shenzhen Goodyear Printing Co., Ltd.	Shenzhen	Shenzhen Municipal Light and Textile Industry Co.	Goodyear Printing Products (China) Co., Ltd. (HK)
Lan Hai Electronics Co., Ltd.	Shenzhen	Gansu Electronic Industry Corp.	Fairford Co., Ltd. (belonging to the Brave Petrel (International Co., Ltd.) (HK)
Shenzhen Oversea Chinese Furniture Co., Ltd.	Shenzhen	Sha He Oversea Chinese Enterprises Co.	H/K/ Hsien Ni Co., Ltd. (HK)
Fujian Jianchiao Enterprise Corp.	Fuzhou	Fujian Huachiao Plastic Enterprises Co.	Jingang Co., Ltd. (HK)
Fuzhou Yiguang Color Photo Studio	Fuzhou	Fuzhou Service Co.	Hong Kong Minhua Trading Center
Guangze Abrasive Paper, Abrasive Cloth Industry Co., Ltd.	Guangze County, Fujian	Investment Enterprise Co. of Guangze County	Mr. He Zuo Ru, the Oversea Chinese Businessman from the Philippines
Zhaozhen Aquatic Products Combine Co.	Zhaoan, Fujian	Xishan Farm, Zhaoan	Hong Kong Ching Kwong Foo-I Co., Ltd.
Quanzhou Man-made Flower Factory Ltd.	Quanzhou, Fujian	Quanzhou Industrial Arts Co.	Kar Wah Trading Co. (HK)

APPENDIX E

LIST OF UNIDO INVESTMENT PROPOSALS[1/]

UNIDO Investment promotion meeting, Fujian, 25-29 November 1985

List of abbreviations for foreign co-operation sought

AFM	Access to foreign markets
CTR	Compensation trade
CVE	Co-operative venture
EQS	Equipment supply
EQY	Equity participation
JVE	Joint venture
LIC	Licensing
LNS	Loans
MAX	Management expertise
MKK	Marketing expertise
SCT	Subcontracting
SOT	Sale of technology
TEX	Technical expertise
TRX	Training expertise

1/ Issued by the Investment Co-operative Programme of UNIDO.

UNIDO does not accept responsibility for any inaccuracy or incompleteness. For each project a profile is available from UNIDO.

PROJECT NUMBER	PROJECT TITLE	PROJECT COST	COOPERATION SOUGHT	PRODUCT & CAPACITY
CPR/701/V/85-07	Bentonite exploitation and processing New	US$ 9.3 million	JVE	High efficiency active belozem: 10,000 t/year Organic bentonite, 200 t/year Bentonite grease: 1,000 t/year
CPR/702/V/85-07	Granite mining and processing Expansion	US$ 2.3 million	LNS, JVE, AFM	Raw black granite: 3,000 cu m/year Granite planks: 60,000 cu m/year
CPR/703/V/85-07	Stone block processing Expansion	US$ 5.5 million	JVE, CVE	Stone blocks: 70,000 sq m/year
CPR/704/V/85-07	Kaolin mining and refined kaolin clay New	US$ 112 million	JVE, LIC, EQS, AFM, MAX, TEX, TRX, MKX	Kaolin mining: 1,200,000 t/year Refined kaolin clay: 300,000 t/year
CPR/705/V/85-07	Chicken bouillon New	US$ 1.55 million	JVE, AFM, MKX	4 million bottles/year
CPR/706/V/85-07	Manufacturing of duck and down products Expansion	US$ 2.3 million	JVE, MAX, TEX, TRX, MKX	2 million dried salted ducks 120,000 pieces down products
CPR/707/V/85-07	Packaging of various foods New	US$ 1.15 million	JVE, SOT, MAX, TEX, TRX, MKX	Rice, sugar, meats, vegetables, plant oil: 3,000 t/year
CPR/708/V/85-07	Pectin and fruit juice New	US$ 1.85 million	JVE, CTR	Pectin: 100 t/year Orange juice: 3,150 t/year
CPR/709/V/85-07	Red laver and fish products Expansion	US$ 5.2 million	EQY	Red laver: 500 t/year Fish products: 7,500 t/year
CPR/710/V/85-07	Laver processing New		JVE, SOT, EQS, TEX, TRX	Roast and flavoured laver: 1,100 t/year
CPR/711/V/85-08	Cod-liver oil New	US$ 1.5 million	JVE, AFM, MKX	2 million boxes/year
CPR/712/V/85-07	Confectionery, food and drink Expansion	US$ 2.82 million	JVE, EQS, AFM	Confectionery, cube sugar, instant coffee: 3,000 t/year
CPR/713/V/85-07	Instant coffee New	US$ 3 million	LNS	300 t/year
CPR/714/V/85-08	Production of foodstuffs New	US$ 5 million	LNS, JVE, SOT, EQS, AFM, CTR, MAX, TEX, TRX, MKX	Starch: 60,000 t/year Artificial cream: 1,500 t/year Glucose syrup: 2,000 t/year
CPR/715/V/85-07	RNA, yeast and 5' nucleotide New	US$ 8.74 million	SOT, EQS, AFM, MAX, TEX, TRX, MKX	RNA: 240 t/year Yeast separated RNA: 1,800 t/year Nucleotide: 50 t/year
CPR/716/V/85-07	High pile fabrics New	US$ 3.1 million	LNS, JVE, EQS, AFM, MKX	1.1 million metres/year
CPR/717/V/85-07	Rock cotton (mineral wool) products New	US$ 5.1 million	JVE	Rock cotton and rock cottor products: 16,300 t/year
CPR/718/V/85-07	Silk fabric New	US$ 9.2 million	JVE, MAX, TEX	1.4 million metres/year
CPR/719/V/85-07	Textile spinning mill Expansion	US$ 9.66 million	LNS, JVE, SOT	Yarn: 1,930 t/year Cloth: 10 million metres/year
CPR/720/V/85-07	Wool and blended fabrics New	US$ 12.3 million	JVE, EQS, AFM	1,500,000 metres/year
CPR/721/V/85-07	Jute carpets Expansion	US$ 2 million	JVE	5 million sq m/year
CPR/722/V/85-07	Polypropylene tufted carpets New	US$ 7.5 million	EQY, JVE	3 million sq m/year
CPR/723/V/85-07	Braided rope Expansion		JVE, EQS, AFM, TEX, MKX	1,200 t/year
CPR/724/V/85-07	Sheepskin and pigskin coats Expansion	US$ 5.6 million	JVE, MAX, TEX	Sheepskin coats: 80,000/year Pigskin coats: 20,000/year
CPR/725/V/85-07	Leather and plastic shoes Expansion	US$ 2.6 million	JVE, EQS, AFM, TRX, MKX	Shoes and sandals: 900,000 pairs/year
CPR/726/V/85-08	Composite lacquer products Expansion	US$ 1.6 million	JVE, LIC, EQS, AFM, MAX, TEX, TRX, MKX	Vases, plates, boxes, bowls, etc Annual sales value: US$ 4,280,000
CPR/727/V/85-07	Lacquer furniture New	US$ 1.86 million	CTR, TRX, MKX	Lacquer furniture and folding screens: 7,600 sets/year
CPR/728/V/85-08	Laminated chipboard and panel furniture Expansion	US$ 2 million	JVE, EQS, AFM, MAX, TEX, TRX, MKX	Laminated chipboard: 300,000 sq m/year Panel furniture: 60,000 pieces/year
CPR/729/V/85-07	Bamboo pulp and printing paper New	US$ 50 million	JVE, EQS, AFM, MAX, TEX, TRX, MKX	Bamboo pulp: 57,000 t/year Printing paper: 17,000 t/year
CPR/730/V/85-07	Facial tissues and sanitary napkins Expansion	US$ 1.98 million	JVE	5,700 t/year
CPR/731/V/85-07	Anhydrous alcohol for automobiles New	US$ 7.45 million	JVE	8,700 t/year

PROJECT NUMBER	PROJECT TITLE	PROJECT COST	COOPERATION SOUGHT	PRODUCT & CAPACITY
CPR/732/V/85-07	Baryta powder New	US$ 10.5 million	JVE, SOT, EQS, AFM, CTR, MAX, TEX, TRX, MKX	120,000 t/year
CPR/733/V/85-08	Butylene glycol production			
CPR/734/V/85-07	Flaked bisphenol-A New	US$ 20 million	JVE, MAX, TEX, TRX	10,000 t/year
CPR/735/V/85-07	High-concentration calcium hypochlorite	US$ 7.31 million	JVE	5,000 t/year
CPR/736/V/85-07	1,1,1 trichloroethane plant New	US$ 8 million	JVE	1,1,1 trichloroethane 10,000 t/year Trichloroethylene 2,500 t/year Perchloroethylene 2,500 t/year
CPR/737/V/85-08	Phthalic anhydride New	US$ 16 million	JVE, SOT, EQS	20,000 t/year
CPR/738/V/85-07	Gum resin New	US$ 2.4 million	JVE, AFM, MAX, TEX, TRX, MKX	5,000 t/year
CPR/739/V/85-07	Polyethylene and nylon monofilament Expansion	US$ 0.9 million	SCT, SOT, EQS, AFM, CTR, TRX	HDPE monofilament 800 t/year or PA-6 monofilament 500 t/year
CPR/740/V/85-07	Polyvinyl chloride paste resin plant New	US$ 6.2 million	JVE	10,000 t/year
CPR/741/V/85-07	PVC film for food packaging New	US$ 4 million	JVE, CVE	1,000-1,500 t/year
CPR/742/V/85-07	Cephalexin monohydrate New	US$ 3.6 million	LNS, JVE, SOT, MAX, TEX	30 t/year
CPR/743/V/85-08	Pharmaceutical products Expansion	US$ 3.7 million	EQY, JVE, EQS, TEX, TRX, MKX	Acidum nicotinicum 400 t/year Nicotinamidum 600 t/year
CPR/744/V/85-08	Pharmaceuticals New	US$ 15.2 million	JVE	Injectable ampicillin Na, ampicillin, amoxicillin, 6-APA intermediate 250 t/year
CPR/745/V/85-07	Perfumes and cosmetics Expansion	US$ 4.07 million	JVE, SOT, AFM, CTR, CVE, TEX	Perfume oil 200 t/year Perfume essence 900 t/year Cosmetics 3 million bottles/year
CPR/746/V/85-07	Sports and casual shoes Expansion	US$ 1.6 million	JVE, CTR	1,000,000 pairs/year
CPR/747/V/85-07	Ceramic toilet and bathroom fixtures New	US$ 1? million	JVE	250,000 articles/year
CPR/748/V/85-07	Ceramic ware New	US$ 6.6 million	EQY, JVE, SOT, EQS, AFM, TEX, TRX	Ceramics 100,000 t/year
CPR/749/V/85-07	Kiln glass fibre		JVE, LIC, SOT, EQS, AFM, MAX, TEX, TRX, MKX	3 million standard cases/year
CPR/750/V/85-08	Abrasive paper and emery cloth New	US$ 9.6 million	JVE	Abrasive sheets, reels, pieces and belts 5 million sq m/year
CPR/751/V/85-07	Granite slabs New	US$ 2.5 million	LNS, JVE, SOT, EQS, AFM, CTR, TEX, MKX	70,000 sq m/year
CPR/752/V/85-07	Graphite base friction material New	US$ 8.9 million	JVE, AFM	100,000 pieces/year
CPR/753/V/85-07	Crystal and quartz components New	US$ 3.2 million	JVE	Crystals 3,000,000/year Crystal filters 50,000/year Crystal oscillators 50,000/year Quartz bars 4 t/year
CPR/754/V/85-07	Processing of kaolin ore New		JVE	100,000 t/year
CPR/755/V/85-08	Cast copper rods New	US$ 6.36 million	JVE, EQS, TEX, TRX	30,000 t/year
CPR/756/V/85-08	Steel dry cargo containers Expansion	US$ 6.1 million	JVE, EQS, AFM, MAX, TEX, MKX	Standard containers (TEU) 4,000/year Non-standard containers 1,000/year
CPR/757/V/85-07	Production of wire springs Expansion	US$ 2 million	JVE, EQS, AFM, MAX, TEX, TRX, MKX	30,000,000/year
CPR/758/V/85-07	Manufacture of general radial drilling machines New	US$ 7 million	JVE	1,000 sets/year
CPR/759/V/85-08	Machine presses Expansion	US$ 5.36 million	JVE, AFM	800 sets/year
CPR/760/V/85-07	Excavator loaders Expansion	US$ 11.4 million	JVE, MAX, TEX, TRX, MKX	2,000/year by 1988

PROJECT NUMBER	PROJECT TITLE	PROJECT COST	COOPERATION SOUGHT	PRODUCT & CAPACITY
CPR/761/V/85-07	Plastic injection moulding machines Expansion	US$ 2 million	JVE, EQS, AFM, MAX, TEX, TRX, MKX	100 sets/year
CPR/762/V/85-07	Computer terminal equipment New	US$ 10.5 million	JVE, MAX, TEX, TRX, MKX	Monitors 200,000/year Display terminals 20,000/year Peripheral equipment 10,000 sets/year Keyboards and adaptors 100,000/year
CPR/763/V/85-08	Micro-computers			
CPR/764/V/85-08	Printers of needle-lattice			
CPR/765/V/85-07	Integrated circuits Expansion		JVE, SCT, EQS, TEX	Computer chips, A/D and D/A converters, sound circuits, TTL circuits 10 million pieces/year
CPR/766/V/85-07	Automatic washing machines Expansion		EQY, JVE, SOT AFM, MAX, TEX, TRX	200,000/year
CPR/767/V/85-07	Biological culture storage boxes New	US$ 4.7 million	JVE AFM, TEX, TRX	Biological culture storage boxes 12,000 year Blood bank freeze boxes 1,200/year Medical freeze boxes 1,200/year CRG freeze boxes 1,200/year Constant temperature boxes 2,400/year
CPR/768/V/85-07	Butterfly valves New	US$ 2.7 million	EQY, JVE, SOT, MAX, TEX	BBI-100 butterball butterfly valves 10,000 sets BETA gate valves EKN and AKL butterfly valves 2,000 t
CPR/769/V/85-07	Compressors New	US$ 27.8 million	JVE, LIC, SOT EQS, TEX TRX	Sealed compressors 1 million sets year
CPR/770/V/85-08	Fork lift trucks New	US$ 20.7 million	LNS, JVE CTR	5,000 trucks/year by 1990
CPR/771/V/85-08	Household pumps and micropumps Expansion	US$ 4.1 million	JVE	200,000 sets year
CPR/772/V/85-07	Pneumatic components and regulating valves New	US$ 2.3 million	JVE, SOT MAX TEX	Pneumatic components 200,000 sets
CPR/773/V/85-08	Precision sealed ball bearings New	US$ 28.9 million	JVE CTR	6 million sets year
CPR/774/V/85-08	Precision steel balls New	US$ 17 million	JVE, CTR	200 million pieces year
CPR/775/V/85-07	Refrigeration screw compressors New	US$ 9 million	JVE, SOT, EQS	1,000 sets year
CPR/776/V/85-07	Compact reactive compensation equipment Expansion	US$ 4.8 million	EQY, LNS, JVE LIC, EQS, AFM MAX, TEX, TRX, MKX	2,000 pieces
CPR/777/V/85-07	MCCB with earth leakage protection Expansion	US$ 5 million	JVE, LIC, AFM, MAX, TEX	100,000 sets/year within three years
CPR/778/V/85-07	Metal-clad switchgear New	US$ 2.95 million	JVE, SOT, EQS, MAX, TEX, TRX, MKX	3,000 sets/year
CPR/779/V/85-08	Motors Expansion	US$ 8.25 million	EQY, LNS	H80-H100 motors 104,000 sets year H112-H132 motors 52,000 sets/year
CPR/780/V/85-07	Micro-computerized electrocardiac monitoring system New	US$ 3.14 million	JVE	360 sets/year
CPR/781/V/85-07	Low-frequency/high-power transistors New	US$ 9 million	EQY, LNS, JVE SCT, TRX	BU 208 5-10 million/year
CPR/782/V/85-07	High-pressure sodium lamps Expansion	US$ 2 million	JVE, EQS, AFM, CTR, TEX	300,000/year
CPR/783/V/85-07	Incandescent and fluorescent lamp bulbs Expansion	US$ 19.9 million	JVE, SCT, EQS, AFM, TEX, TRX	Special fluorescent bulbs 300,000/year Fluorescent lamps 6 million/year Car bulbs 3 million/year Incandescent bulbs 25 million/year
CPR/784/V/85-07	Fine tungsten wire New	US$ 1.6 million	EQY, SOT, EQS, TEX, TRX	15 W 25,000 km/year 25 W 25,000 km/year 40 W 50,000 km/year 60 W 50,000 km/year
CPR/785/V/85-08	Disposable syringes New	US$ 2.87 million	JVE	36 million/year
CPR/786/V/85-07	Manfacture of pencils Expansion	US$ 0.8 million	JVE, MAX, TEX, MKX	130 million/year

APPENDIX F

The approved and/or operational technical co-operation projects of UNIDO
(as of April 1985)

The People's Republic of CHINA

Spec.Act.Code		Project Number	Project Title
PC/ECDC	(30.9.Z)	RP/CPR/84/003	Technical co-operation programme between China and Pakistan in silverware manufacturing, and Sri Lanka in the processing of black tea, and Thailand in bamboo rattan weaving
IO/INFR	(31.3.J)	DP/CPR/84/016*	Assistance to Shanghai Research Institute (SRIM) of materials on non-destructive testing (phase II of DP/CPR/80/052)
IO/FCTY	(31.4.E)	US/CPR/83/122	Management development
IO/TRNG	(31.5.B)	RP/CPR/84/002	Training on powder metallurgy of refractory metals
IO/TRNG	(31.5.B)	RP/CPR/84/004	Training on phosphor for fluorescent lamp
IO/FEAS	(31.6.A)	DG/CPR/81/019	Umbrella project - installation of Computer Model for Feasibility Analysis and Reporting (COMFAR)
IO/AGRO	(31.7.B)	SI/CPR/84/802	Assistance in silk printing and dyeing
IO/AGRO	(31.7.C)	DP/CPR/82/005*	National cane sugar industry research centre
IO/AGRO	(31.7.D)	DP/CPR/83/004*	Leather technology centre
IO/MET	(31.8.A)	DP/CPR/80/045*	Assistance to the establishment of a pilot plant for the manufacturing of aluminium alloy door and window frames
IO/MET	(31.8.A)	DP/CPR/81/034*	Energy conservation in the aluminium industry
IO/MET	(31.8.A)	UC/CPR/84/138 UD	Group training on alumina production

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* Large-scale project (= total allotment $150,000 or above).
** Total allotment $1 million or above.

The approved and/or operational technical co-operation projects of UNIDO
(as of April 1985)

The People's Republic of CHINA
(2)

Spec.Act.Code		Project Number	Project Title
IO/MET	(31.8.A)	SI/CPR/84/803	Pilot demonstration testing for utilization of bauxite residues of the Shangdong Alumina Plant
IO/MET	(31.8.A)	RP/CPR/84/901	Study tour for bauxite-aluminium research (development of carbon metallurgy)
IO/MET	(31.8.D)	DP/CPR/81/031*	Assistance in hot processing technology
IO/MET	(31.8.F)	DP/CPR/80/011*	Chemical reaction engineering laboratory for extractive metallurgy
IO/ENG	(31.9.A)	DP/CPR/81/029*	Assistance to the improvement of design and development capacity of China's photocopier production
IO/ENG	(31.9.B)	DP/CPR/79/021*	Assistance to machine building industry
IO/ENG	(31.9.B)	DP/CPR/80/017*	Agricultural machinery testing centre and technical service to industry
IO/ENG	(31.9.B)	DP/CPR/81/030*	Assistance to the service centre of testing technology in East China
IO/ENG	(31.9.B)	DG/CPR/83/001	Bearing test and research centre (phase II)
IO/ENG	(31.9.C)	DP/CPR/80/050*	Training and development of micro-computer systems application
IO/ENG	(31.9.C)	DP/CPR/80/077*	Assistance to the General Machinery Bureau (FMMB) - electrostatic precipitator testing and development
IO/ENG	(31.9.C)	DP/CPR/81/004*	Regional research and development and training centre for mini-small hydro power generation (multifund to DP/RAS/80/033)

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* Large-scale project (= total allotment $150,000 or above).
** Total allotment $1 million or above.

The approved and/or operational technical co-operation projects of UNIDO
(as of April 1985)

The People's Republic of CHINA
(3)

Spec.Act.Code		Project Number	Project Title
IO/ENG	(31.9.C)	DP/CPR/81/028*	Qualification and surveillance laboratory for consumer electronic products
IO/ENG	(31.9.D)	DP/CPR/81/022*	Quality control and testing of filters for tractor engines
IO/CHEM	(32.1.A)	DP/CPR/82/014*	Cement development centre
IO/CHEM	(32.1.B)	DP/CPR/81/038*	Assistance to glass development centre
IO/CHEM	(32.1.B)	DP/CPR/82/013	Research and development centre for light building materials
IO/CHEM	(32.1.B)	SI/CPR/84/804	Use of non-metallic minerals in agriculture and waste oil absorption
IO/CHEM	(32.1.E)	DP/CPR/81/027*	Technical centre of pulp and paper making technology
IO/CHEM	(32.1.F)	US/CPR/83/277*	Pilot plant for compost production from municipal solid wastes (phase II)
IO/CHEM	(32.1.F)	SI/CPR/85/801	Development of new technologies for phosphate enrichment and proceessing
IO/CHEM	(32.1.G)	DP/CPR/80/008*	Research and development in pesticides
IO/CHEM	(32.1.G)	US/CPR/83/286*	Research and development in pesticides
IO/CHEM	(32.1.H)	DP/CPR/80/061*	Research and development in dye-stuffs (phase I of DP/CPR/84/004)
IO/CHEM	(32.1.H)	DP/CPR/81/020*	Rubber research and development centre
IO/CHEM	(32.1.H)	DG/CPR/82/004*	Synthetic fibre research centre
IO/CHEM	(32.1.H)	DP/CPR/84/004*	Research and development in dye-stuffs (phase II of DP/CPR/80/061)
IO/CHEM	(32.1.I)	DP/CPR/80/048*	Techniques of direct coal liquefaction

* Large-scale project (= total allotment $150,000 or above).
** Total allotment $1 million or above.

The approved and/or operational technical co-operation projects of UNIDO
(as of April 1985)

The People's Republic of CHINA
(4)

Spec.Act.Code		Project Number	Project Title
IO/CHEM	(32.1.I)	US/CPR/81/171*	Industrial biogas technology demonstration plant and experimental station, Beijing
IO/CHEM	(32.1.I)	DP/CPR/83/002*	Techniques of direct coal liquefaction (phase II of DP/CPR/80/048)
IO/CHEM	(32.1.K)	DP/CPR/81/026*	Research and development for fly ash utilization
IS/INF	(62.7.2)	UD/CPR/84/021	Translation into Chinese, editing and printing of UNIDO monograph 'Appropriate industrial technology for paper products and small pulp mills'

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* Large-scale project (= total allotment $150,000 or above).
** Total allotment $1 million or above.

Appendix G

Supplementary Analysis of China's Export Performance, 1979-81

This Appendix presents the results of an attempt at investigating Chinese export performance over the period 1979-81. The methodology developed by Yeats[1/] for computing China's export levels using partner trade data was also utilized here.

The results of the exercise are thus subject to all the qualifications enumerated by Yeats. Moreover there is reason to suspect that the data coverage is less comprehensive and the findings should therefore be treated as tentative.

Table G.1 summarizes the results obtained by computing the index of revealed comparative advantage (RCA) for China's main manufactured export categories over the period 1978-1981.[2/] The table shows that China's highest comparative advantage during the period was in textile yarn and fabrics, clothing and textile fibres. Food products and chemicals also constituted promising growth areas. Although these results are not directly comparable with Yeats (due to differences in product categorization), there is broad similarity in the two sets of estimates. Both find light industrial branches having a high RCA value and machinery and metal products having low RCA values. UNIDO estimates show that whereas the RCA value for food products has gone down since 1978, that for chemicals has significantly improved, offsetting a downward trend detected by Yeats. The international competitiveness of machinery exports has remained virtually unchanged over the last decade. Yeats found it to average 0.17 per cent for 1969-1971 and 0.15 per cent for 1976-1978. The estimate for 1978-1981 is not significantly different.

1/ A. Yeats "China's Recent Export Performance" Development and Change, Vol. 15, No. 1 (1984), p. 1-22.

2/ An effort has been made to exclude mining products.

Table G.1. Trade statistics related to China's selected export products, 1978-1982

SITC a/ (revised)	Description	Share in China's total exports b/	Share in world total exports	China's revealed comparative advantage c/	Net exports d/ 1982
			1978-1981		
0 and 1	Food, beverages and tobacco	0.287	0.117	2.45	1.299
5	Chemicals	0.097	0.084	1.15	-14.536
7	Machinery and transport equipment	0.053	0.304	0.17	-0.583
67	Iron and steel	0.026	0.045	0.57	-0.550
68	Non-ferrous metals	0.014	0.101	0.13	-0.307
84	Clothing	0.141	0.023	6.13	96.716
65	Textile yarn and fabrics	0.230	0.032	7.18	60.353
26	Textile fibres	0.052	0.011	4.72	-31.760
	Other manufactured goods (in ISIC 6 and 8)	0.084	0.277	0.23	0.389

Sources: UN, Yearbook of International Trade Statistics (New York), 1982), Vol. 1; UNIDO data base.

a/ In general, the subgroups of revised SITC (first revision) correspond to items of the original SITC.

b/ The value of total exports is the aggregation of all available 3-digit SITC commodity group as reported by China's trading partners.

c/ Share of a product in China's total exports/Share of the product in world total exports.

d/ Net exports as a per cent of total trade in the selected product.

A more direct comparison with Yeats' results is possible when we consider the evidence in tables G.2 and G.3. These two tables rank China's 30 most successful and least successful manufactured exports in terms of RCA values respectively. Table G.2 includes 24 consumer products and six intermediate products.[1/] Yeats list includes 25 consumer goods. Yeats provides estimates for two periods 1969-1971 and 1976-1978. The value of Spearman's rank correlation co-efficient among the orderings for these two periods is +0.82. This is of course a very imprecise estimate of changes in relative comparative advantage - for it is based on the assumption that the same 30 products were the most successful in both periods which is obviously false. Even within a period of three years - i.e. 1978 and 1981 - there have been significant changes in the list. Thus the 1981 list and Yeats 1978 list include 17 common commodities. The value of Spearman's rank correlation co-efficient for the 1978 and 1981 rankings of these 17 commodities is as high as +0.91 - which is to be expected because of the very small difference in time between the two comparisons. Not much can be made of the difference in product coverage between the two lists because the new items that appear in the 1981 are broadly similar to those displaced from the 1978 level - preserved vegetables, spices, pig iron and organic chemicals against glazed rice, prepared roots and tubers, floor coverings and tin, etc. One would therefore expect that a higher correlation would be found at a two-digit level. Yeats' conclusion that Chinese manufactured exports consist mainly of labour intensive and natural resource intensive products continues to hold for the early 1980s.

When the rankings on China's least successful manufactured exports are compared, the results are more interesting. The 1981 ranking includes 21 products that are found in the 1976-1978 list provided by Yeats. However, the value of Spearman's correlation coefficient between these 21 products ranked in terms of RCA values obtained in 1978 and 1981 is only 0.18. The value of Spearman's rank correlation coefficient for the 1969-1971 and 1976-1978 in Yeats' paper is 0.82. This would mean that commodity turnover at the bottom

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1/ These are explosives, pig iron, jute, inorganic chemicals, nails and non-ferrous bare metal products.

Table G.2. Trade statistics relating to China's thirty most successful export products, 1981

S.No.	SITC	Description	Share in China's total exports a/ (per cent)	Share in world manufactured exports (per cent)	China's revealed comparative advantage (export performance ratio)
1	656	Textile, etc. products, n.e.s.	3.21	0.18	17.83
2	074	Tea and maté	1.10	0.08	13.75
3	651	Cotton fabrics woven tools	3.97	0.33	12.03
4	571	Explosives, pyrotech. products	0.47	0.04	11.75
5	055	Vegetables, etc. preserved and prepared	1.64	0.15	10.93
6	899	Other manufactured goods	2.23	0.23	9.69
7	075	Spices	0.37	0.05	7.40
8	666	Pottery	0.79	0.11	7.18
9	657	Floor cover, Tapestry, etc.	1.37	0.23	6.00
10	613	Fur skins tanned, dressed	0.41	0.07	5.85
11	221	Oil seeds, nuts kernels, etc.	2.66	0.51	5.21
12	842	Fur, etc. clothes	0.31	0.06	5.16
13	841	Clothing excl. fur	10.03	2.02	4.96
14	671	Pig iron, etc.	1.01	0.22	4.59
15	653	Woven textiles, non-cotton	3.31	0.81	4.09
16	831	Travel goods, handbags	0.56	0.14	4.00

Table G.2. (Continued)

S.No.	SITC	Description	Share in China's total exports a/ (per cent)	Share in world manufactured exports (per cent)	China's revealed comparative advantage (export performance ratio)
17	264	Jute	0.04	0.01	4.00
18	013	Meat tinned, n.e.s. prepared	0.42	0.12	3.50
19	031	Fish fresh, simply preserved	1.84	0.56	3.29
20	052	Dried fruit	0.15	0.05	3.00
21	514	Other inorganic chemicals	0.64	0.22	2.91
22	11	Non-alc. beverage	0.11	0.04	2.75
23	696	Cutlery	0.19	0.07	2.71
24	694	Steel, copper rails, nuts etc.	0.38	0.14	2.71
25	697	Bare metal house equipment	0.43	0.16	2.68
26	896	Works of art, etc.	0.29	0.11	2.63
27	654	Lace, ribbons, etc.	0.17	0.07	2.42
28	651	Textile yarn and thread	1.52	0.64	2.38
29	053	Fruit, preserved and prepared	0.49	0.21	2.33
30	689	Non-ferrous base metals	0.21	0.10	2.10

Sources: UNIDO Secretariat computation based on UN Statistical Office data; UNCTAD, Handbook of International Trade and Development Statistics (supplement), 1984.

a/ Value of exports is the aggregation of all available 3-digit SITC commodity group as reported by China's trading partners (partners' imports (c.i.f.) constitute China's exports).

Table G.3. Trade statistics relating to China's thirty least successful export products, 1981

S.No.	SITC	Description	Share in China's total exports a/ (per cent)	Share in world manufactured exports (per cent)	China's revealed comparative advantage (export performance ratio)
1	732	Road motor vehicles	0.07	15.75	0.00
2	341	Gas natural and manufactured	0.01	1.80	0.01
3	714	Office machines	0.02	1.60	0.01
4	734	Aircraft	0.01	1.46	0.01
5	251	Pulp and waste paper	0.01	0.50	0.02
6	071	Coffee	0.01	0.46	0.02
7	561	Fertilizers, manufactured	0.01	0.42	0.02
8	122	Tobacco manufacture	0.01	0.25	0.04
9	266	Synthetic, fibre	0.01	0.21	0.04
10	718	Machines for special industries	0.09	1.65	0.05
11	711	Power machinery non electrical	0.09	1.48	0.06
12	726	Electro-medical X-ray equipment	0.01	0.16	0.06
13	861	Photo, cinema supplies	0.02	0.30	0.07
14	675	Iron, steel, hoop strip	0.01	0.13	0.07
15	712	Agricultural machinery	0.07	0.04	0.08
16	729	Electrical machinery, etc.	0.42	4.02	0.10

Table G.3. (Continued)

S.No.	SITC	Description	Share in China's total exports a/ (per cent)	Share in world manufactured exports (per cent)	China's revealed comparative advantage (export performance ratio)
17	243	Wood, shaped	0.06	0.51	0.11
18	719	Machines, n.e.s. non-electrical	0.59	4.61	0.12
19	674	Iron, steel, universal plate sheet	0.12	1.00	0.12
20	678	Iron, steel, tubes, pipes, etc.	0.13	1.03	0.13
21	681	Silver, platinum, etc.	0.03	0.23	0.13
22	861	Instruments, apparatus	0.16	1.05	0.15
23	892	Printed matter	0.06	0.39	0.15
24	692	Copper	0.08	0.51	0.16
25	431	Processed animal vegetable oil, etc.	0.01	0.06	0.16
26	515	Radioactive, etc., material	0.03	0.16	0.18
27	724	Telecommunications equipment	0.31	1.62	0.19
28	891	Sound recorders, producers	0.14	0.74	0.19
29	735	Ships and boats	0.21	1.05	0.20
30	972	Cocoa	0.04	0.20	0.20

Sources: UNIDO Secretariat computation based on UN Statistical Office data; UNCTAD, Handbook of International Trade and Development Statistics (supplement), 1984.

a/ Value of exports is the aggregation of all available 3-digit SITC commodity group as reported by China's trading partners (partners' imports (c.i.f.) constitute China's exports).

of the manufactured export lists has been very rapid. It would be interesting to compare the 30 least successful export in 1969-1971 with those in 1976-1978. One suspects that commodity composition would be significantly different in the two lists.

Table G.4 compares RCA values of the 21 common exports for 1969-1971, 1976-1978 and the 1981 rankings of China's least succesful exports. The products are almost all produced by the heavy industrial sector mainly by the engineering and the chemical branches. The following products have improved their export performance over the period 1969-1981 and have significantly increased the value of their RCA index; ships and boat components, telecommunication equipment, radioactive equipment, copper products, printed matter, silver and platinum based products and iron and steel sheets. Road motor vehicles, office machines, aircraft and manufactured fertilizers experienced a noticeable deterioration in their export performance ratios over the 1978-1981 period, generally reversing positive trends experienced during 1969-1971 to 1976-1978. This would indicate that the emphasis on liberalization in the field of trade policy has encouraged Chinese firms to specialize in the field of relatively less sophisticated capital goods and intermediate products. China has a better trading profile in these products than in products employing a more advanced technology. Finally it must be stressed that while Table G.4 shows rapid movement at the bottom of China's export profile, the intermediate and simple capital goods have a lot of catching up to do before they can replace the labour intensive and natural resource intensive products in which China currently enjoys her highest international comparative advantage. Unfortunately both the labour and natural resource intensive manufactures and the intermediate and basic capital goods exports in which China is improving her international competitiveness continue to face declining world markets. This can be seen by comparing tables G.2 and G.3 with the data given by Yeats.[1/] The branches which have been increasing their share in world manufacturing trade continue to be those in which China has a weak - in many cases such as aircraft and manufactured fertilizers, a deteriorating - international position.

1/ Yeats, op. cit., pp. 9 and 12.

Table G.4. Changes in RCA Values: 21 Common Manufactured exports

		RCA 1981	RCA 1969-1971	RCA 1976-1978
1.	Road motor vehicles	0.00	0.017	0.020
2.	Office machines	0.01	0.021	0.026
3.	Aircraft	0.01	0.002	0.047
4.	Pulp and waste paper	0.02	0.004	0.020
5.	Coffe	0.02	0.000	0.010
6.	Man. actured fertilizers	0.02	0.004	0.039
7.	Tobacco manufactures	0.04	0.047	0.095
8.	Synthetic fibres	0.04	0.011	0.029
9.	Industrial machines	0.05	0.210	0.100
10.	Electro-medical X-ray	0.06	0.012	0.058
11.	Photo, cinema supplies	0.07	0.072	0.032
12.	Iron and steel hoop strip	0.07	0.023	0.044
13.	Agricultural machinery	0.08	0.030	0.078
14.	Machines, n.e.s. non-electric	0.12	0.111	0.091
15.	Iron and steel sheets	0.12	0.033	0.032
16.	Silver, platinum products	0.13	0.004	0.000
17.	Printed matter	0.15	0.039	0.106
18.	Copper products	0.16	0.027	0.067
19.	Radioactives	0.18	0.017	0.020
20.	Telecommunications equipment	0.19	0.044	0.107
21.	Ships and boats components	0.20	0.004	0.006

Source: 1969-71 and 1976-78, Yeats A. "China's Export Performance" Development and Change, Vol. 15 (1984) No. 1, p. 12.

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