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CURRENCY EQUIVALENTS

Currency Unit = Yuan (Y)

Up to December 15, 1989:

\$1.00 = Y 3.72
Y 1.00 = \$0.27

Up to November 29, 1990:

\$ 1.00 = Y 4.72
Y 1.00 = \$0.21

Effective November 30, 1990:

\$1.00 = Y 5.22
Y 1.00 = \$0.19

FISCAL YEAR

January - December

WEIGHTS AND MEASURES

km	=	kilometer
ha	=	hectare
kWh	=	kilowatt hour
kg	=	kilogram
unit of area	=	mu
1 ha	=	15 mu
1 mu	=	0.067 ha

ABBREVIATIONS AND ACRONYMS

7FYP	=	Seventh Five-Year Plan
8FYP	=	Eighth Five-Year Plan
ABC	=	Agricultural Bank of China
ADF	=	Agriculture Development Fund
BF	=	Budgetary Funds
BOCOM	=	Bank of Communications
BOF	=	Bureau of Finance
BOT	=	Build, Operate and Transfer Back
CAAC	=	Civil Aviation Administration of China
CAM	=	Computer Assisted Manufacturing
CATEC	=	County Agrotechnical Extension Center
CNC	=	Computer Numerical Control
COSCO	=	China Ocean Shipping Corporation
CPC	=	Communist Party of China
CPE	=	Centrally Planned Economy
DER	=	Direct Export Right

EBF	=	Extrabudgetary Funds
EEC	=	European Economic Community
EIA	=	Environmental Impact Assessment
EPB	=	Environmental Protection Bureau
FDI	=	Foreign Direct Investment
FE	=	Foreign Exchange
FEAC	=	Foreign Exchange Adjustment Center
FI	=	Foreign Investment
FTDF	=	Foreign Trade Development Fund
FTC	=	Foreign Trade Corporation
GAC	=	General Administration of Customs
GDP	=	Gross Domestic Product
GNP	=	Gross National Product
GOC	=	Government of China
GVAO	=	Gross Value of Agricultural Output
GVIAO	=	Gross Value of Industrial and Agricultural Output
GVIO	=	Gross Value of Industrial Output
GVO	=	Gross Value of Output
IAIL	=	Integrated Agriculture and Intensification Loan
IBRD	=	International Bank for Reconstruction and Development
ICOR	=	Incremental Capital Output Ratio
JASS	=	Jiangsu Academy of Social Science
JEPB	=	Jiangsu Environmental Protection Bureau
JPCD	=	Jiangsu Provincial Communications Department
JPPEC	=	Jiangsu Provincial Planning and Economic Commission
JV	=	Joint Venture
LDC	=	Less Developed Country
MFA	=	Multifiber Agreement
MOC	=	Ministry of Communications
MOF	=	Ministry of Finance
MOL	=	Ministry of Labor
MOFERT	=	Ministry of Foreign Economic Relation and Trade
NEPA	=	National Environmental Protection Agency
NIC	=	Newly Industrialized Countries
O&M	=	Operation and Maintenance
PBC	=	People's Bank of China
PNE	=	Production Network for Exports
PRC	=	People's Republic of China
PFS	=	Production Responsibility System
QR	=	Quantitative Restriction
R&D	=	Research and Development
RCC	=	Rural Credit Cooperatives
RPI	=	Retail Price Index
RR	=	Retention Right
SAEC	=	State Administration of Exchange Control
SB	=	Specialized Bank
SEZ	=	Special Economic Zone
SOE	=	State-Owned Enterprise
SMC	=	State Material Supply Corporation
SPC	=	State Planning Commission
SRC	=	System Reform Commission
SSS	=	Secondary Specialized School
STC	=	Science and Technology Commission
SVS	=	Secondary Vocational School

SWS	=	Skilled Worker School
TIC	=	Township Industrial Corporation
TPEC	=	Township Planning and Economic Commission
TVCE	=	Township and Village Community Enterprise
TVE	=	Township and Village Enterprise
UCMT	=	Urban Construction and Maintenance Tax
VAT	=	Value Added Tax
WRF	=	Wuxi Radio Factory
ZSG	=	Zhong Shan Group

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ECONOMIC DEVELOPMENT IN JIANGSU PROVINCE

Preface

This report is based on an economic mission which visited Jiangsu from September 9-26, 1990. Mission members included Christine Wallich (Mission Leader); Fernando Montes-Negret (deputy, responsible for TVEs); Anand Rajaram (Industry, Technology Policy and Foreign Direct Investment); Arvind Panagariya (Trade Policy); Caroline Jen (Education and Labor); Jose Veniard (Transport); Roy Bahl (Consultant, Budget and Fiscal Policies); Steven McGurk (Consultant, Agriculture Policy); and Chen Xingdong (RMC). A mission consisting of Messrs. Montes-Negret, Rajaram and Chen visited Jiangsu on June 13-14, 1991 to discuss a draft version of this report with the provincial authorities.

The mission was hosted by the Jiangsu Provincial Planning and Economic Commission, represented by Messrs. Guo Shiliang, Deputy Director, and Jiang Renzhao. A counterpart team from JPPEC, consisting of Messrs. Wu Xingze, Yan Hao and Lu Hongwei accompanied the mission in the field. Mme. Tang Mei Hua (BOF) provided logistical support.

The mission visited Nanjing and Wuxi in the south of the province, together with their associated counties; and Huaiyin and selected counties in the less well-off northern part of the province (Shuyang county). Discussions took place with a range of government bureaus/departments responsible, inter alia, for the agriculture, industrial, material supply, fiscal, banking, foreign exchange and trade sectors, in addition to meetings with the Jiangsu Academy of Social Sciences (JASS); JPPEC (Planning Commission) and System Reform Commission (SRC).

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Kathleen Lynch gave excellent editorial assistance, while Adelma Trim and Meredith Dearborn provided invaluable word-processing support.

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Executive Summary

i. Jiangsu is China's most industrialized province, while its agricultural sector is the most productive in the country. The industrial sector produces a relatively diverse range of products, with nonstate enterprises producing almost half of the gross industrial output. Jiangsu's proximity to Shanghai and its relatively well-developed transport infrastructure have enabled Jiangsu to forge important linkages with the rest of the country, supporting its industrialization, and offering the potential of greater outward orientation.

ii. The Strategic Challenge. With this industrial base, Jiangsu is well placed for continued rapid development in the 1990s and beyond. Nonetheless, both policy and real resource constraints will have to be overcome for Jiangsu to double its current per capita income by the year 2000, as currently targeted. Economic reform and the policy regime adopted by the central and provincial governments will determine Jiangsu's future growth and structure. To sustain the pace of growth and improvements in productivity, Jiangsu needs to push ahead with the full range of enterprise, price, and other related reforms to the extent permitted by central policy guidelines.

iii. Jiangsu's development and growth will depend crucially on the levels of investment, especially in transport and infrastructure, as well as the efficient allocation of such investment. Investment in fixed assets as a share of GNP has generally been maintained at a high level in Jiangsu (as in China as a whole), with the exception of 1988/89 when it dropped from 33.3 percent to 26.4 percent in response to the stabilization policy of the central government. Nevertheless, there is some reason to be concerned about the long-term ability of various levels of government to finance required public investment programs. Budgetary revenue sources have not been buoyant, constraining public investment capacity, while, simultaneously, capital expenditures have been squeezed by the growth of social services and administration costs. Insufficient budgetary and investment allocations to important sectors calls for fiscal reform, combined with attention to public-sector pricing issues and infrastructure-financing mechanisms.

iv. In addition to these challenges, Jiangsu's future development will depend strongly on reforms to industrial policies; policies to foster TVEs; trade, direct investment, and technology-transfer; programs for labor education and absorption, and for agricultural development, described in turn below. Jiangsu will also need to overcome limits imposed by its enterprises' current technology and modes of organization. This will mean deepening enterprise and organizational reform. Reforms to the system of industrial organization (mergers and exit) would also have a major impact on efficiency and growth.

v. Lastly, Jiangsu needs to give careful thought to the approach taken to emerging differences in the north-south development patterns, the balance

within the rural sector between TVCEs and agricultural activities, and the policies adopted in the enterprise sector, towards profitable and loss-making enterprises. Rapid growth in Jiangsu may be served best by permitting enterprises, industries, and regions to develop by exploiting their comparative advantages in a policy environment when the government plays the role of a facilitator rather than a participant. This would require that the Jiangsu provincial and lower levels of government take full advantage of the powers delegated by the center to promote the development of markets, remove barriers to trade, encourage the autonomy and accountability of industrial and financial entities, and, in general, reduce its role in direct resource allocation.

Summary of Recommendations

vi. Industrial Policy. The various levels of government currently conduct industrial policy by intervening in a wide range of sectors and industries through a host of discretionary policies. This raises the costs of economic management by requiring resources to be devoted to monitoring direct policy compliance (indirect policy induces the desired behavior without costly monitoring) and has obstructed achievement of a system whereby "the state will regulate the market and the enterprises will be guided by the market."

vii. Policy reforms in Jiangsu should focus on reducing the interventions by the provincial and local governments and their industrial bureaus in enterprise-level decisions. The role of the government should be defined more narrowly, focusing administrative attention on a few priority areas. The Jiangsu Government has a natural role to play in developing the public infrastructure (transport, power, education), removing barriers to trade and promoting market integration, and facilitating information flows within the province. Encouraging enterprise reforms that strengthen the financial and managerial autonomy of enterprises would enable the government to focus on these priority areas.

viii. Separate from the issue of excessive administrative interventions is the role of the government in defining "priority" industries, which is a major aspect of stated industrial policy in Jiangsu. At present, the priority industries are so broadly defined that any industry, unless explicitly forbidden, can be justified as a priority activity. Real priorities are often only revealed by the system of key materials allocation but, with the gradual reduction of the scope of material allocation, this is a less effective tool for reinforcing stated priorities. This trend suggests that initiatives on industrial development are increasingly determined at local government level. Given this, Jiangsu can improve the quality of industrial investments in the province--addressing issues of appropriate choice of industry, scale, location, etc.--by strengthening the ability of the market to guide and discipline both enterprises and local governments. The province can assist in coordinating investment decisions that straddle administrative boundaries. Promoting market competition both within the province and with other provinces will be a critical function in this respect. The provincial government also has to play a role in shaping technology policy, enforcing pollution control and in consolidating industrial capacity.

ix. Jiangsu's External Stance: Trade and External Policies. Both China and Jiangsu expanded their world trade during the 1980s, but many policies still interfere with Jiangsu's ability to pursue an outward-oriented develop-

ment strategy. National trade policies leave Jiangsu a heavily protected economy, pursuing import substitution and export promotion simultaneously. Although much of what needs to be done in the trade area falls under the center's authority, Jiangsu can carry out a number of reforms.

x. Direct export rights (DERs) for enterprises may be Jiangsu's most important means of promoting its own outward orientation. Currently, Jiangsu confers DERs very selectively under guidelines from the center, and enterprises given DERs are allowed to export only their own products. Jiangsu should promote DERs broadly so that its firms, including large TVEs, can make direct contact with overseas markets and thus establish "reputation" and "name" recognition.

xi. Second, because China's system of foreign exchange retention rights (RR) and input allocations are based on past export earnings, potential exporters are excluded at the outset. Within existing rules, however, Jiangsu does have some room to maneuver. The province can promote a freer market in foreign exchange through swap centers and can release its own planned foreign exchange into the markets for purchase by enterprises. Promoting provincial exports through FTCs on an agency basis is another initiative within the scope of Jiangsu's authority. Many firms seem to have forgone benefits of China's recent devaluations as FTCs maintained domestic procurement prices of export goods constant in Renminbi but raised domestic prices of imported inputs. This policy results in a strong anti-export bias that is inconsistent with Jiangsu's stated export promotion objective.

xii. Finally, Jiangsu should develop a more rules-based export-promotion system wherever possible. Exports are currently promoted through a contract system, with specified export quotas and incentives negotiated enterprise-by-enterprise. Enterprises subject to an export quota obtain a variety of incentives (entitlements to preferred prices for and access to raw materials; bank credit; power supply; foreign exchange) but these ad hoc benefits are not clearly known ex-ante. A rules-based system would be preferable to give every enterprise advance notice about all nondiscriminatory, standardized incentives.

xiii. Technology and Foreign Direct Investment (FDI). Jiangsu has lagged in raising FDI under the open-door policy and should play a more active role in attracting technology and investors to the province. Given Jiangsu's emphasis on expanding technology-intensive "pioneer industries," there is a greater need to develop a strategy to acquire foreign technology (for example, via direct investments; imports, licensing agreements, joint ventures, reverse engineering). Attention should also be given to exports as a way of importing technology (for example, via buyer-seller arrangements and compensation trade).

xiv. Human Resources. Surplus labor is a major concern in Jiangsu, as well as elsewhere in China. While the incompleteness of the ongoing reform process poses difficulties on efficient labor absorption in urban areas, rural labor is outside the sphere of the administrative labor plan system. In Jiangsu, the counterpart of surpluses in the north are shortages and the shift of agricultural labor into the TVCE sector in the rapidly growing south. Some southern cities promote agricultural mechanization to free farm laborers for industry; others promote the contradictory strategy of capital-intensive

industrial development. Jiangsu must instead think globally about labor use and absorption strategies (including the expansion of the service sector) and develop new managerial tools. These mechanisms should include: open, flexible, and responsive province-wide labor markets; information systems at all levels to match job seekers and employers; and an agency for province-wide coordination and labor policy.

xv. An education system with strong emphasis on general education supplemented by "demand-driven" technical/vocational programs is recommended. Under the constraints of central guidelines and the general shortage of education funds, technical/vocational education should be more diverse, with greater effort devoted to short-term training courses for primary and lower secondary school leavers, and use on-the-job training for improving worker skills. Finally, entrepreneurial, managerial, marketing, and accounting training should receive more emphasis to enable further development of both the TVCE and service sectors.

xvi. Challenges for TVCEs. TVCEs are the mainstay of the economy and Jiangsu's local governments have actively promoted their development, but the future performance of TVCEs will depend on the ability to surmount a number of hurdles. TVCE growth may be endangered if local governments follow the path of arranging mergers between profitable TVCEs and failing enterprises. This approach drains retained funds and reduces incentives of profitable TVCEs. It would be preferable to allow loss-making enterprises to fail and encourage mergers and consolidation of profitable TVCEs to reach economies of scale. Jiangsu should also promote joint ventures among local governments so as to pool resources, increase the scale of operations, combat local protectionism and eliminate duplication. (The latter recommendations apply also to SOEs.) Closer ties between TVCEs and SOEs could foster specialization, if done in a way that guarantees TVCE flexibility and autonomy.

xvii. Under the present local ownership form, TVCEs in Jiangsu will find it increasingly difficult to finance their next stage of development, which will involve investments in equipment and technology well beyond the capacity of a single local government (or group of TVCE workers). Larger TVCEs will need new financial instruments to support long-term investments and working capital. A worrisome signal is that, in certain respects, Jiangsu's TVCEs seem to be lagging behind other provinces (Shandong and Guangdong).

xviii. Instances of fiscal predation by local authorities further constrain the supply of capital. If TVCEs in Jiangsu are to flourish, conflicts of interest inherent in the role of local government as owners-cum-tax collectors, and as entrepreneurs-cum-regulators, must be addressed. Because localities depend on TVCEs for revenue, they are ambivalent about collecting taxes, controlling pollution, and enforcing industrial safety standards. The fiscal and development functions of community governments may have to be separated, almost certainly as part of national fiscal reform.

xix. Financing Development in Jiangsu. The low buoyancy of budgetary revenue is the central problem in Jiangsu's fiscal system. While nominal GDP in Jiangsu has grown annually by an average of 17.6 percent over 1986-89, budgetary revenue has only increased by 8.5 percent. By contrast, extrabudgetary revenues of general government (i.e., excluding retained earnings of SOEs) have increased by 18.7 percent per annum over the same period. However, this EBF revenue has accrued entirely to administrative agencies at lower levels of government, while the provincial government's share of revenue retained in the province has declined, from 16.7 percent in 1987 to 14.7 percent in 1989. Moreover, the use of "clawback" taxes on SOEs and TVCEs and the negotiated system of tax relief have resulted in a complicated tax system, straining tax administration capacity.

xx. On the expenditure side, the share of resources devoted to public investment falls short of the amounts needed to improve infrastructure and upgrade industrial production capacity. Much of government expenditure is in the extrabudgetary accounts, which are not fully controlled by the Finance Bureau. Consequently, aggregate expenditures may not match governmental objectives. The provincial government's responsibility for fiscal planning is compromised by local implementation and an inability to monitor the complicated system.

xxi. The province needs a fiscal plan to support its development plan, including projections and a strategy for raising and spending both government budgetary and extrabudgetary resources. Measures will have to be devised to rationalize extrabudgetary expenditures by the BOF and administrative units. Such a plan would include: (i) projections of budget gaps and needs; (ii) capital expenditures matched to resources to defray these expenditures; (iii) estimates of the operation and maintenance costs to support new capital expenditures; and (iv) a plan for fiscal redistribution among different areas in the province.

xxii. While correcting the fundamental problems with the fiscal system must await central government initiative and guidance, some improvements can be carried out by the provincial government. Jiangsu should begin to keep records on how contracting and tax relief affect the size of its tax base, prior to the renegotiation of enterprise contracts which begins in 1991. Another area is to strengthen the provincial tax administration, starting with the (three) major cities that generate half of all revenues. Computerization, unique taxpayer identification numbers, and a proper audit system would yield great revenue returns and would make the system more fair.

xxiii. Agriculture. Jiangsu needs to encourage greater agricultural specialization. Current requirements to produce grain in southern Jiangsu prevent exploitation of comparative advantage in agriculture, which would be served by producing specialty agricultural crops on high-yield lands in the south. Optimally, these regions should not be included in the Jiangsu grain plan. Rather, grain production should be encouraged in the north and other parts of the province that are better suited for these crops and less suited for other endeavors. Agricultural price reform should continue and, within central policy constraints, Jiangsu should try to reduce staple crop procurement so as to release land for other uses, especially in the former leading grain areas.

xxiv. Jiangsu needs to take a number of actions on the following fronts: (i) changing investment priorities to rehabilitate and repair irrigation and drainage networks, particularly in northern Jiangsu; and (ii) reversing the declining trend in agricultural investment, and increasing allocations to research and extension; (iii) resuming the reform process liberalizing pricing, marketing, interprovincial distribution and foreign trade in grain and modern agricultural inputs, while phasing out consumer and fertilizer subsidies.

xxv. Transport. Transport is vital to Jiangsu's industrial development, export growth, and improved north-south integration. To remove transport-related constraints to economic growth, investment must be expanded selectively. The intermodal balance must also be reworked, to build up road and air transport, and to favor waterways over ports. Cost-benefit analysis is recommended for all transport projects. A market-oriented (as distinct from administrative) approach to the allocation of traffic among modes is also recommended, with more decentralization and management independence for transport enterprises. Liberalizing the market and opening road transport to private operators would improve efficiency and encourage fleet modernization.

xxvi. Jiangsu should increase its emphasis on road transport, improve the bulk cargo capacity of rail and waterway systems, encourage private operators in a liberalized market, upgrade and modernize existing facilities, and perfect a multimodal transport system. Financing must be made an integral part of Jiangsu's investment plans for the transport sector. To reach the requisite volume of investment, Jiangsu will have to increase local resource mobilization, seek additional central budgetary allocations, and, where possible, foreign financing. Transport development needs to be financed efficiently, especially through pricing policies that raise more revenues and also rationalize demand. Many transport lines currently are not priced on a cost-basis but operate as if transport were only a public service. Road maintenance fees, and allocations of general tax revenues to transport would supplement self-generated revenues. Jiangsu should also seek to utilize its transport capacity more efficiently by lowering freight traffic intensity from its current high level.

xxvii. Jiangsu has numerous natural advantages and endowments which have, in the past, enabled it to achieve substantial economic progress. The experience of the last decade has shown that these natural advantages can be best exploited by allowing enterprises and farmers to respond to market-driven signals. Jiangsu's future development can thus be favorably influenced by the creation of an appropriate policy environment which continues to expand the role of markets while simultaneously redefining the role of government to focus scarce administrative capacity on a few priority areas. Many of the necessary policy reforms will require central government initiative and guidance but, as this report documents, many other improvements in the policy regime can be accomplished by the province.

I. JIANGSU PROVINCE: RESOURCE ENDOWMENTS, CONSTRAINTS, AND POLICY TOOLS

A. Jiangsu's Economic and Social Structure

1.1 Economic Structure. Jiangsu is the country's most industrialized province, with an industrial output value (GVIO) in 1990 of Y 276.5 billion, about 12 percent of China's total GVIO and 82.6 percent of Jiangsu's total industrial and agricultural output value (GVIAO). More than half of Jiangsu's GVIO is generated by "light industry" (55.6 percent in 1988-90), mainly in the light chemicals, textiles, and electronics subsectors. In contrast to most other parts of China, Jiangsu's industrial TVEs produce a substantial share of provincial GVIO (44.5 percent in 1989), twice the national average. Real GVIO increased more than fourfold in 1980-89 (17.1 percent per annum, see Appendix Table 1.1). Significantly, the contribution of state-owned enterprises (SOEs) to Jiangsu's GVIO (35 percent) is well below the national average of 57 percent and about half of the 69.3 percent share of SOEs in neighboring Shanghai.^{1/} The importance of TVEs in Jiangsu signifies the relatively large role of market-oriented enterprises in this province.

1.2 Jiangsu's agricultural sector, favored by mild weather, rich soil, and abundant water resources, generates 26.4 percent of provincial gross output. Jiangsu has the highest yields in China in grain, cotton, and peanuts, and farming is diversified into cash crops, livestock raising, and aquatic products. Jiangsu is the second largest grain producer after Sichuan and ranks fourth in meat and cotton production. Jiangsu's agriculture grew at 7-8 percent in 1978-84, after the responsibility system was introduced. Since 1985, growth has leveled off to 4 percent (Appendix Table 1.2), following difficulties in increasing yields, marketing, pricing, and input shortages.

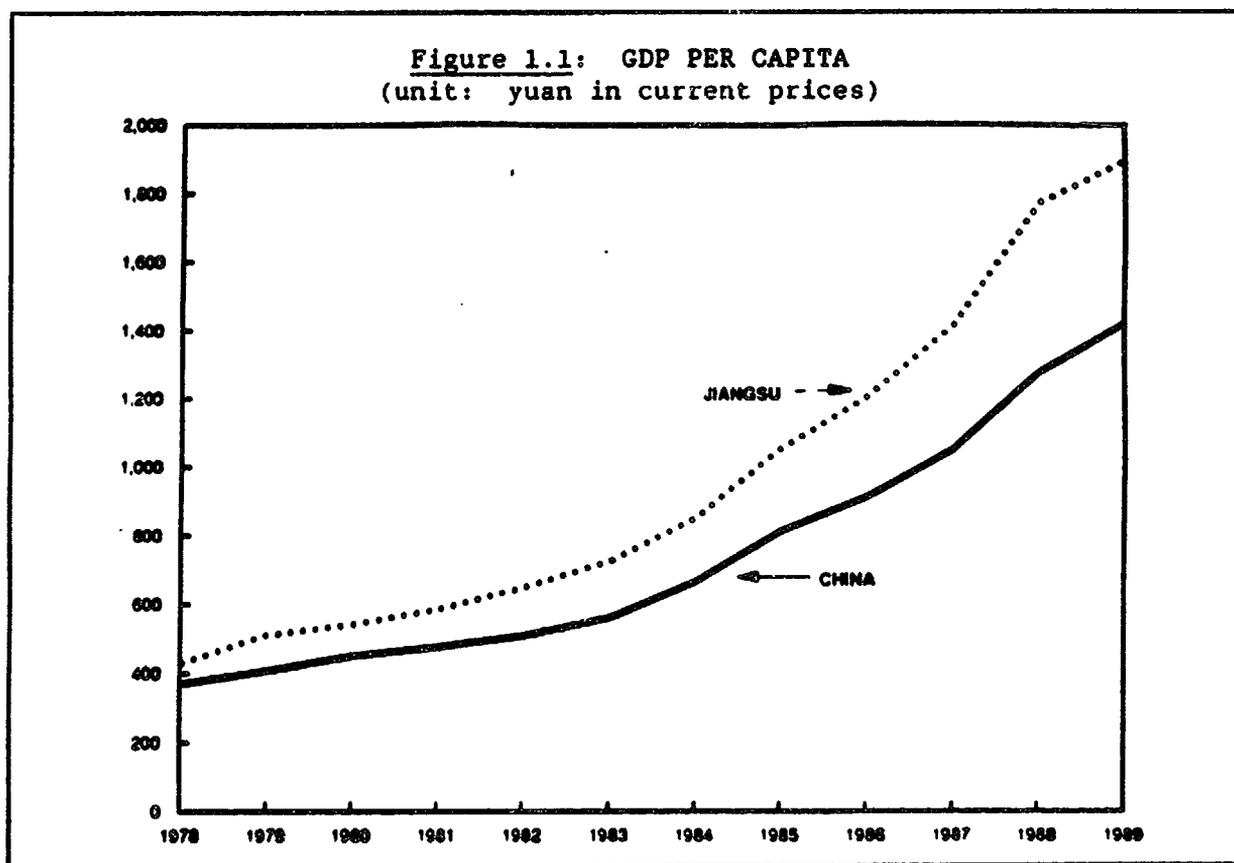
1.3 Jiangsu's external orientation is more recent than that of other provinces such as Guangdong, but the province is well positioned thanks to its coastal location and high level of industrialization. During the 1980s, foreign trade grew rapidly--in real terms at an impressive annual rate of 15 percent until the mid-1980s, when growth tapered to 10 percent. Exports in relation to provincial income rose from 5 percent to 10 percent. However, while Jiangsu produced 12 percent of China's GVIO, it only generated 4.7 percent of China's exports in 1989. Measuring export orientation as the ratio of national export share to national GVIO share, Jiangsu (.39) is less outwardly oriented than Guangdong (3.6) or Fujian (2.9). Close to 50 percent of Jiangsu's exports consist of textiles and garments; light chemicals and agriculture also have significant share. Imports hitherto have been used to ease supply bottlenecks for production and consist mainly of raw materials, machinery, electronic equipment, and technology. Raw materials for the chemical industry have been the largest single import item.

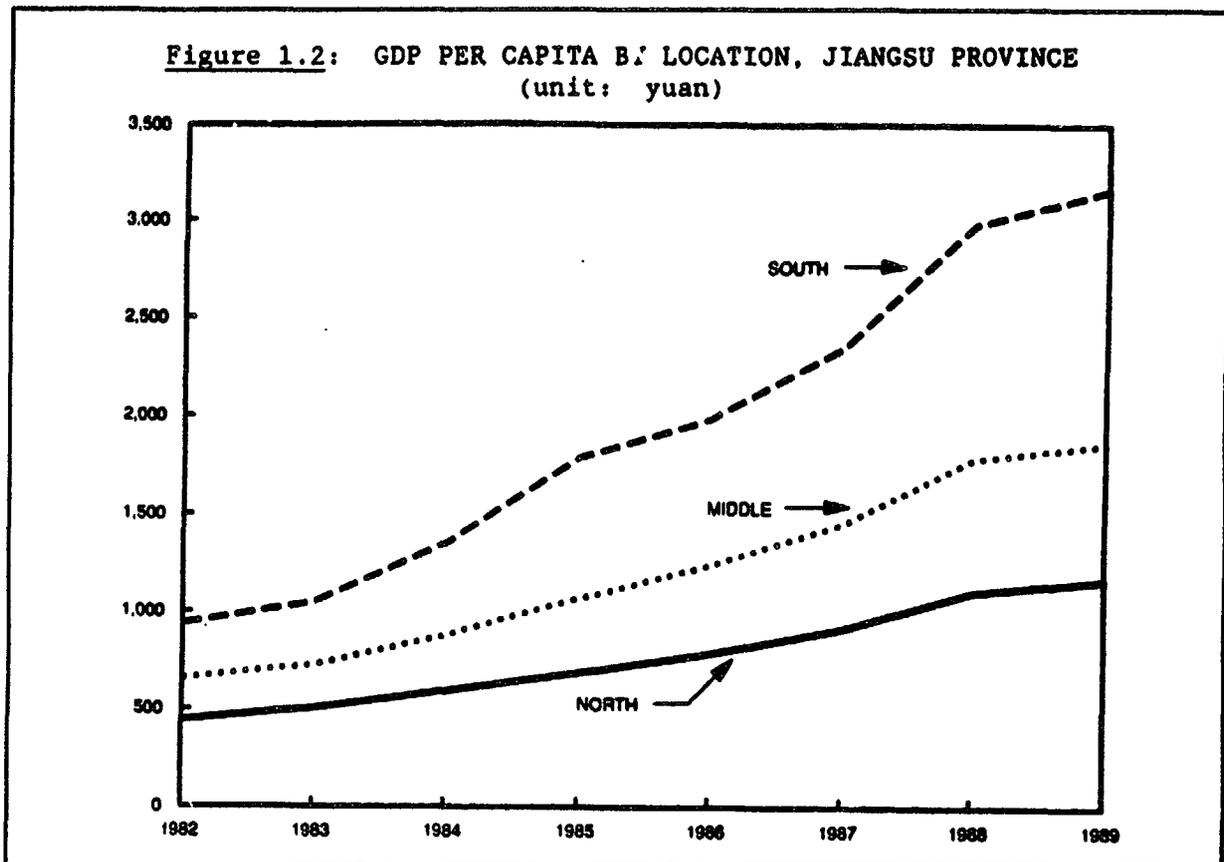
1.4 Jiangsu has tried to create a healthy climate for foreign direct investment (FDI). However, FDI in Jiangsu, as of 1987, remains a small share

^{1/} Figures cited in this chapter may sometimes differ from figures cited in Chapter II. This is explained by the use of two different statistical sources: the China Statistical Yearbook and the Jiangsu Statistical Yearbook and definitional differences therein.

--1.6 percent--of China's total, compared with Guangdong (57.2 percent), Shanghai (6.7 percent), or Fujian (5.5 percent) (Table 2.3). Its composition and economic contribution have been somewhat disappointing. At end-1988, of Jiangsu's 442 approved investments (valued at \$890 million), 421 (92 percent) pledged less than \$10 million; and only two more than \$100 million. About one-third (121) were export oriented, and only 20 of them were "technically advanced," as reflected in the sectoral orientation of FDI which ranked light industry first. (Electronics, instruments, and textile ranked second, third, and fourth, respectively.)

1.5 Product and Income Indicators. Jiangsu's GDP per capita was Y 1,880, 32.4 percent above the national average in 1989 (see Figure 1.1), about twice as high as in China's poorest provinces, Gansu and Guizhou. Within the richer coastal belt, Jiangsu's per capita income is about one-third of neighboring Shanghai's, China's richest province. Intraprovincial income differentials are significant, and the income gap between Jiangsu's northern and southern regions has widened since reforms began (see Figure 1.2). In 1978, southern Jiangsu's per capita income was 2.2 times that of the north; in 1989, it was 2.7 times that of the north (see Appendix Table 1.3). The higher income levels in the south have been driven both by a thriving industrial sector and agricultural prosperity. Industrialization in Jiangsu, by and large, is also associated with higher agricultural labor productivity; the richer industrial south is also agriculturally more productive. This pattern suggests a risk of further widening of north-south differentials.





1.6 Population, Education, and Employment. Jiangsu had a population of 67.6 million in 1990; its population density--higher in the south than the north--of 660 inhabitants per square kilometer, was 5.6 times the national average. Though a populous province, Jiangsu is well endowed with human capital and skills: a comparatively high proportion of the population has received upper secondary, vocational, or technical education. For example, scientific and technical personnel have doubled since 1978 (to rate fifth in the nation) and the enrollment at higher education institutions in Jiangsu is the highest in China. Its labor force participation rate--80 percent of its roughly 35 million labor force--is also one of China's highest. Rural labor makes up almost 75 percent of the labor force, and over 40 percent engage in nonagricultural activities, the highest percentage in the nation. Of the remaining 25 percent, or 8.9 million, urban labor force, less than 0.3 million were employed in the private sector, the rest were "staff and workers" in state, collective, or joint ownership units (Appendix Table 1.1). Labor shortages in the south have appeared in recent years, with every indication that they will become more severe as the province's economy continues to develop.

B. Jiangsu's Special Characteristics

1.7 Table 1.1 provides a comprehensive picture of Jiangsu's place in China's economy along a number of different dimensions. The following features of Jiangsu are noteworthy.

Table 1.1: JIANGSU'S PLACE IN CHINA'S ECONOMY (1989)

	% Share in the nation 1978	% Share in the nation 1989	Ranking in the nation 1989	Top ranking provinces 1989
General Economic Indicators				
GDP (Y 113.2 billion)	6.9	8.2	1	Jiangsu, Guangdong, Shandong
National income (Y 96.9 billion)	6.9	8.6	1	Jiangsu, Shandong, Guangdong
GVIAO (Y 303.0 billion)	7.9	10.6	1	Jiangsu, Shandong, Guangdong
ODP per capita (Y 1,894)	-	-	6	Shanghai, Beijing, Tianjin, Liaoning
Infrastructure and Energy				
Electricity generation	4.9	6.3	4	
Inland waterway (23,653 km)	-	-	1	
Road network (24,609 km)	-	-	24	Sichuan, Hunan, Yunnan, Guangdong, Hubei
Industry				
GVIIO (Y 250.7 billion)	8.0	11.4	1	Jiangsu, Shandong, Guangdong
Production of Industrial Commodities (quarterly)				
Cement (15.1 million tons)	6.9	7.2	3	Guangdong, Shandong, Jiangsu
Caustic soda (0.3 million tons)	8.4	9.9	2	Shandong, Jiangsu, Shanghai
Chemical fiber (0.3 million tons)	7.4	22.5	1	Jiangsu, Shanghai, Liaoning
Cotton yarn (0.7 million tons)	11.9	14.3	1	Jiangsu, Shandong, Hubei
Cotton cloth (0.7 million tons)	12.8	14.9	1	Jiangsu, Shandong, Shanghai
Chemical fertilizer (1.4 million tons)	8.5	7.9	3	Sichuan, Shandong, Jiangsu
Pesticide (0.04 million tons)	9.2	20.5	1	Jiangsu, Hunan, Zhejiang
Sulfuric acid (1.2 million tons)	13.6	10.1	1	Jiangsu, Sichuan, Guangdong
Coal (24.5 million tons)	2.8	2.3	13	Shanxi, Henan, Heilongjiang, Sichuan, Shandong
Steel (1.7 million tons)	1.7	1.9	13	Liaoning, Shanghai, Hubei, Beijing, Hebei
Rolled steel (1.9 million tons)	2.7	3.9	7	Liaoning, Hubei, Shanghai, Sichuan, Beijing
Production of Consumer Durables				
TV (5.3 million)	7.1	19.2	2	Guangdong, Jiangsu, Shanghai
Automobile (38,234)	10.1	6.6	6	Hubei, Beijing, Jilin, Liaoning, Tianjin
Bicycle (4.3 million)	3.6	11.8	3	Shanghai, Tianjin, Jiangsu
Radio (6.8 million)	-	37.0	1	Jiangsu, Guangdong, Shanghai
Sewing machine (1.0 million)	4.1	10.3	3	Shanghai, Guangdong, Jiangsu
Refrigerator (0.6 million)	-	9.5	2	
Electric fan (8.6 million)	-	17.2	2	
Camera (358,316)	-	14.6	2	
Agriculture				
GVAD (Y 52.2 billion)	7.6	8.0	4	Guangdong, Shandong, Sichuan
Cultivated land (68.4 million mu)	-	4.8	7	Heilongjiang, Henan, Shandong
Grain (32.6 million tons)	7.9	8.0	2	Sichuan, Jiangsu, Henan
Oilseed (1.0 million tons)	7.2	7.7	5	Shandong, Sichuan, Henan, Anhui
Cotton (0.5 million tons)	21.9	12.8	4	Shandong, Hebei, Henan

- (a) By most macroeconomic measures, Jiangsu is among China's top two or three provinces. It is top ranked in terms of the share of the nation's GVIAO and GVIIO, and is second ranked in terms of provincial GDP and national income.
- (b) The picture of Jiangsu as a relatively well developed industrial economy is supported by the number of product lines in which it is ranked among the top three provinces. It is the top ranked producer of cotton yarn, cotton cloth, pesticides, sulfuric acid, chemical fiber, TVs and radios; second ranked in producing many consumer durables (electric fans, refrigerators, cameras); and third ranked in production of cement, chemical fertilizer, bicycles, sewing machines, etc. Only Liaoning and Shandong use more energy than

Jiangsu but, unlike these provinces, Jiangsu is among the most efficient in energy and electricity use per unit of output.^{2/}

- (c) As the fourth ranked province in terms of GVAO, Jiangsu's agriculture remains a significant source of both its own, and China's, economic strength.
- (d) Jiangsu's industrial sector is characterized by the relative importance of small, nonstate (TVCE) enterprises engaged in light industry processing activities (see Chapter II).

1.8 Table 1.2 attempts a comparison between Jiangsu and its coastal neighbors to the north and the south; Shandong and Zhejiang, where industrial growth has also been rapid in the last decade, in order to pinpoint the basis for Jiangsu's growth performance. Jiangsu is similar to Zhejiang in most respects (per capita income, share of agriculture in national income, rate of taxation of TVCEs), it shares some features with Shandong (share of light industry in GVIO), and falls in between on some quantitative measures (share of SOEs and collectives in GVIO). Jiangsu differs from both its coastal neighbors in being slightly more industrialized and somewhat less export-oriented. The significant difference between Jiangsu and its neighbors is that the rural industrial sector is a much more important part of Jiangsu's economy than in either of its neighboring provinces ^{3/} (see Table 1.2).

1.9 Another important factor in Jiangsu's development is the role of its skilled labor force and the initial endowment of human capital. As indicated by Table 1.2, Jiangsu has a relatively large share of the nation's scientific and technical labor force (5.47 percent), a high rate of growth in that stock, and the highest level of enrollment in higher education institutions. Jiangsu's superior human capital endowment is only partially indicated by these quantitative measures. The qualitative significance of the educational variable (the quality of Jiangsu's educational institutions, for example) and the presence of entrepreneurial and managerial skills (which cannot be easily measured) is perhaps even more important in explaining Jiangsu's performance.

1.10 The historical and geographical connection of Jiangsu to Shanghai and the proximity of most southern Jiangsu cities to Shanghai has also contributed to development in Jiangsu. Historically, Shanghai was China's financial and industrial center and its window on the western world.^{4/} Even today Shanghai remains China's richest and most advanced area. Good waterway and rail connections link Shanghai and Jiangsu. Shanghai provides southern Jiangsu with a conduit to managerial and technological expertise and access to

^{2/} Energy consumption in Jiangsu in 1989 was 23.9 thousand SCEs per billion yuan of GVIO whereas the corresponding figures for Shandong and Liaoning were 37 and 60.7 thousand SCEs, respectively.

^{3/} Recent growth of the TVCE sector in Shandong has been much faster than in Jiangsu, however, as is indicated by Table 1.2.

^{4/} Shanghai's importance is indicated by the early (1927) classification of Shanghai as provincial level municipality under the central government.

Table 1.2: COMPARISON OF JIANGSU AND OTHER COASTAL PROVINCES

	Jiangsu	Zhejiang	Shandong
Per capita income (1989 current prices)	1,879	1,876	1,472
Population (millions, 1989)	65.36	42.08	81.6
GDP (billion yuan, 1989)	122.85	78.96	120.1
<u>Sectoral Shares</u>			
Agriculture	30.6	30.8	38.5
Industry	51.5	48.7	45.8
Other	18.0	20.5	15.7
<u>GVI0 by Ownership</u>			
SOE	35.0	22.5	46.0
Collective	59.4	63.5	48.9
Other	5.6	14.0	5.1
<u>Light-Heavy Industry (%)</u>			
Light industry GVI0	53	64	52
Heavy industry GVI0	47	35	48
Exports as % of GDP	7.4	8.9	9.6
Share of China's scientists and technicians	5.5	2.8	5.5
<u>Rural TVCE Characteristics</u>			
Growth of rural industrial output, 1986-89 (%)	122.1	116.1	248.3
TVCE tax rate, 1986-90 (%)	74.9	77.9	40.5
Sales income of TVCEs (billion yuan)	89.4	49.5	61.8
Original value of fixed assets (billion yuan)	29.9	16.0	24.0

Sources: China Statistical Yearbook, 1989, 1990; and 'China: Rural Enterprises, Rural Industry, 1986-90,' by Anthony Ody, World Bank draft paper, 1991.

the outside world.^{5/} The practice of subcontracting between Shanghai and enterprises in cities like Wuxi and Suzhou directly contributes to Jiangsu's development. These factors are central to an explanation of southern Jiangsu's growth performance,^{6/} especially in its success in carving out a niche for itself in several technologically advanced industries: petrochemicals, electronics, and telecommunication. The strong growth in southern Jiangsu compared to northern Jiangsu (which is separated by the Yangtze and the Huai rivers) is another reflection of this "Shanghai connection."

^{5/} Close to one-third of China's cargo is handled at Shanghai seaport.

^{6/} Shanghai's contribution to southern Jiangsu's annual GVI0 growth rate in the eighties is statistically significant with R² value as high as 0.9.

1.11 GDP Growth. In the decade ended in 1989, Jiangsu's real GDP grew much faster (40 percent) than the nation (Figure 1.1).^{7/} The difference was particularly marked in 1981, when Jiangsu grew almost twice as fast as the country as a whole (9.6 percent versus 4.9 percent), and in 1985 when Jiangsu grew almost 60 percent above the already very high national rate (20.7 percent versus 13.1 percent for China). This exceptional performance was repeated but for 1980, 1984 and 1989, which were also periods of relative contraction throughout China. During these slowdowns, GDP growth averaged about 6 percent less in Jiangsu than in China as a whole. The difference seems to have become more marked over time, with Jiangsu's growth rate lagging only 0.3 percentage points behind the national rate in 1980 and by one percentage point in 1984. In 1989, for the first time, Jiangsu did substantially worse than the nation (1.4 percent versus 3.9 percent).

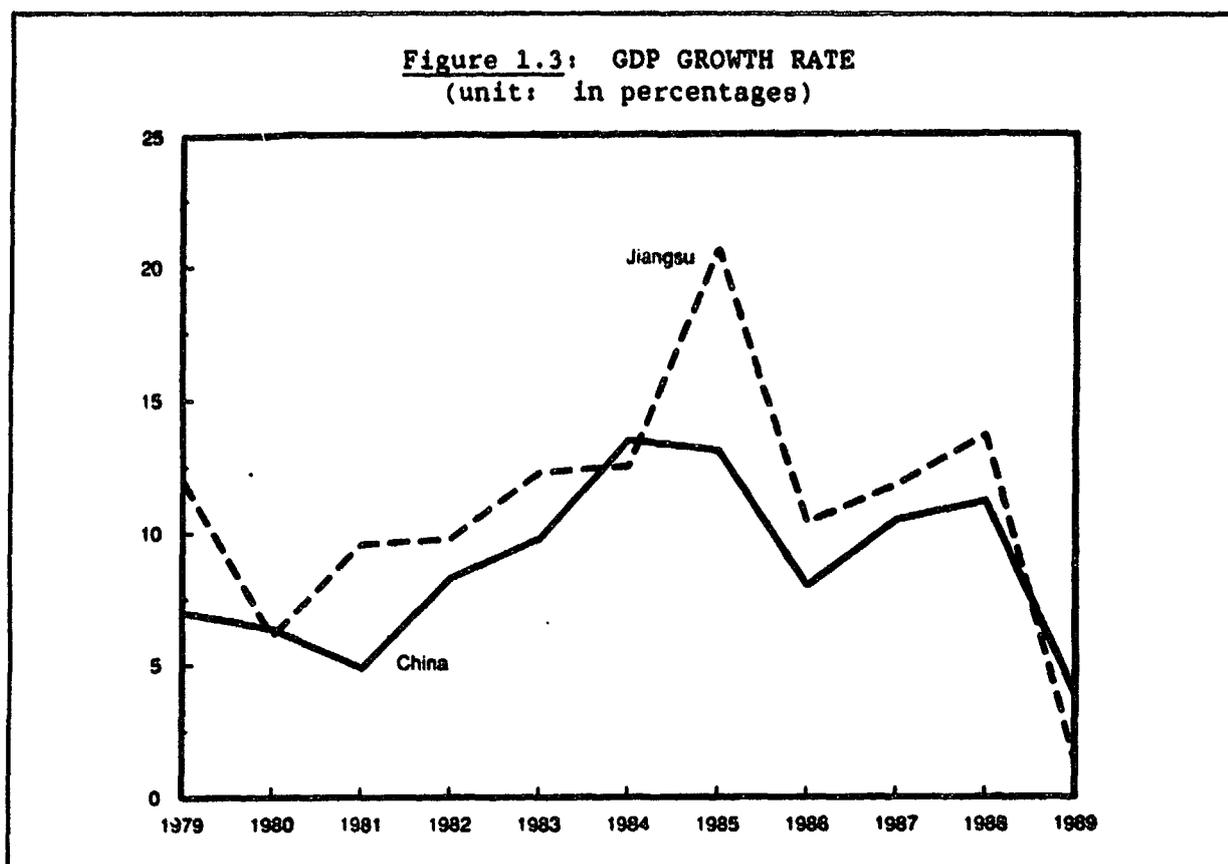
1.12 Cyclical Growth Pattern. Jiangsu's GDP growth rate largely follows the general cyclical pattern of the nation but its growth cycles have become more pronounced since 1984 (Figure 1.3). Growth spurts have been more peaked, and the decline more acute. Three factors explain this cyclical growth phenomenon: Jiangsu's orientation toward the domestic market, the relative sensitivity of Jiangsu's industries, particularly TVCEs, to the use of administrative measures to control demand in China, and the importance of the machinery sector in Jiangsu.

1.13 First, Jiangsu's economy is relatively strongly linked to the national rather than the world economy, in spite of its coastal location. In 1989, Jiangsu exported about \$2.4 billion or 7.4 percent of its GDP,^{8/} a lower share than Shandong (9.6 percent) and Zhejiang (8.9 percent) and far less than Guangdong (23.5 percent). Jiangsu started its "opening to the outside world" relatively late and is still oriented towards the more profitable domestic market. As a result, when the domestic market turned down in 1989, Jiangsu's nominal GNP grew by only 8.5 percent whereas Guangdong (19.4 percent) and Fujian (17.7 percent) grew more rapidly.

1.14 Second, the "retrenchment program" had a disproportionately negative impact on Jiangsu's economy in 1989 because the heavy reliance on administrative controls to reduce China's excess aggregate demand, especially through large cuts in bank credit, discriminated against the TVCEs, which constitute a more market-oriented segment of Jiangsu's economy. Jiangsu has a relatively high share of industrial township and village enterprises (TVEs) which generate 45.3 percent of Jiangsu's GVIO compared with 19.6 percent at the national level. This relatively high concentration in the TVE form of ownership combined with the differential treatment accorded to TVEs during the retrenchment program in terms of discriminatory access to credit, made Jiangsu's TVEs, and therefore its industrial growth, very procyclical.

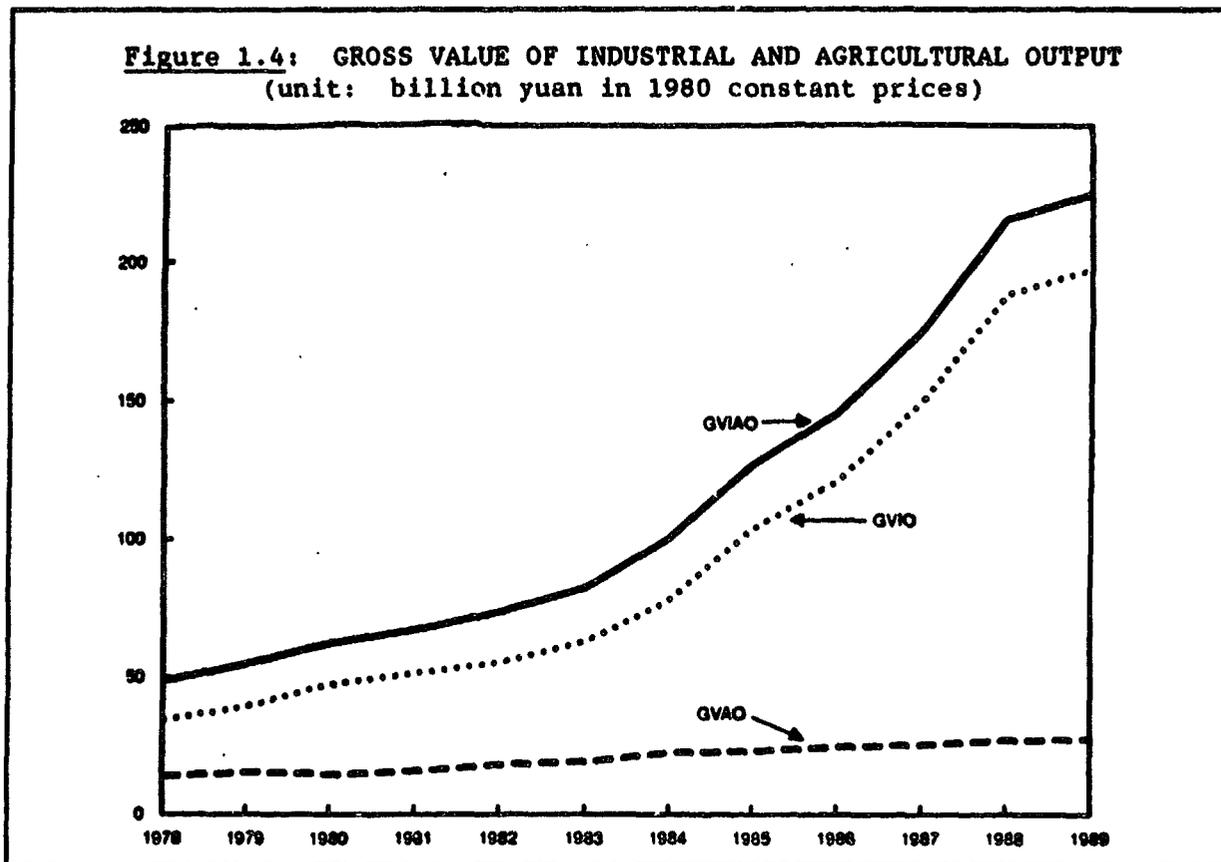
^{7/} In the early reform period, from 1978-82, Jiangsu grew 9.2 percent, compared to 6.6 percent for the nation as a whole. Growth accelerated in 1983, averaging 13.8 percent in the 1983-88 period, compared to 10 percent for China overall (Appendix Table 1.2).

^{8/} This ratio tends to overestimates Jiangsu's "openness" due to the large underestimation of its GDP.



1.15 Third, capital goods industries are subject to especially wide swings in the course of an economic cycle because, in a downturn, enterprises cancel or put off orders for machinery while, in an upturn, investment plans may be speeded up. The large (11.6 percent) share of the machinery sector in Jiangsu thus has a sizable "multiplier-accelerator" effect on the economy, making GVIO more sensitive to aggregate demand shocks.

1.16 Ownership Structure. Rural reforms and the household responsibility system began formally throughout China in the early 1980s. Jiangsu already had a strong, pre-existing foundation of collective ownership, especially in the south, and had started the process of devolution of responsibilities to local governments. The development of rural industries (later TVEs) began in the 1970s and came into full flower with the rural reforms of 1979 and the introduction of market economy modes of organization. Jiangsu also emphasized early the role of the cities in the development of townships and rural areas, eliminating independent prefectures in 1984, and placing rural townships and counties under the leadership of municipalities. The parallel development of household- and collective-based rural agriculture as well as rural industry in this double-track system was unique to Jiangsu. The combination of individual and collective organizations has enabled Jiangsu to develop a broader cross-section of its economy than would have been possible had, for example, only household-based activities in agriculture and collective-based activity in industry been emphasized, as happened elsewhere in China. In Jiangsu's unusual ownership structure, rural community-owned industry generated 44.5 percent



of Jiangsu's industrial growth in 1989 and contributed one-third to one-fourth of Jiangsu's total exports.

1.17 The "Wuxi (or Southern Jiangsu) model," an innovative and peculiar system of property rights evolved, particularly in southern Jiangsu. Under this model, a highly communally oriented and integrated economy developed in which the township governments exercise strict control over production, investment decisions, and important managerial decisions in all nonfarm operations. After the introduction of the production responsibility system (PRS), community governments continued to own and control town and village enterprises. In turn, town and village community enterprises (TVCEs) became major sources of revenue for local governments, through both taxation and profit remittances, part of which is used to subsidize agriculture, support social programs, and finance administrative functions of local governments.

1.18 North and South Imbalances. Jiangsu is characterized by dualism in urbanization, industrialization, and incomes between north and south, roughly divided by an arc drawn between Nantong and Yanzhou. Southern Jiangsu, once an important agricultural base of China, has become much more of an industrial region as a result of an industrial growth rate above 22 percent per annum since 1984. The south is more strongly linked to Shanghai and the coast than to the north. By contrast, northern Jiangsu remains agricultural and less well integrated with the coast or even the south largely due to poor transport infrastructure (see Chapter VI). Its GVAO has grown more rapidly than that of southern Jiangsu (Appendix Table 1.4) and now contributes close to half of

provincial grain production (Appendix Table 1.5), and 60 percent of cotton production (Appendix Table 1.6). These differences in industrialization are reflected in the significant per capita income differentials (see para. 1.6) between south and north.

1.19 North-South income differentials are also reflected in the labor and educational attainments of the two areas. The north has a surplus of unskilled labor with only basic education, while education and technical skills are quite high in the south. Infrastructural facilities are superior in the south which is also more urbanized.

C. Policy Framework: National and Provincial Policies

1.20 As a province of a large nation, Jiangsu has both significant advantages as well as important limitations on its ability to formulate development strategy. Clearly any efficient strategy will involve both central government actions which improve the allocation of resources within the national economy as well as actions by the province which contribute to better utilization of Jiangsu's development potential. In the discussion of this report, responsibilities and actions required by the two levels of government have to be distinguished and the need for coordination of policies and reforms identified where this is appropriate.

1.21 The policy matrix (Table 1.3) indicates that important areas of macroeconomic management fall under central control as would be expected. Trade policy is substantially determined by the center, as is interest rate policy. However, while the structure of nominal tax rates is centrally defined, the actual control over fiscal policy in China is limited by the revenue-sharing arrangement between the provinces and the center. The matrix also reveals the predominance of direct control instruments (credit ceilings, investment ceilings, materials allocation, grain crop targets, etc.) both in the list of central policy tools as well as in the provincial policy instrument list.

1.22 The identification of central and provincial policy instruments still leaves an important issue unaddressed--the need for economic reforms and the extent of initiative that can legitimately be exercised by the province. Previous Bank reports have provided suggestions on reforms which are important for China to continue its rapid economic progress--macroeconomic management (including tax and financial sector reform), price reform, enterprise reform (including ownership reform), reforms to the trade regime, and social sector reforms (including housing and social security issues). Without dwelling at length on the details, it may be useful to recount the role of the center in initiating many of these reforms.^{9/}

1.23 Reforms that will strengthen the center's ability to use indirect policy instruments for macroeconomic management include actions in the area of

^{9/} The nature of such reforms has been discussed in earlier World Bank reports on the topic. See China: Macroeconomic Stability and Industrial Growth Under Decentralized Socialism, World Bank, 1989, China, Industrial Policies for an Economy in Transition, World Bank, 1990, China: Between Plan and Market, World Bank, 1990.

Table 1.3: POLICY MATRIX FOR JIANGSU

INSTRUMENTS	CONTROLLED BY THE CENTER	CONTROLLED BY JIANGSU	
INDIRECT POLICY INSTRUMENTS	CENTRAL	PROVINCIAL	MUNICIPAL
PRICES	Prices of 13 key items Issue of price guidelines	Manipulation of guided prices and influence over market prices	Control over prices of consumption items such as meat, eggs, etc.
TRADE POLICY	Exchange rate, Tariffs QFs, FE retention rates on quota and above quota exports Export licensing of category 1 and 2 items	Can vary FE retention rate via export quotas (see below)	
FOREIGN INVESTMENT	Framework of incentives for foreign investment Tax incentives for export & high tech FDI	Exemption from local income tax and land use fees is offered to FDI with more generous incentives for export and adv. tech. FDI	
MONETARY POLICY	Interest rates		
TAX POLICY	Nominal tax rates	(See under direct policy below)	
TRANSPORT POLICY	Railway tariffs Fuel taxes	Water transport tariff rates Truck transport tariff rates Road maintenance fee	
ENVIRONMENTAL POLICY	Emission levies are set by NEPA; levy system is currently under review.	Province has contracts with local governments on environmental targets	Municipal bureaus write env. contracts with enterprises ranking them on performance
DIRECT POLICY INSTRUMENTS	CENTRAL	PROVINCIAL	MUNICIPAL
INDUSTRIAL/INVESTMENT POLICY	Designation of national priority industries for investment & development Direct investment in key sectors and large SOEs Approval process for investments over ceiling	Provincial priorities for investment Direct investment in large enterprises & infrastructure Approval of local investment over ceiling	Local priorities for investment and production Investment plan for municipality
CREDIT POLICY	Credit plan and directed credit to key enterprises	Credit allocation w/in provincial credit ceiling	Credit allocation w/in municipal credit ceiling
MATERIAL SUPPLY	Key materials allocation	Material allocation	Material allocation
CONTRACTING TAXES	Revenue sharing with provinces (tax contracts) Contracts w/ state-owned enterprises including tax, profit, & export targets Tax concessions to state owned enterprises Tax concessions for high tech investment	Fiscal contracts w/ towns, counties Contracts w/ provincial enterprises including tax, profit, & export targets Tax concessions to provincial enterprises	Bureau contracts with enterprises Contracts w/ municipal enterprises including tax, profit, & export targets Tax concessions to local enterprises
TRANSPORT POLICY	Direct investment in transport infrastructure	Investment in transport infrastructure	
TRADE POLICY	Export quotas with provincial MUFERT Granting Direct Trading rights	Set Export quotas for local govt. & prov. enterprises Can grant direct trading rights w/in guidelines	Set Export contract quotas with local enterprises
FOREIGN INVESTMENT	Approval process for FDI Defining approval limits for provinces	Implementing central guidelines Defining approval limits for municipalities	Local tax and fee concessions
TECHNOLOGY POLICY	Framework of technology pol. VAT exemption for state standard products	Implementing central guidelines	Earmarking revenue for technical upgrading
EDUCATION POLICY	Defining objectives	Implementing directives Finance and training of teachers	Finance and training of teachers
AGRICULTURAL POLICY	Cotton and sugar prices Provincial grain and crop targets Quota prices for grain and oilseeds Pricing and allocation of high analysis fertilizer Budgetary subsidies for agricultural inputs & to cover agric. SOE losses Investment in major irrig. and grain processing enterprises and depots.	Additional price incentives for cotton production, Cotton area targets within province Negotiated prices on above quota procurement of grains and oilseeds Pricing and allocation of low analysis fertilizer FE allocation for import of high quality fertilizer Budgetary subsidies for agricultural inputs & to cover agroind. losses Medium irrigation, non-SOE agroindustry investment Land conversion tax and administrative controls on land use	Retail price ceilings and subsidies for meat/eggs, etc. Negotiated prices on above quota procurement of grains and oilseeds Pricing and allocation of low analysis fertilizer produced by local factories Extrabudgetary funds of agriculture finance departments Small irrigation projects, depots, and agroindustry
SUBSIDIES	Subsidies to cover losses of state enterprises	Subsidies to cover losses of provincial enterprises	Food subsidies Subsidies to TVEs
EXTRABUDGETARY OPERATIONS		Fees and charges collected by admin. departments	Local fees collected and Extrabudgetary fund allocations

center-province fiscal relations and reforms to the system of enterprise taxation. (The latter will necessarily involve modifications to the contract responsibility system.) Financial sector reforms must redefine the role of the PBC such that it focuses on monetary management, setting of the base discount rate, and supervision and regulation of commercial banks which are allowed to function in an autonomous capacity. The center's role in planning has been substantially redefined in the last decade and has become more focused on investment in a few priority activities and a reduced volume of material allocation via the plan. This trend needs to be continued. Any change in the trade regime involves central government action. All the above constitute areas of reform that involve central initiative and that are completely outside the domain of provincial authorities. A number of other issues require substantial guidance and coordination between state and provincial governments. These include enterprise reform and price reform.

1.24 Areas such as social security and housing allow provinces to experiment with alternatives under the current strategy of reform but the interrelationship between these and other reforms (for example, enterprise and price reforms) limit the scope of provincial experimentation. Thus, most economic reforms must either originate or be substantially guided by the center, with the province having some limited scope for action in specific areas such as housing and social security. Nevertheless, the continued pursuit of economic reform by the center has a critical bearing on the development prospects and strategies of individual provinces such as Jiangsu. The need for national price reform is perhaps the most pressing issue in terms of its impact on regional and provincial development prospects.

1.25 The decentralization of economic decision making during the 1980s has increased the scope for provincial and local governments to influence industrial investment, with central government direct investments limited to key raw material and infrastructural sectors and the largest state enterprises (about 200 nationwide). While the center retains some control over provincial investment (through aggregate investment ceilings, a list of "negative industries," a requirement that all projects above a certain ceiling have SPC approval, and review of projects needing central funding or material supply), about 58 percent of total investment in China is now estimated to be outside central control (that is, under the control of provinces and smaller administrative units).^{10/} Some of these controls have been tightened since July 1990, when a more extensive list of activities subject to central approval was issued in an effort to "adjust the industrial structure and to increase macroeconomic efficiency" (see Annex 1). While these recent changes have checked the overall process of decentralization, the last decade of economic reform has nevertheless witnessed a significant overall reduction in the center's use of administrative instruments. However, this has not been matched by a corresponding development of alternative indirect instruments for controlling and influencing industrial development. For example, the use of market prices to

^{10/} Industrial Policies for an Economy in Transition, CHA-8312, World Bank, June 1990.

deal with national shortages of key raw materials and interprovincial trade in such materials remains to be adequately adopted.^{11/}

1.26 The policy matrix indicates that Jiangsu relies heavily on direct intervention to achieve its policy objectives. Relatively greater latitude is available to Jiangsu in the area of direct tools such as investment approvals. The central government's role here is increasingly limited to key sectors and large infrastructure projects, with provincial government now approving some 60 percent of investments. The role of local governments is also substantial in formulating the credit and investment plans. Correspondingly, the function of credit allocation within the overall provincial quota remains large within the province.

1.27 In spite of the latitude Jiangsu may have in implementing direct controls, these instruments remain flawed. For example, in an environment where prices are distorted, direct credit allocation can lead to a misallocation of resources, including financing nonviable enterprises and unsalable inventories. The achievement of fast rates of provincial growth and Jiangsu's future modernization hinges increasingly on its ability to devise new financial and institutional arrangements to revitalize its most productive industries and companies. Delays in this area could frustrate Jiangsu's plans to integrate its economy more closely with the international market.

1.28 Similarly, enterprise contracts have only limited incentive effects, as they work like direct instruments with case-by-case negotiation of taxes, profits and exports, while also weakening the central government's development of indirect policy tools. Illustrating the axiom that direct, ad hoc, controls tend to proliferate, the system has been extended to foreign ventures which now receive tax concessions, preferential allocation of power, water and other inputs and access to infrastructural facilities--each a major element of the central guideline to local governments to increase foreign investment.

1.29 In sum, the policy matrix illustrates the continued heavy reliance on a system of direct controls generally, but particularly within the province. The limited reliance on market-determined prices reduces the efficiency of information flows and decision-making in Jiangsu and increases the costs of economic management. The negotiated system creates an approach that is non-transparent, arbitrary, and complex. It gives no clear signals for efficient resource allocation, and it increases the burden of administration and enforcement.

1.30 The Scope for Provincial Policies. Jiangsu could improve the policy environment by replacing direct controls with indirect instruments wherever possible, although this will require, for the most part, central government initiative. The province can take some measures to increase policy transparency and to ensure that local government interventions support rather than

^{11/} Jiangsu's interests often conflict with raw material producing provinces that are unwilling to supply the amounts required, preferring to set up processing industries within their own provinces. This autarkic tendency is encouraged by the centrally guided price structure which allows profits to be captured by final goods producers but not by raw material producers.

distort the effects of the center's indirect policies. Within the realm of what Jiangsu can effect, enterprise reforms, removing taxes from the enterprise contracts, allowing credit to be determined by autonomous financial institutions, increasing materials allocation via the market, subjecting all enterprises to a hard budget constraint are a high priority. Reforms in the system of industrial organization are essential to improve enterprise efficiency, and policies toward enterprise consolidation, industrial entries and "exits" (failures) all need to be addressed. Restructuring should be undertaken with extreme caution given the present context of distorted relative prices. Jiangsu could pioneer administrative reforms directed at reducing the number of industrial bureaus and strengthening horizontal cooperation. The province should enhance its role as facilitator of economic development, while strengthening its statistical, research, and policymaking capabilities.

1.31 Trying to overcome the shortage of raw materials, Jiangsu has been experimenting with various forms of "horizontal cooperation" with other interior, resource-abundant, provinces. Jiangsu has established "raw material production bases" in Gansu and Guangxi, supplying funds and technology, in exchange for raw materials. These work to a limited degree, but the fundamental problem of materials shortages remains. Some of these scarcities are artificial and reflect price distortions and protectionist trade policies. The removal of intraprovincial barriers offers the best potential for increasing industrial efficiency, achieving optimal plant sizes and location, and enhancing Jiangsu's specialization to reflect local comparative advantages.

D. Future Development Issues

1.32 Jiangsu's development and growth path will depend crucially in the future on its reforms (discussed above), its investment rate, and its approach to addressing emerging differences in north-south development patterns; the balance, within the rural sector between TVEs and agriculture; and the policies adopted, within the enterprise sector, to the conflicting interests of profitable and loss-making enterprises. Each of these reflect different aspects of a strategic choice facing Jiangsu, of whether to pursue a strategy of "balanced" or "unbalanced" growth. Each of these are discussed below, and their implications for future growth assessed.

1.33 The Investment Plan and Vision Information on Jiangsu's public investment program is limited. While the stabilization program necessitated a decline in real investment in 1989, it is likely that investment will recover rapidly. However, public investment may continue to be constrained by the slow growth of revenue. Improving the efficiency of investment is thus even more crucial. The greater efficiency generated by the urban reforms since 1984 has already been reflected in Jiangsu's past high growth rates. Growth has been 50 percent higher in the post reform period (14 percent from 1984-88 compared to 9.5 percent) than in the 1979-83 period. This has taken place with a less-than-proportionate increase in investment resources, suggesting a

major improvement in investment efficiency due to reforms.^{12/} In fact, the investment rate also increased over this period, so that Jiangsu benefited from both an increase in the investment rate and from greater efficiency of investment. Higher investment per se is estimated to have increased Jiangsu's growth by about 2.5 percentage points in the 1984-88 period, while increased investment efficiency has added 1.9 percentage points. Assuming continued efficiency gains can be achieved through reforms, Jiangsu should be able to exceed the 8FYP GDP growth target of 6 percent per annum with a higher level of consumption resources available for the population at large. By contrast, a return to the less-efficient, prereform structures would call for a larger share of investment resources than in the recent past to generate this level of growth.

1.34 Jiangsu's 8FYP outline has the objective of achieving annual rates of real growth of GNP, NI, GVIAO, GVIO and GVAO of 6 percent, 5 percent, 7.5 percent, 8 percent and 3 percent, respectively. The plan intends to increase the share of investment in agriculture and irrigation as well as transport, energy and communications, while reducing the share of investment in processing industries. Major projects in transport include three class I highways, a national railway through northern Jiangsu in collaboration with the Ministry of Railways, and a road bridge across the Yangtze at Jiangyin. In general, these investments are consistent with the view expressed in this report that government should focus on infrastructure projects in bottleneck areas. The plan should provide not only a list of growth targets and projects, but a policy framework and a reform agenda in which investment and production will take place to achieve desired macro targets and distributional goals consistent with this vision, while addressing key infrastructural constraints. The weakness of the provincial plan is its lack of emphasis on employment issues. Since many of the plan projects are capital-intensive, their potential for labor absorption is limited. An estimated 3.4 million workers are expected to join the urban labor force during the 8FYP, so this may have the effect of swelling urban unemployment. While the tertiary sector is expected to absorb over one million of these workers, there do not appear to be any policies to spur the growth of the service sector to a targeted 25 percent share of GDP by 1995.

1.35 Intraprovincial and Sectoral Issues. Provincial policies should focus on increasing the links and exploiting the mutual benefits resulting from the existing or potential north-south complementarities. Improving the north-south transport linkages will promote integration of the two economies. In addition, Jiangsu has emphasized need for balanced sectoral growth in its industrial policies, with balance, not specialization, sought at the sectoral level. The attempt is to match primary sector growth with the growth of processing sectors, an approach which minimizes the role of trade. In rural areas balance means requiring TVEs (the high performers) to support the agricultural sector. Continued reliance on the more productive (TVE) sector to

^{12/} An estimate of the changes in Jiangsu's overall investment requirements in relation to its growth achievements (ICOR) in the pre and post reform periods show a significant shift in the efficiency of investment. Over the period 1980-84 it took Y 1.89 of investment to produce Y 1 of GNP. Following the reforms it took 16 percent less investment--Y 1.64 to produce Y 1 of GNP. (These figures include productive investment only.)

support the weaker--whipping the fast ox--will erode not only Jiangsu's TVE potential, but support the development of a sector not in keeping with Jiangsu's comparative advantage. Specialized and interjurisdictional trade mechanisms need to be developed.

1.36 Profitable/Unprofitable Enterprises Balance. In the industrial sector, balance is sought by developing mechanisms that allow nonviable firms to be subsidized on a continuing basis or to be "revitalized" through mergers with successful enterprises. Since no clear-cut exit of enterprises is allowed by local governments, merging or absorbing nonviable enterprises with profitable ones is the only available option; but is a strategy which only results in internalizing the enterprise losses and worsening the already large misallocation of resources. The economic efficiency of enterprises has been declining recently, (including that of TVEs) and about one-third of SOEs are operating at a loss, increasing the pressure on scarce fiscal resources. Exit mechanisms need to be developed and the pursuit of enterprise reforms enhanced, while devising mechanisms to minimize the resulting social costs (for example, retraining the labor force, establishing a social safety net, etc.).

1.37 How will Jiangsu look by the end of the 20th century? If market-oriented reforms recover the momentum they had in the 1980s in support of non-inflationary output growth of 7-8 percent per annum, it is not unreasonable to expect current per capita income (Y 1,627) and provincial GDP to roughly double over the decade. More significantly, Jiangsu's productive structure by the end of the century would look more like that of the area's new industrializing countries (NICs) in the mid-1980s, than to the agriculturally-based economy of the early 1970s. An extrapolation of Jiangsu's longer-term trends indicate that: (i) the share of the agricultural sector would continue its secular decline, reducing in half the sector's present share in provincial GDP (from about 30 percent to less than 15 percent by the year 2000); (ii) given the already high share (52 percent) of industry in GDP, changes in its composition rather than total share are the most likely development; and (iii) the service sector's share, however, can be expected to rise appreciably to constitute 30-35 percent of GDP by the end of the century.^{13/} These changes will not necessarily materialize unless the central government and the provincial authorities adopt a policy regime conducive to a better allocation of resources, increase the integration of Jiangsu with the international economy and promote a fuller exploitation of Jiangsu's comparative advantages in China's expanding domestic market.

1.38 Estimates of the relative contributions of the labor force, the capital stock and the unidentified residual (attributed to "technical prog-

^{13/} In Taiwan (China), the percentage of labor engaged in primary industry has dropped from 56 percent in 1952 to 17 percent in 1986, while the share of labor employment in the secondary and tertiary industries increased from 17 percent to 42 percent and from 27 percent to 42 percent, respectively, during the same period.

ress" or "productivity growth") for China,^{14/} indicate that during the pre-reform period only 12 percent of the annual 5 percent growth rate was due to increased productivity, whereas for the period 1976-85 productivity growth contributed 43 percent of the 8.8 percent annual real growth. The impressive rate of capital accumulation after 1985 was responsible for explaining as much as 40 percent of output growth, while labor's share has fluctuated around 20 percent. China's as well as Jiangsu's success during the 1990s increasingly hinges in raising productivity in its industrial sector, particularly in its TVCEs, for which at least three types of actions are called for: (i) faster progress in correcting distorted relative prices to enhance its information content, facilitating a decentralized and efficient allocation of investment, the functioning of markets and the dissemination of appropriate signals to address artificial scarcities (ex. cotton); (ii) an early adoption in Jiangsu of China-wide successful experiments in enterprise reform, particularly the joint-stock system, to enhance enterprise autonomy, competition and accountability, both for SOEs as well as TVCEs; and (iii) a rationalization of the tax system, including a clear demarcation of revenue sharing arrangements between the central government and the provinces, as well as a more equitable distribution of the tax burden among heavily taxed TVCEs and other types of enterprises in Jiangsu.

1.39 Jiangsu's Comparative Advantages. During the 1990s, Jiangsu will greatly benefit from a more conscious pursuit of its sectoral comparative advantages. In spite of Jiangsu's absolute advantage in grain production, reflected in high productivity and crop yields, the province does not have a comparative advantage in grains, and the national and provincial authorities should not only allow but actively encourage greater agricultural specialization (ex. in high value added specialty products and agroindustry) and relocation of production within the province and among provinces, moving away from autarkic regional production and trade policies. The main force driving Jiangsu's per capita income in the rural areas is and will continue to be of nonfarm activities, particularly in the TVCE sector. To the extent that TVCEs could recover some of their lost dynamism and profitability, it will accelerate the transition from lower-paid agricultural to more productive industrial jobs.

1.40 In the industrial sector, Jiangsu could exploit more fully its locational advantages given by its proximity to Shanghai and the South China Sea. The priority given by the 8FYP to modernizing Shanghai's industrial base and the development of the Pudong area, will offer new opportunities for Jiangsu (ex. increasing industrial sub-contracting and specialization, and the provision of new services by its relatively skilled labor force). It is not inconsistent for Jiangsu to continue to develop its export base, while enlarging its role as entrepot and distribution center, and expanding its share in China's domestic market. For the later to be possible, Jiangsu will need to address the present bottlenecks in the transport sector (see Chapter VI),

^{14/} See D. H. Perkins, "Reforming China's Economic System," JEL, Vol. XXVI, pages 601-45, 1988; G.C.Chow, The Chinese Economy, Harper and Row, 1985; and G. Peebles, "China's Macroeconomy in the 1980s: The Impact of Reform on Structure and Performance," WP No.90/5, National Center for Development Studies, The Australian National University.

while the national authorities should dismantle the barriers to an integrated national market resulting from past policies of self-sufficiency at the regional level, reduced domestic competition and the suboptimal use of scarce skills and resources.

1.41 External Trade. Since Jiangsu's growth dynamic will continue to derive largely from China's domestic market, Jiangsu's development will differ from that of other economies in the area (see Box 1.1) which do not have access to potentially large domestic markets and whose growth was export-led. Taiwan (China)'s exports increased from about \$117 million in 1952 to \$67 billion in 1990, raising the share of exports in GDP from 8 percent to well over 60 percent. Even with the rapid growth of exports planned by Jiangsu (12 percent per annum), the export-to-GDP ratio 15/ is likely to rise from 7.5 percent in 1989 to less than 12 percent by the year 2000 unless exports grow much faster (at 20 percent per annum export growth, the export/GDP ratio would reach about 25 percent by the end of this decade). In spite of this relatively lower trade ratio, the dynamic effects and efficiency gains of Jiangsu's outward orientation should not be underestimated. An outwardly oriented strategy will allow Jiangsu to import needed advanced technology and expose Jiangsu's industries to more competition, encouraging greater efficiency and specialization, while reducing the cyclicalities the economy now confronts.

15/ Granting its overestimation resulting from the underestimation of the provincial GDP.

Box 1.1: ASPECTS OF DEVELOPMENT IN KOREA AND TAIWAN (CHINA)

Both Korea and Taiwan (China) achieved economic miracles in transforming resource poor, densely populated areas into thriving, industrial economies. The period of economic "takeoff" was 1965-81.^{1/} The single most important policy variable associated with their success was their export orientation early in their development effort.

Taiwan (China) followed the conventional model of development via import substitution until 1958 but switched to an export focus after the domestic market had failed to create enough employment. A realistic exchange rate and emphasis on labor-intensive exports provided the basis for rapid and unprecedented growth of income and exports: Taiwanese exports grew at an average rate of 27 percent in 1965-81, while Korean exports grew even faster at 36 percent per annum. Real GNP grew at average rates of 9.4 percent per annum in Taiwan (China) and at 8.7 percent per annum in Korea over the corresponding period. By 1981 and 1986, the export-GNP ratio had risen to 53.6 percent and 80.6 percent in Taiwan (China) (from a 17 percent in 1965), respectively. Even more remarkably, Korea had raised its export share from 5.7 percent in 1965 to 48.7 percent in 1981.

CONTRIBUTION OF EXPORTS TO GROWTH IN KOREA AND TAIWAN (CHINA)

KOREA	1960-63	1963-66	1966-68	1968-70	1970-73
Export Expansion	4.8	14.2	12.4	15.1	35.9
Import Substitution	-2.8	0.2	11.4	7.2	-4.0
TAIWAN (CHINA)	1955-61	1961-66	1966-71	1971-76	
Export Expansion	22.5	35.0	45.9	67.7	
Import Substitution	7.7	0.5	5.7	-2.4	

Source: Korea: Policy Issues for Long Term Development, World Bank Country Study, 1979, Table 1.3, and Taiwan Economy in Transition, by Kuo Shirley W., (Boulder, Colorado, Westview Press), 1983, Table 7.6.

Export success depends largely on an economy's relative efficiency in producing the export items. Both Taiwan (China) and Korea's initial successes were in labor-intensive exports where their low wages gave them a comparative advantage. This strategy also contributed to high rates of employment creation and beneficial income distribution effects.

In Taiwan (China), the industries that provided the basis for this expansion included textiles, basic metal products, chemicals and plastics, and food processing. Subsequent growth occurred in electronic components, machinery, precision optics, leather, and clothing. In Korea the export industries included textiles, apparel, plywood and footwear and, after the late 1980s, shipbuilding, steel, electronics, chemicals, and synthetic fibers. Large investments in the heavy industry and chemicals in Korea after 1973 were partly justified as backward integration into intermediate products for export industries. This stage is now viewed as having imposed large costs on Korea.

Both economies have diversified export products and markets to spread out the risks of foreign trade. This is indicated by the relatively low commodity concentration (23 percent for Taiwan (China) and 25 percent for Korea in 1975) and geographical concentration (41 percent in both countries in 1975).^{2/}

1/ For a detailed comparison see "Models of Development: A Comparative Study of Economic Growth in South Korea and Taiwan," Lawrence J. Lau (ed.), ICS Press, 1988.

2/ Concentration ratios are derived by calculating the square root of the sum of the squared shares of different commodities/countries in Korea's (Taiwan, China's) trade.

II. INDUSTRY, TRADE AND LABOR SKILLS IN JIANGSU

2.1 Sustained growth of industry and exports will provide the basis for increased income and employment opportunities in Jiangsu in the future, as they have done in the recent past. Policies which facilitate such growth are therefore of singular importance, along with policies which enable labor to respond flexibly to emerging regional labor requirements. This chapter discusses, in turn, issues regarding industrial policy, trade promotion, foreign investment, and labor skills and training.

A. Features and Issues in Jiangsu's Industrial Economy

2.2 Industrial Growth and Structure. Jiangsu is China's most industrialized province, contributing almost 12 percent of China's GVIO in 1990. Industry has clearly been the engine of growth in Jiangsu, as illustrated by Figure 1.4. Total real GVIO increased fourfold in 1980-89, reaching Y 197 billion in 1989. Such rapid growth has raised per capita real GDP from Y 542 in 1980 to Y 1,285 in 1989, but it has also resulted in a widening of intra-provincial disparities, and increased competition for infrastructural capacity, particularly in energy and transport.

2.3 In 1989, six industries accounted for about 70 percent of Jiangsu's GVIO--textiles and garments; machine building; chemicals and related industries; electronics and communications equipment; food processing; and construction materials (Table 2.1).^{1/} In several of these industries, Jiangsu produces the largest national shares of output. Most industries in Jiangsu have grown at double-digit real rates over the last five years. However, growth has varied substantially across subsectors, resulting in increased output shares for chemicals and synthetic fibers, and reduced shares for food processing, textiles, and construction.^{2/}

2.4 The distinguishing features of Jiangsu's industry compared to the national norm and to other industrialized provinces may be summarized as follows: (i) processing industries dominate industrial output with 87 percent of GVIO while basic (raw material and mining) industries account for only 13 percent of output; (ii) almost 27 percent of Jiangsu's labor force is employed in industry, compared to the national average of 17.3 percent, and 51 percent of provincial income derives from industry, compared to 46 percent nation-

^{1/} Provincial authorities claim that, in their estimation, almost 85 percent of GVIO is due to these six industries.

^{2/} The impact of national contractionary policies in 1988/89, on growth performance, has differed across subsectors: export-oriented sectors such as textiles and garments were less affected, while more domestically oriented sectors (pharmaceuticals, machine building, electronics, and plastics) experienced dramatic declines in growth rates. Even booming industries such as chemicals and synthetic fibers slowed their rate of growth in response to the contraction.

Table 2.1: JIANGSU: MAJOR INDUSTRIES: SHARES AND GROWTH OF GVIO

	Share of 1989 GVIO	GVIO Rate of Growth	
		1985-89	1988-89
Synthetic fibers	2.4	34.87	19.8
Chemicals	9.4	27.64	18.2
Pharmaceuticals	1.6	24.22	5.1
Plastics	2.7	20.28	-0.8
Textiles	20.3	17.52	13.4
Garments	2.3	17.64	16.7
Machine building	11.6	16.41	3.2
Electronics and telecommunications	5.5	22.23	4.5
Construction materials	5.8	14.99	4.3
Food processing	6.6	12.56	4.1
Subtotal	<u>68.2</u>		
Total industry	100.0	18.27	9.0

Source: Appendix Table 2.4.

ally;^{3/} (iii) state-owned enterprises are significantly less important in Jiangsu than elsewhere, accounting for only 35 percent of GVIO and 10.6 percent of enterprises, compared to 57 percent and 17 percent for China as a whole; (iv) small enterprises in Jiangsu account for a substantially larger share of GVIO (65 percent) than the national norm (50 percent) even though the proportion of "small" firms is approximately equal; and (v) the composition of Jiangsu's output is tilted towards light industry (about 54 percent), whereas provinces such as Liaoning are much more oriented towards heavy industry (66 percent) (Table 2.2).

2.5 Jiangsu relies on external (mainly domestic) markets to supply its raw materials and to purchase its output. Over 70 percent of the iron ore used in Jiangsu, for example, was imported, including substantial amounts from Australia. The chemical industry imports over 50 percent of its raw materials from other provinces or abroad. The petrochemical industry similarly relies on crude oil from oil fields located outside the province. On the other end of the production process, an estimated 70 percent of Jiangsu's output is sold outside the province. One-third of machinery products, half of electrical appliances and 60 percent of electronics output (mainly components) is sold to other provinces. These features have an important bearing on its

^{3/} Including industrial TVEs below town level would raise industrial employment share in Jiangsu to 35.4 percent.

Table 2.2: RELATIVE INDUSTRIAL STRUCTURE IN JIANGSU

Liaoning	Percent of GVIO				Percent of Enterprises			
	Jiangsu	China	Shandong	Liaoning	Jiangsu	China	Shandong	
Light Industry 43.4	53.5	49.3	51.7	33.7	53.4	54.4	54.7	
Heavy Industry 56.6	46.5	50.7	48.3	66.3	46.5	45.6	45.3	
Large Enterprises	17.5	30.7	24.7	47.6	0.5	0.8	0.7	1.3
Medium Enterprises	17.8	19.7	19.0	18.5	1.4	1.8	2.4	2.7
Small Enterprises 98.0	64.7	49.6	56.3	33.9	98.1	97.5	98.9	
State-Owned 15.5	34.7	56.8	45.5	61.2	10.6	17.4	15.5	
Collectives 83.7	59.4	36.2	48.9	29.5	88.7	81.8	84.2	
Other	5.9	7.0	5.6	9.3	0.7	0.8	0.3	0.8

Source: China Statistical Yearbook, 1989. Tables T6.9, T6.14. Figures for share of large and small enterprises in GVIO are based on Table T6.14, which only includes enterprises at or above township level. All figures for number of enterprises are also based on T6.14.

industrial structure and underline the importance of transport infrastructure in Jiangsu's development.^{4/}

2.6 Industrial Policy. Industrial policy in the United States is characterized by the virtual absence of government intervention in deciding on industrial priorities and investment. In other countries, such as Korea, the role of government is more evident and is widely regarded as having influenced the direction and rate of investment in different industries.^{5/} Most developing countries employ both direct and indirect controls on industry--for example, licensing of capacity, subsidies to specific industries, tariff and quota protection against imports, favorable financing of exports, etc.--to achieve a variety of objectives; to ensure investment priorities, control monopolies, achieve regional balance, promote regional integration, expand exports, etc.

2.7 In general, international experience suggests that sound investment decisions are best made by those who have the most knowledge of the specific industry and who are guided by market price signals. The role of the government is then restricted to maintaining macroeconomic balance, ensuring the competitive functioning of markets, regulating monopolies, and creating the

^{4/} See Chapter VI for a discussion of the nature of the transport network as well as emerging bottlenecks in Jiangsu.

^{5/} In the period 1961-73, Korean government intervention featured comprehensive incentives for export-oriented activities (which overcame the effect of import protection) without a strong sectoral bias. Only after 1973 did Korea target heavy and chemical industries. Such targeting is generally viewed to have imposed a large cost on Korea. See Korea: Managing the Industrial Transition, Vol. I, The Conduct of Industrial Policy, World Bank Country Study, 1987.

conditions for efficient, decentralized decision-making in industry. While this provides a useful framework to strive towards, China and Jiangsu are still a considerable distance from that ideal. Moreover, as a province of a larger economy, Jiangsu is constrained in the degrees of freedom it has to reform industrial policy.

2.8 Policy Instruments and Issues. In China, and in Jiangsu, industrial policy is articulated through an extensive array of administrative controls. As indicated by the policy matrix in Chapter I, in addition to the administrative controls imposed by the center, Jiangsu sets its own controls, including municipal investment approval limits, credit allocations via the provincial mandatory plan and guidance plan, material supply, etc. Other administrative measures include investment approval processes, licensing restrictions, and the provision of "information" on government policies. Economic measures include tax preferences, credit and foreign exchange allocations, labor distribution and material supply policies, and price controls. Legislative measures include various legal restrictions on industries such as rules governing enterprise formation, functioning, pollution control, and bankruptcy. Some of these are decided entirely by the province; others are provincially implemented, under varying degrees of central guidance.

2.9 The discretion available to Jiangsu and other provincial governments to influence industrial investment decisions at the provincial level derives mainly from the ability to approve investment up to limits defined by the central government.^{6/} While other restrictions on provincial investment decisions (for example, the center's "negative" list of industries needing central approval, regardless of investment scale) impose some constraints, they still allow considerable room for the province and local governments to select and promote industries of their choice. At present, the provincial government attempts to intervene in a wide range of sectors and industries through a host of discretionary policies, but primarily via the enterprise contracting process.^{7/} This is problematic in a number of respects: (i) it hinders the development of indirect policy tools; (ii) it raises the costs of economic management by requiring resources to be devoted to monitoring direct policy compliance (indirect policy induces the desired behavior without costly monitoring); (iii) it distorts industrial development; and (iv) it overburdens the enterprise contract with functions, diluting its fundamental purpose: efficient management of enterprises. In sum, it has obstructed achievement of a system whereby "the state will regulate the market and the enterprises will be guided by the market."

^{6/} Provincial investment approval limits are Y 50 million (for transport, energy, and raw materials), Y 30 million (for other sectors), and \$30 million (for foreign direct investment). Nanjing and Wuxi have the same approval limits. However, provinces can undertake many investments without central review by downsizing projects or stretching out projects over time.

^{7/} Enterprise contracts specify a large number of mutual obligations for both the enterprise and the industrial bureau. See Annex 2 for text of a sample contract.

2.10 Policy reforms in Jiangsu should focus on reducing the interventions by the provincial and local government and their industrial bureaus in enterprise-level decisions. The role of the government should be defined more narrowly, focusing administrative attention on a few key areas. The Jiangsu Government has a natural role to play in developing the public infrastructure (transport, power, education), removing barriers to trade and promoting market integration, and facilitating information flows within the province. Encouraging enterprise reforms that strengthen the financial and managerial autonomy of enterprises would enable the government to focus on these priority areas.

2.11 Separate from the issue of excessive administrative interventions is the role of the government in defining "priority" industries, which is a major aspect of stated industrial policy in Jiangsu. At present, the priority industries are so broadly defined that any industry, unless explicitly forbidden, can be justified as a priority activity.^{8/} Real priorities are often only revealed by the system of key materials allocation but, with the gradual reduction of the scope of material allocation, this is a less effective tool for reinforcing stated priorities. This trend suggests that initiatives on industrial development are increasingly determined at local government level. Given this, Jiangsu can improve the quality of industrial investments in the province--addressing issues of appropriate choice of industry, scale, location, etc.--by strengthening the ability of the market to guide and discipline both enterprises and local governments. The province can assist in coordinating investment decisions that straddle administrative boundaries. Promoting market competition both within the province and with other provinces will be a critical function in this respect. The provincial government also has to play a role in shaping technology policy, enforcing pollution control and in consolidating industrial capacity.

2.12 Trade, Transport, and Integration of Markets. The future development of Jiangsu will be significantly influenced by policies that integrate markets both within the province as well as with other provinces. Greater emphasis on development of the road transport network will allow for faster and more flexible movement of passengers and freight from Jiangsu's industrial sectors to markets within China while expansion of air transport and multimodal facilities will improve access to world markets for high value exports (see Chapter VI). Corresponding to these improvements is the need to break down barriers to trade within China. The removal of barriers to trade is an important action that will provide unambiguous benefits to all parties in the long term. As an economy dependent on trade, Jiangsu has a vested interest in achieving agreement with its neighboring provinces at first and then more widely to permit trade to occur without hindrance. Jiangsu could initiate a "free trade agreement" with its major trading partners in other provinces on an experimental basis to demonstrate how such a system might work. Policing

^{8/} The State Council defines priority sectors as including the following: agriculture and related activities, light and textile industries (which covers a very large set of industries), basic industries and facilities (all infrastructure and most intermediate goods), machinery and electronics, high technology (not sector specific), and foreign exchange earning activities.

such agreement to ensure compliance within the province will then be Jiangsu's responsibility.^{9/}

2.13 Technology Policy. Under the 8FYP, Jiangsu intends to derive as much as 55 percent of agricultural growth and 40 percent of industrial growth from technological progress. By 1995, over 10 percent of provincial GNP and 5 percent of exports are expected to be from sectors using "new technology." Jiangsu's technology support policy includes four main incentive devices: priority credit, income tax concessions, material supply, and flexibility in pricing of output. In addition, under central policy, technological investments can apply for exemption from sales tax. Administrative measures are also employed in Jiangsu, including the earmarking of a percentage of sales revenue (1 percent to 10 percent) for technical development. Jiangsu's Science and Technology Commission (STC) sponsors collaborative research projects between research institutes and enterprises via zero interest loans to be repaid when profits are generated. However, while Jiangsu financially sponsors R&D (10 percent), most financing comes from enterprise funds (60 percent) and borrowing from banks (30 percent). Jiangsu allocates about 10 percent of its contribution to basic science, 40 percent to applied research, and 50 percent to development research for small business.

2.14 In early 1991, Jiangsu unveiled a 17-sector technology strategy for the 8FYP that specifies, in considerable detail, the kinds of machinery and technology to be employed by different industries. It also goes so far as to target the composition of output by subsectors. For example, the proportion of synthetic to cotton fiber in total fiber production is targeted to be 35:65 by 1995. Such targeting is typical of a rigid, plan approach to technology and ignores the valuable role and natural advantage of markets in guiding such decisions. It also expands the interventionist role of the government and contradicts the assertion that enterprises will be allowed to make industrial production and investment decisions, guided by the market and a few industrial policy instruments. In addition, a rigid application of such technology standards may have adverse consequences for competition by creating barriers to entry and forcing the exit of some efficient TVEs.

2.15 Issues that do require the attention of the provincial government relate to technology diffusion and acquisition of foreign technology. Diffusion of technology in Jiangsu could be improved by better information flows, greater labor mobility, and the removal of constraints on the marketability and reward for innovation. The creation of a provincial information agency that subscribes to technical and industrial journals and disseminates information will provide enterprise managers and engineers with the basis to make decisions on foreign and domestic technology.

2.16 Acquisition of relatively sophisticated technology (such as CNC machinery) will require Jiangsu to develop long-term strategic alliances,

^{9/} The World Bank has recommended that a State Industrial Policy Commission be established at the center to promote interprovincial trade and to arbitrate when conflicts emerge. See China: Industrial Policies for an Economy in Transition, 1990, World Bank. Also see China: Macroeconomic Stability and Industrial Growth under Decentralized Socialism, 1989, World Bank, particularly Chapter VIII.

rather than one-time transactions, with leading foreign technology suppliers. Such alliances should include the foreign firm, domestic enterprises and local research institutes. For example, strategic alliances in the CNC industry (a Jiangsu "pioneer" industry) are increasingly observed.^{10/} The coproduction arrangement between Nanjing Machine Tool Factory and Traub Company is a step in the right direction, but a broader-based alliance, incorporating Jiangsu's research institutes, would be more appropriate. Management groups such as Zhong Shan which have the technical capacity to absorb key technologies quickly and to learn from reverse engineering processes offer significant advantages in structuring long-term technology contracts with a major foreign entity on a broad range of technologies. Jiangsu should develop this mechanism of technology absorption.

2.17 Environmental Policy. Industrial policy in Jiangsu must more explicitly integrate environmental concerns into development plans (see Box 2.1). The existing system of adding environmental targets to a list of more conventional targets, such as profits and taxes, is inadequate. The pressure on enterprises to achieve tax and profit targets implies that when faced with a conflict, environmental targets are abandoned. Attaching greater weight to environmental objectives should be one modification to industrial policy that should be reflected in better enforcement. Jiangsu should support the production of pollution control equipment in which the chemical industry has some potential--this would enhance both industrial and environmental objectives.

2.18 Mergers, Enterprise Groups, and Subcontracting. Jiangsu's industrial structure, like China's, is characterized by inefficient scale, fragmented markets, and policies that permit the continued operation of inefficient or loss-making enterprises. Such a structure implies high costs, fails to take advantage of Jiangsu's comparative advantage, hampers technological development and innovation, and weakens Jiangsu's ability to compete in international markets. In Jiangsu, industrial restructuring and improvement in industrial efficiency is sought largely through "horizontal cooperation" between enterprises, enterprise groups, and mergers. The cooperative relationship is also intended to provide a channel for technological transfer from advanced enterprises to smaller, less knowledgeable firms within the cooperative group. In Wuxi, 34 such cooperative arrangements have been set up. The Wuxi Mayflower Electronics Group illustrates the successful operation of such a group (Box 2.2). To the extent that cooperation allows a firm to specialize in certain processes and to capture marketing and transaction cost economies, it can improve scale economy in participating enterprises.

2.19 The formation of "enterprise groups" such as the Zhong Shan Group is another instrument for internal restructuring to capture scale and scope economies. The creation of such groups is particularly useful in industries that are earmarked for technical development because coordinating research priorities can yield substantial advantages. Size can be an asset in projecting reputation in international markets and in forming technical alliances with foreign corporations.

^{10/} For example, Fanuc, Ltd., of Japan, a leader in CNC machine tools, has formed a strategic alliance to produce computer integrated manufacturing devices with General Electric (U.S.) whose strengths are in software, programmable logic controls, and factory automation.

Box 2.1: ENVIRONMENTAL ISSUES AND POLICIES IN JIANGSU

Population growth, rapid urbanization and industrialization have contributed to serious environmental degradation in Jiangsu. While some progress has been achieved, adequate environmental management remains a critical issue for Jiangsu's long-run sustainable development requiring, among other things, better integration of economic objectives with environmental goals.

Water pollution has been identified as the top priority for Jiangsu's environmental management program, while air pollution is also emerging as a serious concern. The importance of TVCE industries in Jiangsu poses special environmental problems since such industries, in some instances, use outmoded, polluting technology while their widely dispersed location renders centralized waste treatment difficult and expensive.

Despite growing environmental concerns, investment in pollution reduction has remained at 0.3 percent of GNP in Jiangsu, below the national average of 0.6 percent. Under the 8FYP, Jiangsu proposes to raise this ratio to 0.6-1 percent with the objective of reducing the pollution elasticity of GNP through improved waste management, energy conservation and industrial efficiency. While Jiangsu is considered one of the leading provinces in environmental management in China, its policies have been an eclectic assortment of command and control and incentive instruments.

Contract Responsibility System. Since 1989, the province has employed an environmental CRS with respect to municipal governments who, in turn, have required enterprises to enter into contracts to reduce pollution. This contract system is not a first best instrument for cost-effective pollution reduction. However, some improvements to this system would include the following:

- (i) pollution control targets should focus on quality, in addition to the quantity, of the pollutant;
- (ii) the rewards/penalties for pollution reducing actions should be raised significantly; and
- (iii) the criteria for rewards should be refined to encourage cost-effective attainment of contract goals.

Environmental Levy System. The current environmental standards are set in terms of pollution concentration levels, rather than the more effective mass discharge limits. Moreover, the present levy system has a number of deficiencies, including: (i) levels of pollution levies too low to exert a deterrent effect; (ii) levies applied only to the highest polluting constituent, ignoring other pollutants; (iii) the same levy charge is applied to all the pollutants even though higher treatment costs are required for toxic constituents; (iv) levies do not cover solid and hazardous waste generation; (v) most of the levy funds are returned to the polluting enterprises for end-of-pipe treatment, however, a generally more cost effective approach is to build common treatment facilities for industrial and domestic wastes or invest in waste minimization technology and/or to minimize waste; and (vi) varied levels of enforcement among the cities, while levy collection rate is generally low at the county and lower levels.

Pollution Monitoring and Control. While environmental impact assessment (EIA) is required to be an integral part of project feasibility studies, its implementation has a number of shortcomings: (i) inadequate monitoring data and funds; and (ii) incomplete enforcement, mainly due to conflicts between environmental and economic objectives.

Industrial Technologies. Industrial pollution control has thus far focused on "end-of-pipe treatment" which is generally not the most cost-effective approach. In particular, more attention needs to be focused on such least-cost approaches as waste minimization, recycle, recovery and reuse which would improve both industrial efficiency and pollution abatement.

The problem of pollution in Jiangsu, as in China as a whole, is closely related to the underpricing of natural resources, especially water and energy. Increasing sewer treatment charges would allow mobilization of funds for treatment facilities. Deepening of economic reforms to the fiscal, price, and enterprise management systems are essential to enhance the incentive and ability of enterprises and municipalities to reduce pollution in a cost-effective manner.

Box 2.2: ENTERPRISE GROUPS, HORIZONTAL COOPERATION, AND MERGERS

Horizontal Cooperation. The Wuxi Mayflower Electronics Group consists of the Wuxi Radio Factory, as technological and production hub, in association with 85 other enterprises (including both state enterprises and TVEs). The group is bound together by production subcontracting and technology-sharing arrangements. The lead or hub enterprise, the Wuxi Radio Factory (WRF), produces video and communications equipment for domestic and international markets. Before this group was formed, space limitations prevented WRF expanding its output in its existing location. The group arrangement has relaxed this constraint by allowing WRF to subcontract the production of plastic and rubber components to the smaller enterprises, while providing them with technological advice to improve quality. The cooperative arrangement has evidently allowed overall production to be increased by 50 percent, which would have taken an estimated Y 40-50 million of investment without it.

The Zhong Shan Group, a conglomerate that was part of China's military-industrial complex, has since its creation in 1986 been largely engaged in production for the civilian market. It is one of 10 such entities in China. Structurally, ZSG is a management group, composed of government officials, that controls selected central government enterprises in the electronics and telecommunications sectors primarily in Nanjing. Its holdings employ 78,000 people and include Nanjing Radio Factory (which produces Panda TV), Huadong Electron Tube Factory, Nanjing Telecommunications Works, and three research institutes. The group has a contract with the central government to deliver an agreed amount of tax revenue and, in turn, the Board of ZSG writes contracts with the enterprises it manages. ZSG can issue bonds to the public (with PBC approval), and can borrow abroad and conduct financial business with foreign financial entities. It has export and import licenses, managed by its subsidiary the ZSG International Export Corporation, and can retain 100 percent of its foreign exchange earnings. As proof of its special status vis à vis the central government, ZSG is paid in foreign currency for products delivered to the government under quota contracts.

Enterprise Merger. The Wuxi Electric Fan Factory is a highly profitable enterprise that produces 12 and 16 inch table and floor model fans and which is diversifying into household items such as electric knife sharpeners. The enterprise has a substantial share of the domestic market (8 percent of national sales) and a fast growing export market which earned \$8 million in export sales in 1990. Large profits have enabled the firm to increase capacity by 32 percent in 1990. In addition to this expansion, the factory recently acquired a loss-making enterprise by taking over its debts (estimated at Y 1 million), thereby, obtaining the management rights to the sick firm. The managing director of the Wuxi fan factory indicated that this acquisition was not at the state's instruction but was sought by his firm. He attributed the problems of the sick firm to "inappropriate product structure." Restructuring the acquired firm was already underway and included the installation of a new production line at the factory with plans for further capacity expansion.

In Huayin county in northern Jiangsu, 58 enterprises were reported to have acquired 61 loss-making enterprises. The mergers involved transferring 8,451 workers and total assets of Y 29.3 million. Of the 61 loss-making firms, 20 were reported to have been returned to profit-making status by the merger.

2.20 To revive ailing enterprises, especially medium and large SOEs, Jiangsu also organizes mergers with well-managed enterprises. Such mergers and acquisitions should be based on efficiency grounds without distortions by fiscal or other incentives. Mergers where revival is unlikely weaken the healthy firms, magnifying the original problem. In particular, Jiangsu should ensure that the dynamism and productivity of the TVEs is not hampered either by forced mergers with SOEs or the creation of monopsonistic relationships with large SOEs. (See Chapter III for further caveats.) The guiding principle in all state-guided attempts at industrial restructuring should be the promotion of competition between and among SOEs and TVEs, on an even playing field.

B. Jiangsu's International Trade: Past Growth and Future Plans

2.21 In 1974, Jiangsu became the fifth province in China to be given the right to export directly. In 1978, Jiangsu was awarded the right to own foreign exchange.^{11/} During the first half of the 1980s, Jiangsu's exports in real terms grew at the impressive annual rate of 15.25 percent (compared to 11.3 percent in China as a whole) but, during the latter half, this growth slowed down to 10.57 percent (compared to 15.8 percent for China as a whole). The total value of exports at current prices grew from just \$0.85 billion in 1980 to \$2.95 billion in 1990. The ratio of provincial exports to income rose from less than 5 percent in 1980 to a peak of 10 percent in 1987 but fell to 8.8 percent in 1989.^{12/}

2.22 Composition and Direction of Trade: 1980-89. Together, textiles, silk, and garments traditionally account for the largest proportion of Jiangsu's exports: 52 percent in 1980, 55.30 percent in 1984, but 47 percent in 1989. The decline in the share of textiles has been especially sharp, from 32.8 percent in 1984 to 19.4 percent in 1989, corresponding to a nominal growth of textile exports of only 2.17 percent in 1985-89. This slowdown is largely due to the voluntary export restraints in the USA and EEC. The machinery sector, after stagnating in the early half of the 1980s, grew at the phenomenal rate of 39.7 percent in the last half of the decade, but from a very low base. The share of machinery exports in Jiangsu's total exports rose from 1.4 percent in 1978 to 13 percent in 1989. Until last year, when Japan became Jiangsu's largest importer, most of Jiangsu's exports had gone to Hong Kong and Macao. At the peak, in 1984, 28.3 percent of Jiangsu's total exports went to Hong Kong and Macao. In 1989, this share fell to 21.5 percent, Japan took 22.5 percent of the exports, and EEC, Jiangsu's third largest importer, took 15.2 percent. Exports to the United States and Canada in 1989 stood at 13.6 percent.

2.23 Consistent with its position in China's economy, Jiangsu has ambitious plans to expand exports during the 8FYP and 9FYP. The province intends to push the growth rate of exports to 10-12 percent during the 8FYP and 12-15 percent during the 9FYP. Foreign exchange earnings are to reach \$8-9 billion during the 8FYP and \$15-16 billion during the 9FYP.

2.24 Jiangsu's export strategy is inevitably influenced by the national policy of encouraging the machinery and electronic goods industries. Thus, by

^{11/} For China-wide trade policy reforms, see China: Between Plan and Market (particularly Chapter V), World Bank Country Study, 1990.

^{12/} Export figures (referred to as "Self Managed Exports") as reported in Jiangsu Statistical Yearbook, do not include all of Jiangsu's exports as they exclude all exports handled by the center directly. At the national level, some 90 percent of China's exports are classified as self managed exports. Similarly, "Self Managed Imports" include only those goods imported by Jiangsu directly, using its own retained foreign exchange earnings. For China as a whole, over 70 percent of the goods coming into the country are handled centrally by national foreign trade corporations. (See Denny, David L., "Provincial Trade Patterns, " China Business Review, September-October 1987, p. 18 and p. 20.)

the end of the 8FYP, Plan, exports of machinery and electronic goods are targeted to rise to 20-25 percent of the province's total exports. In Wuxi, for example, machinery and electronic goods, which already account for 25 percent of exports, will be increased to 50 percent by the end of the 8FYP. Textiles will also be promoted with more emphasis on quality upgrading and less on expansion. The province also plans to expand foreign exchange earnings from trade in services. Earnings from tourism and labor exports are to expand by an average of 10 percent during the 8FYP.^{13/}

2.25 These targets may or may not be feasible, depending on the rates of growth that can be maintained (see Appendix Table 2.11). Compared to the current low share of machinery and electronic goods (10 percent) in total exports, the 20-25 percent, five-year goal is rather ambitious, especially because exports by other sectors are also expected to rise during the plan. If the other provinces plan to expand their exports of machinery and electronic goods at an equally rapid pace, Jiangsu's goal will be even more difficult to attain. Furthermore, a simultaneous burst of exports from all provinces may pose a sufficiently serious terms-of-trade threat to warrant caution. There is insufficient information available on the plans of other provinces to reach a conclusion one way or the other, but Jiangsu authorities should pay close attention to them in this regard.

2.26 Another important objective is to develop substantially the export capacity of TVCEs. In Wuxi for example, by the end of the 8FYP, the authorities intend to reverse the current export pattern in which 70 percent of exports are generated by Wuxi city and 30 percent by its counties. Since most city exports are from SOEs and in the counties from TVCEs, increasing the counties' exports to 70 percent implies a substantial expansion of the TVCE sector.

2.27 Jiangsu has come a long way toward achieving an outward orientation of the economy during 1980s. The province's exports expanded rapidly, which, in turn, helped accelerate the growth of per capita income in the province. To continue on this path, reforms in the international trade regime must continue. Some reforms will have to be carried out at the national level, others at the local level.

2.28 Foreign Exchange Retention Rights. To encourage exports, China has put in place an elaborate system of foreign exchange retention rights. Retention ratios are set by the central government and cannot be adjusted by provinces. They form the framework within which the export promotion strategy of Jiangsu and other provinces must be developed. Retained foreign exchange can be either used for imports, or sold (above the official price) in a Foreign Exchange Adjustment Center (FEAC). In effect, the system partially offsets the negative effect of the overvalued exchange rate and/or the low renminbi prices paid by Foreign Trade Corporations (FTCs) on exports. While recent changes have modified the FEER system (see paras. 2.45-2.49), the following paragraphs first describe the system in place before 1991. Under the previous system, rights to foreign exchange were shared among the central and local

^{13/} For more details, see "Jiangsu's Export-Oriented Economy," China's Foreign Trade, 1988, Vol. 11, pp. 10-11, by Zhang Xuwu, Vice-Governor of Jiangsu Province.

governments, FTCs, and the enterprise responsible for exports. These rights differed by industry and region, as well as by whether exports were within or above the mandatory quota and whether the exporting enterprise belonged to a "production network for exports" (PNE). Generally speaking, except for centrally designated PNE enterprises, retention rights within a sector are uniform across enterprises and ownership forms. Thus, collectives and TVCEs continue to have the same retention rights as state-owned enterprises, whether they export their goods through FTCs or directly.

2.29 In Jiangsu, the sharing was as follows. As in most other provinces, 2 percent went to FTCs to cover handling costs. For within quota exports, the remainder was shared 75:25 between the center and Jiangsu. Jiangsu's share was divided between enterprise (12.5 percent) and provincial government (12.5 percent--7.5 percent to the municipal and 5 percent to the provincial MOFERT). An exception to the 75:25 sharing rule appeared to be the center's designated enterprises in the PNEs, whose retention ratios were higher than those for other enterprises in the same sector. Machinery and electronic goods also got higher retentions and were another of the many exceptions to this rule, reflecting the center's policy of targeting these goods for fast export growth.^{14/} PNE enterprises in the machinery and electronic goods sector were allowed to retain 100 percent of the foreign exchange earned.

2.30 For above-quota exports, these shares were virtually reversed, with the ratio being 20:80 between the center and the province. The locally retained portion accrued largely to the FTC (55 percent), 12.5 percent to the enterprise, and 12.5 percent to the province (7.5 percent to the municipal and 5 percent to the provincial MOFERT). These "above-quota ratios" apply also to light industry, arts, crafts, and knitwear sectors where the center has applied 20:80 sharing to all exports to provide special incentives. Mandatory targets apply typically to SOEs, with collectives and TVCEs only rarely subject to these targets. Nevertheless, it is important to note that the above-quota FERR provided no added export incentive to enterprises, revealing a basic flaw in its design (see para. 2.37).

2.31 Like other provinces, Jiangsu signs annual contracts with MOFERT specifying an export quota, i.e., the province's total foreign exchange earnings. While the Jiangsu-center quota is negotiated with the center and can be considered a central policy tool, Jiangsu determines the quotas for lower levels.^{15/} Wuxi, for example, has an annual export quota of \$250 million and

^{14/} For within quota exports of these goods, only 35 percent goes to the center; the remaining is shared, 30 percent (exporting FTC), 21 percent (enterprise), 7 percent (FTC) and 7 percent (provincial and municipal MOFERTs). Above-quota exports are treated the same as other industries.

^{15/} Mandatory/instructive (i.e., within quota) and indicative export targets must be met commodity-by-commodity as stated in the contract whereas market adjustable targets allow a change in the mix of goods. Instructive targets correspond to export quotas in the provincial and municipal contracts and to MOFERT's command plan for exports. "Indicative" and "market adjustable" targets seem to correspond to MOFERT's guidance plan and are therefore more amenable to provincial influence.

a foreign exchange quota of \$99.9 million, which it must give to Jiangsu.^{16/} By adjusting these quotas that Jiangsu can manipulate the foreign exchange retained by localities and enterprises, and thereby, the effective export incentive felt by them. The system works as follows: mandatory/instructive, indicative, and market adjustable export quotas and targets are specified in "contracts." Since foreign exchange earnings on within-quota (instructive) exports are shared 75:25 between center and Jiangsu, while above-quota exports are shared 80:20 (implying higher FTC retentions), negotiations of these quotas between Jiangsu and its enterprises is an important provincial tool for influencing both the regional and commodity composition of exports. By putting a low (and easily achievable) quota on a certain commodity, Jiangsu can increase the sector's effective (average) retentions from exports. Of course, this must be done while meeting the center's overall export and foreign exchange quotas, so latitude may be limited.

2.32 The long-term goal of the Chinese authorities is to move to a freely fluctuating exchange rate, but until that happens, the system of exchange retention rights will continue to play an important role. Therefore, rationalization of this system makes sense. Jiangsu can do little, however, about the serious inefficiencies caused by its current shortcomings. Reforms of this system must come from the center and, as discussed below, recent developments address some of the issues mentioned here.

2.33 To the extent that exporting enterprises benefit from retention rights, they compensate exporters and reduce the antiexport bias resulting from import licensing, an overvalued exchange rate, and a price structure that favors domestic sales. The structure of these "subsidies" is inefficient, however, due to variations in retention ratios across provinces and commodities, within commodities, and even across provinces for the same commodity.

2.34 Moreover, when exchange rates differ in different FEACs, even identical retention ratios translate into different subsidy rates in different regions. Thus, for any given commodity, provinces with higher retention ratios and a higher dollar price in the swap centers will have higher marginal costs of production (because of higher import costs) than other provinces (Jiangsu can effect swap center pricing by allowing full arbitrage). Production can be made more efficient by eliminating differences in retention rates for the same commodity and equalizing the marginal costs in different provinces.

2.35 For a given commodity, retention ratios also differ. The ratio is much lower for within-quota exports than for above-quota exports. Provinces that can negotiate low export quotas with the center can therefore allow high-cost enterprises to operate profitably. Provinces that end up with high quotas may have difficulty operating even low-cost enterprises profitably. Similarly, at the provincial level, municipalities (or enterprises) that can nego-

^{16/} The difference between the overall export quota and the foreign exchange quota consists of: (i) foreign exchange retentions from quota and above-quota foreign exchange earnings by Wuxi enterprises, FTCs, and the Wuxi municipality itself; (ii) trade with East European countries, which generates exports, but presumably does not generate any foreign exchange; and (iii) transportation, handling, and insurance fees.

tiate low quotas can allow high-cost enterprises to export profitably, but high-quota cities and enterprises cannot. At the enterprise level, units that are subject to the quota have a disadvantage over units that do not have a quota. As noted, Jiangsu can use this system to manipulate its enterprise incentives, but, overall, the system generates major distortions.

2.36 These considerations suggest that the center should set uniform retention rates across provinces, at least within a given sector. Whether or not variations across sectors are justifiable is a complex issue.^{17/} On grounds of transparency and administrative simplicity, a strong case can be made for use of one or two retention rates. Under the current system, enterprises sometimes do not even understand what their retention rights are.

2.37 A further issue concerns the sharing of provincially retained foreign exchange. If the agency system (under which FTCs act as agents, doing business at foreign prices, converted into renminbi) is introduced aggressively for exports, China should adjust the sharing ratios so that almost all locally retained foreign exchange is given to exporting enterprises. The current centrally mandated practice of giving as much as 55 percent of the foreign exchange generated by above-quota exports to FTCs leaves relatively little foreign exchange for enterprises and, more significantly, provides no added incentive to export. The 55 percent retention is especially unreasonable when goods are exported by an enterprise with direct trading rights. Moreover, FTCs presumably use the foreign exchange less efficiently than enterprises.

2.38 Export Pricing Policies. Procurement prices for exports are set (in renminbi) within central guidelines by the relevant provincial city or county FTC to suit local conditions. Available evidence suggests that, on average, domestic sales prices are higher, sometimes much higher, than the prices FTCs pay to enterprises for exports. In the price hierarchies, enterprises exporting directly to other provinces receive the highest price on domestic sales, the next highest on their own direct-export price abroad and the lowest price on exports through the FTC. In Jiangsu, export prices received by enterprises are some 10 percent below the corresponding domestic prices, a difference that inhibits exports and efficiency.^{18/} To offset enterprises' loss on exports, higher prices must be charged on domestic sales. In addition, in setting procurement prices, FTCs in Jiangsu (and elsewhere) subsidize high-cost exports at the expense of low-cost exports. Because under the contract responsibility system any losses on procurement and sales of high-cost exports must be offset by profits on low-cost exports, FTCs use their monopsony power to enforce export purchases from enterprises and sectors with low production costs. The implication is that low-cost goods are exported in below-optimal quantities while the opposite is true of high-cost exports. Considering

^{17/} If the central government's objective is to raise a certain amount of foreign exchange or to target certain industries for exports, the optimal structure of retention rates across commodities will not be uniform. Determining the optimal structure, however, requires the kind of information that is difficult to obtain for even advanced industrial countries.

^{18/} See JPPEC paper "Foreign Economic Relations and Trade of Jiangsu: 1983-88", September 1990.

Jiangsu's ambitious export plans, the province needs to examine how best to eliminate the export disincentive implicit in this price and procurement structure.

2.39 Inefficiencies arising out of this export pricing system will be largely eliminated if the export procurement system is reformed along the lines suggested below. If the procurement system is not reformed, however, reforms of export pricing policies will be beneficial. One simple change would go a long way toward promoting efficiency and improving welfare: narrowing the difference between domestic and exports prices for the same commodity. If the domestic price of a commodity is higher than the export price, the marginal benefit from domestic consumption is higher than that from exporting. The opposite is true when the domestic price is lower than the export price. Jiangsu should make export procurement prices competitive with domestic prices and phase out exporting items that can be sold only at a loss.

2.40 Reforming FTCs. The FTCs' monopsony power over enterprises, especially for quota exports, is an area that deserves attention in this context. Even if enterprises are required to export a certain quantity of goods, there is no reason to require those exports to go through a particular FTC. Allowing enterprises to choose from among all FTCs exporting the same commodity at least within the province will heighten competition. For example, after the export quota has been determined, enterprises under Nanjing municipality should be allowed to export textiles through Jiangsu's provincial textile FTC or textile FTCs in other cities of the province. Jiangsu should encourage competition between FTCs within Jiangsu (cross-sectoral and regional) as well as between its own FTCs and FTCs in other provinces. To the extent that the non-Jiangsu provincial FTCs take business from Jiangsu's firms (or vice versa), a corresponding change in the retention system may be called for.

2.41 Direct Export and Import Rights. China encourages provinces to grant direct export and import rights for nonlicensed (Category 3) goods to qualified enterprises and enterprise groups that export Y 10 million or more annually through FTCs. The province must also be satisfied with the personnel's qualifications in the area of direct trading. Within three years of receiving export rights, enterprise's direct exports must reach at least Y 3 million (revised recently from Y 5 million). Otherwise, the right to trade directly can be withdrawn. These enterprises have the same retention rights as other enterprises in the industry, i.e., they share foreign exchange with the FTCs even though they do not use their services.

2.42 Two types of enterprises have DERs in Jiangsu. One group receives its rights to trade directly from Jiangsu on criteria from the center. The 27 such enterprises and business groups in Jiangsu exported \$80 million worth of goods (3.3 percent of provincial exports) in 1989. The other group includes center-designated enterprises such as Nanjing Radio Import-Export Corporation and Nanjing Automobile Import-Export Corporation. These corporations, all members of PNEs, can retain 100 percent of their foreign exchange. Although, DER-enterprises account for less than 5 percent of Jiangsu's total exports, they may become important instruments of foreign trade growth.

2.43 Jiangsu's expansion of direct export and import rights is strongly to be recommended. Though an extremely important policy development, these direct rights for firms are an underexploited instrument in two respects.

First, the rights are being conferred very selectively. The failure to fulfill export contracts by unreliable firms that manage to get direct trade rights may undermine the reputation of more reliable exporters, but the current approach seems too conservative. A more rapid expansion would enable more firms to establish direct contacts with their customers. Also recommended is the expansion of the business scope of firms with DERs. Firms that have the right to trade directly can only export their own products and import raw materials for their own use. They should also be allowed to export other firms' products and import raw materials for them. Reputation-conscious firms will export only high-quality products for smaller firms, especially TVEs, that cannot afford their own marketing network. This arrangement could only enhance an exporting firm's reputation in world markets. At the same time, competition will force FTCs to scour foreign markets to get the highest export prices and lowest imports prices for their clients. Jiangsu should develop "direct trading firms" into a serious alternative to FTCs over the long term.

2.44 With less than 5 percent of Jiangsu's exports transacted under the "agency system," the system has made little headway in Jiangsu as in the rest of China. Thus, FTCs bring in almost all imports on a commission basis. This means that any domestic currency devaluation immediately raises the import price in Jiangsu, as for example in December 1989 and November 1990. The export price can, by contrast, be almost completely insulated from devaluation.^{19/} In reforming FTCs, an expansion of the agency system for exports is the most important recommendation. Jiangsu could make this policy change within central guidelines. The contract responsibility system now requires FTCs to show a profit only on overall export transactions, not on each commodity. This means that FTCs can engage in an economically inefficient, complex cross-subsidization of various activities. The cross-subsidization will be controlled automatically when the agency system is introduced for exports.

2.45 Recent Developments. At the beginning of 1991, the central government introduced important changes to China's foreign trade regime. The reforms cover two main aspects: (i) the adoption of a new formula for allocating export retention rights; and (ii) the extension of the self-responsibility system for profits and losses to FTCs, meaning that from 1991 on the budget will not absorb their losses, nor pay direct export subsidies.

2.46 From the previous system (see paras. 2.28-2.37) under which retention rights varied across regions, the authorities moved to one in which uniform retention rates are applied across regions for any given commodity category. In addition, as discussed below, the new system enhances the role of the exchange rate determined in the Foreign Exchange Adjustment Centers (FEACs).

2.47 Under the new system, retention rights are initially allocated in the following way: (i) 20 percent of the foreign exchange retention rights resulting from the export of ordinary commodities shall be turned to the central government at the official exchange rate; (ii) local governments can keep retention rights equivalent to 10 percent of the export value; (iii) enter-

^{19/} To the extent retention rights can be sold in FEACs at a market-clearing price, exporters will experience a price increase, but retention rights of enterprises are limited.

prises (exporters) can also keep retention rights equivalent to 10 percent of the export value; while, (iv) FTCs can initially keep retention rights for the remaining 60 percent of export value.

2.48 The initial allocation of retention rights is modified by a second round of transactions between the central government and the initial recipient of the export rights: the central government purchases 20 and 10 percentage points--equivalent of retention rights from FTCs and exporting enterprises, respectively, at the foreign exchange rate prevailing in the FEACs. As a result, the final allocation of retention rights among the different agents and levels of government is as follows: (i) central government: 50 percent of total retention rights (20 purchased at the official exchange rate and 30 at the FEAC exchange rate); (ii) local governments keep 10 percent of total retention rights; (iii) exporters are left without retention rights (0 percent); and, finally, (iv) FTCs keep 40 percent of total retention rights.

2.49 While, in principle, the new system--combined with a more integrated foreign exchange market at the national level 20/--is more transparent and corrects previous regional inequities, it is still rather complex. By leaving a larger share of export rights to the central government, it might lead, potentially, to a tighter control over the foreign exchange rate in the FEACs. Secondly, export enterprises continue to receive too small a share of the benefits of FEAC rate transactions, while FTCs receive too large an allocation.

2.50 Finally, while the authorities have announced, at the national level, that FTCs will be strictly accountable for their profits and losses, the acid test will come when some of the loss-making FTCs will be forced to close. Given the diversity of local interests, locally-owned FTCs may be bailed out by the various levels of government eager to receive retention rights. However, it is too early to pass any judgment on this issue.

2.51 Conclusion. Jiangsu's exports are generally governed by the rules laid down by the center. Although, the province has few direct policy levers to influence trade flows, it does have indirect influence through implementation. For example, the center sets mandatory targets or export quotas for only certain items or limited volumes. Jiangsu, however, can make contracts between FTCs and enterprises for binding indicative and market adjustable targets. Similarly, despite the national trade associations, Jiangsu's FTCs seem to exercise their monopsony power when setting export prices, often below the corresponding domestic prices. Within state guidelines, provinces can confer rights to trade directly upon enterprises and enterprise groups. To the extent possible, Jiangsu should aggressively pursue these reform of direct trade rights. The province could also speed up its implementation of the agency system. Finally, Jiangsu should use whatever freedom it has in setting prices to reduce the export and domestic prices differentials.

20/ Under the new regulations, enterprises and individuals can buy and sell export/import rights in the FEAC of their choice. Previously, such sales and purchases had to be made in designated FEACs, leading to a relatively wide dispersion of exchange rates in the various FEACs.

C. Foreign Direct Investment in Jiangsu

2.52 Unlike some other coastal provinces, Jiangsu was slow to attract foreign direct investment (FDI) under China's "open door" policy. This is reflected in low shares of national totals of number of joint ventures approved (4.2 percent), value of pledged capital (5.8 percent), and actual investment (1.6 percent), relative to Jiangsu's share of national GVIAO (10.6 percent). However, FDI in Jiangsu has grown sharply since 1986, reaching \$46 million in 1987 and \$103 million in 1988.^{21/} Most FDI projects in Jiangsu involve investments of less than \$1 million and are concentrated in light industry, textiles, and clothing. The few large projects include investments in the pharmaceutical, chemical, and electronics subsectors and two hotel projects. Jiangsu's joint ventures contributed 2.1 percent of the province's exports in 1989, whereas for all China foreign-invested enterprises contributed about 13 percent of exports in 1989.

2.53 Jiangsu's objectives in encouraging FDI include its potential positive effect on total investment, transfer of technology and managerial skills, product quality and foreign exchange. For the foreign investor, Jiangsu offers relatively low cost skilled labor, proximity to the Pacific Rim countries and access to a large domestic Chinese market.

Table 2.3: THE REGIONAL DISTRIBUTION OF FOREIGN DIRECT INVESTMENT IN CHINA
(amount actually invested, \$ billion, 1979-87)

Province/ Municipality	Amount	Share of Total (%)	Province/ Municipality	Amount	Share of Total (%)
Guangdong	31.12	57.2	Guangxi	1.22	2.2
of which:			Shaanxi	1.22	2.2
Shenzhen	(18.99)	34.9	Jiangsu	0.89	1.6
Guangzhou	(4.82)	(8.9)	Zhejiang	0.63	1.2
Zhutai	(4.82)	(8.9)	Shandong	0.53	1.0
Beijing	6.40	11.8	Sichuan	0.43	0.8
Shanghai	3.66	6.7	Others	2.34	4.3
Fujian	3.00	5.5	---	---	---
Tianjin	1.51	2.8	Total	5.44	100
Liaoning	1.45	2.7			
of which:					
Dalian	(0.90)	(1.7)			

Source: Almanac for Foreign Economic Relations and Trade, 1988.

2.54 Under the guidelines of the State Council statement of October 1986, Jiangsu can promote FDI by utilizing instruments within its discretionary control.^{22/} Incentives used by Jiangsu include exemption from local income

^{21/} This growth must be seen in the larger context where global FDI in developing countries has declined from 25 percent in 1987 to 13 percent in 1988. See China: Direct Foreign Investment, World Bank Mimeo, October 1990.

^{22/} Jiangsu province, and 11 municipalities controlled by the province such as Nanjing and Wuxi, can approve productive FDI supported by the state up to \$30 million (increased from \$5 million in 1988).

tax and land use fee for specified periods, concessional tax treatment for a further period, priority allocation of water and electricity at plan prices, exemption from certain fees and subsidy payments to workers. The incentives are particularly favorable to FDI engaged in export production or which employ advanced technology.

2.55 The low, though growing, level of FDI in Jiangsu reflects the late start as well as the fact that tourism related FDI projects have not been emphasized by the province. By contrast, over 41 percent of total FDI in China between 1978-88 was in luxury hotels, taxi services, and tourist facilities. The recent increase in the volume of FDI in Jiangsu suggests that municipal and county governments have improved approval procedures and successfully attracted small investors from Taiwan (China) and Hong Kong. However, Jiangsu's lack of success in establishing higher value, technologically advanced FDI suggests that provincial FDI policies and procedures may need to be improved.

Recommendations

2.56 In order to compete effectively against other countries and provinces for a limited supply of global FDI, Jiangsu has to sharpen its self-promotion to make foreign investors aware of its features. The provincial government has a natural role in facilitating the flow of information both about Jiangsu to potential investors and vice versa. Improving business support services (market research, legal counselling, etc.) will enable investors to obtain more reliable feasibility studies.^{23/} Malaysia and Singapore have used central investment promotion agencies to contact potential investors, provide information and shepherd projects through to completion. Jiangsu should consider a similar "one window" agency which facilitates information exchange and simplifies the process for FDIs. "Cutting red tape" often does more than the incentives themselves to increase investment flows. In addition, FDI enterprises should not be subject to arbitrary levies and taxes or to administrative interventions in their day-to-day operations. Such interventions undermine the development of long-term investor confidence, in addition to raising direct costs. While Jiangsu uses administered allocation of key inputs as an important tool for encouraging foreign investment, these priority allocations are so widely employed that in many situations FDI enterprises have trouble obtaining key inputs.^{24/} A long-term policy of replacing administered allocations with market-guided allocations will reduce this uncertainty and improve the investment climate.

2.57 Targeting High-Technology FDI. Jiangsu's development plans place heavy emphasis on acquisition of advanced technology, best done through direct foreign investment. Central to this policy should be the realization that output of such advanced technology projects will not be exportable for some

^{23/} Current practice has been characterized as producing "approvability" studies rather than a realistic economic analysis of project feasibility.

^{24/} The 1986 policy document underlines priority allocation of power, water, etc., for foreign invested enterprises. The recent Coca-Cola project in Nanjing was set up at a time when power was in short supply and involved a guarantee of supply.

time.^{25/} Successful technology transfer requires care in selecting the right partner. An FDI promotion agency could expedite direct contacts between leading enterprises seeking foreign technology and suppliers of such technology to enable a suitable match. To persuade foreign investors to share new technologies, attractive domestic market access might be offered.

D. Education and Training: Issues and Policy Recommendations

2.58 Employment Structure. Industrial growth (including industrial TVEs) in Jiangsu has led to a major shift in employment from agriculture into non-agricultural activities. Employment in agriculture dropped 23 percentage points (from 70 percent to 47 percent) while industry's share rose by 11 percentage points (from 18 percent to 29 percent) between 1978 and 1989.^{26/} Employment in the tertiary sector (public administration, personal and producer services, and retail trade) increased from 13 percent to 24 percent of total employment. These shifts parallel the experience of Korea and Taiwan (China).^{27/} With respect to ownership forms, the bulk of urban employment (60 percent in 1988) is in SOEs (compared with a national average of 75 percent), with 38 percent in collectives (collectives have a 25 percent employment share at the national level) and 2 percent in the private sector.

2.59 Unlike other areas of China, and in spite of its high population density, the advanced and rapidly growing southern part of Jiangsu Province had marked labor shortages prior to the 1989 slump. The shortages were primarily in three categories: manual laborers to carry out unpleasant, tedious, and dangerous tasks; highly-skilled scientific and technical experts to engage in R&D and disseminate know-how; and entrepreneurs, to organize both factors of production into profitable businesses and the necessary marketing networks. Rural enterprises continued to have difficulties in attracting entrepreneurs, managers, and marketing experts. The labor shortages in many villages became acute, as vast numbers of able-bodied peasants left their contract lands to seek higher earnings in booming TVCEs. Drawn by opportunities to farm these discarded croplands and to work at TVCEs, low-wage migrant peasants came in droves from surrounding poorer rural areas, northern Jiangsu, and even across the provincial boundary. In the urban areas, enterprises recruited peasants as "outside plan workers" to cope with the shortage of unskilled labor.

2.60 As noted earlier, the growth of the urban labor force in the coming decade will require attention to sectors which can absorb the additional labor. The tertiary sector is relatively underdeveloped in Jiangsu and its targeted growth from 20 to 25 percent of GDP by 1995 is expected to provide employment for one third of the estimated 3.4 million growth in urban labor

^{25/} Jiangsu's objective of achieving 5 percent of total exports from "new technology" industries may therefore be unrealistic.

^{26/} At the national level, agricultural employment decreased by 12 percentage points and industrial employment increased 4 percentage points in the period of 1978 to 1989.

^{27/} Where nonagricultural employment rose from 49 percent to 66 percent and from 63 percent to 78 percent of total employment between 1970 and 1980, respectively.

force in Jiangsu during the 8FYP. However, policies to spur the rapid growth of the service sector have received relatively little attention. Eliminating barriers to entry for private enterprises, facilitating licensing processes and providing access to institutional credit (at market rates and not subsidized rates) will enable the growth of this sector and accompanying labor absorption.

2.61 While employment issues deserve the province's continued attention, this report focuses on the relatively narrow issue of labor skills and training. The China-wide decentralization of financial and administrative responsibilities has favored labor training based on local economic requirements and support, and Jiangsu has made notable progress toward the establishment of an effective education system needed for economic development and the diffusion of new technologies. Extra resources may, however, be needed to mitigate the widening disparities between rich and poor localities in Jiangsu. A shortage of qualified teachers (Appendix Table 2.18) and slow implementation of the nine-year basic education will jeopardize worker adaptability to Jiangsu's proposed technological improvements during the 8FYP.^{28/} A policy of expanding the scope of general education while using on-the-job training to "retool" workers for changing skill requirements is advisable as Jiangsu's industries incorporate technical advances. Enrollment in technical/vocational schools should be responsive to industrial demand rather than be administratively determined.

2.62 Education Financing. Public funds for education are raised and allocated by local government. Some 66 percent of provincial recurrent expenditure goes for primary and secondary schools, and 12.8 percent to higher education. A major problem in Jiangsu is the shortage of education funds. The decentralization of financial and administrative responsibilities was intended to permit human capital formation based on local requirements; however, the reliance on local funds has also raised the concern of limited budgetary resources. To address this, local governments raise additional local extrabudgetary revenue for education, levies such as a 2 percent education surcharge on a portion of TVCE profits and peasant net income, and a 2 percent surcharge on major indirect taxes.^{29/} For vocational and technical education, financial support comes primarily from the local government budget, while some enterprises make a substantial contribution for short-term training. Provincial funds help to mitigate the widening disparities in the provision of education services between rich and poor localities. The challenge is to identify the investments that would provide the highest social return. The most urgent needs identified by the Jiangsu Education Bureau are in three areas: enhancement of teacher qualifications, implementation of nine-year compulsory education, and improvement of technical and vocational education.

^{28/} Under the central guideline of gradual introduction of nine-year compulsory education across China, Jiangsu province, in accordance with the financial capacity of different localities, legislated its target goal of implementing the nine-year compulsory system in developed areas by 1992, and expanding the system to areas with a medium level of development by 1995.

^{29/} This surcharge has been included as a budgetary item since August 1990.

2.63 Teacher Qualifications and Supply. Teacher qualification in Jiangsu is a major issue, as in the rest of China. The first priority of the teacher training program in Jiangsu is to supplement the inadequate education of unqualified teachers and to increase the number of teachers up to qualification standards.^{30/} Ensuring adequate teacher supply to the needed education levels and fields is also essential. The Jiangsu Education Bureau estimates that the existing and planned training will basically meet the demand of student enrollment at primary and upper secondary levels of education. The shortage of teachers will be at the lower secondary level.

2.64 General Education and Technical/Vocational Training. General education, which is a foundation for both technical/vocational programs and the adaptability of workers, should be specially emphasized as a principle in Jiangsu. The enrollment of technical/vocational schools should be determined by market demand rather than to aim at an arbitrarily determined enrollment target. It is also important for technical/vocational schools to maintain constant contact with all employers to best meet employment needs and to design programs that adapt to changes in demand. Decentralization of enrollment plan and curriculum design and internship assignment ^{31/} are essential to accomplish this approach.

2.65 However, the current enrollment in technical/vocational schools in Jiangsu complies with central guidelines and incurs loss of economies of scale in utilizing teachers and equipment (Appendix Table 2.19). Constrained by enrollment guidelines and limited local budgets, programs of technical/vocational education should be more diverse with greater effort devoted to short-term training courses for primary and lower secondary school leavers. Jiangsu's emphasis on short-term pre-service vocational training is a step in the right direction.^{32/} For vocational programs at the upper secondary level, where there the rate of return is generally higher, policy should emphasize using centralized facilities. In this connection, establishment of larger,^{33/} enterprise linked, educational institutions in populated areas is recommended.

2.66 Entrepreneurial, managerial, marketing and accounting training should be emphasized. These scarce skills are needed to organize factors of production into profitable business. Apprenticeships in managerial work in more developed cities may be an effective strategy to compensate for the shortage of entrepreneurship in the backward areas.

^{30/} There is a systematic effort to convert unqualified (minban) teachers into qualified (gongban) status; however, this conversion has been temporarily suspended in 1990.

^{31/} Internship assignments are integral components of all school-based and employer-based technical/vocational programs and a part of the pre-service vocational training of regular secondary school leavers in Jiangsu.

^{32/} Huaiyin City started the program in 1984; 80 percent of new labor now has pre-service training.

^{33/} The average school size was 699 for "STS," 314 for "SWS," and 417 for agriculture "SVS" in Jiangsu in 1989. In the United States, unit cost is reported at minimum for schools of 1,000 to 2,000 students.

2.67 On-the-Job Training. On-the-job training should be encouraged as it is a cheaper and more effective way to upgrade workers' skills.^{34/} Because technological advancement is emphasized in Jiangsu's 8FYP, on-the-job training also provides an opportunity to introduce up-to-date technologies into the work place. To facilitate this, Jiangsu should address the shortcomings in the present system, including the fact that it is difficult for enterprises to replace the absent trainee, the very high tuition costs paid to large enterprises or "SWS,"^{35/} and the unwillingness, for fear of possible competition, to transfer know-how by large enterprises.

2.68 Training and Skill Transfer in the Rural Areas. Primary school dropouts occur primarily in the rural areas because of the indirect cost of compulsory schooling to families. Children in backward northern rural areas participate in farm work and household chores at an early age. The school dropout rate (5 percent) is much higher than the provincial average (1.3 percent). In advanced areas, children engage in non-agricultural rural activities to contribute to household income. Jiangsu has taken appropriate measures to safeguard basic education through school holidays and changes in the school schedule during agricultural peak seasons and by prohibiting all enterprises to employ child labor.

2.69 Formal training and skill upgrading has been emphasized in the cities, but specialization has increased in agriculture as a result of the responsibility system. Agricultural technical/vocational training deserves more attention in the rural areas. Complementary short-term skill training, currently provided by the rural adult education centers at township level, is an appropriate institutional setting for fostering rural household economy.

2.70 One of the drawbacks of TVCE development is the existing pool of unskilled workers; only 2 percent have had specialized training. TVCEs rely on restricted import of high-quality urban labor, and limited inflows of retirees or returning migrants to bring technical, marketing, and other skills to rural areas. Skill acquisition by TVCE workers could also be attained by arrangements whereby large "parent" enterprises provide training for smaller enterprises that are related to them in their production process. The TVE Bureau might consider coordinating with the Labor Bureau to extend on-the-job training requirements to TVCEs. In the short run, TVCEs must continue to depend on limited flow of quality labor from cities to village, but in the long term, planning is needed to upgrade the quality of rural industrial workers through formal education and training programs.

2.71 Another means of diffusing technology and skills would be by encouraging highly skilled labor and entrepreneurs to provide consulting and advisory services in rural areas. To do so, entrepreneurs must be paid at competitive rates with their potential earnings in more developed areas, and their transportation and moving costs should also be subsidized.

^{34/} As of 1990, 28.5 percent of 6.5 million workers in state and collective enterprises in Jiangsu have received on-the-job training.

^{35/} The tuition ranges from Y 100 to Y 300 per training session per worker in Huaiyin City.

III. RURAL INDUSTRIALIZATION IN JIANGSU

Introduction

3.1 The rapid growth of rural nonstate (collective and private) industry is the most remarkable aspect of Jiangsu's recent economic development. The reforms of 1978--decollectivization of agriculture, devolution of many decisions to local governments, etc.--enabled Jiangsu to evolve new forms of rural industrial organization. It should be recalled that rural industries were common in Jiangsu before 1978, driven by the pressure of population on limited agricultural resources,^{1/} as well as policy directives (the Great Leap Forward in 1958 and the emphasis on agricultural mechanization in 1970). Nevertheless, the post-1978 growth in township and village community enterprises (TVCEs) reflects both a qualitative as well as a quantitative shift in rural industrialization in Jiangsu.^{2/} The output of this sector grew at more than 32 percent per annum over 1978-87 and by 1990 its share of provincial GVIO was 45.3 percent, while Jiangsu's industrial TVEs generated almost 19 percent of national output of TVEs. The TVCE sector in Jiangsu is now the primary source of rural income and its growth has raised provincial per capita GDP to a level that is 33 percent over the national average. Furthermore, TVCEs accounted for more than a third of goods procured for export and for almost one-fourth of Jiangsu's tax revenues in 1990.

A. TVCE Sector Development and Recent Performance in Jiangsu

3.2 The introduction of the production responsibility system in agriculture and increased procurement prices allowed Jiangsu, endowed with fertile agricultural land, to sharply increase agricultural incomes and savings, thereby creating the surplus for investment in rural industries. The growth of these industries was actively promoted by local governments and enabled by the availability of skilled workers (including some retired from SOEs) as well as good transport connections, especially between southern Jiangsu and Shanghai.

3.3 Ownership. TVCEs in southern Jiangsu have evolved with a number of distinctive characteristics less common in other provinces such as Guangdong, where a different, mostly private variety of TVEs has been extremely success-

^{1/} Arable land per member of China's rural population dropped from 2.39 mu to 1.85 mu in the twenty-five years between 1952 and 1977. In Wuxi, with an above average density, arable land per person declined proportionally even more from 2.52 mu to 1.27 mu over the same period. By the end of 1990, cultivable land per capita was only 1.01 mu for the province as a whole. See Du Haiyan, "Causes of Rapid Rural Industrial Development," in China's Rural Industry, op. cit.

^{2/} There are some ambiguities in the definition of the sector, but the broadest definition encompasses all nonagricultural activities in rural areas and small towns other than those on state farms. Enterprises owned by community governments, the prevailing form of ownership in Jiangsu, are referred to as TVCEs. See W. Byrd and Lin Qingsong, China's Rural Industry: Structure, Development, and Reform, Oxford Univ. Press, 1990.

ful.^{3/} In the pattern of development followed in southern Jiangsu, known as the Wuxi or Southern Jiangsu model, the township government "grandfathers" TVCEs at the three administrative levels: township, village, and below-village.^{4/} The township government, either directly or through its township industrial corporation (TIC), exercises tight control over production, borrowing, investment, labor allocation, and other managerial decisions by enterprises (particularly labor allocation, wage determination, and distribution of profits), while leaving their managers considerable day-to-day autonomy. The Jiangsu authorities have repeatedly stated that rural industry has been put on "five wheels"--since the addition of private household and production team firms--on an equal footing with the township, village, and county levels. In practice, however, the first two types of firms have been explicitly or implicitly discouraged in southern Jiangsu and the supremacy of the TVCEs has been maintained over other forms of organization and ownership. The township government has continued to provide direct political and economic support for the local TVCE development keeping higher levels of government at bay.^{5/} This ownership model also economized on transaction costs in an environment where communal governments control land, labor, basic raw materials, and financial resources. The communal form of pooling resources to finance new investments also minimized the risks assumed by individuals in an area where wider dispersion of individual gain was poorly tolerated. These community links, while in many ways a source of strength and stability, imposed limits to enterprise size, and have virtually ruled out enterprise relocation or cross-community mergers.^{6/}

3.4 Industrial Specialization. Almost 90 percent of the Gross Value of Output (GVO) generated by Jiangsu's TVCEs comes from industrial activities, and industrial TVCEs employ 80 percent of the TVCE labor force, compared with a national average of 73 percent and 60 percent, respectively (Appendix Table 3.1). Far behind industrial TVCEs comes the construction sector, which generated 7 percent of TVCE GVO and employed slightly more than 10 percent of TVCE workers in Jiangsu, compared to 10.8 percent and 16 percent, respectively, at the national level.

3.5 Jiangsu's industrial TVCEs are relatively specialized by subsector. About three quarters of TVCEs' industrial output comes from four subsectors: machine building, textiles, chemicals and building materials (Appendix Table 3.2). Machine building is the most important industrial activity in southern

^{3/} While privately-owned TVEs have grown very rapidly in Guangdong, still about two-thirds of the sector's GVIO is produced by community-owned enterprises.

^{4/} See Luo Xiaopeng, "Ownership and Status Stratification," in China's Rural Industry, op. cit., pp. 134-171.

^{5/} A 1989 World Bank Report pointed that "the lack of "mothers-in-law" for TVEs outside the local community may be a major factor in their success." IBRD, China-Rural Industry: Overview, Issues and Prospects, Report No. 7267-CHA, March 1, 1989, p. 39.

^{6/} See A. Ody, "China: Rural Enterprise, Rural Industry, 1986-90," World Bank, mimeo, January 4, 1991.

and mid-Jiangsu, generating about one third of the GVIO. Next comes the textile industry, responsible for more than one fourth of the GVIO in the south and one sixth in mid-Jiangsu. In northern Jiangsu's economy, building materials is the predominant industrial activity, mainly extracting yellow sand and brick and cement manufacturers (Appendix Table 3.3).

3.6 Geographical Concentration. TVCEs' GVIO is concentrated in southern Jiangsu, and about 62 percent of it is generated in three southern municipalities near Shanghai, with less than 21 percent of Jiangsu's population. Only 10 percent of the TVCEs' GVIO comes from the poorer, more agricultural, northern counties with almost 45 percent of Jiangsu's population. The higher degree of industrialization and concentration of TVCEs is closely correlated with a higher GDP and income per capita. GDP per capita in the southern part of the province is almost three times as high as in the four northern counties (Appendix Table 3.4).

3.7 Agriculture. TVCEs depended heavily on financial support from agriculture and surplus farm labor in the early phase of development. Since the mid-1980s, the role has been reversed and part of TVCE profits have been used to subsidize agricultural prices (especially in more industrially developed southern Jiangsu), to stimulate agricultural production by mechanization, and to finance rural infrastructure. Jiangsu's TVCEs currently pay a Y 120 to Y 180 head-tax per worker to promote agricultural modernization.

3.8 Exports. Jiangsu exported some \$2.4 billion in 1989, 50 percent of it from the 3,800 TVCEs engaged in foreign trade. Most exports came from the largest TVCEs in southern Jiangsu (only 120 TVCEs had exports in excess of Y 10 million in 1989), where TVCEs generated up to 85 percent of the export revenues of some counties. The greater profitability of domestic sales over exports and the lack of direct export rights both inhibit export performance and must be addressed (see Chapter II). Increased competition in the domestic market (from other TVCEs, as well as SOEs) and saturation of some traditional product lines (textiles) is forcing these enterprises to increase their outward orientation.

3.9 Cyclical Growth. TVCEs tend to be vulnerable to economic cycles. During the 1980s, TVCEs experienced two full business-cycles. First, Jiangsu's TVCEs suffered a marked slowdown in 1981 and 1982, when real GVIO grew by 14 percent and 6.7 percent, respectively. Adjustment policies in the machine-building industry resulted in large cutbacks in state investment, which reduced direct orders for machinery and equipment and TVCEs' subcontracting work with SOEs.^{7/} A restructured product mix emerged from the slowdown, and production moved away from heavy industrial machines into textiles, light industrial machinery, and consumer durables. The second cycle is concluding now. After average real output growth of 35 percent a year in 1986-88, Jiangsu's TVCEs grew only 2.4 percent in 1989. During the second half of 1990, real growth had climbed to about 8 percent, recovering faster than SOEs (2 percent). For 1990 as a whole, TVCEs' GVIO grew by 14.3 percent, while SOEs' output only advanced by 7.6 percent.

^{7/} See Christine P.W. Wong, "The Development of Township and Village Enterprises in Wuxi County," mimeo, January, 1987.

3.10 Number of TVCEs. Between 1987-89, the number of TVCEs in Jiangsu (above village level and excluding individual household enterprises) dropped by some 6,616 enterprises (Appendix Table 3.5). This decline started in Jiangsu in 1988, a year ahead of the decline at the national level, suggesting that Jiangsu's TVCEs were already experiencing difficulties before the 1989 austerity program. Of the 1,782 TVCEs shut down or merged in 1989, 1,104 were in light industry and 678 in heavy industry.^{8/} Four main reasons were behind the difficulties of industrial TVCEs: lack of financial resources; increasing market saturation; heavy taxation; and stronger competition from SOEs in a number of important industrial subsectors. Jiangsu was not unique, but the contraction of its TVCE sector in 1989 was more pronounced than at the national level, while they also seemed to have recovered faster in 1990 compared to the national average. Stricter enforcement of pollution standards and energy conservation measures may also explain this contraction.

3.11 Employment. Jiangsu's TVCEs on average are almost twice as large as the national mean, with almost 60 employees compared to less than thirty for the nation. Within Jiangsu, an average township-owned TVCE employed 108 workers in 1989; an average village-owned TVCE had 37 workers. TVCEs employed 6.9 million workers in 1989, 21 percent of the provincial labor force against a national figure of 9 percent. About 56 percent of these workers were employed in township enterprises, 44 percent by village-owned enterprises. Industrial TVCEs occupied about 86 percent of the TVCE labor force, followed far behind by TVCEs in the construction sector. The slowdown of the economy in 1989 caused TVCE employment in Jiangsu to fall by 6.3 percent in 1989 (Appendix Table 3.5), a fourth of the national job loss in the TVCE sector. Employment fell more in township-owned than village-owned TVCEs in 1989.

3.12 Financial Performance of TVCEs in Jiangsu. Despite the headstart advantage of Jiangsu's TVCE sector, its recent growth has tended to lag behind the growth rates of the TVCE sector in a number of other provinces, as well as the national average. Thus, in the 1986-89 period, industrial output of TVCEs in Jiangsu grew by 122 percent, below the national average of 147 percent and far below Shandong (248 percent) or Guangdong (195 percent) (see Table 3.1).

3.13 While TVCEs nationwide display a secular decline in indices of profitability, the TVCEs in Jiangsu (and Zhejiang) have reached dramatically low levels of net profitability. The decline of gross profit indicators in Jiangsu reflects, in part, increased competition in product markets, but may also be due to increased wage payments (as enterprises attempt to avoid profit taxes), as well as stricter enforcement of pollution controls. The decline, as well as the low level, of net profitability, on the other hand, seems to be largely explained by the high and rising level of taxation of TVCEs in Jiangsu. According to the classification system in China's statistical yearbooks, in 1986, the average effective tax rate on TVCEs in Jiangsu was 64 percent, almost 40 percent higher than the national average. According to the same source, in 1989, the Jiangsu average tax rate on TVCEs was 75 percent,

^{8/} Although it should be noted that there were about 1,000 new entrants in 1989.

Table 3.1: TVCE INDUSTRIAL OUTPUT GROWTH, 1986-89

	Percent growth, 1986-89
National	147.2
Jiangsu	122.1
Shandong	248.3
Guangdong (including Hainan)	194.8
Henan	165.6
Hebei	146.5
Zhejiang	116.1
Fujian	149.5

Source: China: Rural Enterprises, Rural Industry, 1986-90.

41 percent higher than the national average.^{9/} By contrast, provinces such as Shandong and Guangdong have average effective tax rates of approximately 40 percent, allowing the TVCE sector to expand at much higher rates than TVCEs in Jiangsu (see Table 3.2). These figures should be interpreted with a great deal of caution, since they might show not only income taxes paid (less than 18 percent of total taxes paid by TVCEs in 1989) and other taxes, fees and levies, but also profits transferred to local governments and TICs to be reallocated among the various enterprises. One hypothesis would be that these figures capture "gross transfers" (including taxes) to TICs, which would be reallocated to TVCEs in a "closed capital market," presumably to their more profitable uses. If this hypothesis is true, the dispersion across provinces will be more an indication of the higher degree of intervention of the local authorities in Jiangsu compared, for example, with Guangdong. Nonetheless, to the extent that funds are siphoned away from TVCEs to other uses, the argument of low retention of after-tax profits at the enterprise level as a factor limiting investment and future growth continues to be valid.

3.14 Effective tax rates on TVCEs, as defined above, in Jiangsu are, on average, as much as 20 percentage points higher than on SOEs. While it is not possible to obtain a breakdown of the different taxes levied on TVCEs, it is apparent that enterprise income taxes constitute only a part of the total. Discriminatory treatment of TVCEs under the enterprise income tax in Jiangsu is one reason for the high effective tax rate. TVCEs, unlike SOEs, cannot deduct loan repayments in determining taxable profit so that the same nominal tax rate translates into a higher effective tax rate on TVCEs. The same effect is created by defining a lower profit threshold for TVCEs at which the top tax rate of 55 percent applies. In addition, TVCEs in Jiangsu are subject to ad hoc levies and forced transfers to agriculture which also tend to depress net profits.

^{9/} These figures were obtained from China: Statistical Yearbook, 1990 (see Table 9.57, p. 383), calculated as the ratio of total taxes over total taxes plus after-tax profits.

Table 3.2: FINANCIAL PERFORMANCE OF TVCE SECTOR, 1988-89

	Gross profit as % sales	Net profit as % sales	Gross profit as % fixed assets	Net profit as % fixed assets	Reinvest- ment as % net profit	Average tax rate /a
National						
1988	13.4	7.2	31.5	17.0	49.8	46.0
1989	10.6	5.0	26.7	12.5	n.a.	53.2
Jiangsu						
1988	10.0	3.6	30.3	10.8	57.7	64.4
1989	7.0	1.7	20.8	5.2	n.a.	74.9
Shandong						
1988	15.3	10.0	34.9	22.9	50.1	34.6
1989	11.4	6.8	29.4	17.5	n.a.	40.5
Guangdong (incl. Hainan)						
1988	11.5	7.0	27.1	16.6	45.5	36.7
1989	9.7	5.5	22.8	13.0	n.a.	43.1
Zhejiang						
1988	13.5	5.7	40.7	17.0	49.2	56.1
1989	8.7	1.9	26.9	5.9	n.a.	77.9
Fujian						
1988	12.6	7.7	31.1	19.0	48.7	36.9
1989	11.3	6.3	30.0	16.8	n.a.	43.9

/a Total/(total taxes + after-tax profits).

Source: China: Rural Enterprise, Rural Industry, 1988-90.

3.15 While this picture of egregiously high taxation of the TVCE sector in Jiangsu appears to be well founded, the effect on fiscal revenue of the government has not been correspondingly positive (see Chapter IV). This suggests that taxation of this sector has either exceeded a level that would maximize fiscal revenue or revenue accruals are inadequately captured by conventional government accounts. For example, it is not clear if the head-tax per TVCE worker is recorded as fiscal revenue of the government. It is also not apparent if and to what extent extrabudgetary accounts have garnered this revenue. What is evident is that such high rates of taxation are not conducive to the continued growth and financial health of the TVCE sector.

3.16 Administrative Oversight of the TVCE Sector. The General Administrative Bureau for TVCEs, which represents the interests of industrial TVCEs at the national level, is under the Ministry of Agriculture. At the provincial level, the TVCE Bureau is under the office of one of the Vice-Governors, at the same level as other line departments. Chart 3.1 shows the organization of Jiangsu's TVCE Bureau into five functional departments, and their services. In terms of budgetary flows, TVCE bureaus also collect distributed profits and managerial fees for the township industrial corporations (TIC). Below the provincial level, the Township Planning and Economic Commission (TPEC) and the TICs are the decision-making units, acting as holding companies with local officials as the board of directors, severely limiting factory manager autonomy. Smaller or less advanced towns and villages do not have TPECs and decisions are taken by the Township Governments and the TICs. By contrast, in

southern Jiangsu TICs can be more specialized, overseeing enterprises in particular industrial subsectors. TICs (Chart 3.2) are organized into six departments, five of which oversee, tax, and provide services to TVCEs.

Chart 3.1: PROVINCIAL TVE BUREAU

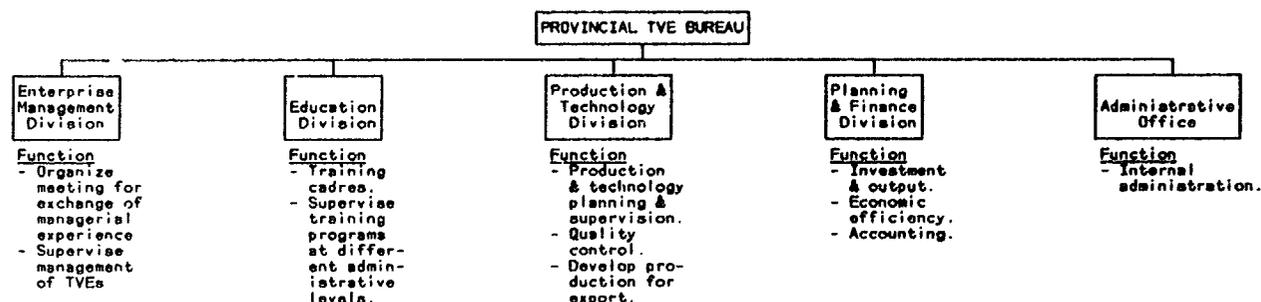
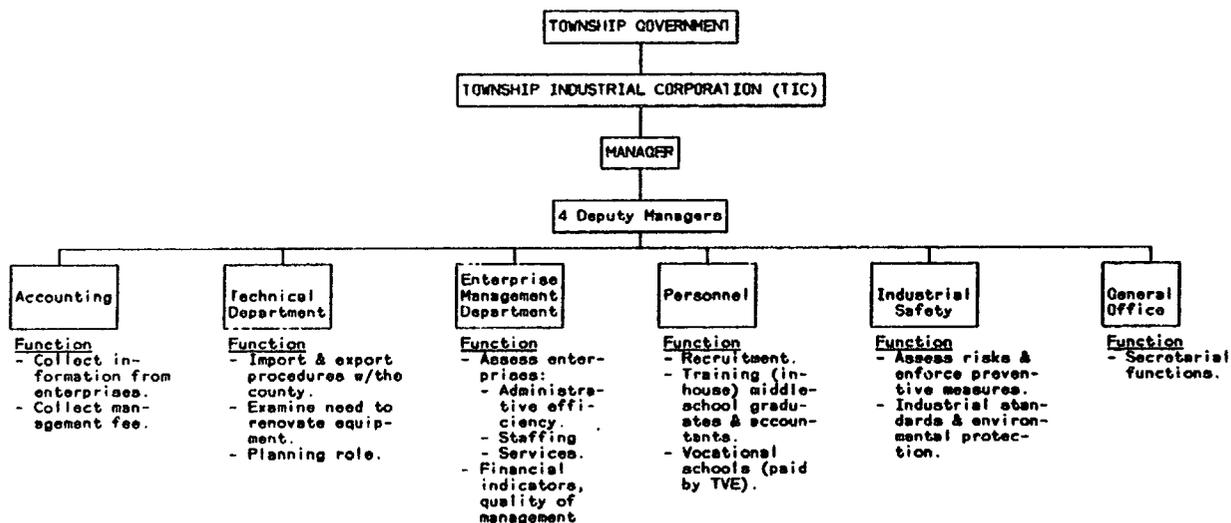


Chart 3.2: TOWNSHIP INVESTMENT CORPORATION (TIC)



B. The Policy Framework: Issues and Recommendations

3.17 Jiangsu's TVCE sector appears to be at a crossroads, with major challenges ahead. The first challenge is to deal with emerging problems, while preserving the incentives, dynamism, and flexibility of TVCEs. Reforms are essential to enhance the sector's efficiency and competitiveness and to reduce the heavy burden of taxes and levies now imposed on the sector. Second, new financial mechanisms, instruments, and ownership forms must be introduced to finance the modernization at a new, more mature, and costly stage of TVCE development. Third, new organizational reforms in government oversight bodies are needed to enhance their ability to assist TVCEs with financial and managerial challenges. Last, new policy tools must be developed to govern the TVCE sector in an indirect way. This means interpreting and fleshing-out at the provincial and local level, recent State Council regulations, in order to accommodate the local characteristics of TVCEs (see Annex 3).^{10/} This

^{10/} See "Regulations Governing the Rural Collective-Owned Enterprises of the PRC," issued by the State Council. Xinhua News Agency, June 10, 1990.

local interpretation should forestall direct administrative recentralization through mandatory planning and guidance over the sector, as a substitute to correcting price and other administrative distortions. Deficiencies in the current credit system and its treatment of TVCEs should also be addressed.

3.18 Policy Tools and Framework. While it may not be possible for the TVCE sector to continue growing at the very fast rates of the 1980s, the bluntness of the policy tools applied during the recent retrenchment program--significant cuts in public investment and a freeze in credit to the TVCE sector--had a very negative impact on TVCEs' profitability, employment, and output growth. Implementation of the new central legal guidelines on TVCEs and the design of the local credit and fiscal measures discussed below is within Jiangsu's jurisdiction. In addition, Jiangsu could adopt measures to reduce the impact of the business cycle on TVCEs, to diversify its productive base and market orientation.

3.19 New Legal Framework. Jiangsu is to restructure its TVCE sector within the framework established by the State Council Regulations designed to strengthen the rudimentary legal and regulatory framework and the rights of TVCEs. The restructuring is to be achieved via "guidance" by means of three (overlapping) tools: economic, administrative, and legislative (Chapter II). While the provincial and municipal authorities will not bring the TVCEs formally into the production plan, they have started to use mandatory and guidance planning to restructure TVCEs in an effort to improve their efficiency by reducing their fragmentation and duplication of industrial activities, suboptimal plant scale and location patterns, wasteful use of energy and raw materials and their negative environmental impact.^{11/} This approach means a possible reduction in the limited enterprise autonomy and local government leeway in managing community-owned enterprises in Jiangsu, at the expense of dynamism, flexibility, local commitment, and resilience that characterized the sector high growth period in the 1980s. On the positive side, the local implementation of the new regulations potentially offers an important opportunity to deal with the TVCE sector's structural problems.

3.20 Until recently, TVCEs developed more or less spontaneously under the auspices of entrepreneurial local governments. However, the debate over the future role of the sector--in the economy and in Jiangsu--has turned to the issue of leadership over the process of rural industrialization. The State Council Regulations contain a number of positive measures to strengthen the legal and regulatory framework governing community-owned TVCEs, but they also raise the worrisome specter of tighter planning and "guidance" over most aspects of TVCEs' activities by government bodies above townships and villages (see Annex 3). This could possibly move TVCEs closer to the planning process than to a more market and profit-oriented industrial subsector. The final impact of these regulations will depend on their provincial and local implementation and (probably uneven) enforcement.

^{11/} Many of the criticisms made on TVCEs performance as regards efficiency in utilization of energy and raw materials are misplaced, and should more appropriately be directed against the lack of competitiveness and quality of some domestic suppliers of capital goods.

3.21 Inadequacies of the Credit Plan. Enterprise interviews in Jiangsu pointed to the difficulties TVCEs face in obtaining credit in general and bank loans in particular (Box 3.1). Most TVCE managers ranked the lack of funds as their biggest problem. Another major deficiency in credit operations was the lack of indirect instruments as exemplified in the denial of credit to TVCEs by administrative allocation of credit, especially during the retrenchment program. Indirect instruments would have allowed the more efficient and less risky firms to bid for additional resources at higher interest rates.

3.22 The system-wide lack of longer term financing in China's credit market, the absence of a developed capital market, and the fragmentation of TVCEs ownership among local governments make it difficult to match investment projects with financing or to pool enough funds to finance larger, more efficient projects. Major systemic changes in the credit policy framework and in the development of financial markets and products are needed if TVCEs are to flourish.

3.23 "Fiscal Predation" and Direct Financing of Community Services. TVCEs are often asked by local governments to directly finance public expenditures as part of current costs, with each TVCE worker paying a head-tax of Y 120 to Y 180 to promote modernization of agriculture. In addition, TVCEs often are forced to make ad hoc tax payments to local governments, directly or through TICs. Despite repeated central government bans on excessive milking of funds from rural enterprise by local governments, the burden on the enterprises has grown increasingly heavy. In one case of "fiscal predation" in northern Jiangsu, 80 percent of enterprise profits were transferred to the local government. In the early reform years, rural enterprises benefited from a variety of tax exemptions; however, all of these exemptions have already expired. In the recent past rising tax rates and rapid TVCE growth, combined with relatively stagnant revenues from most other sources (resulting from the inflexibility of the revenue contracting system) has resulted in TVCE tax payments rising substantially faster (75 percent over 1986-89) than public revenues as a whole (43 percent over 1986-89). So, TVCEs in Jiangsu carry a disproportionate fiscal burden which is hampering their future development.

3.24 Because of the lack of buoyancy in other sources of fiscal revenue, local governments in Jiangsu have targeted TVCEs as "small treasuries" or "money trees" and have subjected them to various taxes and apportioned various costs. As a result, on the average, Jiangsu's TVCEs faced tax rates that are more than 20 points higher than the national average (53 percent) and more than 30 points above the levels of Shandong and Guangdong (see Table 3.2). This rate, the second highest in the nation (after Zhejiang), left TVCEs with less than 20 percent of pretax profits for expansion. While TVCEs theoretically have under the new regulation the "right to reject the imposition of quotas and illegal fines," they must also provide "financial and material assistance and manpower in accordance with state laws and statutes." These elements reinforce concern about a scarcity of retained and reinvested resources to finance the new stage of TVCE development in Jiangsu, in the face of pressures to support public investment and current expenditures, welfare of local peasants, and upstream transfer of fiscal resources. This unsystematic and ad hoc treatment of TVCEs within the fiscal system is very harmful and needs to be remedied. The contract responsibility system needs reforms in two key aspects: (i) to contract profits after taxes; and (ii) to stipulate repayment of loans with after-tax income. This reform has been adopted for

Box 3.1: INSTITUTIONAL CREDIT TO TVCEs (1988/90)

The rapid increase in rural bank savings after the 1978 reforms led to a rapid growth (particularly in the mid-1980s) in the supply of funds by local bank to the TVCE sector, helping to fuel the 1986 and 1988 booms. As a result of the austerity measures introduced since 1988, the People's Bank of China (PBC) instructed the specialized banks (SBs), at the national level, to freeze their loans to the TVE sector at their (year-end) 1988 level. Rural credit cooperatives (RCCs) were subject, for the first time, to global credit ceilings.^{1/} Only during the last quarter of 1989, when general credit policies became again expansive, was the nominal level of bank lending to the TVE sector allowed to rise. The "credit crunch" was particularly severe during the second and third quarters of 1989 when total bank credit was growing at annual rates between 11 percent and 12 percent.

In Jiangsu, under national guidelines, bank credit to the TVCE sector remained practically unchanged in nominal terms, increasing by only Y 30 million, between 1988 and 1989 while RCCs increased their loans by less than Y 1.0 billion (16.3 percent), as shown in Appendix Table 3.6. According to Jiangsu's PBC Branch, in 1989 TVEs received loans from the SBs (mainly the Agricultural Bank of China, ABC) and the (RCCs) amounting to Y 11.05 billion, of which 63 percent were granted by the RCCs, the main institutional source of funds for TVEs. Out of a total 1989 loan portfolio of Y 68.9 billion, the SBs lent less than 6 percent to TVEs (compared with almost 7 percent at the national level). In addition, almost 82 percent of Jiangsu RCCs' total loans were concentrated in the TVCE sector.^{2/} RCCs' high concentration of loans in the TVCE sector probably results from local pressures to channel funds to TVCEs as well as their exclusion in past years from credit plan ceilings.

In real terms, institutional credit to TVEs remained about constant in 1988. Bank credit to Jiangsu's TVEs grew by 19.2 percent, while the national Retail Price Index (RPI) rose by 18.6 percent. However in 1989, real credit to TVEs fell markedly: credit rose 10.7 percent in nominal terms, while the RPI increased by 17.8 percent. TVEs were discriminated in their access to institutional credit during 1989, which remained constant in nominal terms, while total bank credit rose by 13 percent. RCCs' lending to TVEs grew 16.3 percent less than their total credit growth of 18.7 percent (Appendix Table 3.6). During the first half of 1990, bank credit rose rapidly in real terms, contributing to the fast recovery of the TVE sector. During the first semester of 1990 total credit to the TVCE sector rose by Y 1.7 billion. However, this has been mainly in the form of working capital loans. Practically no loans have been made for fixed assets, which will affect the TVE sector's future development.

Jiangsu's banks face a large (though declining) negative gap between their sources and uses of funds, while the opposite occurs for RCCs (Appendix Table 3.6). For example, in 1989 bank credits exceeded bank deposits by more than Y 20 billion, while RCCs had a surplus of Y 4.2 billion. The banks' gap is filled from transfers from three sources: (i) large credit allocations from the People's Bank (channeled mainly through ABC for grain procurement); (ii) allocation of funds by ABC's headquarters; and (iii) to a lesser extent, inter-bank loans. Such dependence causes credit to behave in a highly procyclical way, even more so when contractionary policies are combined with stricter credit allocation to preferential sectors and SOEs. This "crowds-out" more efficient and less risky TVEs, which would (if allowed) bid for additional resources at a higher interest rate.

1/ IBRD, China- Financial Sector Review: Financial Policies and Institutional Development, Report No. 8415-CHA, June 29, 1990.

2/ Notice that SB and RCC credits to TVCEs as reported by PBC amounted to Y 11.05 billion in 1989, while "Bank Loans" to TVCEs in Table 3.6 (as shown in Jiangsu's 1990 Statistical Yearbook) reached Y 13.09 billion. The discrepancy results from differences in institutional coverage (BOCOM is not included in PBC's figure) and possibly PBC's figures do not include loans in foreign currency.

TVCEs but not for SOEs, an additional element of discrimination. The fiscal treatment of TVCEs also should be made consistent so as to reduce its ad hoc and negotiated aspects.

C. Strengthening Jiangsu's TVCEs: Structural Issues and Recommendations

3.25 Dealing with Structural Issues. Over the last decade, Jiangsu's economy has operated in a very procyclical way: it grows much faster than the rest of the country during expansions but contracts more during recessions. Something similar can be said of Jiangsu's TVCE sector. Such cyclical vulnerability results, in part, from the high degree of sectoral specialization of TVCEs in a few industrial subsectors like capital goods, their higher dependence on an unstable and rapidly changing domestic market, and the close similarity of industrial structures across counties in southern Jiangsu. High dependence of TVCEs on bank credit for about 40 percent of their working capital requirements and the procyclical role of bank credit, has served to amplify the phases of expansion and contraction. Higher dependence on the domestic market, compared to TVCEs in Guangdong and Shandong, also contributes to the vulnerability of Jiangsu's TVCEs. The policy environment for Jiangsu's TVCEs needs to be substantially strengthened if they are to live up to their potential contribution to industrial growth and exports. Among the areas needing attention are industrial structure, location patterns, organizational forms, the role of government, and financial structure.

3.26 Industrial Structure, Efficiency and Scale. While the small scale of Jiangsu's TVCEs is sometimes viewed as a source of inefficiency, this is best corrected by policies which continue to encourage competition. Increasing plant size is difficult in the presence of largely immobile productive factors (labor and capital) and distorted relative prices. In addition, the widespread use of the "Wuxi model" of community ownership makes it difficult in Jiangsu to increase enterprise sizes by cross-community mergers. The first characteristic rules out enterprise relocations, while the transfer of resources to larger enterprises (prosperous perhaps only because of arbitrary distortions) in the hopes of improving scale, may only compound the misallocation of resources.

3.27 Groups. Strengthening subcontracting and other links between small and medium-sized enterprises has been a successful strategy in countries such as Japan (for example, auto parts sector) and northern Italy (for example, industrial districts) and would very likely be a good strategy to follow in Jiangsu. However, unless adequate safeguards are introduced, the regulatory environment in China and the weak legal system might put TVCEs at the mercy of SOEs or spread inefficiencies across enterprises if loss-making or less efficient enterprises are merged with successful TVCEs or SOEs. Moreover, the creation of "groups" and "conglomerates" for SOEs and TVCEs, has been promoted without clearly setting the objectives and types of integration desired in each case.^{12/} Alternatives include: on-site; off-site; backward integration into basic materials with enterprises in other provinces; lateral integration into components; forward integration into distribution. Jiangsu should not attempt these types of integrations by administrative means, but rather it should play the role of facilitator creating the incentives or correcting existing distortions while letting local governments and enterprises to select the most appropriate forms of integration. Through specialization in each stage of production from R&D to marketing, combined with a high degree

^{12/} See China: Enterprise Management Reform - Issues and Options, The World Bank, Report No. 7773-CHA, July, 1989.

of cooperation, small firms can reap economies of scale and scope that can match those of big firms.

3.28 Ownership Reform. The fragmentation of enterprise ownership and lack of mechanisms to overcome the "cellular" character of the provincial economy, hampers TVCE development. Jiangsu must provide a "framework" to facilitate cooperation among local governments to develop forms of "cross-ownership," or integration without reducing local incentives and support for TVCEs. Joint-stock companies, one important option, would result in a cross-ownership arrangement that would also reduce local financial risks. Common ownership of successive stages of production would also be advisable when deepening asset specificity increases the number of specialized TVCEs in collaboration.

3.29 While most TVCEs operate under the CRS, which intends to preserve the autonomy of enterprise managers regarding day-to-day production decisions and profit and tax obligations, in practice ad hoc interventions by TICs and local authorities are reported to be widespread in many provinces. In particular, TICs and local governments exercise a great deal of discretion to extract revenue from enterprises. As a result, enterprises, in many cases, are left with inadequate retained earnings to finance continued development.

3.30 Clarification of property rights is an essential step to allow collectives to achieve significant organizational improvement. Defining the rights of owners/workers and investors regarding distribution of profits is essential to widen the access of TVCEs to equity capital while defining the functions, rewards and responsibilities of managers (as well as the control exercised by owners over managers) is necessary to ensure that assets are efficiently managed. Jiangsu should observe the experiments in this area of reform being carried out in Fuyang (Anhui province), Zoucun (in Shandong) and Wenzhou (in Zhejiang), with a view to encouraging the growth of shareholding enterprises. While "self-accumulations" will continue to be important, it will be unable to provide all the resources for the next phase of modernization. The lack of long-term bank financing will force TVCEs to access the emerging capital market.

3.31 Deepening Outward Orientation. Expanding international market share is a promising strategy for the future development of many of Jiangsu's TVCEs. TVCEs still have disadvantages vis à vis SOEs in terms of technology and equipment, economies of scale, and preferential access to skilled labor, credit, and subsidized raw materials. These factors make competition and expansion difficult for TVCEs. Consequently, TVCEs need to exploit better their comparative advantages (for example, cheaper labor costs, more autonomy and flexibility), open new "windows" and look more actively for opportunities in the international market (for example, SEZ, joint-ventures, faster acquisition of new technology). In addition, export incentives for TVCEs should be corrected for distortions and Jiangsu could introduce new export promotion services for TVCEs and SOEs. Implementing these policies, by granting direct export rights, for example, will be crucial to deepening TVCE export potential (Chapter II).

3.32 Support and Community Arrangements: TVCE Bureaus and TICs. TICs theoretically act like "holding companies" in western enterprises but seem limited in their capacity to function as a "miniature capital market" for

reallocating funds to high-yield uses or expanding finance for TVCEs. For the larger TVCEs (400-600 workers), these planning and decision-making bodies urgently need a "new mentality." The quality and type of support services provided by TICs are inadequate; they seem more concerned about collecting administrative fees and overseeing the remittance of profits and taxes to the townships, than about providing TVCEs with technical and financial services.

3.33 The dual role of community governments also needs to be addressed, especially the pervasive "conflict of interest" between local government as owners and tax collectors (also as entrepreneurs and as regulators). Despite their high stake in the prosperity of TVCEs, they also depend heavily on TVCEs' revenue transfers to defray public expenses. This suggests the importance of segregating the fiscal and the development roles of TICs and community governments, while maintaining their interest in supporting rural industrialization. TICs could become an institutional mechanism to pool funds for R&D, setting up joint training centers, promoting dialogue between producers and users of capital equipment and providing specialized export and legal services, giving to individual TVCEs access to facilities and expertise they could never afford on their own. This most constructive "high road" to development has proven successful in northern Italy's industrial parks, where competition, on the basis of innovation in design, quality and innovation, has proven successful, avoiding the self-defeating road of tax breaks and exemption from regulations on employment, health, and safety standards.

3.34 Steps to Address TVCEs' Financial Weaknesses. The TVCE sector displays a number of financial weaknesses. It is highly dependent on bank credit by being "working-capital intensive," with a higher ratio of working capital to fixed assets (1.43 in 1987 and 1988, and 1.39 in 1989) than other sectors. TVCEs maintain large inventories of raw materials to ensure continuous operation, high inventories of finished goods or goods in process, and a generally low fixed-capital intensity. These features help to explain the vulnerability of TVCEs to swings in bank credit, retained profits, and reinvested funds. To raise working capital outside of the banking system, well-established TVCEs in south Jiangsu should be allowed to issue commercial paper with the approval of PBC instead of issuing "receipts" to capture the savings of their own workers. Developing "associations of RCCs" as special financing vehicles for TVCEs should also be considered, as recommended in an earlier World Bank Report.^{13/} These features, together with the locally controlled ownership form, suggest that TVCEs will have a hard time financing their next stage of development. This stage differs from the previous one in the major investments that will be required to upgrade equipment and technology in already large TVCEs. Most likely these investments will exceed local government capacity. New longer-term financing vehicles and instruments will have to be found because current bank credit terms are inadequate. In addition, joint ventures among community governments should urgently be promoted to pool resources, reduce risks, and rationalize overlapping industrial structures.

3.35 Cross-Subsidies Between TVCEs. Profitable TVCEs are often asked to assume loans, to absorb loss-making TVCEs, or both. Jiangsu's authorities know that this financial burden results in a large misallocation of resources,

^{13/} See Financial Sector Policies and Institutional Development, The World Bank, 1990.

slows down successful enterprises, and limits the resources that successful TVCEs can keep for modernization. Maintaining a "balanced growth strategy" that leaves nobody behind violates the "self-accountability" principle and sends a negative signal to enterprise managers about government support. Loss-making enterprises should be allowed to fail, as, in fact, many have in the recent retrenchment (see para. 3.10). Setting clear and enforceable bankruptcy rules will assist the rational restructuring of industry. The government should enact measures to cushion the social costs by early reforms in social security,^{14/} labor retraining, and increased mobility of labor. Banks should be allowed to function as financially autonomous entities, responsible for assessing and bearing risk.

3.36 Other Issues: Human Resources, Pollution, Energy, and Raw Materials Consumption. Other pressing problems in the TVCE sector include a shortage of skilled workers in the south, especially technicians and managers, and a lack of entrepreneurs in the north. To address these problems, the authorities need to provide and refocus personnel training (Chapter II) and promote mobility of entrepreneurs and skilled technicians. Greater use of competitive bidding for urban construction projects, together with informal easing of controls on internal migration, created in the past growing opportunities in the cities for both rural construction enterprises and individual construction workers. A return to such forms of competition would be especially important for high unemployment northern Jiangsu. This process was set back by 1989's austerity program, but it should be revived.

3.37 Industrial pollution resulting from the cumulative effects of TVCE concentration have overwhelmed both regulatory capabilities and the environment's absorptive capacity. In addition, in southern Jiangsu, industrial safety standards are not enforced. This reflects, in part local government "conflict of interest." The authorities should consider enacting emission charges and other taxes to induce pollution abatement measures at the enterprise level, and clustering and more effective industrial zoning in order to make technical solutions more affordable (Chapter II). Tougher safety standards should be gradually phased in, because absorbing the costs of modernization will make enterprises less competitive.

3.38 At enterprise level, shop layouts are deficient and industrial machinery is obsolete, and energy and raw material intensive. Jiangsu should promote technical assistance from TICs and SOEs, or both, to TVCEs. Even gradual modernization will entail such huge investments that external help will be needed from foreign direct investments and long-term credits from multilateral agencies for the most advanced TVCEs (Chapter II).^{15/}

3.39 Finally, backup power at enterprise level is costly because the central government lacks revenue to finance infrastructure and because local enterprises, townships, and counties do not cooperate to assure larger power

^{14/} See China: Reforming Social Security in a Socialist Economy, Report No. 8074-ChA, June 25, 1990.

^{15/} See China: Rural Industrial Technology (Spark) Project, Staff Appraisal Report, Report No. 7484-CHA, The World Bank, October 22, 1990.

16/ To raze bureaucratic obstacles to interjurisdictional cooperation at the county, city, township, and village levels, "Regional Development Corporations" might be created to promote joint projects on pollution control and energy, for example, on an economic scale.

3.40 Promoting TVCEs in Backward Areas. The authorities should actively encourage new and existing individual and household TVEs, especially in northern Jiangsu. This encouragement could take several forms: (a) "seed" risk capital (but no subsidies) to finance new private TVCEs; (b) a long-term, comprehensive training program in the north to raise the low level of technical and managerial skills; (c) "job export" promotion from the south, especially labor-intensive processes (using tax and credit incentives); (d) active encouragement of specialized agro-industrial and food-processing TVCEs in the north, instead of trying to "catch up" with, or duplicate, TVCEs in the south (as proposed by the Jiangsu's TVCE Bureau); and (e) promotion of rural service sectors in the fields of construction, transport, and commerce. Provincial policies should focus on increasing the links and exploiting the mutual benefits of north-south complementarities. Policies should not, however, "slow-down growth in the south," for example through heavy taxation of TVCEs, to subsidize the north, because the outcome might leave everybody worse-off.

3.41 Jiangsu is to be congratulated on being the first out of the starting blocks in promoting the TVCE sector and in achieving many notable successes. However, it is evident that this sector is slowing down as the early advantages of reform and endowments are gradually eroded. There can also be little doubt that the heavy load of taxes and levies on the TVCE sector in Jiangsu in recent years has the potential to significantly hinder investment and, consequently, the growth of this sector. The sector can be rejuvenated if appropriate policy actions are taken in a number of areas. First, the effective taxes on TVCEs and other transfers to TICs and local governments must be reduced to more reasonable levels to allow for the continued growth of the sector. Second, administrative intervention in the functioning of TVCEs should be minimized and market signals allowed to guide their development. Any attempts by local governments to protect TVCEs by limiting market competition should be strongly discouraged. Greater flexibility in the institutions which govern labor flows will allow the TVCE sector to develop along appropriately labor-intensive lines, with desirable consequences for employment. Finally, Jiangsu should encourage the development of alternate organizational forms in this sector by clarifying property rights within the collective and by promoting experiments which allow the creation of joint stock companies and shareholding enterprises.

16/ See "Decentralization of China's Electricity Sector: Is Small Beautiful?", World Development, vol. 18, no. 14 (April 1990).

IV. ISSUES IN JIANGSU FISCAL POLICY

Introduction

4.1 The relaxation of fiscal constraints on the future development of the Jiangsu economy is high on the provincial policy agenda. To identify the proper solutions to the tax and expenditure problems of Jiangsu and its local governments, Jiangsu must initiate a detailed planning process. The analysis in this chapter is intended to give perspective to the policy process, not a blueprint for reform, in three areas: (i) an estimate of the "resource envelope," the revenues the government has available to provide necessary public services and to undertake investment in the provincial development plan; (ii) a summary statement of the fiscal problems which the province must resolve to realize its objectives; and (iii) a summary of the options that the province might want to evaluate should it put together a reform agenda.^{1/}

4.2 The Central Fiscal Framework. The national tax structure and the system of intergovernmental fiscal relations are inextricably linked in China. This understanding must inform any discussion of local tax and expenditure options in Jiangsu. The laws of taxation and the powers and responsibilities of the various levels of government are laid down in Beijing. Any changes in Jiangsu's local fiscal policy must thus take place within the context of central government tax reform. Because provincial and local governments are responsible for tax collection and administration, share in revenue collections, and enjoy substantial latitude in awarding tax preferences to enterprises, however, the central government's ability to use the tax system for its own objectives hinges on its ability to influence local implementation of central policy. Likewise, Jiangsu's ability to encourage revenue mobilization or expenditure redirection depends on the cooperation of its subprovincial governments.

4.3 The foundations for national fiscal reform are being laid in China. Reform measures that would change the division of national and provincial revenues are being considered by the central government, including a variety of approaches to expand local government's revenue powers. Options appear to include: (i) an increased number of strictly local taxes ("local fixed revenues"), full separation of center and provincial tax powers and reassignment of major taxes between central and local governments in proportion to their expenditure needs; or (ii) a reform of the present system to include revenues of the locally retained tax shares to increase local tax effort, accompanied by a transfer system. The pros and cons of these are discussed in the context of Jiangsu, in Section C.

A. The Resource Envelope in Jiangsu

4.4 Revenues. In 1990, the government sector including SOEs derived its revenue from budgetary resources (50 percent), extrabudgetary sources (45 percent), and central government grants (about 5 percent). Budgetary

^{1/} For detailed recommendations on tax policy and revenue mobilization at the provincial level, see China: Revenue Mobilization and Tax Policy, CHA-7445, June 1989, Chapter IV.

revenues include the major taxes (enterprise tax, sales tax, customs duty), while extrabudgetary revenues consist largely of the retained profits and depreciation funds of the SOEs (65 percent), revenues raised by administrative departments, line agencies, etc. (32.5 percent), and revenue raised by local government (2.5 percent).

4.5 Table 4.1 describes the trend in revenue from both budgetary and extrabudgetary sources, as well as grants, over the period 1987-90. Budgetary revenue has declined slightly in importance, from a 51 percent share to a 50 percent share while, correspondingly, extrabudgetary revenue has increased in significance from 42 to 45 percent. Central grants have declined from 6.7 percent to 4.8 percent.

Table 4.1: FISCAL REVENUE TRENDS IN JIANGSU, 1987-90

	1987		1988		1989		1990	
	Y bln	%						
1. Budgetary revenue	10.72/a	51.1	11.80	50.3	12.64	49.6	13.62	50.2
2. Central grants	1.40	6.7	1.33	5.7	1.29	4.8	1.31	4.8
3. Extrabudgetary revenue	8.86	42.2	10.32	44.0	11.55	45.3	12.22	45.0
Of which:								
Local government	0.29		0.30		0.30		0.30	
Undertakings, admins.								
agencies, institutes	2.44		3.02		3.44		3.97	
SOEs	6.11		6.99		7.81		7.95	
<u>Total Revenue (1+2+3)</u>	<u>20.97</u>	<u>100.0</u>	<u>23.45</u>	<u>100.0</u>	<u>25.48</u>	<u>100.0</u>	<u>27.13</u>	<u>100.0</u>
Revenue of "general government" (excluding SOEs)	14.86		16.46		17.67		19.18	

/a Figures for 1987 do not include revenue from the electric power construction fund which was introduced in 1988. Revenue collected by this fund in 1988-90 was Y 0.25, Y 0.23 and Y 0.19 billion, respectively.

Source: Based on Appendix Tables 4.1 and 4.3.

4.6 Table 4.2 describes the shares of the major components of revenue in relation to provincial GDP in Jiangsu over the period 1987-90. In general, we would expect revenues to keep pace with the growth of GDP in any fiscal system where revenues were buoyant. As Table 4.2 describes, however, revenue has not kept pace with GDP growth in Jiangsu. Most revenue sources have declined as a share of GDP although extrabudgetary revenues have declined the least. Excluding the revenues of the state-owned enterprises and focusing on the revenues (both budgetary, grant and extrabudgetary) of the general government sector, this period has seen a decline in its command over real resources from 16.6 percent of GDP in 1987 to 14.6 percent in 1990.^{2/} This trend is important in understanding the fiscal situation and prospects in Jiangsu.

^{2/} The "general government sector" is defined to include provincial and lower level governments, administrative units, and line departments; it excludes the state-owned enterprises.

**Table 4.2: REVENUE IN RELATION TO PROVINCIAL GDP
(Percent of GDP)**

	1987	1988	1989	1990
Budgetary revenue	12.00	10.42	10.29	10.35
Extrabudgetary revenue	9.91	9.12	9.41	9.29
Total revenue including central grants and revenue of SOEs	23.48	20.72	20.75	20.62
Revenue of general government excluding revenue of SOEs	16.64	14.54	14.39	14.57

Source: Jiangsu Bureau of Finance.

4.7 The second feature of Jiangsu's revenue system relates to the revenue-sharing system between the various levels of government. Table 4.3 provides the distribution of total revenue (both budgetary and extrabudgetary) across these government entities. Over the period 1987-89, the share of total revenue accruing to the center has declined from 29 percent to 25 percent. In part this is the effect of the "incremental revenue-sharing system" whereby the center receives a fixed share (59 percent) of a provincial budgetary revenue target that is determined by a 1987 base of Y 10.01 billion, adjusted upwards by 5 percent per year. So long as actual budgetary revenue collections increase by more than 5 percent per year, this system will result in a declining share of revenue remittances to the center.

**Table 4.3: REVENUE SHARING IN JIANGSU
(Billions of current yuan)**

	1987	%	1988	%	1989	%
1. Total revenue	20.97	100.0	23.45	100.0	25.48	100.0
a. Revenue remitted to the central government	5.91	28.8	6.23	26.6	6.55	25.7
b. Revenue retained within Jiangsu	14.61	71.2	17.22	73.4	19.87	74.3
Of which:						
i. Provincial government	2.41	(11.7)	2.35	(10.0)	2.40	(9.42)
ii. Municipal and county governments / ^a	3.65	(17.8)	4.66	(20.7)	5.28	(20.7)
iii. Administrative agencies, institutes, etc.	2.44	(11.9)	3.02	(12.9)	3.44	(13.6)
iv. SOEs	6.11	(29.8)	6.99	(29.8)	7.61	(30.6)

/^a Revenue retained by municipal and county government is derived as a residual = 1(b) - 1(b)(i) - 1(b)(iii) - 1(b)(iv).

Source: Based on Table 4.1 and Appendix Table 4.13.

4.8 While the share of revenue retained within the province has increased from 71 percent to 74 percent, Table 4.3 suggests that the provin-

cial government has not benefited from lower remittances to the center--the share of total revenue accruing to this level of government in fact declined from 11.7 percent in 1987 to 10 percent in 1988 and an estimated 9.4 percent in 1989.

4.9 Municipal and county governments have increased their share in total revenue from about 18 percent in 1987 to 20 percent in 1989. (Again, it should be noted that, since the extrabudgetary revenue of local governments stayed stagnant, these movements are due to budgetary revenue.) The long-term significance of this increase is doubtful, however, since the revenue share of these lower levels of government in 1986 was as high as 24 percent. Administrative agencies, undertakings and institutes have increased their share of total revenue from 11.9 percent to 13.5 percent (see Table 4.3), reflecting in part the increased use of "clawback" fees and levies under the extrabudgetary account.

4.10 Expenditures. The distribution of total budgetary and extrabudgetary funds, including the extrabudgetary expenditure of SOEs, is described in Table 4.4. The largest single item of budgetary expenditures is social services (mostly education). The next two largest are price subsidies and "other" expenditures, including urban maintenance. The small (13 percent) share of budgetary expenditure devoted to capital activities is the most striking finding. When budgetary and extrabudgetary expenditures of the general government are taken together (col. 4), a similar pattern prevails; when SOEs' extrabudgetary expenditures are included, their higher investment rate raises the share of capital expenditures (col. 1-3).

Table 4.4: DISTRIBUTION OF EXPENDITURES IN JIANGSU PROVINCE: 1987-89
(billion yuan)

Categories	1987			Including SOEs 1988			1989			Excluding SOEs 1989		
	BUD.	E. BUD.	TOTAL	BUD.	E. BUD.	TOTAL	BUD.	E. BUD.	TOTAL	BUD.	E. BUD.	TOTAL
Capital Expenditure	1.02	2.60	3.62	1.17	2.47	3.64	1.24	3.55	4.79	1.24	0.47	1.71
Social Services	2.02	-	2.02	2.44	-	2.44	2.82	-	2.82	2.82	-	2.82
Price Subsidies	1.89	-	1.89	1.82	-	1.82	1.94	-	1.94	1.94	-	1.94
Employee Bonuses and Welfare	-	1.37	1.37	-	1.62	1.62	-	2.08	2.08	-	0.12	0.12
Administration	0.47	0.05	0.52	0.59	0.12	0.71	0.71	0.07	0.78	0.71	0.07	0.78
Taxes and Contributions	-	0.54	0.54	-	0.56	0.56	-	1.09	1.09	-	0.15	0.15
Other	1.60	3.36	4.96	2.12	4.26	6.40	2.51	4.32	6.63	2.51	2.66	3.33
Total Expenditure	6.9	7.92	14.72	8.14	9.05	17.19	9.22	11.11	20.33	9.22	3.47	10.85
Percent Distribution												
Capital Expenditures ^{/a}	15.00	32.83	24.59	14.87	27.29	21.18	13.46	31.95	23.56	13.45	28.83	15.78
Social Services	29.71	-	13.72	29.98	-	14.19	30.59	-	13.87	30.59	-	25.99
Price Subsidies	24.85	-	11.46	22.36	-	10.59	21.04	-	9.54	21.04	-	17.88
Employee Bonuses and Welfare	-	17.30	9.31	-	17.90	9.42	-	18.72	10.23	-	7.36	1.11
Administration	6.91	0.63	3.53	7.25	1.33	4.13	7.70	0.53	3.84	7.70	4.29	7.19
Taxes and Contributions	-	6.82	3.87	-	6.19	3.28	-	9.81	5.36	-	9.20	1.38
Other	23.53	42.42	33.70	26.04	47.29	37.23	27.22	38.68	33.60	27.22	50.31	30.69
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

^{/a} See key to tables (in Annex) for definitions of capital expenditures, social services, etc.

Note: "BUD" denotes Budgetary Expenditure; "E.BUD." denotes Extrabudgetary Expenditure.

4.11 The distribution of fiscal activity by level of government within Jiangsu (Appendix Table 4.3) shows that the provincial government is not the major player in either spending or collecting revenues. The province directly accounts for only about 24 percent of expenditures; most expenditure is done by municipalities and counties. Jiangsu's counties (with 70 percent of its population) make less than 40 percent of all expenditures; per capita expenditures by cities are nearly twice as high as expenditures by counties.

4.12 This fiscal profile tells us that while the general government sector is a major force in provincial resource allocation and expenditures, the Provincial government itself, the main "regulator and planner" of economic activity, is not a major force in the implementation of taxing and spending activities in the fiscal sector. Therefore, its direct ability to affect the distribution of fiscal resources through direct transfers to local governments is limited (the province allocates revenues for "support for underdeveloped areas"; equivalent to less than 2 percent). This suggests that the effectiveness of the provincial government depends to a large extent on its ability to control and monitor the activities of the city and county governments below it.

B. Problems and Issues in Jiangsu's Public Finances

4.13 As identified in the above section, the overarching problem in Jiangsu is the low buoyancy of the fiscal system. It explains the perception, at various levels of government, that public expenditure programs are constrained by insufficient revenue. While the "incremental revenue sharing" system introduced in 1988 was intended to increase local government incentive to collect taxes, this has clearly not proved adequate to increase budgetary revenues. A second issue concerns the apparent decline in public investment spending in Jiangsu. While local governments have attempted to require enterprises to undertake public investments, there nonetheless appears to be a decline in investment in infrastructure. Third, the growth of extrabudgetary accounts reduces the provincial government's discretionary control over such revenue. Finally, the use of "clawback" fees and levies complicates the tax system. We consider each one of these problems in turn.

4.14 Resource Mobilization. Budgetary expenditures fell from 8.8 percent of GNP in 1986 to 7.5 percent in 1989, and their level in (real) per capita terms was also lower in 1989 than in 1988 (Appendix Table 4.2).^{3/} Expenditures have fallen because Jiangsu's revenue performance was weak in the 1980s. Collected budgetary revenue consistently declined as a share of GNP, from 13.1 percent in 1986 to 10.4 percent in 1990 (Appendix Table 4.1). Part of this may be explained by the establishment of large centrally owned SOEs in Jiangsu, which contribute to fixed central government revenue and limits the growth of Jiangsu's tax base. In real terms, budgetary revenues (Jiangsu's tax collections before sharing with the central government) declined by about Y 24 per person between 1985 and 1989. Budgetary revenue collections were weak in the major revenue-generating centers: in both Nanjing and Wuxi, collections were a lower percentage of GNP in 1989 than in 1987. A major part of real growth in Jiangsu's total revenues came from extrabudgetary sources (Appendix Table 4.6).

4.15 The government's discretionary tax relief policy has contributed to Jiangsu's revenue constraints, because of the substantial tax concessions granted under the provincially implemented tax contracts and incentive programs. Tax contracting is intended to give enterprises both incentives and

^{3/} The growth in budgetary expenditures appears to be uneven across Jiangsu's localities. There was no real budgetary expenditure growth in Wuxi, either as a percentage of GNP or in per capita terms, but there was a modest real budgetary growth in Nanjing (Appendix Tables 4.4 and 4.5).

resources to expand their productive activities, but the base of the income tax is substantially narrowed by the contracts negotiated with SOEs. Thus, tax contracting imposes significant revenue costs.^{4/} Wuxi officials estimate that the effective income tax rate for enterprises in that city is now less than 30 percent, compared to the nominal rate of 55 percent and an estimated effective 44 percent income tax rate in 1986, before contracting began. Jiangsu Finance Bureau officials also acknowledge the revenue cost of contracting ("the normal 55 percent rule would probably yield more money"), but have no estimate of the amount. From another perspective, however, the revenue cost has some advantages for provincial and local governments: by reducing provincial tax collections (which must be shared with the center), resources are effectively shifted into the extrabudgetary accounts of enterprises, which are taxed at lower rates (10-15 percent depending on the particular EB levy), and which Jiangsu can tap in an ad hoc manner as necessary. Secondly, it avoids a faster growth of provincial budgetary revenue which could potentially raise the base for future tax contracts with the center.

4.16 Provincial and local governments further narrow the tax base for all taxes by providing discretionary relief under several programs: (i) tax incentives to encourage the development of pioneer products; (ii) relief for enterprises "running into problems"--this is more ad hoc and can include income and sales taxes; (iii) "special case" tax relief programs for technical upgrading; and (iv) treatment of both debt repayment and interest payments as deductible costs (in addition to the normally expensed items).^{5/} The success of the relief measures in meeting their objectives cannot be continuously monitored for lack of systematic analysis of the costs and benefits of tax relief programs, or detailed record keeping of the number of participating enterprises. There is thus considerable room for improving estimates of the revenue cost of tax relief and fine-tuning it to target the benefits more narrowly.

4.17 The weak performance of the enterprise income tax provides indirect evidence about the cost of these tax preferences. The slowdown in economic growth has contributed to the decline in revenue but so have tax preferences. During this period, gross collections of income tax and adjustment tax declined in absolute terms. If planned SOE losses financed by the budget are offset against tax revenues, income tax revenues net of enterprise subsidies have dropped by about 68 percent between 1986 and 1989, despite the 63 percent rise in provincial GNP (Appendix Table 4.1). In fact, enterprise income tax

4/ See Revenue Mobilization and Tax Policy, op. cit., Chapter II.

5/ This deduction is theoretically given only to "selected" firms and to those developing new products. While most SOEs in Jiangsu receive this favorable treatment, TVCEs do not.

collections (net of planned losses) in 1989 were equivalent to only about 2 percent of total revenues.^{6/}

4.18 Other problems posed by tax relief include its perverse nature across the economic and fiscal cycle. Typically, in a tight fiscal situation, as in 1990, government curtails tax relief, especially to profitable firms, to expand its revenues. Conversely, more relief is granted during upturns when revenues are higher. Thus, tax relief is procyclical and it runs counter to economic stabilization objectives.

4.19 Shortcomings in the tax collection and assessment system may be an additional reason for Jiangsu's revenue deficiency. Tax administration in Jiangsu, and in all China, has modernized less rapidly than the tax structure. The Jiangsu provincial government exercises an oversight role in tax administration, which provincial officials say is considerable. The Jiangsu Tax Bureau spends about a third of each year's work "checking up on the locals and providing guidance in their work."

4.20 Indirect evidence, however, suggests that Jiangsu's tax administration may not be sufficient. In the provincial Tax Bureau, only 120 nonclerical employees oversee 600,000 private firms and 100,000 SOEs, TVEs, and collectives doing business in Jiangsu. The municipal and county Tax Bureaus, which are directly responsible for assessing and collecting taxes, have many more employees, some 23,000. These Tax Bureaus have no system of unique taxpayer identification numbers and no centrally maintained and regularly retrievable tax file for each enterprise, and the ledger entries for 80,000 enterprises in Nanjing are recorded in chronological sequence. Because provincial Tax Bureau offices maintain no detailed or computerized tax records, only summary statistics, exerting control over either taxpayers or the local tax bureau offices is very difficult. With this volume of work and limited data base, monitoring the flow of taxes and auditing is very difficult. In effect, therefore, the system is essentially self-assessed.

4.21 Trends in Investment Spending. Jiangsu's investment plan calls for increased allocations to infrastructure, transport, and energy and for upgrading industrial production capabilities. Yet social services and price subsidies absorb nearly half of the budget. The share of total expenditures that remains for capital investment seems modest and accounted for about 13 percent of total budgetary expenditures in 1989 (Table 4.2).^{7/} Moreover, the share spent for capital purposes declined throughout the 1980s, from 30.2 percent in

^{6/} Enterprise tax revenues were about 20 percent of total revenues; planned (budgeted) losses were -18.2 percent of budgetary expenditures. "Net" refers to the sum of income tax, adjustment tax, remittances, and subsidies for planned operating losses. In 1990 the unplanned operating losses (not included in the budget) are estimated at Y 300 million compared to Y 100 million in 1989. To include these would make total "revenues" from enterprises negative and at -1 percent to -2 percent of GNP, quite large.

^{7/} Budgetary capital expenditures are defined here (see Appendix Table 4.10) as the sum of expenditure categories 1, 2, 3 and 7 in Appendix Table 4.2. This definition will be used in the remainder of this chapter.

1981, to 18.1 percent in 1986, to 13.5 percent in 1989. The same trend holds at the local level in Nanjing and Wuxi since 1987, with capital expenditures at roughly 10 percent of budgetary outlays.

4.22 The emphasis on capital expenditures is much greater in the extrabudgetary accounts, although these too have declined (Table 4.4). About 32 percent of all extrabudgetary expenditures including the extrabudgetary expenditures of SOEs, are made for capital purposes, slightly less than the 33.6 percent in 1985.^{8/} The percentage of extrabudgetary capital expenditures (excluding capital expenditures of SOEs) drops to 15 percent of the total in 1989. These figures, however, need proper interpretation. The distribution of extrabudgetary retained earnings by SOEs (Appendix Table 4.7) shows that 40 percent was spent for net investment purposes in 1989. The extrabudgetary capital expenditures of government departments taken alone amount to some 30 percent of the total. These are not typically infrastructure expenditures but rather capital expenditures on revenue-earning projects such as hotels. Public investment in the traditional sense is short-changed by the very small share of capital expenditures in the provincial government's budget. It is not apparent if including investment undertaken by enterprises on behalf of local authorities would modify this conclusion.

4.23 The share of capital expenditures has shrunk for a variety of reasons. At the budgetary level, these include the overall constraint of budgetary/financial resources, and the quotas on capital construction fixed by the central government and allocated by the provincial government. At the extrabudgetary level, they include the preferences of "short-sighted" enterprise managers who skimp on enterprise investment in favor of more popular wage/bonus and worker welfare expenditures. In addition, the practice of having the extrabudgetary resources flow into the separate administrative unit accounts, which are not under unified budgetary or provincial management, makes it difficult to coordinate expenditures or to undertake public investments of any significant scale or scope (see below). Whatever the reasons, the shortfall has implications for productive capacity and infrastructure development in Jiangsu province.

4.24 Lack of Control of Extrabudgetary Accounts. Because much of Jiangsu's expenditures are in the extrabudgetary accounts, they are not subject to management by the government sector or the Finance Bureau. This dispersion of control leads to an aggregate expenditure program that does not match Jiangsu government's objectives for expenditure policy in many respects. Two other specific issues are problematic. First, some line departments take a laissez-faire approach to revenue raising mostly by means of ad hoc charges on enterprises, which may or may not be consistent with government fiscal pol-

^{8/} Extrabudgetary capital expenditures are defined here as categories 1, 3, 4 and 9 in Appendix Tables 4.10 and 4.11.

icy. Similarly, extrabudgetary expenditures are made by the departments that raise the money, with only limited provincial government control.^{9/}

4.25 The "Clawback" Fees and Levies. Jiangsu, like other provinces and the central government, has attempted to make up for what it considers an inadequate level of budgetary revenues by clawing back revenues from the SOEs with a variety of ad hoc charges and taxes. The magnitude of the "clawback taxes" is both significant and growing, from 7 percent of total extrabudgetary expenditures in 1987 to 10 percent in 1989 (Appendix Table 4.10). Overall, these "clawback" taxes were increased by Y 540 million, while SOE income and adjustment taxes fell by Y 190 million. Total extrabudgetary revenues of SOEs, however, net of clawback taxes, were up from Y 5.5 billion in 1987 to Y 6.7 billion in 1989. While this is understandable, given the revenue constraints facing the general government sector in Jiangsu, it also creates significant problems. First, it complicates the tax structure, making tax administration more difficult. Second, it transfers resources from the budgetary accounts to the more loosely managed extrabudgetary sector. Perhaps most important, it makes tax policy reform a moving target--every year seems to bring a new scheme to tap the resources of the enterprises.

C. Options for a Policy Agenda

4.26 The problems and issues facing Jiangsu in the fiscal area, while partly due, in the short run, to a weak economy, also stem from policies that are inconsistent with Jiangsu's own objectives of increasing revenue mobilization and investment in priority sectors such as transport and energy. The central government's grand design for the distribution of revenues among the central government, the general purpose local governments, and the state-owned enterprises is embodied in the tax system and the revenue-sharing system. Since the late 1980s, the general system has changed dramatically. Its revenue potential has been weakened by incentives and contracting, and to offset this, many "clawback" taxes have been introduced to recapture revenues. Incremental revenue sharing has also been introduced as an incentive for revenue mobilization. However, the larger local governments still see the basic sharing rate (often in the 70 percent range) as a major disincentive to increasing their tax collection efforts. Instead, they have reduced taxes through discretionary relief and contracts, leaving enterprises with more retained earnings, which are then subjected to "clawback" fees levied by administrative agencies. It should be noted that these measures occur within the framework of rules for tax relief drafted by the central government. However, in effect, this transfers revenues to the extrabudgetary accounts of administrative agencies where there is less sharing with higher levels of government.

^{9/} Extrabudgetary revenues in Jiangsu have steadily increased relative to budgetary revenues. In 1989, extrabudgetary revenues (including SOEs) were equivalent to 91 percent of budgetary revenues; such revenues (excluding SOEs) made up 30 percent of budgetary collections. Extrabudgetary revenues (including enterprises, local governments, and units) grew faster than provincial GNP until 1987, but since then have declined as a share of income (Appendix Table 4.6), a pattern that holds roughly throughout China.

4.27 Central Government Tax Reform. Central government initiative on tax reform should be on the policy agenda. It should have three elements. First, the tax structure and tax rates should be aligned with economic objectives. Second, a comprehensive reform should replace the tax incentive and tax contracting systems. Third, the central government should also take the lead in promoting improvements to the tax administration system.^{10/} In addition, major changes need to take place in the revenue-sharing system. Box 4.1 describes some options which the central government might consider in reforming central-local taxes.^{11/}

4.28 These options present no easy choices. The most basic issue on the tax side is the command of each level of government over fiscal resources, and the resultant independence (or lack thereof) of each governmental unit in meeting its expenditure goals. The proper mix and level of local government revenues depends in part on the expenditure responsibilities which are assigned to local governments. Since revenues and expenditures almost never match, a transfer system is usually needed. Since there are also wide variations in resource endowments among regions and per capita incomes across provinces, the central government also has a redistributive role to play via transfers.

4.29 In evaluating the various choices facing the authorities, government must first decide on the role to be assigned to the central, provincial, and local government sectors. The questions to be addressed are whether provincial (municipal and county) governments will be given some degree of revenue-raising autonomy, whether tax administration can remain a local government responsibility, and whether the intergovernmental transfer system will also include a formula-based transfer program.

4.30 Centralizing the fiscal system sacrifices possibilities of vesting more budgetary decision-making powers in local governments and reducing the revenue-raising incentives of provincial and local governments, which are goals of system reform. If the decision is in favor of some degree of continued fiscal decentralization in China, four possible models can be developed. Each option has different implications for stabilization policy, equalization potential, resource allocation, tax administration, and the extent and nature of the autonomy given to provinces (Box 4.1).

4.31 Fiscal Reform in Jiangsu. In the short run, Jiangsu could move immediately on some of the problems. Jiangsu should: (a) invest in strengthening the tax administration in the province; (b) improve management of extra-budgetary expenditures; (c) undertake cost-benefit analysis of tax relief; (d) initiate major reform of enterprise taxes; and (e) develop a fiscal plan.

4.32 Invest in Strengthening Provincial Tax Administration. Jiangsu should begin with the three major cities--Suzhou, Wuxi and Nanjing--which generate half of all Jiangsu's tax revenues. Computerization of the tax roll, establishing a unique taxpayer identification numbering system, and developing

^{10/} These issues were discussed in an earlier, in-depth World Bank study of China's fiscal problems and reforms, op. cit.

^{11/} Ibid.

Box 4.1: OPTIONS FOR REFORM OF THE REVENUE-SHARING SYSTEM

As the first step in a reform program, government must decide on the role it wants to assign the provincial and local government sector. The questions are whether provincial, municipal and county governments will be given some degree of revenue-raising autonomy, whether tax administration can remain a local government responsibility, and whether the intergovernmental transfer system will include a formula-based grant program.

Fiscal centralization versus fiscal decentralization is a hard choice and each has benefits. Three possible models can be developed; each with differing implications for the degree of decentralization, tax administration, and the extent and nature of the autonomy given to provinces.

Separate Tax Systems: Centralized Approach. This approach would call for fully separate central and provincial taxing powers, and the abolition of the shared tax system. The two questions to resolve would be which taxes to give to each level of government and what to do about tax administration. At one extreme is a very centralized approach under which the enterprise income tax and the produce, business, and value-added taxes would become fixed central revenues. Provincial governments would be given the minor taxes (for example, the 13 "fixed local taxes" assigned to them in 1988). Separate central and subnational tax administrations would be needed. Since provincial and local governments would be unable to finance all services for which they are responsible, either the central government would have to assume direct responsibility for provision of certain services, or a regular program of central grants to provincial governments would have to make up for the revenue shortfall. The grant could be distributed on a formula basis, with the elements of the formula chosen to reflect need (some combination of per capita income level, population size, infrastructure needs, urbanization).

Separate Tax Systems: Balanced Tax Assignment. There is also a more balanced version of the separate assignment of taxes. The subnational governments could be given access to one of the productive tax bases--namely, control over the sales tax or the profits tax. Revenues could be large enough, at least for the highest income provinces, that a supplementary national grant scheme would not be necessary. Under this solution, provincial governments would have a considerable amount of discretion in determining the level of revenues and expenditures, and the role of government in the local area.

This approach poses the question of which major taxes to choose. The profits tax would be a good choice because it is revenue productive, but is also cyclically unstable; the sales tax would be more stable, but it is unlikely that the central government would agree to give up so productive a revenue source. The recently introduced urban land tax is a natural choice for a local government revenue source but its revenue yield is unlikely to be significant. This approach would also require separate tax administrations and would also require a program of compensating grants.

Sharing the Tax Base. A third model might be sharing the tax base, not the tax revenues. This arrangement would allow subnational and central governments to share in the base of the enterprise income and product, business, and value-added taxes, by buying (within a range) a surtax rate on each base. For example, a basic rate (say 20 percent) on the enterprise income tax would belong to the central government as fixed revenue, and the provincial government could elect an additional rate of 10 percent (minimum) or 20 percent (maximum).^{1/} For indirect taxes, the subnational rate might be an additional charge levied as a percentage of the central government product tax liability, in much the same way as the present urban construction and maintenance tax is levied. The UCMT offers some precedent for this approach. Local revenue administration might be retained under a base-sharing program, but provincial and local governments would not be permitted to engage in any tax relief policies that would affect the base or rate of the central government tax.

Disadvantages of this shared base approach are that provinces with a stronger economic base would have an advantage and the supplementary grant program would have to be created and maintained.

Patching Up the Present System. A fourth alternative is to patch up the present system. Three recommendations must be kept in mind if the present system is to be reformed.

- (a) If the tax sharing system is to be retained at all, the sharing ratios should be determined on some objective (formula) basis rather than in an ad hoc way.
- (b) The tax-sharing ratios should be fixed for a number of years to provide provincial governments with some certainty and to discourage annual negotiation.
- (c) The present system of grants to provincial governments should be replaced with a regular, formula-based grant program with a known pattern of distribution, which is coordinated with the outcome of the shared tax system.

^{1/} The case of turnover taxes, especially an invoice-based VAT, could raise some difficulties under this approach. See World Bank Report No. CHA-7445, "Revenue Mobilization and Tax Policy" for detailed discussion of the revenue options.

a proper audit system would yield revenue returns to Jiangsu and would make the system more fair.

4.33 Improve Management of Extrabudgetary Expenditures. Jiangsu should consider how to better manage the expenditure from governmental units and line departments' extrabudgetary funds. Since 1978, a central government regulation calls for a separate bank account for extrabudgetary funds and for expenditure approval from the Finance Department. While this does introduce another layer of bureaucracy, it allows the government to bring departmental extrabudgetary resources into the fiscal planning process. Management of the extrabudgetary resources of SOEs can only be controlled by a thoroughgoing system reform, which would include enterprise reform and price reform.

4.34 Reexamine Tax Relief with Cost-Benefit Analysis. Jiangsu urgently needs to begin a record-keeping process to generate the tax and extrabudgetary data to enable the provincial government to understand how contracting and the granting of tax relief affects the size of its tax base. Jiangsu should also set up an analytic framework to evaluate the revenue consequences and benefits of each proposed contract and preferential treatment. This kind of analysis will be a useful basis for reconsidering enterprise contracting in 1991.

4.35 Consider Major Contracting and Enterprise Tax Reforms. Jiangsu should consider initiating reforms of enterprise taxation, but within the existing enterprise tax-contracting framework. Reform should be directed toward achieving a system with a uniformly lower rate and fewer special enterprise taxes and charges on retained profits. The central government should take the lead, but the Jiangsu province can take some steps. First, expiring tax contracts in 1991 should be replaced with an identical income tax rate on all firms, perhaps lower than the present 55 percent. Each enterprise would pay the full rate set by law and any extrabudgetary charges that the law requires (55 percent plus the fees). The local government could then reimburse, through the budget, every enterprise by enough to lower the overall tax rate to the target level in Jiangsu (its present average rate is 27-30 percent). The transparency of such a system would enable the local and provincial governments to better control the performance of the fiscal sector.

4.36 Develop a Fiscal Plan. Jiangsu province has a development plan, and it also needs a fiscal plan. This would include projections of revenues and expenditures for a three- to five-year period and a strategy for raising and spending resources through the general government sector. A good fiscal plan would enable the government to do the following: (i) use fiscal projections to anticipate budget gaps and the need for fiscal reform; (ii) establish a plan and priorities for capital expenditures including a specification of the exact resources that would be mobilized to pay for these resources; (iii) build into future budgets the operation and maintenance costs necessary to support new capital expenditures; and (iv) plan for fiscal distribution among different areas in the province. All of these issues are addressed to some extent now, but a fiscal plan would bring them together systematically and comprehensively, allowing government to better evaluate fiscal trade-offs. By bringing a longer-term focus to government fiscal planning, it would be a valuable supplement to the provincial development plan.

V. AGRICULTURAL DEVELOPMENT

Introduction

5.1 Jiangsu, long the grain basket of China, ranks among China's most important producers of nonstaple crops. Its rural sector, especially in the south, is increasingly oriented toward industrial activities. The major issue is whether the entire province should continue to play this bread-cotton basket role, or whether parts of the province should tap their comparative advantage in specialized crops and leave the staple and nonstaple crops to the northern grain basket. Regional specialization within the rural sector, increased diversity within both the agricultural sector and within the cropping subsector, and decreased emphasis on regional self-sufficiency would maximize gains to be made from reforms in pricing, market, and trade liberalization.

A. Agricultural Development in Jiangsu

5.2 Recent Performance and Output Structure. Jiangsu's rural sector has done well in the 1980s. Growth of GVAO has averaged 6.3 percent annually. Rural output has expanded 20 percent annually, including rural industrial activities, construction, transport, and commerce (Appendix Table 5.1). A major sectoral shift and diversification have occurred, away from agriculture. Agriculture's contribution to total rural output has fallen from 59 percent in 1979 to 29 percent in 1988, while rural industry, transport, marketing, and services have increased, from 31 percent to 58 percent over the same period. In addition, the share of the primary sector in Jiangsu's GNP has fallen from almost 53 percent in 1949, to 29 percent in 1980 and about 26 percent in 1990. Cropping, particularly grain cropping, still predominates in the agricultural sector. More than 75 percent of all cultivated land is sown to grains--primarily paddy and wheat. The rest is sown to coarse grains (8 percent), maize (6 percent) and soy (4 percent). Other major crops are cotton (6 percent), rape (6 percent), vegetables (4 percent), and green manure (4 percent). Paddy cultivation has gradually spread to northern Jiangsu dryland areas, and animal husbandry has grown rapidly from a small base. Jiangsu has become a dual economy: cropping activities are increasingly concentrated in the north, rural industry in the south.

5.3 The striking decade-long growth figures overshadow more recent trends. Jiangsu's growth in GVAO averaged 7.6 percent annually in 1979-84, 5.3 percent a year in 1985-88, and by only 2.5 percent in 1990. This phenomenal expansion was due to a number of critical early reforms--chiefly, the introduction of agricultural production responsibility systems, staple crop price increases, and the rapid development of rural markets and intra- and interprovincial trade. Decades of investment in rural infrastructure, mostly in irrigation systems, also began to pay off. By 1985, growth had begun to level off in most agricultural subsectors. Although 7FYP agricultural targets were achieved two years in advance, agricultural development was outpaced by urban and industrial development. A chief concern was that staple crop production would be too slow to satisfy rapidly growing urban demand for food, feed, and agricultural raw materials. This moderation of growth in major crop output has been attributed to: difficulties in raising already high yield levels; raw material shortages; contract pricing problems for grains and cot-

ton; transport, marketing, and storage problems after the 1984 bumper harvest; problems of common resource management; reduced investments in agricultural infrastructure in 1980-85; and inadequate agricultural support services (superior seeds, limited and deficient agricultural extension, lack of training in relevant technologies, and lack of agricultural mechanization).

5.4 Emerging Imbalances. Growth in rural nonagricultural subsectors in 1980-85 has had significant implications for the Jiangsu agricultural sector. In particular, agricultural processing industry capacity growth far outstripped raw material supply. Because the light and textile industry meets 70 percent of its raw material needs from agriculture, the rapid expansion of these industries and the (relatively) slower pace of agriculture has forced Jiangsu to procure products from other provinces. This has increased production costs and has incurred the protectionism of neighbors. To increase output, the authorities stress agricultural raw material production and strictly enforce area and procurement targets and land-use laws. Industries are encouraged to seek raw materials from out of province (even if protectionism results), and limits have been placed on capacity in the agricultural processing industry. While some measures have been taken, more needs to be done to change the irrational pricing structure as a means of alleviating shortages, even though raw material subsidies are to blame for irrational resource use, capacity duplication, and low productivity. Private interprovincial grain trade is also restricted, imposing excessive and expensive central government grain stocks. The state's monopoly inherent in its control and management of the internal marketing and foreign trade in grains and for key inputs, such as chemical fertilizer, are essential reforms in order to raise agricultural efficiency.^{1/}

5.5 Jiangsu's Agricultural Strategy: The 8FYP and Beyond. To expand production to meet provincial needs, Jiangsu plans to develop all its major agriculture subsectors, aiming at a GVAO of Y 67.5 billion by 1995 with annual rates of real growth of 3 percent. Cotton area targets will be expanded, and provincial demand for cotton will be reduced by closing or converting small mills and processing plants. The composition of animal husbandry output will be changed to stabilize pork production and increase chicken and fowl production, with an annual growth target of 2.8 percent in total output. Freshwater fisheries for domestic use and export are targeted to grow 2.6 percent annually; and the forestry subsector is to remain stable. Grain output is to expand 3 percent a year, to 35 million tons by 1995, while cotton output is expected to reach 650,000 tons by the end of the 8FYP.

5.6 To reach these production targets, Jiangsu intends to increase yields, extend land under cultivation through land reclamation and tighten legal controls on cultivated land conversion; increase grain prices; increase chemical fertilizer production; develop an agricultural labor strategy to keep farmers on the land in sideline sectors but take them out of cropping subsectors; and invest in five major flood control, irrigation, and drainage projects.

^{1/} See China: Managing an Agricultural Transformation (Part I--Grain Sector Review), Report 8652-CHA, October 17, 1990.

5.7 The feasibility of these targets will depend on a variety of factors. Although both the 6FYP and 7FYP periods showed faster growth rates, 3 percent annual growth in GVAO through the 8FYP will require sustained effort. In 1985-88, annual GVAO growth was maintained at 5 percent only through considerable growth in fisheries, animal husbandry, and sidelines; cropping subsector growth fell to 1.9 percent. Yet under the proposed 8FYP, both fisheries and animal husbandry are to be stabilized at output growth rates under 3 percent, and no specific measures are directed at sidelines.

5.8 Some subsectoral goals may also be inappropriate or excessively costly. The thrust of one-ton-yield field programs, stressing diffusion of extension area techniques (without regard to availability or costs of critical farm inputs) should be altered to emphasize high and stable yields. On the other hand, programs to comprehensively transfer low- and medium-yield lands should be strongly encouraged.^{2/} The adequacy of local matching funding sets the limit for extensive programs of this nature. Cultivated area conversion controls probably cannot be maintained at a 2/1,000 level once contractionary policies are lifted. Efforts to keep conversions of cultivated land at 3/1,000 through the 7FYP consistently failed, and the water resource projects may not fully come to fruition in the 8FYP.

B. Real Resource Constraints: Issues and Recommendations

5.9 The chief real or tangible limitations on further agricultural development in Jiangsu are population-land conflicts; scarcity of raw materials, energy, and credit, and transport bottlenecks. Other major policy constraints relate to pricing and marketing policies and provincial grain self-sufficiency objectives.

5.10 Land. Some 13,000 ha of land have been taken out of farm cultivation in Jiangsu every year since 1987. The province and municipalities are attempting to prevent further shrinkage of cultivated area, but the trend is likely to continue through the 8FYP. Jiangsu plans to use both administrative and land-conversion tax measures to keep as much land as possible under grain cultivation. Land policies within the existing land availabilities give too little attention to provincial-level research and planning of optimal long-run land-use patterns.^{3/} Because municipalities can make only small adjustments in provincially mandated cultivated area targets, they have too little latitude to initiate their own land-use programs.

^{2/} The one-ton-yield program included in Jiangsu's 8FYP will cover 2 million mu of land, while additional 15 million mu of low- and medium-yield lands have been selected for improvement.

^{3/} In spite of the fact that most land-lease contracts in Jiangsu were signed in 1983 for an average period of 15 years, the growing perception of tenurial insecurity over the shortening life of the leases and the unknown nature of the new contracts might have an adverse impact on farmer investment in agriculture. The authorities are considering the adoption of a system of rewards/penalties, based on objective indicators, in order to ensure investments by tenants that maintain land productivity.

5.11 Energy. Power supplies for agriculture are problematic in Jiangsu. Most farmers rely on expensive self-generated sources of power, but planned allocations of diesel fuel have been dropping. Jiangsu provincial and municipal officials nonetheless reported no anxieties about agricultural power supplies in 1990 because total industrial power use declined with the industrial slowdown. In past years, agricultural producers had been at the tail end of the system and had received the lowest priority.

5.12 Agricultural power pricing, allocation, and priority assignments, need to be rethought. Theoretically, agricultural power prices are low, but actual prices are about four times above planned prices. If agriculture is a low priority user, agricultural power planning and pricing should reflect this. Irrigation expansion or farm rehabilitation proposals should at least be evaluated with power costs that reflect scarcity value (Y 0.4-0.55/kWh) and should be approved only if power supplies are adequate.

5.13 Financial Resource Mobilization and Allocation. The agriculture sector obtains resources through the general budget and through earmarked taxes. The land-conversion tax, a levy on cultivated land conversions to nonagricultural use, is one tax earmarked for agricultural development and infrastructure. In addition to tax revenues, the agriculture sector receives resources generated in TVCEs (head levies and other ad hoc fees). Together with budgetary revenues, these resources cover: expenditure on capital construction; underdeveloped area support; agricultural production support (irrigation renovation); annual operating costs of agriculture, forestry, water resources, and meteorologic administrative research, and service institutions, and subsidies for agricultural inputs and agricultural SOE operating losses. These subsidy expenditures are large, and most of them are financed by the province. Capital expenditures on agriculture are low (15 percent of capital expenditure and about 1 percent of total expenditures). Municipal, county, and township governments do most of this spending.

5.14 Agriculture runs a "deficit," in that its budgetary allocation and earmarked funds do not cover expenditures. Local agricultural finance departments rely increasingly on extrabudgetary funds to bridge these deficits. Critical agricultural (and other) infrastructural construction and O&M have thus been left hostage to Jiangsu's ability to extort extrabudgetary funds from such sectors as TVCEs. This feature penalizes both northern and southern agriculture in Jiangsu. (Northern Jiangsu has little TVE industry, and funding in southern Jiangsu is tied to the procyclical nature of TVE and agricultural SOE development.) If tapping TVCEs to support agriculture is a conscious "balanced development" policy, some allowance for northern Jiangsu should be considered, particularly if northern Jiangsu decides to catch up with southern Jiangsu TVCE development. Such a "great leap" strategy would use all available resources (and then some) to the detriment of agricultural development in the north.^{4/}

5.15 Access to Credit. Throughout Jiangsu, credit is primarily allocated for working capital. Long-term credit is a special problem throughout Jiangsu's rural sector, and in the south, high TVCE demand for working capital

^{4/} See Chapter III for effects of this "fiscal predation" on the TVCE sector and Chapter IV for fiscal reforms to address budgetary insufficiencies.

may crowd out other rural agricultural demands. In northern Jiangsu, the Agricultural Bank of China (ABC) regularly has trouble getting enough provincial credit allocations even for working capital to procure staple crops, although some 66.2 percent of ABC loans went to the Grain Bureau and the SMC. Reductions in staple crop contract procurement and increases in ADF (or other government) funding of rural infrastructure needs, would free some ABC funds, easing long-term credit shortages. Absent these reforms, provincial short- to medium-term allocations to local ABCs should be increased, particularly in the north. Nonetheless, the above actions will be insufficient and additional measures to reverse the declining trend in real agricultural investment must be adopted.

5.16 Water Resources. Due to its favorable location within the lowest reaches of three different water systems, Jiangsu's water resources are adequate for municipal, industrial, and rural requirements in all but the driest years. Similarly, drainage, waterlogging, and flood protection works are well developed, although part of this system urgently needs extensive overhauls.^{5/} In addition, the irrigation system needs rationalization before it can be extended to serve poorer coastal areas of northern Jiangsu.

5.17 Other Farm Input Shortages. Jiangsu's most critical farm input shortages are in high-quality chemical fertilizers (as elsewhere in China). Provincial and local fertilizer plants produce large quantities of low-grade fertilizers. Most high-quality fertilizers are unavailable at any price through SMC or other formal supply channels and must be purchased dearly through nonformal channels. In 1989, the provincial government allocated some foreign exchange for some high-quality chemical fertilizer imports, which somewhat alleviated shortages. Provincial officials view these imports as a temporary and partial expedient. More generally, high-quality farm inputs are in high demand, and the complex multitiered sales and pricing structures allow opportunities for arbitrage. Supply and marketing arrangements for these inputs urgently need to be rationalized to cut waste in extensive black market purchases. Jiangsu should encourage the creation of new distribution channels relaxing entry policies into the fertilizer trade.

5.18 High-quality seeds are especially scarce (less than 30 percent of farm needs), and township and village seed stations can offer little assistance. In every county, seed services are duplicated, and economies-of-scale are completely neglected. Some improvements are expected under the 8FYP, but Jiangsu should also experiment with joint, cross-county seed procurements, to reduce duplication of county seed company services and to take advantage of economies-of-scale in processing. Urgent attention should be given to research priorities, and to constraints on the marketing of certified seeds.^{6/}

5.19 The Agricultural Support System (CATEC) and Input Supply Issues. Agrotechnical and extension services are inadequate at township and village levels. At the national level, less than one-third of the counties have established agrotechnical extension centers and 20 percent are not served by

5/ See recommendations in IAIL Project, draft Staff Appraisal Report.

6/ See China: Managing an Agricultural Transformation, op. cit.

even a rudimentary extension service. Major inefficiencies stem from disorganization in the administration of farm inputs (through SMC channels), and inept recommendations by the agrotechnical and extension system for input handling, storage, and application. Under the 8FYP, both the County Agrotechnical and Extension Centers (CATEC) will be strengthened,^{7/} funded primarily through user fees reflecting costs plus overhead. In addition, under the 8FYP, experiments are to be introduced combining SMC input-supply functions and CATEC agrotechnical and extension services.

5.20 Input supply and agrotechnical and extension work should be combined in a single system. Thus unified, the agencies should evolve into independent agroservice companies, purchasing needed inputs directly from producers or import agencies and selling them directly to farmers. This would reduce distortions caused by subsidized farm inputs, diminish the scope for arbitrage in material supply delivery, and take advantage of synergy in input supply and application.

C. Policy-Induced Constraints: Issues and Recommendations

5.21 Besides real sectoral constraints, policy-related constraints impede Jiangsu's agricultural development. Chief among them are provincial emphasis on self-sufficiency over specialization based on comparative advantage and inadequate marketing, procurement, pricing, and trade policies.

5.22 Specialization and Comparative Advantage Versus Food Security and Regional Self-Sufficiency. Jiangsu should focus on the benefits of agricultural specialization, arguing more strongly for scrapping the "material balances" approach towards interregional grain transfers and the administrative allocation of fertilizers. Planned grain area targets, especially for paddy in southern Jiangsu, prevent them from gaining the full benefits of comparative advantage. Although Jiangsu insists on controlling grain area so as to ensure its self-sufficiency, the provincial government argued for and won a decrease in southern Jiangsu's grain area targets in a national meeting on grain bases in 1986. Until late 1986, Jiangsu had been one of the five largest net grain-exporting provinces. Moreover, Jiangsu recently agreed to let farmers freely market incremental grain production in the proposed Bank Irrigated Agriculture Intensification Loan project areas. In other words, Jiangsu considers present production far beyond procurement needs.

5.23 Reforms of staple crop pricing and procurement would give regions some latitude to use their comparative advantage in agricultural activities and sidelines. Optimally, staple crop-producing regions in southern Jiangsu should be excluded from the provincial grain base. Farmers there are well informed and responsive to urban market and rural industrial needs, have ready access to large urban markets for specialty produce, and work high-yield lands. Soil and climactic conditions permitting, these farmers should be free to promote feed crops (hybrid corn) to support rapidly growing, income-driven

^{7/} A recent Bank Report recommended that "at least a doubling of annual expenditures would appear justified to upgrade China's agricultural research complex to bring total expenditures on agricultural research in line with nearby Asian countries." See China: Managing an Agricultural Transformation, op. cit.

urban household demand for meat products. Conversely, inframarginal grain farmers in northern Jiangsu, with long tradition in grain farming, should be the core of the Jiangsu grain base. Their low- and medium-yield lands are ill-suited to nongrain cropping and far from large urban centers.

5.24 External Trade in Agriculture. Jiangsu's agricultural sector does not sufficiently exploit Jiangsu's good location, relatively good transport infrastructure, and skilled entrepreneurs and work force to capture the rents available from domestic and international trade (Chapter II). Jiangsu's agricultural exports amount to 8 percent of its total exports following a 13.2 percent peak in the mid-1980s after the bumper grain harvest of 1984. However, this relatively small share understates the importance of agriculture in export trade as a supplier of inputs to export-oriented agroprocessing. The combined export share of agroprocessing and agriculture in total exports, above 55 percent, remained relatively stable throughout the 1980s. Major agricultural exports include grains (particularly rice), edible oils and other foods, and local and animal products.

5.25 On the foreign side, either on its own or through pressure on the central MOFERT system, Jiangsu should relax regulations for agricultural firms to obtain direct export rights and expand their authority to trade for other parties.^{8/} This would improve information flows, establish international repute, and put competitive pressure on the foreign trade corporation (FTC) system.

5.26 Domestic Trade in Agriculture. Domestic trade presents a different picture, with declines in interprovincial trade in many commodities. Net grain sales to other provinces increased 21.5 percent annually in 1980-88, making Jiangsu one of China's largest provincial net sellers of grain. After 1988, grain outsales returned to 1984 levels, and in mid-1989, provincial authorities temporarily prohibited private rice outsales. In the same period, net cotton out-of-province allocations and sales declined 29.5 percent annually from their 1980 level. Domestic trade in oilseeds has stabilized at 2-3 percent of production. Bans on interprovincial trade, as well as existing price distortions which depress incentives in surplus production areas (Jiangsu) to sell grain to deficit areas, are counterproductive. The reduction (or elimination) of staple crop contract procurement, reforms in producer prices and factor markets, and the expansion of wholesale marketing will lead to a large growth in domestic trade.

5.27 Staple Crop Procurement and Pricing. Grain and cotton are Jiangsu's two major crops--accounting for over 80 percent of sown area. Any policy distortion in these important commodities detracts from the entire farming sector's performance, and policy distortions are significant in pricing, incentives, state purchase requirements, and mandatory sown area targets. Thus impaired, Jiangsu cannot fully exploit its comparative advantage within the province in north-south specialization in different crops and vis à vis other provinces, in production of different commodities.

^{8/} At present, the grain trade is a reserved monopoly for the state's FTCs, which operate on the basis of inflexible, annually established import and export targets.

5.28 Grain procurement and grain pricing remain a major issue in Jiangsu. From 1985 onward, increases and minor regional adjustments have been made in central government staple crop contract prices. These changes have not eliminated the glaring differences between contract and world prices. Further liberalization in the lagging grains sector should be the centerpiece of future agricultural reforms.

5.29 Negotiated prices are set by relevant provincial grain agencies (not by the center), close to or below expected domestic "free market" prices. They are the price at which farmers sell above-contract output to state procurement agencies. For rice and corn, these prices are close to world prices. For other commodities, negotiated prices are quite different from world prices: wheat (52 percent), soy (-32 percent), peanuts (-43 percent), rape (-27 percent), and cotton (16 percent). In recent years, negotiated sales prices have averaged about 15 percent below domestic "free market" prices, depending on crop and location.^{9/} Regional variations in negotiated sales prices are also significant, perhaps because of fragmentation in the markets against which the negotiated sales prices are forecast. Alternatively, state commercial agencies sometimes set negotiated prices that allow them to capture the price differential for themselves.

5.30 Cotton pricing policies must also be modified. Cotton remains substantially underpriced, even after the 26.9 percent increase to a nationally unified price of Y 6,000 per ton in 1990, and with the production incentives from Jiangsu and local governments (Y 700/ton). Provincial SMC officials estimate that national cotton price levels would have to reach Y 8,000/ton (excluding production incentives) for farmers to make a profit on cotton. However, provincial and municipal officials agreed that present cotton price levels could not be raised much further because: (a) the "optimal" grain to cotton price ratio of 1:8 had already been achieved (however spurious such a price ratio may be in a partly fixed-price system) and (b) any increase in cotton prices would influence all cotton apparel prices to the detriment of either the state treasury (if urban retail prices are kept low), the textile industry, or urban consumers.

5.31 This report strongly recommends the continuation of agricultural price reform, on policy lines set by the central government in 1985. In the context of reducing or eliminating staple crop contract procurement and pricing, negotiated sales prices should be gradually raised to market levels. This would reduce price distortions in agriculture and rural industry, relieve government fiscal pressures induced by massive subsidies on urban grain sales and fertilizers, and eliminate rent taking by commercial and material supply agencies that set negotiated sales prices.

5.32 For grain, most municipalities would like to reduce or eliminate contract procurement. Provincial officials, concerned chiefly about price stability, would also like a reduction in procurement targets. According to Jiangsu officials, any change in present procurement policies (except for small decreases in total contract targets) would induce uncertainty and

^{9/} In 1990, due to good harvests, the reverse was true: domestic "free market" prices fell below negotiated prices which were maintained at "assured price" levels. The marketing agencies thus ran large losses.

imperil urban food supply. This position is somewhat contradicted because: (a) Jiangsu in the 1980s became one of the largest grain-exporting provinces in China (mainly to other provinces; (b) Jiangsu recently argued for and won decreases in centrally mandated contract grain procurement targets; and (c) Jiangsu has stipulated that the incremental production from newly developing areas should not be subject to contract procurement. Since market prices for grain in China's free markets have fallen precipitously (by as much as 25 percent) due to record production in 1989 and 1990, China should seize the moment to raise urban ration prices and reduce per capita allocations in order to reduce the subsidy burden without causing too much hardship for the urban poor.^{10/}

5.33 Regional inequities abound in the distribution of contract grain procurement targets. Although Wuxi municipality contract grain procurement is only 22 percent of total grain production, some Wuxi townships must remit more than 80 percent of total production as contract grain. Huaiyin reported similar patterns. These local inequities stem from historical production and procurement patterns, frozen in place by central and provincial directives forbidding increases in procurement.

5.34 Cotton planning, pricing, procurement, and trade policies also need urgent attention. In the mid-1980s, Jiangsu went from being a large cotton exporter to other provinces and abroad to being a net importer (Appendix Table 5.12). Overall, Jiangsu's localities have fallen short of central cotton procurement targets every year since 1985. "Local imports" are purchased by Jiangsu mill agents in other provinces, and competition for supplies is fierce. Bidding wars erupted in 1989 between Jiangsu and Anhui, whose local production was also insufficient. Even within Jiangsu province, there are anomalies. To meet Jiangsu's demand (55,000 tons, including cotton to be allocated to the province), Huaiyin sends agents to townships in other municipalities and provinces to buy cotton to meet both its own industrial needs as well as its 20,000-ton production target. For imports from abroad, Jiangsu receives a cotton import quota from MOFERT (30,000 tons in 1990), but actual imports were likely to reach 35,000-40,000 tons. Because foreign and local imports together do not meet Jiangsu's demand, planners cut projected cotton demand in 1995 below the 1990 level by the administrative expedient of assuming the closing or conversion of small-scale cotton processing and cotton textile enterprises (Appendix Table 5.12).

5.35 Because the minimum "economic" size of a cotton processing plant is quite small, closing or converting smaller Jiangsu cotton processing and textile mills seems senseless. Instead, regardless of MOFERT or MFA limitations on cotton exports, ginned cotton producer prices should be raised to near world market levels (for example, Y 8,000/ton. The projected cotton border price in northern Jiangsu in the year 2000 is Y 8,520/ton). This price rise would spur Jiangsu cotton production, as one did in 1985. Nonsubsidized cotton prices (and any export market restrictions) would also encourage the restructuring of Jiangsu processing and textile operations. Any remaining cotton needs could be met from imports (from other provinces or external sources at world market prices). The procurement of cotton (as well as grain)

10/ See China: Managing an Agricultural Transformation, op. cit.

also needs to be rationalized within the province, and at the central level, between provinces.

5.36 A number of recommendations can be made for staple crop procurement. The center exercises the primary role in staple crop procurement, but Jiangsu has some leeway for change within the system as one of China's largest provincial grain traders. Jiangsu, in fact, began making selective reductions in contract procurements, at its own discretion, in 1988 and continued in 1989 and 1990. Neither does it plan to allow incremental production in any developing area to be subject to contract procurement. Eliminating or selectively reducing staple crop procurement should be continued and emphasized for its potential to alleviate regional and local inequities in contract procurement. This approach, by releasing former leading production areas from onerous contracts would free them for more productive activities.

5.37 Market Development and Marketing Policies. The vast majority of staple crop marketing is still done by the Grain Bureaus and the State Material Supply Corporations (SMCs), on allocation schedules made at higher levels. These agencies are poorly suited to adjust allocations because they lack timely information, adequate storage and credit facilities, and discretion over prices. Moreover, because most of intra-agency staple crop trading is done under an assortment of fixed, or partly fixed, prices--outside competitive pressures--the scope for arbitrage is extensive. Wholesale markets are woefully underdeveloped. For example, the wholesale grain market in Beitang District in Wuxi, the largest in Jiangsu, covers only 3,000 m² and handles only about 200 tons/day.

5.38 If price and procurement reforms and regional production specialization proceed, pressures on state supply and marketing agencies will increase dramatically. So plagued by the lack of timely information, storage and credit shortcomings, and pricing distortions is intra-agency trade that these channels will not be able to handle any large marketing expansion. Wholesale markets must be rapidly developed. They offer the full gamut of services (information, transport, banking, daily living) and are open to private, collective, and state agents. These markets can improve information flows between producers and consumers, reduce storage needs, and eliminate the scope for agency arbitrage by increasing the transparency of commodity flows.

5.39 In summary, in Jiangsu, as elsewhere in China, meeting future agricultural and grain production targets will not only depend on increases in cropping intensity and yields on existing cultivated land, but on a number of actions in the following fronts: (i) changing investment priorities to rehabilitate and repair irrigation and drainage networks, particularly in northern Jiangsu; and (ii) reversing the declining trend in agricultural investment, including an increase in the funds allocated to research activities, the strengthening of agricultural extension to accelerate the transfer of relevant technology to farmers and to reestablish the links between agricultural research, extension and education at the national, provincial and county levels; and (iii) resuming the reform process liberalizing pricing, marketing, interprovincial distribution and foreign trade in grain and modern agricultural inputs, while phasing out consumer and fertilizer subsidies.

VI. THE TRANSPORT SECTOR IN JIANGSU ISSUES AND PROBLEMS

Introduction

6.1 Transport is vital to Jiangsu's numerous provincial objectives, including north-south integration, industrial development, and export growth. In recent years, the share of transport in total provincial public investment has declined and current imbalances in modal investments are particularly detrimental to highways. Removing transport-related constraints to economic growth will require a substantial expansion of investments. In addition, an intermodal strategy needs to be analyzed and developed and investments coordinated to ensure the lowest possible overall transport cost.

A. Transport Network in Jiangsu

6.2 The transport network in Jiangsu consists of the Yangtze River and inland waterways, railways, roads, ports, and airports. The Yangtze River and the Grand Canal are the principal features of the inland waterway, but the network includes nine river ports, 70 inland waterway ports, and 400 minor piers. The canal is a major transport artery to the industrial cities in southern Jiangsu. It provides access to the Yangtze River system and connects a vast network of lesser canals and rivers that handle nearly 40 percent of all Jiangsu's freight (ton/km). Though a vital artery of waterborne transport, the Yangtze is also a formidable barrier to land transport (rail and road). The road-rail bridge at Nanjing is the only fixed crossing of the Yangtze in the province, some 350 km from the sea. The provincial railway network consists of two lines; the Longhai line close to the northern provincial boundary and the Nanjing-Shanghai high-density line linking the major industries and population centers in southern Jiangsu. The 24,600 km of roads in Jiangsu consist largely of Class III and IV standard roads (72 percent) and a small share of Class I and II roads (11 percent). Jiangsu has five maritime and river ports. Of these, Nanjing, Nantong, Zhangjiagang and Zhenjiang, all river ports, and Lianyungang, a sea port, are the best developed for foreign trade. There are six airports for scheduled civil aviation, and one international airport, at Nanjing.

6.3 Transport Intensity. Jiangsu's transport density is higher than the national average, yet the infrastructure cannot adequately handle provincial traffic, which jeopardizes Jiangsu's strong economic development. Between 1980 and 1989, freight and passenger traffic in Jiangsu province grew, respectively, 7 percent and 11 percent yearly. Traffic could have grown more except for the capacity constraints in all types of transport that became evident in the mid-1980s, in part because transport coefficients are very high. Freight traffic intensity (about 2.7 ton-km/\$ of GNP) in Jiangsu is almost twice as high as in India (1.5 ton-km/\$ of GNP), and much higher than in Brazil (1.8 ton-km/\$ of GNP) or the United States (1.6 ton-km/\$ of GNP). Most freight customers are both producers and consumers of heavy equipment and bulk commodities such as chemicals and unprocessed raw materials such as coal.

6.4 Investment in Transport Infrastructure. In Jiangsu, as in China as a whole, investments in transport infrastructure have declined in relative terms over the 6FYP and 7FYP. The share of transport investment stood at about 1.4 percent of GNP in 1980-89 in China and 0.8 percent of GNP in

Jiangsu, compared to 2-3 percent for countries like South Korea and Brazil. Transport investments as a percentage of GNP have been declining in China from a high of 2.4 percent during the 4FYP, to 1.5 percent during the 6FYP, despite an absolute increase in transport investments during the 6FYP. In Jiangsu, the deficiencies of the transport infrastructure can be traced to underinvestment as well as imbalances in modal investments that have been particularly detrimental to highways. Recent transport investments (1987-89) have been distributed to highways (22 percent), railways (26 percent), and port and waterways (50 percent).

6.5 Modal Shares of Freight and Passenger Traffic. Table 6.1 shows the relative importance of the three major systems in freight and passenger transport. In 1989, 43 percent of all Jiangsu's freight was transported on the railways, a decline from the 52 percent share in 1980. Total freight in Jiangsu's waterways was 26 million ton-km in 1989, 38 percent of the provincial total of ton-km. While passenger travel in Jiangsu as in the rest of China remains limited (half as much as in India), recent growth in demand has further taxed the transport system. The highways accounted for a dominant (58 percent) share of passenger traffic within Jiangsu.

Table 6.1: MODAL SHARES IN JIANGSU
(percentages)

	Railway	Inland Waterway	Highway
Freight (billion ton-km)	42.7	38.7	12.0
Passengers (billion passenger-km)	40.0	2.0	58.0

6.6 Transportation in Jiangsu, or in China, cannot be fully understood without an appreciation of the overriding importance of coal. Coal-burning locomotives move close to 60 percent of all freight coming into Jiangsu on the Nanjing-Shanghai railway and 80 percent on the Longhai railway. On the waterways the situation is similar. Coal is used for a substantial part of all transport--23.0 million tons on inland waterways, 10.0 million tons on the Grand Canal, and 13.0 million tons on the Yangtze River. In addition, coastal ships carried 20.0 million tons of freight in 1989.

6.7 Service Quality. Widespread low efficiency, low capacity, and poor service are among the shortcomings of the transport sector. These are the results of overall resource and investment constraints, technical obsolescence, and managerial limitations. In Jiangsu, although the operational efficiency of the railways is satisfactory, a shortage of wagons and passenger coaches contributes to long waiting times and unsatisfied demand. In road transport, services are generally responsive to users' requirements, but road safety and cargo protection can be a problem. Similarly, in passenger road transport, the service quality is better than on rail despite obsolete equipment, overcrowding, frequent breakdowns, and poor safety. The availability and quality of service explain the success of road transport despite its high cost to travelers and shippers.

B. Issues and Recommendations

6.8 Transport Requirements. Economic reform and modernization will change the economic structure of Jiangsu and transport needs. The new system will be called upon to make more small shipments of higher value goods than at present, where the volume of traffic is higher in heavy, low-value, bulk commodities. The rail and waterway systems' current emphasis on coal transport will continue for the foreseeable future and its total tonnage will continue to increase, but industrial modernization and improved energy efficiency will lower its share in total transport. Much of Jiangsu's export-oriented industrial development, based on township and village community enterprises, will need transport services tailored to their needs, especially shipping to export markets. This means fast and flexible transport and a shift in traffic from railways and barges to trucking, as has occurred in many other economies at the same stage of development.

6.9 The impact of proposed policies and projects requires thorough, comprehensive analysis in a number of regions. One such is the Nanjing-Shanghai corridor, where major highway investments are already being contemplated. Given resource limitations, ambitious projects may displace spending for basic roads, and thus lead to further imbalance in Jiangsu's transport system development. The imperfect modal split of traffic, due to restricted basis for competition among modes and the lack of advanced planning methods, poses a risk that sizable investment resources could be misallocated. An intermodal strategy must be analyzed and developed, and investments coordinated, to ensure the lowest possible overall transport cost.

6.10 Volume of Investment. The share of transport investment in total provincial public investment has declined, and the imbalance in modal investments is particularly detrimental to highways. To accelerate the pace of rehabilitation and modernization of transport infrastructure, the government must spend more money on transport investment. Upgrading existing facilities and removing bottlenecks will yield high economic returns.

6.11 Allocation of Investment Across Modes. Increased investment resources among the competing modes of ground transport (rail, waterways, roads) should be distributed in a way that recognizes the changing roles of transport modes and the importance of integrating modes and projects. With demand on road transport constantly growing, a well thought-out investment program would increase roads' future share to at least equal that of the railways, waterways would be emphasized over ports, and aviation and pipelines' shares (together accounting for less than 1.0 percent of traffic) should be possibly increased.^{1/}

6.12 Market vs. Administered Modal Decisions. A market-oriented, rather than administrative, allocation of traffic among modes will help to reduce total transport costs and attain optimal resource allocation among them. Further decentralization and management independence of the publicly owned enterprises would also help. Some segments of the industry (water and especially road transport) could provide an ideal base for gradual reforms to strengthen the responsibility system and allow individual operators to compete

^{1/} This is very low for an advanced, industrial province such as Jiangsu.

in offering the services that customers want and need. Since the removal of official controls on freight allocation, shippers have theoretically been free to select from among alternative carriers. However, because large shippers and transporters belong to the state sector, administrative actions by state-controlled managements considerably influence on the modal allocation of major traffic.

6.13 Road Transport. The provincial highway network, designed for light vehicles and low traffic, has deteriorated under increasing traffic and heavier trucks. To overcome congestion, low vehicle speeds and capacity, and poor safety conditions, design and construction standards must be upgraded and pavement must be reconstructed. Road development should get the highest priority. This priority assignment is well justified by the needs for substantive rehabilitation and modernization work throughout the province, for selected new road construction, and for adequate north-south interconnections. Road maintenance expenditures would also have to rise.

6.14 A key policy of the provincial government should be the spatial integration of north and south Jiangsu. The infrastructure developments required to support this policy would include: (i) a Yangtze River fixed crossing; (ii) a central "spine" highway from the crossing towards Lianyungang; and (iii) the strengthening of other ferry crossings and a network of roads leading to them. In giving priority to the construction of a bridge across the Yangtze River, Jiangsu should take a long-term perspective in harmony with the overall network's development in major corridors such as Nanjing-Shanghai, Nantong, and Lianyungang.

6.15 A successful long-term provincial highway program would entail improvements in the quality of civil works. For this, the provincial construction industry needs strong incentives and technical assistance.

6.16 The two basic policy issues for the road transport sector in Jiangsu are to improve the economic efficiency and service quality of current operations, and to modernize capacity. The road freight transport industry is an ideal choice for improving efficiency by further opening up of private operator participation and liberalizing the market. Private operators need improved access to credit, vehicles, and markets to modernize their fleets.

6.17 Vehicle Fleet. The large state-owned transport companies have made most of the investments in road vehicles, but their vehicle fleet meets neither current nor projected demand for efficient road transport. Two-axle trucks carry much of the freight on Jiangsu's roads. China still builds most new trucks to specifications characteristic of old models elsewhere, with heavy tare weight, gasoline engines with low power-weight ratios, and flat-bed bodies. Practically the only specialized vehicles are liquid-fuel tankers. Future vehicle investment should incorporate modern specifications for large, multi-axle vehicles and tractor-trailer trucks as a complement to full economic use of Jiangsu's improved road system. Fleet modernization ultimately is related to central government policy on promoting advanced technology and vehicle-design standards in truck building, possibly through joint ventures and foreign direct investment in the automotive industry.

6.18 The Transport Industry. The large transport companies are still too large, despite the breakup of the single state monopoly transport organization

in 1986. A further breakup of these companies into smaller enterprises, openly competing in the same territories and in closer contact with the market, could further the reform policy and make road transport more efficient and service-oriented.

6.19 The provincial government has reemphasized its support for large transport company operations and has reduced its support for private operators, to be limited to only local service. Jiangsu is in the process of "rationalizing" and restructuring the supply of transport. Through guarantees for bank financing and quick licensing approval, the province strongly encourages fleet renewal and modernization by large state companies (small collectives and private operators have to take care of themselves). This policy is partly intended to reduce the large "social" or "own-account" share of total traffic by improving the services provided by the large public service companies. The road freight and passenger fleets both have substantial capacity under "own-account" management, nontransport companies. Own-account vehicle productivity is much lower than commercial transport productivity, but the fact that they operate suggests that for-hire transport is unreliable and that private fleets fill a market niche. The relatively high proportion of own-account trucks is a serious distortion that has to be gradually reduced by improving public for-hire services and discouraging nontransport enterprises from operating their own fleets.

6.20 All of Jiangsu's public transport and freight terminals are owned and operated by major truck companies for consolidating their own cargo. This strengthens large state-owned transport monopolies in road transport and puts small truckers at a further disadvantage. Investment by municipalities or townships in public freight centers and terminals should be considered because a monopolistic system will be less efficient and responsive to market needs than a mixed system that includes strong private operators. At provincial level, Jiangsu could encourage fleet modernization by favorable license and regulatory measures and by freight terminal construction outside congested city centers for the transshipment and consolidation of cargo.

6.21 Finally, transport brokerage services are still informal and seemingly outside regulations. Because brokers could become transport agents and freight forwarders to support future growth of interregional trade and exports, Jiangsu should encourage their development as a service industry.

6.22 Railways. Heavy bulk traffic accounts for about 75 percent of all tonnage transported by the two Jiangsu railways. Because freight trains are slower and than rolling stock used in developed countries, transport capacity is comparatively limited in China. Operational restrictions, such as at Nanjing bridge, also limit capacity, and transport demand often cannot be met. Long-term modernization of rolling stock (combined with appropriate stockpile management) would allow the railway to continue carrying the major bulk commodities for which it has economic advantages.

6.23 The principal infrastructure capacity limitations on the two trunk lines within the province are due, in the Longhai line, to the incomplete double tracking from Pixian to Lianyungang (151 km). On the southern Nanjing-Shanghai line, operations are saturated at capacity of about 47 million tons. Between Nanjing and the north (Beijing), the addition of heavy rails has eased the former bottleneck at the Nanjing Yangtze bridge. However, the bridge

features and block system still limit train frequencies and speeds to below the 70 million tons/year actual carriage on the line to its north. As a result, railway freight has to be transshipped in barges from the Yangtze north shore to Jiangsu and Shanghai ports. While potentially beneficial, this transshipment is not decided on its economic merits but forced by congestion.

6.24 Coal consumption in Jiangsu is huge and has an overwhelming share in the total rail freight traffic. Coal conservation would have a significant impact on future transport demand. In addition, washing coal at the point of origin would reduce transport requirements by eliminating the ash content of coal.

6.25 Jiangsu's rail investment strategy should emphasize rehabilitation and capacity-improving modernization works and should include a careful review of the future role of railways in Jiangsu, especially proposed branch lines, local railways, and passenger transport. The development of rail passenger traffic in Jiangsu is closely related to road improvements, especially the construction of first-class highways in the Nanjing-Shanghai corridor. This project, coupled with intensified competition after liberalizing road transport, would divert substantial intraprovincial passenger traffic from the railway.

6.26 In sum, decisions on new railway construction in Jiangsu (with the exception discussed below) should possibly be deferred pending the formulation of overall strategies and policies for the future of transport systems and services and their regional integration. The Yangtze Economic Zone Transport Study would provide the base for these decisions. For example, the overall objectives are valid, for the integration of northern Jiangsu with the more developed southern Jiangsu under the Xingxi to Huaiying rail project. However, the proposed low-standard railway to carry coal to the south would not advance integration; its low capacity and high costs would limit its role as an alternative railway route to Shanghai.^{2/} In addition, a preliminary assessment is not positive for the proposed East-West local railway, to compete directly with Yangtze river shipping and a Class I highway between Nanjing and Nantong. However, the project merits a more careful examination within the context of broad transport objectives and strategies. Finally, some of Jiangsu's short-distance, intercity rail passenger services (which are subsidized) should be gradually eliminated to release railway capacity for transport of such essential goods as coal.

6.27 Inland Water Transport. Inadequate specialization in bulk cargo and the role of large and small barge companies are issues to be addressed in this mode. Water transport has gradually lost market share, reportedly due to delays and congestion at some key locks and channels and, lately, loss of rate

^{2/} In the final stages of the preparation of this report, the authorities indicated that this railway line was to be part of a national railway network. However, if this line primarily serves to transport coal, it will not contribute significantly to north-south integration. Some sections such as the northern and southern ends, having specific purposes and justification, could be treated as short branch lines to the main north and south Jiangsu trunk railways, respectively, and considered independently as potentially viable investments.

advantage to railways. The existence of low bridges over canals restricts the size of barges, raising costs and contributing to the relative decline of water transport of bulk items. Priority should be given to investments to relieve waterway bottlenecks because sustained use of water transport would lower costs for both the province and energy consumers.

6.28 The government recognized the importance of the individual small barge operators and medium-size collectives in 1985 when unsatisfied demand and rapidly growing traffic overwhelmed the large, state-owned shipping companies. Small operators, however, acquired old, small tonnage vessels. Currently, with the slow down in trade, government policy is to curtail small operators and promote fleet renewal by the state-owned companies. The future of the inland waterways transport depends on fleet upgrading and modernization, but success here should not come through restrictions on small barge competition. Privately owned barges, despite their smaller share of the traffic, constitute a low-cost, dynamic segment of the industry for which more supportive policies should be adopted. Adapting fleets to new technologies would require large expenditures over many years. In this, the participation of private barge operators would be crucial. Government should encourage their participation by appropriate policies and financial support.

6.29 Some canal ports have tried but failed to maintain and improve their general cargo-handling facilities. Actual traffic growth has shown that their future lies in efficient handling and storage of bulk commodities where water has the relative advantage. Policy should discourage local port handling of general cargo. In the longer term, locating industries along the Yangtze River would boost port traffic development, giving these industries low-cost, uncongested transportation.

6.30 Maritime Ports. Jiangsu's port strategy should be thoroughly reviewed to distinguish satellite ports from major hubs. At Jiangsu's five major ports, traffic has grown slowly despite large investments since 1986 under the policy of opening them up to foreign trade.

6.31 Port specialization may not be desirable for China, but some policy should be adopted, after analysis of the performance, economics, and role of China's southeastern ports in the context of foreign trade and shipping realities. More and more, international shipping operates throughout the world in a hub-and-spoke configuration, with deep-water, high-capacity ports as centers and smaller feeder ports at satellite locations. For Jiangsu's international trade, these functions have been established for containerized cargo. As a result, Nanjing, Nantong, and to a degree, Shanghai operate as feeders for Kobe and Hong Kong, the hubs. This port specialization might not be desirable for many reasons, but reversing it would be ineffectual without first laying a sound basis for policy recommendations for all of China's maritime transport and sea ports.

6.32 While provincial authorities are confident of its prospects, the economic feasibility of the proposed new terminal at Lianyungang, in the context of eastern China's regional port and shipping, needs further evaluation. Foreign trade, including anticipated trade with Europe via the transcontinental rail line, may grow substantially under the export promotion policies. Jiangsu would then have to modernize its container-handling systems and equip-

ment (and other intermodal facilities) at selected feeder ports so that they can actively participate in the containerized trade.

6.33 Aviation. Aviation can contribute substantially to business, government, and tourism, but centrally oriented CAAC policies must be reviewed in light of provincial and regional needs. Investments in support facilities (air traffic control, communications and other navigational aids) are very important to increase air route capacity and safety, as well as to promote international trade in high-value products, and should be encouraged. CAAC decisions on the size of Jiangsu airports, the provincial need for direct internal flights, or the market preference for more frequent services in smaller aircraft (commuter air services) should be considered with respect to their impact on Jiangsu. For example, despite Shanghai's proximity, the designated hub for Jiangsu airports is Beijing (and soon partially Guangzhou). This means that direct traffic between Jiangsu airports is not possible unless it go first to Beijing, a circuitous and impractical routing.

6.34 Multimodal Transport and Intermodal Links. Jiangsu needs to develop a system of multimodal transport operations to enhance its foreign trade position. A modern economy must make full use of the comparative advantages of every transport mode, but especially connections with road transport for door-to-door service. A well-designed and operated intermodal transport system, based on excellent, low-cost transport services, can confer a telling competitive edge in foreign trade.

6.35 In Jiangsu, as elsewhere in China, export trade is handicapped by inefficient transport relative to its foreign competitors. Many goods are handled at the ports in break bulk instead of direct shipment of containers from Chinese shipper to foreign consignee under a single document. Although container terminals have been built at a number of ports, the key door-to-door advantages of containerization have not yet been fully appreciated or exploited. This lag could be traced to traditional, officially established trading and distribution practices and the self-contained, inward-looking approach of main transport agencies and key transport service enterprises. An example would be foreign trade under Chinese-flag vessels (the state line COSCO) which, though not yet fully equipped for this trade, are the exclusive carriers.

6.36 Modern multimodal transport arrangements should be introduced to carry unbroken container loads as far as possible. Adequate container facilities will be needed beyond the ports, including handling equipment, inland terminals and intermodal containers and cars. In addition, streamlined systems of banking, documentation and customs clearance would have to be established so that containerized imports can move smoothly to inland destinations.

6.37 Transport Investment Plan. Central policies still give priority to investments in energy, transport, and agriculture. Thus, the government of Jiangsu anticipates a real increase of over 100 percent in total transport investments under the 8FYP. While investment allocations are not yet determined, an increase in funding of highways is expected. It is also estimated that the waterway and port subsector would see a drop in share of investment (from 50 percent under 7FYP), while the airport infrastructure share would sharply increase, to 6 percent from 1 percent under 7FYP.

6.38 For railways, as noted earlier, the 8FYP proposal calls for major investments in infrastructure, including the continuation of works underway under 7FYP, the national-level railway and two new local railway construction projects. The 8FYP proposes the construction of several highway projects. Prominent among these are the Jiangyin highway bridge across the Yangtze and three high-class highways, of which two will be in northern Jiangsu. Airport construction in Nantong and Nanjing are part of the investments in aviation. For inland waterways, 8FYP proposes two major canal construction and upgrading works, one the rehabilitation of the Grand Canal South, already approved by SPC. Proposed expenditures on ports would fall to less than half their level under 7FYP and emphasis under 8FYP would be on completing expansion works at Nantong and Zhangjiagang with a new terminal at Lianyungang.

6.39 The effect of an increasingly large work program on construction standards should be considered because a large investment plan could strain Jiangsu's capacity. This could compromise the timing and the quality of projects executed, problems that might be compounded by the relatively underdeveloped state of Jiangsu's construction industry.

6.40 The Financing of Transportation Development. Jiangsu's high transport intensity suggests that transport pricing has an important influence on overall demand. Higher, cost-based rates and tariffs for some subsidized commodities carried by railways would discourage uneconomic excess demand while helping the transport industry maintain financial independence and profitability. The present rail tariff structure is not entirely cost-based, and rates for major freight items including coal, cement, and fertilizer, are held below costs to keep down the prices of these commodities. As a result, demand for these commodities, and hence rail transport, is artificially high.

6.41 The correct pricing policy is, of course, crucial. Railway freight tariffs for distances under 200 km have been substantially increased. Though still lower than for road transport, these additional charges have gradually eliminated the bulk of the short-haul railway traffic within the province. For longer distances, the average railway rate is much lower than water transport and several times lower than road transport. For short distances, the waterway rates are even higher, double railway rates. These rate differentials seem not to pose a widespread problem. For intraprovincial Jiangsu traffic, where there is a modal alternative, shippers of low-value bulk freight in large quantities will still choose water transport over rail due to congestion in the railway system. Conversely, for most other commodities, even if rail rates were higher than for waterborne transport, the railways would have a comparative advantage in time and dependability and would be preferred by shippers.

6.42 Railway rates in Jiangsu are part of a national tariffication, but water and road transport rates are fixed by Jiangsu's Price Bureau. Official tariffs must be applied by all transporters, but in practice private operators as well as collectives, and even some state-owned transport companies, are known to charge lower, negotiated rates. Large trucking and barge companies, however, support the higher official rates. As a result of the official rate increases for trucking (45 percent increase in July 1990) and barges (100 percent increase in March 1990), coupled with the current slowdown in traffic, more transporters are openly competing, cutting prices while apparently still covering costs. Passenger tariffs for road transport, differentiated by clas-

ses of services, were increased by 57 percent in December 1989 to current levels. Given the fast-growing, unsatisfied demand for passenger services, private operators do not undercut rates uniformly applied throughout Jiangsu.

6.43 Financing Transport Services. Raising resources will be vital to Jiangsu's ability to improve its highways and waterways. As is done in almost all sectors in China, the Provincial Communications department adopts a balanced budget policy. A proposed highway or waterways investment plan is always balanced against revenues earmarked for development over the plan's duration; each year's approved investment is closely related to projected revenues for the same year.

6.44 The main source of provincial funds is the road maintenance fee (83 percent is retained by Jiangsu and 15 percent remitted to MOF, 2 percent to highway patrol), while road tolls provide some additional revenue. These fees, which are set by the provincial government, are designed to mobilize enough resources to finance road expenditures. Other resources for highway works are obtained from MOC and the provincial Finance Bureau. Of the Y 770 million allocated for 1989 road uses in Jiangsu, 85 percent came from the road maintenance fees, the rest from MOC allocation (Y 85 million) and toll collections. Provincial contributions to MOF from road maintenance fees (Y 119.0 million) exceeded MOC allocations back to Jiangsu.

6.45 Fuel taxes, another form of road use tax, are levied by MOF and charged to road users but may not be allocated back to road works. Tax-inclusive fuel prices for planned fuel allocations are comparable to international market prices,^{3/} while those charged in the open market are well above international market prices and are increasing in line with the consumer price index. Allocation quotas have remained fairly constant since 1982, and, because all fuel demand growth is supplied through the open market, their share is steadily declining. At present 44 percent of the fuel in Jiangsu is sold through planned allocations, while 56 percent is sold in the open market.

6.46 The main own-source of funds for waterways in Jiangsu are the channel maintenance charges (77 percent) and lockage tolls (23 percent). Other resources for canal works are obtained from MOC and the provincial and local governments. Total provincial resources in 1989 (Y 165.4 million) came 64 percent from taxes and 36 percent from government contributions. About 75 percent of the revenues from the channel maintenance charges are retained by the province, while 15 percent goes to MOF as the Energy and Transport Fund, and 10 percent to the Provincial Finance Bureau as a Readjustment Tax for nonplanned projects.

6.47 Financing Constraints. Jiangsu's ambitious 8FYP proposals for transport investment will be substantially cut by SPC at the central government level since adequate revenue provisions seem lacking to back them. Jiangsu should make financing an integral part of the provincial investment plans. The proposed highway and waterway investments will require increased budgetary allocations from the central government (and foreign financing).

^{3/} Reflects the policy and situation prevailing for a number of years before the Gulf crisis. How this would change in view of the increase on international fuel prices is not known.

The province will have to match this finance with drastic increases in road and canal fees. On the other hand, ports, railways, and to a degree airports, as revenue-earning agencies, could cover a big part of their investments from their own resources. Airports, however, would require an additional sizable contribution from the central government for their new capital investment. Other methods for financing large projects would be worth assessing, for example, associating private foreign investors in building, operating, and then transferring back the facilities.

The State Council Circular on the Control
of the Production Capacity of Certain Products

The provisions of the circular are as follows:

1. All projects which create new capacity, or capacity expansion and transformation should be implemented strictly in line with the state industrial policy. Production of products which has been ordered to be stopped, should not continue in the form of new or expanded and transformed production lines. The principle is also applicable to those products, for which capacity expansion is under strict restriction.
2. In addition to investment approval limits, fixed assets investment for certain products which should be under strict control will be approved case by case according to the state's industrial policy and the scale of capital investment and technology upgrading. The government will publish, on a regular or irregular basis, a list of products for which capacity build up or transformation should be controlled. The list will be adjusted at appropriate times. All projects concerning listed products should be submitted to line ministries by provincial economic and planning commissions, regardless of the project scale, volume investment and fund source before going through the present approval procedures. Line ministries must respond to the requests no matter whether they agree or not.

For those projects which have not got the consent from line ministries, agencies with approval rights can not give their approval, banks cannot provide loans, and foreign exchange control agencies cannot provide foreign exchange. If they do so, the chief of the concerned agency will take full responsibility.

3. Local authorities should review those fixed assets projects for which project proposals or designs have been approved but on which construction has not yet started. If these projects need to continue, the concerned department should report to the line ministry and go through the authorizing procedures.

This circular required line ministries to take the interest of the whole into consideration and examine projects strictly. Chiefs of line ministries will take full responsibility for any duplicate project of the listed products. The control list of certain categories in the circular is attached.

Control List of Categories

1. finished cars and motorcycles and unit assemblage, key auto parts and components
2. ethylene
3. primary oil products
4. cotton and wool textiles
5. raw materials of chemical fiber and filament
6. electric and gas-fueled water heaters
7. household and auto air conditioners and compressors
8. compressors used for household refrigerators
9. microwave ovens, electromagnetic ovens (including magnetism-controlled tubes and crystallite glass used for ovens)
10. imported drinks (including solid drinks)
11. electric wires and cables (including optical fiber cables, cross-linked polythane cables, and magnet wires)
12. black and white, color, single and multicolor kinescopes (including display tubes and project tubes), and relevant glass shells, electronic guns and overspreads for color tubes)
13. video recorders and their key components such as core, magnetic drum, magnetic head and electric machine
14. program-controlled exchanges, and their key fittings
15. equipment for optical telecommunication system, beehive telecommunication equipment, radio call equipment, automatic dialing wireless telephones, and multichannel mobile telecommunication equipment
16. light-sensitive and magnetic recording materials
17. tires, caustic soda, and pesticides
18. graphite, up-lead plate glass, float glass, film-coated glass, laminated glass, reinforced glass
19. ferrous-alloy
20. steel sheet and wire materials

21. electrolytic aluminum, lead, zinc, magnesium, copper, tungsten, tin, and antimony
22. processed copper materials, and processed aluminum products (including aluminum foil)
23. oil-fueled electric generators (including gas-fueled turbine generators), and condensing generators with a capacity of less than 25,000 kW

SAMPLE CONTRACT OF ENTERPRISE RESPONSIBILITY SYSTEM

In order to further carry out enterprise reformation, to enliven enterprises, to separate enterprise ownership rights and managerial rights, to increase economic efficiency and enterprise-retained earnings, and also to improve the renovation ability of an enterprise, after the approval of the municipal government, Wuxi Building Material Enterprise and Machinery Enterprise now is chosen, on an experimental basis, to carry out an enterprise contract responsibility system. According to the recommendation by the Enterprise Employee Representative Committee, the appraisal by the Bureau Examination Committee, and the approval by the Cadre Management Authority limit regulation, Mr. Wang Zhan Dou, the representative on behalf of the equity owner Wuxi Building Material Bureau (Company), as Side A, has decided to appoint Mr. Li Zhan Yen as the responsibility taker of the enterprise management (Side B). After negotiations by the two parties, this written contract is hereby made to ensure implementation by the two parties.

I. Enterprise Status:

- 1. Enterprise ownership type: state-owned enterprise.
2. Enterprise size: medium-size.
(a) Number of employees at end of the year: 1,277;
(b) Total payroll: Y 1,679,000;
(c) Average annual income/capita: Y 1,322.
4. (a) Original fixed assets: Y 11,447 million;
(b) Net present value: Y 7.01 million.
5. (a) Enterprise-owned working capital: Y 1.78 million;
(b) Fixed (necessary) working capital: Y 7.84 million.
6. (a) Area of enterprise: 101,911 m2;
(b) Area of plant: 35,779 m2.
7. Major production facilities and equipment:
8. Major products and annual production capacity:
9. (a) Profit to generate in 1986: Y 5.21 million;
(b) Profit before tax: Y 4.99 million;
(c) Profit and tax to submit (income tax, adjustment tax, and profit): Y 3.85 million.
10. Enterprise-retained profit in 1986: Y 1.69 million.
11. Enterprise bonus fund at end of 1986: Y 0,1093 million.
12. Fund for development at end of 1986: Y 0.2575 million.

II. Managerial Formality and Duration

- 1. Managerial formality: independent.
2. Contracted managerial duration: four years, from January 1, 1987 to December 31, 1990.

III. Respective Managerial Targets to be Achieved Within Managerial Duration as Specified in the Contract

- 1. (a) Annual compound growth rate of target profit, basic amount of payment for credit before tax, and basic year profit (which is determined at the time when the contract is signed), once determined, are not subject to change in the four-year contract duration. Annual target profit = basic amount of target profit x annual growth rate [An = A.(1+g)n], An = annual target profit, n = number of years, g = annual growth rate. The annual target profit is to be examined on an annual basis. The fulfillment of target profit is evaluated on the total sum of target profit over the four-year contract period. Within the basic profit quota, the state and the enterprise keep the original profit allocation principle as specified.
(b) According to the regulated ratios, any above-basic-profit increase is subject to 30 percent income tax.
(c) And as to the 25 percent income tax and adjustment tax exemption, three-fifths is to be used as enterprise development fund, two-fifths is to be used as employees' welfare and bonus fund.
2. As to enterprises on basis of progressive profit contract responsibility and low profit-margin contract responsibility, the allocation of retained profit is also calculated according to the above principle. The total increased retained profit is transferred into production development fund.

IV. The Rights and Duties of Party B

- 1. Rights: Party B, as the legal person of the enterprise:
(a) Has the right of decision-making in production and management.
(b) Has the right to lease, transfer the possession of or sell the surplus or idle equipment which have been confirmed by the two sides.
(c) Has the right to hire or fire the heads at middle-management level, and to nominate the deputy directors, general engineer, general accountant general, who shall be appointed to or removed from the position, hired or fired according to the rules of personnel administration.
(d) Has the right to set up new internal departments.
(e) Within the total amount of payroll set by the government (including increased payroll quota), and the limit of relevant policy, the enterprise has the decision-making right on the form and way of the distribution of payroll and bonus.
(f) Has the right to advertise for and hire staff members, technological and managerial personnel according to the needs and relevant regulations, and to determine the pay in accordance with the relevant rules.
(g) Has the right to float the price for the products and those over the state production quota, to hire, fire, reward or punish workers, and to dispose the self-owned funds.
2. Duties:
(a) Shall conscientiously implement the various policies of the State, make a good use and management of all the property of the enterprise, and observe the articles of the contract.
(b) Shall guarantee the safety and appreciation of the property. Any changes of the fixed assets must be approved and supervised by the owners.
(c) Shall analyze market, adjust product mix and investment direction accordingly, and assume the economic responsibility on the consequence of the management and decision-making.
(d) Shall organize surplus labor force to engage in other business activities.
(e) As to the external economic relations before the contracted managerial responsibility system (including credit and debt, horizontal cooperation, etc.), after they have been checked up and confirmed before the conclusion of the contract, shall continue to abide by and carry out them.
(f) Shall report the work to the Party Committee and the Congress of Workers and staff members and receive their supervision.

V. Rights and Duties of Party A

- 1. Rights:
(a) Has the right to protect state-owned property from damage, to promote the appreciation of the fixed assets, and to dispose the ownership of the fixed assets.
(b) Has the right to terminate the contract and choose another manager when Party B is not good at managing or made mistakes in making strategic decisions.
(c) Has the right to put forward a handling suggestion or terminate the contract according to the relevant law and organizational procedure if Party violates the law or discipline, or infringes on the interest of the enterprise.
(d) Implement the reward and punishment toward Party B and the management group as stipulated by the contract.
2. Duties:
(a) Implement and carry out the principles and policies of the government and abide by the provisions of the contract.
(b) Carries out macroeconomic guidance and instruction, provides timely information and coordinates economic relations.
(c) Provides support and help for Party B to get the supply of raw materials, coal, power, etc. for the production.
(d) Actively back Party B for technical upgrading and the developing of new products and technology.

....Continued....

SAMPLE CONTRACT OF ENTERPRISE RESPONSIBILITY SYSTEM (cont'd)

VI. Treatment and Reward and Punishment Toward Party B and the Management Group

1. In the period of contract validity, Party B shall have the lowest standard salary as the head of the enterprise, or his/her original salary which is higher than the lowest standard ones for the head of the enterprise.

Contract Target #1: ANNUAL COMPOUND GROWTH RATE OF TARGET PROFIT, BASE AMOUNT OF REPAYMENT OF LOAN BEFORE TAX, AND BASE-YEAR PROFIT (in Y 10,000)

	1988 (Base year)	1987	1988	1989	1990Total
Base amount of target profit	510	---	---	---	-----
Base year profit	499	---	---	---	-----
Annual growth rate (%)	---	2.5	2.5	2.5	2.52.5
Basic amount of repayment of loan	---	NS	NS	NS	NSNS
Annual target profit	---	522	535	549	5622,168
Annual base profit of enterprise on basis of progressive profit and low profit-margin contract responsibility	---	499	499	499	499996

NS = Not specified

Contract Target #2: TARGET FOR NEW PRODUCT DEVELOPMENT (number of years for new products to be developed)

	1987	1988	19891990
Name of product:			
Construction Apparatus	3	4	44
Construction Machinery	1	NA	22
Value of new products as % of total output	6	9	1011

NA = Not available.

Contract Target #3: TARGETS FOR QUALITY OF PRODUCTS AND STANDARD OF MANAGEMENT

	1987	1988	19891990
Indicators of major product quality:			
Percentage of Overall Machine up to Standard	100	100	100100
Percentage of Major Parts and Functions Up to Standard	95.0	95.2	95.495.6
Grade of standard	2		
Output value of high-quality products as % of total Output	30	30	3030
International standard	1	~	--
Grading of management	-	Prov.	State (grade 2)

Contract Target #4: TARGET FOR TECHNOLOGY IMPORT AND BASE CONSTRUCTION

Nature of the Project	1986	1987	1988	1989	1990Total
Total annual investment	-	180	220	340	131871
7th Plan Technical transformation projects:	-	60	120	300	31611
Cement packing machine	-	120	100	40	-260
Incremental profits from the project	-	-	5	10	2035

Contract Target #5: TARGETS FOR FIXED ASSET GROWTH AND PER CAPITA PROFIT AND TAX

1986	1986 (base year)	1987	1988 (targets)	1989 (targets)	1990	Comparison between 1990 and
Value of fixed assets (Y)	1,145	1,180	1,250	1,280	1,500	+365 Y
Per capita profit and tax (Y)	5,165	5,270	5,370	5,480	5,600	+435 Y
Reliability rate of main equipment (%)	92	92	92	92	92	---

THE JUNE, 1990 STATE COUNCIL REGULATION GOVERNING TVCEs

The new regulation attempts to:

- (i) give additional protection by the state "to the legitimate rights and interests of rural collective-owned enterprises" and support in "the area of credit, energy, raw materials and transport" for high-quality producers and exporters ((2) Article 36), in exchange for the right to "guide their healthy development" (Article 1);
- (ii) (potentially) increase the involvement of higher levels of government in guiding TVCEs, as "... a component part of China's socialist public ownership economy", in the form of "rational planning, correct guidance and strengthened management," in exchange for "active support" from the state (Article 8).^{1/} In this new role "all levels of people's governments and competent administrative departments of village and township enterprises will strengthen guidance, supervision, coordination and service to enterprises" (Article 84);
- (iii) subject TVCEs to the central government's industrial policies, bringing them closer to the priorities set in the national production plan. As stated in Article 9 of the Regulations, "The state encourages and supports rural collective enterprises in exploiting natural resources according to law and in developing, in line with local conditions, industries and products which conform to the state policy on industry and meet the market demand so as to increase supplies for society". In practice, the Regulation will more closely link TVCEs and SOEs through a process of "voluntary conglomeration"^{2/};
- (iv) to reassert the party's political control over the TVCE sector, establishing as the first qualification for enterprise managers that "They must uphold the four cardinal principles" (Article 21), while all levels of people's governments and competent administrative departments "organize and guide political education work in enterprises and help promote the building of socialist spiritual civilization in enterprises" ((8) Article 34);
- (v) increase the legal protection over enterprise assets, while reiterating their sole responsibility for their profits or losses (Article 6);
- (vi) require relicensing of existing enterprises and licensing of proposed new enterprises, checking if their production plans and scope of business "merc a set of criteria" (Article 10) in accordance to government policies, previous to giving them a "Business License". While such qualifications might have the negative consequences mentioned above (i.e., limiting new entry and competition, while bringing TVCEs closer to the planning process), they also offer a welcomed opportunity for higher levels of government to enforce necessary minimum "labor sanitation facilities, safety measures for production, and measures for environmental protection" ((5) Article 13). Nevertheless, to the extent that those regulatory powers are not transferred to upper levels of government, it does not necessarily deal effectively with the "conflict of interest" faced by local governments as owners and regulators of TVCEs;
- (vii) clarify, in principle, ownership rights and the "right of the enterprise to act on its own" (Articles 18 and 19), while establishing limits to avoid "fiscal predation": "The portion of after-tax profits reserved for enterprises should not be below 60 percent. Enterprises are free to make use of their profits. Profits might either be used as development funds to increase production, for technological transformation, for plant expansion or for appropriate increase in welfare funds and reward funds", while the profits received by local governments as owners can be used to support agriculture, finance rural public works, reinvest in the enterprise, or setup new enterprises (Article 82); and
- (viii) establish the right of enterprises to decide a number of internal issues (e.g., the use of their funds, the organization of production and internal structure, the size of their staff), as well as the right to market their own products and set their prices, "except those [goods] controlled by commodity price departments and relevant administrative departments" (Article 24).

1/ The Regulations state that "The State Council's administrative departments in charge of village and town enterprises should also take charge of rural collective enterprises" in addition to administrative departments under the township and village people's governments (Article 12).

2/ "The state encourages and supports rural collective enterprises in achieving multiform economic and technical cooperation in accordance with the principle of equality, mutual benefit, voluntary consultation, and payment for equal value" (Article 8).

Source: State Council, "Regulations Governing the Rural Collective-Owned Enterprises of the PRC", Xinhua News Agency, June 10, 1990. This Regulation explicitly excludes agricultural production cooperatives, rural supply and marketing cooperatives and rural credit cooperatives, covering only to collectively owned TVCEs, while "private enterprises" fall under the "Provisional Regulations of the PRC Concerning Private Enterprises" issued by the State Council on June 25, 1988.

Table 1.1: MAJOR ECONOMIC INDICATORS, JIANGSU PROVINCE

Indicators	Unit	1978	1980	1985	1987	1988	1989	1990
A. Population	Thousand	58,340	59,380	62,130	63,480	64,380	65,360	67,670
Nonagriculture	Thousand	7,280	8,530	10,140	11,750	12,810	13,740	14,210
B. Labor force	Thousand	27,777	28,210	32,630	34,297	35,027	35,198	35,692
Staff & workers	Thousand	5,815	6,442	7,824	8,453	8,730	8,676	-
State	Thousand	3,664	4,020	4,688	5,087	5,275	5,252	5,369
Collective	Thousand	2,151	2,422	3,054	3,267	3,314	3,247	3,233
C. GDP (current prices)	B Yuan	24,924	32,180	65,154	89,293	113,201	122,849	131,439
NI (current prices)	B Yuan	20,828	27,289	57,846	78,919	98,992	105,552	113,831
D. GVIAO (current prices)	B Yuan	44,352	60,627	132,522	197,056	265,088	302,967	394,468
QVAU	B Yuan	10,587	13,845	28,855	38,025	49,795	52,225	58,033
QVID	B Yuan	33,765	46,782	103,667	159,031	215,293	250,742	276,410
Village & below	B Yuan	2,485	4,392	17,376	32,534	46,525	53,567	60,995
Light	B Yuan	17,694	26,797	55,223	85,940	115,100	133,853	151,075
Heavy	B Yuan	16,071	19,985	48,444	73,091	100,193	116,889	125,363
E. GVIAO (1980 prices)	B Yuan	48,590	62,276	127,050	175,459	215,650	224,512	244,963
QVAO	B Yuan	14,088	14,765	23,284	25,508	27,201	27,295	27,978
QVID	B Yuan	34,502	47,511	103,766	149,951	188,449	197,217	216,985
Village & below	B Yuan	2,485	4,392	17,376	30,628	42,678	45,709	50,443
Light	B Yuan	17,828	26,776	57,925	82,944	104,402	108,688	121,036
Heavy	B Yuan	16,674	20,735	45,841	67,007	84,047	88,531	95,949
F. Fixed assets investment ^{/a}	B Yuan	2,175	3,473	10,003	15,685	18,836	14,745	-
State	B Yuan	2,070	3,165	8,043	12,843	15,404	12,416	13,486
Collective	B Yuan	0,105	0,308	1,960	2,842	3,432	2,329	2,079
G. Commerce & foreign trade								
Retail sales	B Yuan	10,649	15,448	30,768	42,201	54,856	59,732	59,906
Procurement for trade	B Yuan	1,986	3,455	5,390	9,985	13,452	16,951	22,640
Export	M US \$	418,460	854,010	1,558,510	2,118,650	2,349,870	2,441,110	-
H. Avg. wage of S & W	Yuan/P,Y	513	667	1,135	1,471	1,796	1,916	2,129
Avg. income of peasants	Yuan/P,Y	155	218	493	627	797	876	884
I. Agr. product								
Grain	1,000 Ton	24,007	24,180	31,265	32,577	32,434	32,828	32,642
Cotton	1,000 Ton	475	418	479	444	562	485	464
Oil Seeds	1,000 Ton	374	386	1,088	1,211	987	999	1,123
Hogs	1,000 Head	13,261	20,711	20,126	20,192	19,837	20,419	21,166
Tobacco	1,000 Ton	12	4	9	6	12	17	9
Jute	1,000 Ton	70	39	102	53	43	22	19
Tea	1,000 Ton	5	5	9	12	14	14	14
Cocoon	1,000 Ton	26	38	73	83	95	112	120
Aquatic	1,000 Ton	398	427	675	922	1,028	1,105	1,183

^{/a} This figure is the sum of fixed-asset investment by state and collective enterprise and excludes the fixed-asset investment carried out by "individual enterprises." The latter accounted for as much as 38 percent of total fixed-asset investment in 1988.

Sources: Jiangsu Statistical Yearbook, 1990, pp. 30-35; and Main Statistical Indexes of the National Economy of Jiangsu Province (1949-90), by the Statistical Bureau of Jiangsu Province, April 1991, printed edition, pp. 2-11.

Table 1.2: GDP BY SECTOR, JIANGSU PROVINCE

	Jiangsu GDP	Industry	Agri- culture	Other	GDP China
(unit: billion yuan in 1980 constant prices)					
1978	27.1	14.3	8.2	4.6	
1979	30.3	13.9	11.6	4.9	420.3
1980	32.2	16.7	10.3	5.2	447.2
1981	35.3	17.6	12.1	5.6	469.1
1982	38.7	18.0	14.8	5.8	508.0
1983	43.5	19.9	16.3	7.3	557.8
1984	48.9	23.0	17.9	8.1	633.1
1985	59.0	30.5	19.2	9.3	716.0
1986	65.2	33.3	21.4	10.4	773.3
1987	72.8	37.4	22.3	13.1	854.5
1988	82.8	42.4	25.5	14.9	950.2
1989	84.0	45.5	24.7	13.8	987.2
Sectoral Share of GDP (in percentage)					
1978	100.0	52.7	30.2	17.1	
1979	100.0	45.8	38.1	16.1	
1980	100.0	51.9	31.9	16.2	
1981	100.0	49.9	34.3	15.8	
1982	100.0	46.6	38.3	15.1	
1983	100.0	45.8	37.4	16.8	
1984	100.0	47.0	36.5	16.5	
1985	100.0	51.7	32.6	15.7	
1986	100.0	51.1	32.9	16.0	
1987	100.0	51.4	30.6	18.0	
1988	100.0	51.2	30.8	18.0	
1989	100.0	54.2	29.4	16.4	
GDP Growth Rate by Sector (unit: in percentages)					
1979	12.0	-2.7	41.3	5.5	7.0
1980	6.1	20.2	-11.2	6.7	6.4
1981	9.6	5.3	17.8	6.9	4.9
1982	9.8	2.6	22.7	5.0	8.3
1983	12.3	10.4	9.6	24.9	9.8
1984	12.5	15.4	9.8	10.5	13.5
1985	20.7	32.8	7.8	14.9	13.1
1986	10.4	9.1	11.4	12.5	8.0
1987	11.8	12.5	4.0	25.8	10.5
1988	13.7	13.2	14.4	13.7	11.2
1989	1.4	7.4	-3.2	-7.6	3.9

Source: Computed from Jiangsu Statistical Yearbook, 1990, p. 76, and pp. 59-61.

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Table 1.3: GDP PER CAPITA IN CURRENT PRICES
(unit: Yuan)

City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Northern Jiangsu	287.6		347.3		445.5	508.3	598.3	689.5	791.5	916.4	1,105.6	1,170.3
Xuzhou	331.4		433.7		517.3	609.9	709.7	785.4	881.2	991.8	1,137.8	1,257.3
Lianyungang	349.7		413.4		564.9	637.7	750.0	974.6	1,146.2	1,229.0	1,354.0	1,379.5
Huaiyin	246.3		280.3		388.6	437.4	512.7	568.8	646.5	791.1	875.2	973.4
Yancheng	272.3		320.7		397.8	444.9	526.9	626.3	736.6	867.5	1,131.9	1,211.9
Southern Jiangsu	640.4		830.8		939.8	1,051.1	1,355.0	1,795.3	1,989.5	2,357.5	2,987.5	3,165.5
Wuxi	682.6		943.2		1,058.0	1,192.8	1,526.2	2,042.5	2,250.8	2,584.7	3,268.9	3,516.8
Changzhou	608.8		769.1		862.6	981.1	1,269.2	1,616.0	1,767.3	2,121.9	2,590.0	2,712.2
Suzhou	631.1		784.4		898.0	988.1	1,279.2	1,717.6	1,925.7	2,325.8	2,995.1	3,167.2
Mid-Jiangsu	462.0		557.0		658.5	730.9	881.7	1,070.6	1,243.0	1,454.7	1,787.8	1,888.7
Nanjing	632.2		986.3		1,105.0	1,224.8	1,428.8	1,739.5	1,965.6	2,277.8	2,669.2	2,830.9
Nantong	372.3		445.7		535.2	587.5	695.7	837.4	973.2	1,134.8	1,459.4	1,443.0
Yangzhou	342.6		414.4		509.4	566.1	701.6	850.9	1,025.9	1,205.3	1,495.0	1,585.2
Zhenjiang	520.8		630.6		745.2	838.4	1,066.2	1,301.5	1,463.9	1,738.8	2,125.8	2,300.4
<u>Total</u>	<u>424.3</u>		<u>524.4</u>		<u>625.2</u>	<u>700.6</u>	<u>854.9</u>	<u>1,052.6</u>	<u>1,199.4</u>	<u>1,404.7</u>	<u>1,733.9</u>	<u>1,825.0</u>

Source: Calculated from Jiangsu 40 Years, 1949-89, pp. 381-8, and Jiangsu Statistical Yearbook, 1990, pp. 98 and 111.

Table 1.4: GROSS VALUE OF OUTPUT, JIANGSU PROVINCE
(unit: billion yuan at 1980 constant prices)

City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	Growth Rate		
													1978-89	1984-89	
QVIO															
Northern Jiangsu	6.530	7.265	8.605	9.265	10.268	11.474	13.500	16.785	19.668	24.604	30.662	32.708	15.8	19.4	
Xuzhou	2.352	2.696	3.249	3.498	3.853	4.211	4.776	5.752	6.268	7.390	9.057	10.041	14.1	16.0	
Lianyungang	0.863	0.893	1.043	1.133	1.293	1.456	1.706	2.401	2.681	3.593	4.011	3.575	13.8	15.9	
Huaiyin	1.646	1.840	2.165	2.290	2.536	2.909	3.432	4.125	5.021	6.736	8.612	9.357	17.1	22.2	
Yancheng	1.667	1.836	2.148	2.344	2.608	2.698	3.564	4.507	5.500	6.683	8.782	9.734	17.4	22.1	
Southern Jiangsu	13.451	15.701	19.511	21.551	22.869	26.718	34.533	47.985	56.479	70.493	90.566	93.647	19.3	22.1	
Wuxi	5.069	5.946	7.333	8.019	8.553	10.116	13.398	18.196	21.473	26.303	32.626	34.624	19.1	20.9	
Changzhou	3.486	3.950	4.819	5.345	5.704	6.495	7.639	10.445	11.636	14.125	17.71	18.883	16.6	19.2	
Suzhou	4.896	5.605	7.359	8.187	8.612	10.107	13.296	19.344	23.370	30.065	40.029	40.340	21.1	24.9	
Mid-Jiangsu	14.421	16.383	19.301	20.575	22.168	24.833	29.614	38.83	44.934	55.204	67.692	70.480	15.5	18.9	
Nanjing	6.001	6.666	7.429	7.568	8.083	8.657	10.239	12.514	13.575	16.069	19.065	19.752	11.4	14.0	
Nantong	3.358	3.940	4.859	5.389	5.678	6.445	7.569	9.592	11.110	13.520	16.871	16.857	15.8	17.3	
Yangzhou	3.269	3.791	4.590	4.950	5.549	6.268	7.678	11.228	13.749	17.193	21.412	23.038	19.4	24.6	
Zhejiang	1.793	1.986	2.423	2.668	2.678	3.243	4.106	5.496	6.500	8.422	10.344	10.832	17.6	21.4	
Total	34.402	39.349	47.417	51.391	55.345	63.023	77.647	103.600	121.081	150.301	189.920	197.034	17.2	20.5	
QVAO															
Northern Jiangsu	5.307	6.082	6.082	7.000	7.693	8.707	9.964	10.561	11.180	11.665	12.365	12.579	6.2	4.8	
Xuzhou	1.204	1.435	1.517	1.630	1.631	2.151	2.497	2.507	2.640	2.735	2.794	2.868	8.2	2.8	
Lianyungang	0.596	0.687	0.760	0.823	0.935	1.025	1.278	1.517	1.714	1.795	1.777	1.677	9.9	5.6	
Huaiyin	1.709	1.813	1.849	2.174	2.654	2.926	3.323	3.510	3.640	3.802	4.019	4.117	8.3	4.4	
Yancheng	1.798	2.147	1.936	2.373	2.473	2.605	2.666	3.027	3.186	3.333	3.775	3.916	7.3	6.4	
Southern Jiangsu	3.268	3.597	3.239	3.107	3.788	3.706	4.731	4.440	4.916	5.137	5.372	5.297	4.5	2.3	
Wuxi	0.868	0.961	0.834	0.774	0.996	0.997	1.188	1.131	1.302	1.392	1.432	1.453	4.6	4.1	
Changzhou	0.714	0.782	0.764	0.757	0.916	0.932	1.205	1.145	1.184	1.197	1.279	1.280	5.4	1.2	
Suzhou	1.664	1.854	1.641	1.578	1.676	1.777	2.338	2.164	2.430	2.548	2.661	2.564	4.0	1.9	
Mid-Jiangsu	5.521	6.017	5.474	5.84	6.624	6.977	7.664	8.283	8.645	8.682	9.467	9.419	5.0	3.7	
Nanjing	0.734	0.792	0.763	0.777	0.924	0.976	1.104	1.192	1.284	1.297	1.330	1.336	5.6	3.9	
Nantong	2.151	2.253	1.924	2.141	2.371	2.475	2.803	2.784	2.909	2.892	3.310	3.217	3.7	2.8	
Yangzhou	2.120	2.392	2.238	2.357	2.670	2.814	3.142	3.462	3.501	3.485	3.739	3.782	5.4	3.8	
Zhejiang	0.516	0.580	0.549	0.565	0.659	0.712	0.815	0.845	0.951	1.006	1.088	1.084	7.0	5.9	
Total	14.094	16.696	14.775	15.947	18.305	19.39	22.559	23.284	24.741	25.484	27.204	27.295	6.2	3.9	

Source: Jiangsu 40 Years, 1949-89, pp. 393-6 and pp. 397-399; and Jiangsu City and County Economy, 1990, pp. 102-9 and pp. 134-41.

QVIAO, JIANGSU PROVINCE
(unit: billion yuan at 1980 constant prices)

City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1978-88
Northern Jiangsu	11.837	13.347	14.667	16.265	18.181	20.181	23.474	27.346	30.848	36.269	43.027	13.8
Xuzhou	3.556	4.131	4.766	5.128	5.684	6.362	7.275	8.259	8.906	10.125	11.851	12.8
Lianyungang	1.459	1.580	1.803	1.958	2.228	2.481	2.984	3.918	4.595	5.388	5.788	14.8
Huaiyin	3.357	3.653	4.014	4.464	5.190	5.835	6.755	7.635	8.661	10.540	12.631	14.3
Yancheng	3.465	3.983	4.084	4.717	5.079	5.503	6.450	7.534	8.686	10.216	12.557	13.7
Southern Jiangsu	36.659	41.698	47.525	51.073	55.469	62.284	76.697	99.538	114.974	139.517	173.097	16.8
Nanjing	6.735	7.458	8.192	8.345	9.007	9.833	11.343	13.706	14.859	17.367	20.395	11.7
Wuxi	5.957	6.907	8.167	8.793	9.549	11.113	14.586	19.327	22.775	27.695	34.258	19.1
Changzhou	4.200	4.732	5.583	6.102	6.620	7.427	9.004	11.590	12.620	15.322	18.990	16.3
Suzhou	6.560	7.659	9.000	9.763	10.468	11.684	15.634	21.508	25.800	32.613	42.690	20.6
Nantong	5.509	6.193	6.783	7.510	8.049	8.920	10.387	12.376	14.019	16.412	20.181	13.9
Yangzhou	5.389	6.183	6.628	7.307	8.219	9.102	10.620	14.690	17.250	20.678	25.151	16.7
Zhenjiang	2.309	2.566	2.972	3.253	3.537	3.955	4.923	6.341	7.451	9.430	11.432	17.3

Source: Jiangsu 40 Years, 1949-89, pp. 389-92.

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Table 1.5: SHARE OF GRAIN PRODUCTION BY CITY AND LOCATION
(unit: in percentages)

City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Northern Jiangsu	36.8	36.2	41.5	44.8	44.1	46.4	46.2	49.0	48.3	49.9	48.4	49.6
Xuzhou	8.6	9.2	10.4	11.0	10.3	12.0	12.1	12.1	12.3	12.4	11.4	12.3
Lianyungang	4.3	4.7	5.3	5.3	5.2	5.7	5.7	6.2	6.1	6.4	6.0	5.9
Huaiyin	13.1	12.9	13.8	16.1	16.9	17.3	17.2	18.1	17.5	18.1	17.6	17.9
Yancheng	10.8	11.5	12.1	12.5	11.7	11.3	11.3	12.5	12.4	12.9	13.4	13.5
Southern Jiangsu	25.9	25.4	22.4	19.5	21.5	19.8	20.2	17.2	18.0	17.4	17.9	17.4
Wuxi	7.3	7.2	6.1	5.3	6.0	5.6	5.6	4.7	4.9	4.7	4.7	4.6
Changzhou	6.3	6.0	5.8	5.3	5.5	5.4	5.3	4.9	4.9	4.7	4.9	4.9
Suzhou	12.3	12.2	10.6	8.9	9.9	8.8	9.2	7.6	8.3	8.0	8.3	7.9
Mid-Jiangsu	37.3	36.4	36.1	35.7	34.4	33.9	33.6	33.8	33.7	32.7	33.7	33.0
Nanjing	6.1	6.0	5.7	5.6	5.6	5.7	5.5	5.6	5.2	5.1	5.1	5.3
Nantong	9.6	9.0	9.1	9.3	8.6	8.1	8.5	8.8	9.2	8.5	9.1	8.3
Yangzhou	17.4	17.3	17.1	17.0	16.3	16.0	15.8	15.8	15.6	15.5	15.7	15.7
Zhejiang	4.1	4.1	4.1	3.9	3.8	4.0	3.8	3.7	3.7	3.6	3.8	3.6
Total	100.0											

Source: Computed from Jiangsu 40 Years, 1949-89, pp. 401-404, and Jiangsu City and County Economy, 1990, pp. 110-117.

Table 1.6: SHARE OF COTTON PRODUCTION BY CITY AND LOCATION
(unit: in percentages)

City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Northern Jiangsu	41.0	41.4	48.0	53.3	49.8	52.0	53.4	58.4	55.9	60.9	61.8	59.5
Xuzhou	5.2	3.8	10.7	7.7	9.9	11.0	14.0	14.7	15.6	16.9	15.7	9.7
Lianyungang	1.1	0.7	2.4	2.1	2.8	2.6	3.0	3.9	3.7	3.8	4.0	3.7
Huaiyin	3.9	2.7	7.3	6.7	7.0	6.7	7.3	7.6	5.4	7.1	7.2	5.9
Yancheng	30.8	34.2	27.6	36.8	30.6	31.7	29.2	32.2	31.2	33.1	34.9	40.3
Southern Jiangsu	6.1	9.1	9.8	7.8	9.6	9.7	11.1	10.5	10.7	7.6	7.1	7.3
Wuxi	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0
Changzhou	0.4	0.6	1.3	1.9	2.0	1.8	1.9	1.5	0.9	0.7	0.6	0.5
Suzhou	7.7	6.4	6.4	5.7	7.4	7.6	9.0	8.9	9.8	6.9	6.4	6.8
Mid-Jiangsu	50.8	49.5	42.2	38.9	40.6	38.3	35.4	31.0	33.4	31.5	31.1	33.1
Nanjing	0.8	0.9	1.3	1.3	1.2	1.0	0.9	0.9	0.8	0.6	0.5	0.4
Nantong	42.6	39.6	31.1	26.8	29.5	26.4	23.2	14.5	17.3	15.4	17.8	19.5
Yangzhou	6.0	7.2	7.9	8.4	7.7	8.5	8.9	13.4	13.4	13.6	11.6	12.7
Zhejiang	1.4	1.8	1.9	2.3	2.3	2.4	2.4	2.2	2.0	1.8	1.2	0.6
Total	100.0											

Source: Computed from Jiangsu 40 Years, 1949-89, pp. 405-408, and Jiangsu City and County Economy, 1990, pp. 118-125.

Table 1.7: GDP BY SECTOR, JIANGSU PROVINCE
(Unit: billion yuan in current prices)

	GDP	Primary	Secondary	Tertiary
1978	24.924	6.871	13.109	4.944
1979	30.055	10.404	14.114	5.537
1980	32.180	9.424	16.741	6.015
1981	35.091	10.939	17.540	6.612
1982	39.253	13.515	18.372	7.366
1983	44.306	15.041	20.909	8.356
1984	52.377	17.900	25.039	9.438
1985	65.154	19.566	33.445	12.143
1986	75.199	22.426	37.632	15.141
1987	89.293	24.528	46.172	18.593
1988	113.201	31.918	58.682	22.601
1989	122.849	32.418	65.545	24.886
1990	131.439	35.517	69.259	26.663

Sources: Jiangsu Statistical Yearbook, 1989, p. 52 and p. 57; and Main Statistical Indexes of the National Economy of Jiangsu Province (1949-90), by the Statistical Bureau of Jiangsu Province, April 1991, printed edition, p. 45.

Table 1.8: REAL GDP GROWTH RATE BY SECTOR, JIANGSU PROVINCE
(Unit: in percentages)

	GDP	Primary	Secondary	Tertiary	China GDP
1978					
1979	12.0	22.8	7.1	5.7	7.0
1980	6.1	-10.5	18.5	7.9	6.4
1981	9.6	12.9	7.0	11.0	4.9
1982	9.8	16.0	5.8	10.5	8.3
1983	12.3	7.2	15.3	13.5	9.8
1984	12.5	13.0	17.9	-2.4	13.5
1985	20.7	-0.9	28.1	38.6	13.1
1986	10.4	5.4	9.6	19.3	8.0
1987	11.8	0.5	18.1	8.7	10.5
1988	13.7	4.4	17.8	12.2	11.2
1989	1.4	-2.8	0.5	8.8	3.9

Source: Computed from Jiangsu Statistical Yearbook, 1989, p. 52 and p. 57.

Table 1.9: THE COMPOSITION OF SOME MAJOR ECONOMIC INDICATORS

Indicators	1978	1980	1986	1987	1988	1989
A. GDP	100.0	100.0	100.0	100.0	100.0	100.0
Primary	27.6	29.8	29.9	27.5	27.9	26.4
Secondary	52.6	52.0	50.0	51.7	51.3	53.4
Tertiary	19.8	18.7	20.2	20.8	20.8	20.8
B. QVIO	100.0	100.0	100.0	100.0	100.0	100.0
Light	52.4	57.8	54.8	54.0	53.5	53.4
Agr. input		42.7	37.9	37.0	35.9	36.2
Nonagricultural input		14.8	16.0	16.7	17.4	17.2
Heavy	47.6	42.7	45.7	46.0	46.5	46.6
Mining		2.0	1.7	1.5	1.4	1.5
Primary		18.4	14.4	14.6	15.4	15.8
Manufacture		27.1	30.0	30.2	29.9	29.3
C. QVAD	100.0	100.0	100.0	100.0	100.0	100.0
Farming	79.3	75.9	68.6	60.0	55.1	54.9
Forestry	1.4	1.4	1.5	1.6	1.5	1.3
Animal husbandry	15.8	19.2	20.9	23.0	28.1	28.3
Sideline	1.2	0.7	7.2	8.0	7.3	7.4
Fishery	2.3	2.8	6.8	7.4	8.0	8.1
D. Sown area	100.0	100.0	100.0	100.0	100.0	100.0
Grain	73.6	73.8	76.3	76.3	76.3	77.0
Cash crops	10.6	11.6	14.4	14.7	14.4	14.2
Other	15.9	14.6	9.3	9.0	9.3	8.8
E. State investment in capital construction	100.0	100.0	100.0	100.0	100.0	100.0
Productive	82.1	65.5	63.2	72.4	71.5	69.3
Nonproductive	17.9	34.5	36.8	27.6	28.5	30.7
Housing	10.1	20.6	16.8	12.3	11.6	12.7
F. State investment in capital construction						
Agriculture	10.2	7.0	1.3	1.4	1.4	1.6
Light industry	10.6	16.2	9.3	9.0	10.5	9.6
Heavy industry	49.1	40.5	41.5	49.6	50.9	47.3
Energy	21.0	18.8	15.5	21.3	19.3	17.9
Transport, post, & telecom.	13.0	6.4	14.0	13.1	10.2	13.0
G. National income	100.0	100.0	100.0	100.0	100.0	100.0
Investment	34.6	31.6	39.9	42.7	42.5	40.4
Consumption	65.4	68.4	60.1	57.3	57.5	59.6
H. Culture, education, public health, & science as a Share of fiscal Exp.	17.5	23.5	26.6	26.6	28.8	29.1
I. Fiscal revenue as a share of national income	29.3	22.9	14.9	13.8	11.6	11.7

Source: Jiangsu Statistical Yearbook, 1989, pp. 30-31.

Table 2.1: TOTAL GVIO IN JIANGSU, 1980-89
(unit: billion Yuan)

Year	Total GVIO Constant Prices	Total GVIO Current Prices	Deflator (1980=100)
1980	46.8	46.78	100.0
1981	50.3	50.49	100.3
1982	53.2	53.49	100.6
1983	59.5	60.07	100.9
1984	71.9	74.54	103.7
1985	96.0	103.67	108.0
1986	109.3	123.54	113.0
1987	136.4	159.03	116.6
1988	181.1	215.29	118.9
1989	197.3	250.74	127.1
1990		276.41	

Notes: Total GVIO in constant prices is calculated by using implicit industrial goods deflators from "China: Between Plan and Market," World Bank Country Study.

Total GVIO here includes output of all levels of enterprises. both village and above village level.

Sources: Jiangsu Statistical Yearbook, 1990, p. 180; "China: Between Plan and Market," World Bank Country Study, 1990, p. 109; and Main Statistical Indexes of the National Economy of Jiangsu Province (1949-90), by the Statistical Bureau of Jiangsu Province, April 1991, printed edition, p. 164.

Table 2.2: JIANGSU'S GROSS VALUE OF INDUSTRIAL OUTPUT (GVIO)

Year	Total					TVE BREAKDOWN	
		Urban	Rural	Non-TVE	TVE	Town	Village
(billion Yuan in current prices)							
1980	46.78	42.88	4.40	35.88	10.9	6.5	4.4
1981	50.49	45.59	4.90	37.99	12.5	7.6	4.9
1982	53.49	48.89	5.10	40.29	13.2	8.1	5.1
1983	60.07	53.87	6.20	44.07	16.0	9.8	6.2
1984	74.54	64.74	9.80	51.44	23.1	13.3	9.8
1985	103.67	86.29	17.38	65.07	38.6	21.2	17.4
1986	123.54	100.79	22.75	73.84	49.7	27.0	22.7
1987	159.03	126.51	32.52	90.13	68.9	36.3	32.6
1988	215.29	168.77	46.52	117.19	98.1	51.6	46.5
1989	250.74	196.59	54.15	139.38	111.4	57.8	53.6
1990	278.41	n.a.	n.a.	(151.21)	125.2	64.2	61.0
(in percentages)							
1980	100.0	90.6	9.4	76.7	23.3	59.6	40.4
1981	100.0	90.3	9.7	75.2	24.8	60.8	39.2
1982	100.0	90.5	9.5	75.8	24.7	61.4	38.6
1983	100.0	89.7	10.3	73.4	26.6	61.3	38.8
1984	100.0	86.9	13.1	69.0	31.0	57.6	42.4
1985	100.0	83.2	16.8	62.8	37.2	54.9	45.1
1986	100.0	81.6	18.4	59.8	40.2	54.3	45.7
1987	100.0	79.6	20.4	56.7	43.3	52.7	47.3
1988	100.0	78.4	21.6	54.4	45.6	52.6	47.4
1989	100.0	78.4	21.6	55.6	44.4	51.9	48.1
1990	100.0	n.a.	n.a.	54.7	45.3	51.3	48.7

Sources: Jiangsu Statistical Yearbook, 1990; and Main Statistical Indexes of the National Economy of Jiangsu Province (1949-90), by the Statistical Bureau of Jiangsu Province, April 1991, printed edition, pp. 162 and 164.

Table 2.3: GVIO BY MAJOR INDUSTRY, JIANGSU PROVINCE
(million Yuan in current prices)

Years	1985	1986	1987	1988	1989
Total	86,291	100,790	126,508	168,768	198,587
Food processing	6,988	8,028	9,119	11,745	18,064
Textiles	17,885	20,898	25,288	32,915	39,913
Plastics	2,278	2,486	3,302	5,012	5,317
Chemicals	6,093	6,968	9,992	14,681	18,551
Pharmaceuticals	1,153	1,480	1,988	2,815	3,164
Machine building	10,710	12,374	15,612	20,662	22,785
Metal products	2,619	3,174	4,248	5,458	6,343
Electronics & telecom. equipment	4,304	4,734	6,675	9,711	10,847
Construction materials & nonmetal products	5,578	6,927	8,138	10,221	11,391
Ferrous metal metallurg. & processing	2,904	3,926	4,777	6,041	7,150
Nonferrous metal metallurg. & processing	1,001	1,366	1,537	2,532	3,168
Electric machinery	4,110	4,764	5,866	7,934	10,295
Transportation equipment	2,726	2,522	3,429	4,489	4,909
Electricity, steam & hot water supply	1,688	1,882	2,270	2,982	3,980
Garment industry	1,982	2,245	2,834	3,561	4,444
Synthetic fibers	1,228	1,648	2,526	3,678	4,708
Major industries	73,223	85,222	107,601	144,433	169,995
Other industries	13,068	15,568	18,907	24,335	28,592

Notes: GVIO figures exclude enterprises below township level.

Source: Jiangsu Statistical Yearbook, 1990, pp. 183-5.

GVIO GROWTH RATES BY MAJOR INDUSTRY
(million Yuan in current prices)

	1985	1986	1987	1988	1989	1986-89	1986-88
Total	16.80	25.52	33.41	16.48	23.05	25.24	
Food processing	14.88	13.59	29.80	11.23	17.12	19.09	
Textiles	15.73	22.17	30.17	21.26	22.33	22.69	
Plastics	9.13	32.82	51.79	6.09	24.98	31.25	
Chemicals	14.36	43.40	46.93	26.36	32.76	34.90	
Pharmaceuticals	28.36	34.32	41.80	12.40	29.17	34.78	
Machine building	15.54	26.17	32.35	10.27	21.08	24.68	
Metal products	21.19	33.84	29.44	16.26	24.93	27.82	
Electronics & telecom. equipment	9.99	41.00	45.48	11.70	27.04	32.16	
Construction materials & nonmetal products	24.18	17.48	25.60	11.45	19.68	22.42	
Ferrous metal metallurg. & processing	35.19	21.68	26.46	18.36	25.42	27.78	
Nonferrous metal metallurg. & processing	36.46	12.52	64.74	25.04	34.69	37.91	
Electric machinery	15.91	23.17	35.21	29.38	25.92	24.76	
Transportation equipment	-7.48	35.96	30.91	9.36	17.19	19.80	
Electricity, steam & hot water supply	12.97	20.62	31.37	33.47	24.60	21.65	
Garment industry	13.27	26.24	25.65	24.80	22.49	21.72	
Synthetic fibers	34.42	53.28	45.53	28.02	40.31	44.41	
Major industries	16.39	28.26	34.23	17.70	23.64	19.55	
Other industries	19.13	21.45	28.71	9.27	19.64	23.10	

Source: Jiangsu Statistical Yearbook, 1990, pp. 183-185, and Table 2.3.

Table 2.4: QVIO BY MAJOR INDUSTRY, JIANGSU PROVINCE
(million Yuan in 1980 constant prices)

	1985	1986	1987	1988	1989
Total	79,899.1	89,194.7	10,8497.4	141,941.1	15,4671.1
Food processing	6,470.4	7,104.4	7,820.8	9,878.0	10,270.6
Textiles	16,580.2	18,816.8	21,886.1	27,892.9	31,402.8
Plastics	2,109.3	2,200.0	2,881.9	4,215.3	4,199.3
Chemicals	5,641.7	6,166.4	8,589.5	12,847.4	14,595.6
Pharmaceuticals	1,067.6	1,809.7	1,705.0	2,867.5	2,489.4
Machine building	9,916.7	10,850.4	18,389.4	17,377.6	17,928.8
Metal products	2,425.0	2,808.8	3,648.2	4,588.7	4,990.6
Electronics & telecom. equipment	3,985.2	4,189.4	5,724.7	6,167.4	8,534.2
Construction materials & nonmetal products	5,164.8	6,180.1	6,979.4	8,598.3	8,962.2
Ferrous metal metallurg. & processing	2,688.9	3,474.3	4,096.9	5,080.7	6,825.6
Nonferrous metal metallurg. & processing	926.9	1,208.8	1,319.2	2,129.5	2,491.0
Electric machinery	3,805.6	4,215.9	5,032.6	6,672.8	8,076.3
Transportation equipment	2,524.1	2,281.9	2,940.8	3,775.4	3,962.3
Electricity, steam & hot water supply	1,542.6	1,686.5	1,946.8	2,508.0	3,131.4
Garment industry	1,885.2	1,986.7	2,430.5	2,995.0	3,498.5
Synthetic fibers	1,185.2	1,458.4	2,166.4	3,091.7	3,702.6
Major Industries	67,799.1	76,417.7	92,282.2	121,474.3	133,749.0
Other Industries	12,100.0	13,777.0	16,215.8	20,466.8	20,922.1
Industrial Goods Deflator	108	113	116.6	119.9	127.1

Notes: QVIO in constant prices is calculated using Table 2.3 and industrial goods deflator in Table 2.1.

Source: Jiangsu Statistical Yearbook, 1990, pp. 183-5, and Table 2.1.

QVIO GROWTH RATES IN JIANGSU BY MAJOR INDUSTRY, JIANGSU PROVINCE
(in percentages)

	1986	1987	1988	1989	1986-89	1986-88
Total	11.6	21.6	30.8	9.0	18.27	21.37
Food processing	9.8	10.1	26.3	4.1	12.56	15.40
Textiles	10.6	18.4	27.7	13.4	17.52	18.88
Plastics	4.3	28.7	49.9	-0.9	20.28	27.29
Chemicals	9.3	39.0	44.1	18.2	27.64	30.79
Pharmaceuticals	22.7	30.2	38.9	5.1	24.22	30.57
Machine building	10.4	22.3	29.8	3.2	16.41	20.89
Metal products	15.8	29.7	26.0	6.8	20.06	23.63
Electronics & telecom. equipment	5.1	36.6	42.7	4.5	22.23	28.15
Construction materials & nonmetal products	18.7	13.9	23.2	4.3	14.99	18.57
Ferrous metal metallurg. & processing	29.2	17.9	24.0	10.7	20.47	23.71
Nonferrous metal metallurg. & processing	30.4	9.0	61.5	17.0	29.50	33.67
Electric machinery	10.8	19.4	32.6		20.94	20.92
Transportation equipment	-11.6	31.8	26.4	2.3	12.72	16.19
Electricity, steam & hot water supply	8.0	16.9	28.8	24.9	19.64	17.89
Garment industry	8.3	22.3	23.2	16.7	17.64	17.94
Synthetic fibers	26.5	48.6	42.7	19.6	31.67	39.91
Major industries	11.2	22.4	31.6	10.1	19.89	16.02
Other industries	13.9	17.7	26.2	2.2	15.00	19.26

Source: Jiangsu Statistical Yearbook, 1990, pp. 183-5, Table 2.1 and Table 2.3.

Table 2.5: NUMBER OF INDUSTRIAL ENTERPRISES IN JIANGSU

	1985	1986	1987	1988	1989	1990
Total /a	43,289	47,248	47,252	47,846	47,351	46,627
By Ownership						
State	4,910	5,018	5,035	5,059	5,055	5,086
Collective	38,251	42,085	41,952	42,420	41,810	41,190
Other	108	145	265	367	486	532
of which TVEs above town level	28,853	29,639	29,439	29,745	29,045	28,417
By Size						
Large	139	165	184	217	268	287
Medium	465	510	593	691	855	970
Small	42,688	46,583	46,475	46,938	46,228	45,590
By Major Industry						
Food processing	4,144	4,418	3,998	3,883	3,796	
Textiles	3,548	3,865	4,125	4,289	4,326	
Plastics	1,868	2,078	2,207	2,280	2,192	
Chemicals	1,861	2,054	2,260	2,474	2,543	
Pharmaceuticals	284	321	292	299	312	
Machine building	4,857	5,276	5,459	5,830	5,661	
Metal products	3,173	3,333	3,696	3,720	3,569	
Electronics & commercial equipment	805	695	913	931	974	
Construction material and nonmetal products	6,296	6,699	6,960	7,055	6,966	
Garments	2,416	2,402	2,157	2,035	1,929	
Synthetic fibers	62	104	116	133	126	
Major industries	26,812	28,939	29,909	30,541	30,379	
Other industries	16,467	18,309	17,343	17,305	16,972	
Total	43,289	47,248	47,252	47,846	47,351	

/a Excludes enterprises below township level.

Sources: Jiangsu Statistical Yearbook, 1990, pp. 177-8; and Main Statistical Indexes of the National Economy of Jiangsu Province (1949-90), by the Statistical Bureau of Jiangsu Province, April 1991, printed edition, pp. 154-154.

**Table 2.6: MAJOR ECONOMIC EFFICIENCY INDICATORS OF
INDEPENDENT ACCOUNTING ENTERPRISES IN 1989**
(percentage, constant price 1980=100)

	Gross output/ original value fixed capital /a		Pretax profits/ original value fixed capital /a		Pretax profits/ total capital /b		Pretax profits/ sales revenue	
	Jiangsu	National	Jiangsu	National	Jiangsu	National	Jiangsu	National
Total	171.46	140.08	20.45	18.24	16.10	16.79	5.26	6.81
Food processing	228.42	249.99	15.86	18.97	11.08	13.67	3.54	4.5
Textiles	235.87	232.11	21.24	21.07	15.69	15.78	5.47	5.55
Plastics	212.28	218.09	17.99	18.68	12.47	13.60	5.54	5.54
Chemicals	116.28	152.17	21.67	23.22	19.59	23.05	5.99	8.12
Pharmaceuticals	248.66		21.78		15.82		6.48	
Machine building	195.22	145.38	21.89	16.85	14.16	12.67	7.82	7.69
Metal products	228.44	235.87	19.74	24.88	13.22	17.75	4.59	6.87
Electronics & telecom. equipment	331.54	247.84	27.90	24.59	16.62	14.93	7.94	7.66
Construction materials & nonmetal products	113.90	119.99	11.86	14.45	10.25	14.18	2.17	6.26
Ferrous metal								
Metallurg. & processing	117.42	115.61	18.15	21.55	16.11	22.15	3.96	9.92
Nonferrous metal								
metallurg. & processing	254.34	158.59	23.89	19.13	16.57	18.35	4.82	9.71
Electric machinery	313.08	282.70	35.44	33.34	20.00	20.61	6.01	7.56
Transportation equipment	157.34	148.90	15.27	15.22	11.10	11.99	6.79	7.21
Electricity, steam & hot water supply	31.94	37.05	14.71	10.39	19.73	13.76	5.91	9.79
Garment Industry	388.75		30.71		17.71		5.18	
Synthetic fibers	204.43	117.41	28.44	20.60	23.63	20.17	10.13	11.15
Mean of major industries listed in this table	209.21		21.66		15.87		5.76	

/a Original capital refers to the initial book value of fixed capital. It does not subtract the value of depreciation, nor does it adjust values for inflation.

/b Pretax profits equals taxes plus retained profits.

Source: Jiangsu Statistical Yearbook, 1990, pp. 210-211.

Table 2.7: LABOR PRODUCTIVITY IN INDUSTRY
(yuan per worker in 1980 constant prices)

	1985	1986	1987	1988	1989	1990
All industry	13,321	14,120	16,146	19,003	19,979	22,148
Light industry	15,977	16,356	18,869	22,019	22,776	
Heavy industry	11,019	11,582	13,603	16,156	17,311	
State	18,759	19,807	21,488	23,218	23,789	25,289
Collectives	10,133	10,990	13,092	16,276	17,273	19,581
<u>By major industry</u>						
Food processing	21,916	22,081	22,601	24,076	24,031	
Textiles	19,348	20,287	21,890	23,956	24,298	
Chemicals	16,789	17,389	20,393	23,892	26,287	
Machine building	13,135	13,723	16,684	20,832	21,665	
Electronics & commercial equipment	n.a.	n.a.	n.a.	n.a.	n.a.	
Construction material and nonmetal products	4,642	5,116	5,640	6,588	6,690	
Garments	7,487	8,762	11,082	13,997	16,414	

Sources: Jiangsu Statistical Yearbook, 1990, pp. 216-218; Jiangsu Statistical Yearbook, 1989, pp. 198-200; and Main Statistical Indexes of the National Economy of Jiangsu Province (1949-90), by the Statistical Bureau of Jiangsu Province, April 1991, printed edition, p. 86.

**Table 2.8: GEOGRAPHICAL DISTRIBUTION OF GVIO AND
ENTERPRISES IN JIANGSU, 1989
(in percentages)**

	GVIO	Enterprises
<u>Southern Cities</u>		
Nanjing	10.78	8.12
Wuxi	16.67	9.26
Suzhou	20.17	11.81
Zhenjiang	5.36	8.00
Changzhou	9.48	8.08
<u>Subtotal</u>	<u>62.46</u>	<u>45.27</u>
<u>Northern Cities</u>		
Xuzhou	5.60	5.74
Nantong	8.58	13.67
Lianyungang	1.93	4.00
Huaiyin	4.95	9.26
Yancheng	5.14	7.94
Yanzhou	11.35	14.11
<u>Subtotal</u>	<u>37.54</u>	<u>54.73</u>
<u>Total, Jiangsu</u>	<u>100.00</u>	<u>100.00</u>

Source: Jiangsu Statistical Yearbook, 1990.

Table 2.9: JIANGSU'S SHARE OF NATIONAL GVIO OF MAJOR INDUSTRIES, 1989
(1980 constant prices, million yuan)

	National GVIO	Jiangsu GVIO	National Share	National Rank	#1 or #2 GVIO	GVIO of #1 or #2 Province	#1 or #2 GVIO % Province
Total	1,229,457	145,047	0.12	1	Shanghai (2)	99,699	8.1
Food & beverage processing	94,351	8,480	0.09				
-Food	74,793	7,201	0.10	1	Guangdong(2)	5,236	7.0
-Beverage	19,558	1,279	0.07	4	Shandong(1)	2,085	10.4
Textiles & other products	198,398	36,180	0.18				
-Textiles	153,818	30,761	0.20	1	Shandong(2)	15,839	10.2
-Garment industry	31,910	3,792	0.12	1	Guangdong(2)	3,738	11.7
-Leather & fur products	12,670	1,577	12.40	2	Guangdong(1)	1,743	13.8
Chemical and related industries	182,151	25,748	0.14				
-Chemicals	85,404	12,112	0.14	1	Liaoning(2)	6,504	7.6
-Pharmaceuticals	27,446	2,782	0.10	1	Guangdong(2)	2,669	9.7
-Synthetic fiber	20,941	5,011	0.24	1	Shanghai (2)	4,180	20.0
-Rubber products	21,587	1,822	0.08	3	Shandong(1)	2,341	10.9
-Plastic products	26,793	4,019	0.15	1	Guangdong(2)	3,504	13.1
Construction materials & other products	53,677	6,809	0.13	1	Shandong(2)	4,822	9.0
Machinery building	139,595	18,148	0.13	1	Shanghai (2)	14,598	10.5
Electric machinery & equipment	64,541	8,227	0.13	2	Guangdong(1)	10,023	15.5
Electronic & telecommun. -Equipment	58,417	11,406	0.20	1	Guangdong(2)	4,947	8.5

Source: China Statistical Yearbook, 1990, p. 424 and pp. 426-439.

Table 2.10: JIANGSU'S SHARE OF NATIONAL MACHINERY SECTOR OUTPUT, 1988
(1980 constant prices, million yuan)

Industries	Number of Enterprises			Gross Value of Ind'l Output		
	National Total	Jiangsu	Share of Jiangsu	National Total	Jiangsu	Share of Jiangsu
Industry total	111,291	12,214	0.11	206,205	23,222	0.11
Metal product fabricating industries	33,625	3,888	0.10	26,947	3,120	0.12
Machine Building industries	48,094	5,276	0.11	97,236	11,850	0.12
Communication equipment Building industries	11,786	978	0.08	33,118	2,325	0.07
Electric equipment Manufacturing industries	14,147	2,149	0.15	41,309	4,999	0.12
Instrument & meter Manufacturing industries	3,639	478	0.13	7,568	946	0.13

Source: China Machinery Industries Yearbook, 1987, pp. 405-406 (Statistical Yearbook of China, 1987, p. 229 and p. 240).

Table 2.11: JIANGSU'S SHARE OF MAJOR PRODUCTS IN MACHINE BUILDING INDUSTRIES, 1988

Products	Jiangsu's Share	Jiangsu's Rank	Share of #1 Province	#1 Province
Mining equipment	9.2	2	13.4	Liaoning(1)
Power generating equipment	2.5	9	24.9	Sichuan(1)
Metal cutting machine tools	10.7	3	12.8	Liaoning(1)
Automobiles	6.0	5	24.6	Hubei(1)
Tractors (20 hp above)	0.6	11	34.9	Shanghai(1)
Small-sized tractors	12.8	2	16.0	Shandong(1)

Source: China Machinery Industries Yearbook, 1987, p. 411.

Table 2.12: GROWTH RATE OF SELF-MANAGED EXPORT /a

		1978-89	1980-84	1985-89
	All Exports (Nominal) Merchandise Export Price Index /b (Growth Rate)	14.29	18.83 -1.92	12.09 1.62
Breakdown (Nominal)	I	1974-89	1980-84	1985-89
	Grain, oil, and food	18.04	15.26	7.32
	Textiles /c		20.13	2.17
	Silk /c		7.30	18.80
	Garments /c		12.88	18.01
	Local and animal products	23.98	7.70	9.68
	Light industry	29.91	9.17	19.52
	Arts and crafts	38.41	12.39	41.91
	Fine metals, and minerals	21.27	2.03	30.34
	Chemical and medicine	37.67	16.61	-22.39
	Machinery	20.99	2.48	39.66
	Equipment	25.70	19.19	57.54
	II /d	1981-89	1981-84	1985-89
	Industry and mining	7.70	-0.80	11.19
	Agriculture and sidelines (processed)	12.86	17.44	15.53
	Agriculture and sidelines (unprocessed)	13.85	40.18	0.40
	III /d	1981-89	1981-84	1985-89
	Agriculture and sidelines (unprocessed)	13.85	40.18	0.40
	Light industry	9.95	9.87	12.43
	Heavy industry	10.79	-2.10	17.48

/a Export data are collected from Jiangsu Statistical Yearbook, various issues and Jiangsu Economic Yearbook, 1984.

/b Real export as obtained by deflating nominal export values through export price index (1980 = base year) which is from World Bank Country Study "China: Between Plan and Market, 1990."

/c For the years preceding 1980, we do not have separate figures for textiles, silk, and garments. Therefore, growth rates for these sectors for the period 1978-89 have not been calculated.

/d Data for classifications II and III are not available prior to 1981. Export price deflators are not available by commodity groups.

Table 2.13: Export/National Ratios Income Ratios

Year	Export	National Income	Ratio
1974	11,502.74	1,415,700	0.008
1975	25,351.22	1,514,600	0.017
1976	34,056.44	1,538,700	0.022
1977	41,258.18	1,658,300	0.025
1978	68,491.92	2,082,800	0.030
1979	97,370.57	2,579,200	0.036
1980	127,759.90	2,728,900	0.047
1981	165,351.84	2,985,700	0.063
1982	189,040.64	3,350,000	0.068
1983	218,525.54	3,824,000	0.071
1984	238,090.60	4,663,100	0.074
1985	260,966.01	5,784,600	0.079
1986	313,892.67	6,639,000	0.089
1987	362,557.03	7,891,900	0.100
1988	389,933.85	9,692,200	0.090
1989	391,256.26	10,555,200	0.088

Note: Both export and national income are in Y 10,000. In contrast to GVIAO, national income figures do not include any double counting.

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Table 2.14: COMPOSITION OF SELF-MANAGED EXPORT (i)

Year	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total million \$	76.89	169.46	227.65	275.79	418.46	618.98	854.01	1097	1195	1372	1487	1559	1720	2119	2350	2441
Export price in							100	99.3	94.3	93.9	93.4	88.9	80	85.3	87.7	91.6
Percentage:																
Grain, oil, food	19.90	10.90	10.20	9.30	9.00	8.10	11.00	10.90	14.20	12.00	10.60	9.00	9.00	7.90	8.00	7.50
Textiles				25.10	23.80	23.30	27.40	32.80	28.50	28.80	26.40	23.20	19.40			
Silk	59.08	74.42	74.03	68.48	68.55	65.89	17.50	14.20	12.90	13.70	13.20	14.10	15.70	14.60	15.10	20.10
Garment				9.40	8.40	8.90	8.30	9.30	9.30	11.00	10.90	10.90	12.60			
Local & animal	4.70	6.10	8.30	10.60	12.50	13.10	14.70	12.90	11.30	12.20	11.10	11.50	11.40	10.50	10.40	10.70
Light industry	1.20	2.10	2.20	3.20	4.20	4.50	6.00	6.20	5.00	5.10	5.30	5.10	6.20	6.90	7.00	6.90
Arts & crafts	0.00	0.30	0.40	0.70	0.90	1.00	2.40	4.20	4.40	3.80	2.40	2.40	2.70	5.00	5.90	7.10
Five metals & minerals	4.80	3.80	1.80	4.00	1.40	2.20	2.10	4.40	3.70	2.40	1.60	2.10	2.70	3.10	3.70	4.40
Chemicals & medicines	0.80	0.90	1.50	1.20	1.30	3.00	9.70	11.10	12.50	12.20	10.90	15.90	9.40	10.00	9.60	2.80
Machinery	9.50	1.50	1.60	2.60	1.40	1.60	2.10	2.70	2.40	1.80	1.50	1.40	1.80	2.70	3.60	4.10
Equipment	0.00	0.00	0.00	0.00	0.80	0.80	0.80	1.30	1.50	1.10	1.10	0.70	1.20	2.10	2.60	4.30

Source: Jiangsu Statistical Yearbook, various issues. Jiangsu Economic Yearbook, 1984

Export price indices: \$ (1980=100) Source: The World Bank country report: China-Between Plan and Market, p. 133.

This figure represents the combined share of textiles, silk and garments. For the years 1974-1979, separate figure for the three sectors are not available.

Table 2.15: COMPOSITION OF SELF-MANAGED EXPORTS (ii)

Year	Total (\$10,000)	Agriculture & Sidelines (%)	Light Industry (%)	Heavy Industry (%)
1981	109,685	5.30	75.60	19.10
1982	119,536	7.00	73.30	19.70
1983	137,242	9.00	73.70	17.30
1984	148,704	13.00	73.90	13.10
1985	155,851	13.20	69.10	17.70
1986	171,991	12.20	72.20	15.60
1987	211,865	6.30	78.40	15.30
1988	234,987	10.40	69.50	20.10
1989	244,111	8.00	71.70	20.30

Source: Jiangsu Statistical Yearbook, various issues.

Table 2.16: COMPOSITION OF SELF-MANAGED EXPORT (iii)

Year	Total \$10,000	Industry & Mining (%)	Agriculture Sidelines Processed (%)	Agriculture Sidelines (%)
1981	109,685	58.10	36.60	5.30
1982	119,536	43.80	49.20	7.00
1983	137,242	48.50	42.50	9.00
1984	148,704	38.50	48.50	13.00
1985	155,851	43.80	43.00	13.20
1986	171,991	41.30	46.50	12.20
1987	211,865	43.20	50.50	6.30
1988	234,987	42.50	47.10	10.40
1989	244,111	41.30	50.70	8.00

Source: Jiangsu Statistical Yearbook, various issues.

Table 2.17: DESTINATIONS OF SELF-MANAGED EXPORT (%)

Year	1984	1985	1986	1987	1988	1989
Total (10,000)	148,704	155,851	171,991	211,865	234,987	244,111
Hong Kong and Macao	28.30	21.76	28.96	28.95	28.16	21.50
Japan	20.00	21.07	18.35	18.72	19.88	22.49
EEC	16.53	13.56	14.74	15.87	15.55	15.21
USA & Canada	12.22	11.68	13.41	12.69	11.94	13.63
USA	NA	10.00	11.64	10.43	NA	NA
Canada	NA	1.68	1.77	2.26	NA	NA
Eastern Europe & Soviet	9.34	9.70	NA	9.18	8.88	8.12
Eastern Europe	3.40	5.23	NA	6.19	6.09	4.70
Soviet	5.94	4.47	4.99	2.99	2.79	3.42
Middle East Oil Producers	2.85	2.98	3.19	2.32	NA	NA
Others	10.98	19.32	21.36	17.27	20.61	19.05
Singapore	NA	NA	NA	NA	2.10	3.70
Australia	1.88	NA	NA	NA	1.87	1.55

Sources: Almanac of Chinese Foreign Trade Relation and Trade.

If data on a specific destination were not available, they were grouped under "others."

Table 2.18: STRUCTURE OF SELF-MANAGED IMPORTS (\$10,000)

Year	Total	Producer Goods (%)	Consumer Goods (%)
1981	9,638	59.46	40.54
1982	8,368	70.97	29.03
1983	7,894	78.74	21.26
1984	14,446	81.64	18.37
1985	29,492	75.41	24.59
1986	36,175	79.99	20.01
1987	58,380	62.78	37.22
1988	81,511	97.69	2.31
1989	86,563	98.66	1.34

Source: Jiangsu Statistical Yearbook, 1990

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Table 2.19: PERCENTAGE OF QUALIFIED TEACHERS, 1990

	Jiangsu	Huaiyin City
Primary	74.8	73.7
Lower-Secondary	60.0	48.7
Upper-Secondary	48.4	36.9

Source: The Jiangsu Provincial Development Study Mission Data Collection.

Table 2.20: AVERAGE NUMBER OF STUDENTS, STUDENT TEACHER RATIO, AND SHARE OF SUPPORT STAFF

Year	Primary School			Regular Secondary School			Skilled Worker School			Secondary Specialized School			Higher Education Institutions		
	Average Size	Student Teacher Ratio	Share of Support Staff	Average Size	Student Teacher Ratio	Share of Support Staff	Average Size	Student Teacher Ratio	Share of Support Staff	Average Size	Student Teacher Ratio	Share of Support Staff	Average Size	Student Teacher Ratio	Share of Support Staff
1978	219	32	7.4%	658	24	20.5%	140	15	61.5%	413	9	56.0%	1,729	5	55.2%
1979	219	31	8.5%	750	23	20.7%	178	14	65.4%	469	10	53.8%	2,058	5	55.2%
1980	219	30	10.8%	642	21	25.3%	176	10	61.0%	527	7	53.0%	1,828	5	59.4%
1981	206	28	9.6%	532	19	25.6%	153	8	63.5%	413	7	55.6%	1,704	5	61.5%
1982	199	26	10.6%	478	19	27.5%	153	6	57.7%	391	6	53.9%	1,385	4	59.8%
1983	198	27	11.0%	472	19	27.7%	165	6	52.7%	473	8	54.3%	1,362	4	60.1%
1984	199	27	11.4%	462	20	28.7%	185	7	56.9%	531	9	55.0%	1,387	5	61.5%
1985	199	26	12.0%	455	19	29.4%	202	7	57.1%	568	10	55.7%	1,709	5	61.3%
1986	201	26	12.4%	451	19	29.4%	239	8	57.1%	568	10	52.9%	1,859	5	60.0%
1987	199	25	12.2%	447	18	28.8%	272	8	54.1%	615	11	52.2%	1,975	5	58.6%
1988	198	24	12.4%	443	17	28.6%	296	9	55.0%	652	11	50.6%	2,051	5	59.1%
1989	200	24	12.3%	459	16	28.4%	314	9	53.6%	699	11	51.4%	2,083	5	59.7%

Source: Jiangsu Statistical Yearbook, 1990, pp. 359-63.

Table 2.20: THE SHARE OF URBAN EMPLOYMENT BY SECTOR IN JIANGSU, SELECTED YEARS
(unit: in percentages)

Year	Total	Agri-culture	Industry	Geological surveying	Construc-tion	Transport, posts and telecom-munications	Commerce, catering, marketing, and ware-house	Real estate, public utilities, and consultancy services	Public health, sports, and social welfare	Education, culture, and broad-casting	Scientific research and poly-technical services	Banking and insurance	Government agencies, parties and social organiza-tions
1978	100.00	7.96	48.84	0.37	3.42	7.85	11.93	2.30	2.69	10.52	0.63	0.52	2.98
1980	100.00	6.08	49.34	0.36	4.34	7.43	12.51	2.68	2.59	9.97	0.75	0.66	3.10
1983	100.00	5.57	49.77	0.33	4.84	6.90	12.97	2.70	2.66	9.18	0.81	0.72	3.54
1985	100.00	5.13	50.02	0.45	5.34	6.70	12.77	2.53	2.54	9.03	0.84	0.79	3.87
1987	100.00	4.73	50.59	0.39	5.52	6.49	12.68	2.48	2.50	8.78	0.89	0.92	4.03
1988	100.00	4.62	50.86	0.38	5.21	6.33	12.75	2.59	2.51	8.69	0.87	1.06	4.12
1989	100.00	4.40	50.77	0.37	4.8	16.31	13.00	2.56	2.58	8.83	0.90	1.11	4.36

Note: All individual workers are excluded.

Source: Jiangsu Statistical Yearbook, 1990, p. 115.

Table 2.22: CHARACTERISTICS OF SECONDARY TECHNICAL AND VOCATIONAL SCHOOLS

	Specialized Schools	Skilled Worker Schools	Vocational Schools
Main Adminis- trative Author- ity	Technical Ministries through local.	Ministry of Labor through local.	Education Commission through local bu- reaus of education
Entrance Requirements	Lower secondary edu- cation and success at entrance examination with lower grades than general secondary en- trants; or completed upper secondary educa- tion	Lower secondary educa- tion and success at entrance examination with lower grades than specialized school en- trants.	Lower secondary edu- cation and success at entrance examina- tion with lower grades than skilled workers school en- trants.
Course duration	2-3 years for upper secondary graduates. 3-5 years for lower secondary graduates.	3 years or less	3 years or less
Eligibility for higher education	Permitted to sit for national university/ college entrance examination after 2 years of work.	Same as specialized schools.	Same as specialized schools. Success rate is low.
Placement	Mandatory assignment.	Mandatory assignment.	No guarantee for employment.
Expected Employment Status	Cadre or technician.	Middle level worker.	Worker

Table 3.1: JIANGSU'S TVES: SECTORAL DISTRIBUTION
(in percentages)

PRODUCTIVE SECTORS	WORKERS		GVO	
	1988	1989	1988	1989
Industry	78.75	79.52	87.61	87.56
Construction	11.31	10.31	7.38	7.25
Transport	4.44	4.50	2.37	2.48
Commerce	3.57	3.77	2.42	2.53
Tertiary	0.89	0.90		

Source: Provincial TVE Bureau.

Table 3.2: JIANGSU: SHARE OF MAIN INDUSTRIAL SUBSECTORS IN TOTAL GVIO
(percentages)

Subsector	1988	1989
Machine building	28.88	29.54
Textiles	21.17	22.06
Building materials	11.67	10.85
Chemicals	12.71	12.57
Other	25.65	24.98

Source: Provincial TVE Bureau.

Table 3.3: JIANGSU: TVES BY SUBSECTOR AND GEOGRAPHICAL LOCATION (1989)
(percentages)

Region	Machine Building	Textiles	Building Materials	Chemicals	Food Processing
South	30.4	26.7		13.2	
Mid	32.6	15.9	12.0	12.3	
North	15.6	10.6	30.0	11.0	

Source: Provincial TVE Bureau

Table 3.4: JIANGSU: INTRAPROVINCIAL DISTRIBUTION OF GVIO AND POPULATION IN 1989
(percentages and yuan)

Region	GVIO % /a	Population % /b	Average GDP per Capita /c
<u>Southern Jiangsu</u> (Wuxi, Suzhou, and Changzhou)	61.6	20.61	2,957
<u>Mid-Jiangsu</u> (Nanjing, Zhenjiang, Yangzhou, and Nantong)	28.4	34.93	1,937
<u>Northern Jiangsu</u> (Xuzhou, Huaiyin, Lianyungang and Yangcheng)	10.0	44.46	1,106

/a Provincial TVE Bureau.

/b Jiangsu Forty Years (1989).

/c Ibid., yuan per year at current 1988 prices.

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Table 3.5: JIANGSU: NUMBER OF TVCEs, EMPLOYMENT, AND AVERAGE SIZE OF ENTERPRISES

	1982	1983	1985	1987	1988	1989	1987/88	1988/89
Number of TVEs	70,067	68,528	98,567	124,743	119,788	118,127	-3.97	-1.39
Townships	27,295	27,141	33,541	36,457	35,889	35,684	-1.56	-0.63
Villages	42,772	41,385	65,026	88,286	83,899	82,463	-4.97	-1.71
of which:								
Agriculture	3,834	2,965	2,365	2,116	1,116	898	-47.26	-19.53
Industry	56,807	56,464	81,580	107,488	104,933	103,841	-2.38	-1.04
Transport	3,187	3,077	3,828	3,700	3,254	2,878	-12.05	-11.58
Construction	2,441	2,375	3,087	3,515	3,198	3,162	-9.02	-1.13
Number of Employees (10,000)	429.1	459.02	627.09	729.77	736.96	690.44	0.99	-6.31
Townships	263.72	282.23	383.43	411.81	415.82	386.6	0.97	-7.03
Villages	165.89	176.79	283.67	317.96	321.14	303.84	1.00	-5.39
of which:								
Agriculture	12.21	7.61	6.62	3.9	3.18	1.98	-18.46	-37.74
Industry	348.57	369.6	511.86	617.97	632.42	600.15	2.34	-5.10
Transport	16.06	16.15	16.24	18.63	13.2	11.97	-3.15	-9.32
Construction	50.24	58.7	88	85.35	79.8	67.75	-8.50	-15.10
Number of workers per enterprise:								
Average Size	61.24	66.98	63.62	58.50	61.52	58.45	5.16	-5.00
Townships	96.62	103.99	108.35	112.96	115.86	108.40	2.57	-6.44
Villages	38.74	42.72	40.5 ^c	36.01	38.28	36.85	6.28	-3.74
China's Average ^{/a} :								
All TVEs	n.a.	24	26	30	n.a.	n.a.	n.a.	n.a.
Industrial TVEs	n.a.	29	33	n.a.	n.a.	n.a.	n.a.	n.a.

Note: Below village and household enterprises are not included.

^{/a} IBRD, "China--Rural Industry: Overview, Issues, and Prospects," Report No. 7267-CHA, March, 1989.

^{/b} The renaming of "commune and brigade enterprises" in 1984 for "township and village enterprises", three new categories of enterprises were added: team enterprises, joint household enterprises and individual private enterprises. Consequently, data on TVCEs from 1984 onwards are not strictly comparable to pre-1984 statistics. Another source of upward bias in the post-1984 growth rates results from deficiencies in accounting for the rate of inflation as only GVIO of township enterprises were recorded in constant prices, while lower level TVCEs' GVIO was added in current prices. Finally, it seems that the weakening of the reporting network might have resulted in a deterioration of data quality. See Christine P.W. Wong, "The Development of Township and Village Enterprises in Wuxi County," mimeo, January, 1987.

^{/c} Although TVCEs at the national level correspond to a broader definition (including jointly managed and private TVCEs), the number of enterprises rose from 17.44 million in 1987, to 18.88 million in 1988, declining to 18.68 million in 1989, a trend followed by the number of jobs in the sector (87.78 million, 95.45 million and 93.66 million, respectively, between 1987 and 1989).

Sources: Jiangsu's Statistical Yearbooks (1989, 1990).

Table 3.6: JIANGSU: SAVINGS AND LOANS BY THE SPECIALIZED BANKS AND RURAL CREDIT COOPERATIVES (1988/89, JUNE 1990)
(billion yuan and percentages)

Sources & Uses	1988	1989	Growth	June 1990
A. BANKS /a				
Total deposits	38.74	48.15	24.3	57.45
- Enterprises	13.30	13.92	4.7	16.95
- Households	14.80	22.24	50.3	27.88
Total credits	60.98	68.89	13.0	71.35
- Working capital	50.71	58.21	14.8	59.42
- Agriculture	1.31	1.58	20.6	1.76
- Fixed assets	6.70	7.19	7.3	7.20
- Other	2.26	1.92	-15.0	2.17
B. RCCs				
Total savings	10.44	12.81	22.7	15.07
- Rural households	8.26	10.58	8.1	12.94
Total credit	7.22	8.57	18.7	10.22
- TVCEs	6.02	7.00	16.3	8.01
- Ag. organizations	1.20	1.58	31.7	2.21

/a It does not include BOCOM.

Source: PBC's Provincial Branch.

Table 4.1: BUDGETARY REVENUE COLLECTIONS IN JIANSU PROVINCE
Before Sharing, 1981-89 ^{/a}

	1981	1982	1983	1984	1985	1986	1987	1988	1989
(in billion yuan)									
Industrial and commercial taxes	4.46	4.98	5.46	6.24	7.73 ^{/b}	8.41	9.12	10.28	11.69
Total sales taxes	3.47	3.89	4.01	3.62	5.89	6.57	7.13	8.36	9.39
Product tax				0.76	3.76	3.1	2.86	2.04	2.18
Business tax				0.18	1.37	1.74	2.04	2.78	3.35
Value-added tax		0.01	0.2	0.86	0.76	1.73	2.23	3.54	3.88
Income tax on collectives					1.15	1.12	0.94	0.95	0.95
Wage bonus tax					0.04	0.04	0.01	0.02	0.04
Urban construction and maintenance tax					0.31	0.38	0.41	0.49	0.56
Urban land use tax									0.05
Construction tax					0.1	0.1	0.14	0.12	0.15
Salt tax	0.11	0.11	0.12	0.12	0.13	0.12	0.11	0.09	0.1
Miscellaneous ^{/c}	0.88	0.98	1.33	2.5	1.26	0.05	0.2	0.26	0.45
Agriculture and cultivated land use tax	0.2	0.21	0.23	0.23	0.3	0.32	0.37	0.49	0.59
Agriculture tax	0.2	0.21	0.23	0.23	0.3	0.32	0.34	0.35	0.42
Income tax on SOEs					1.8	1.5	1.53	1.45	1.38
Adjustment tax on SOEs					0.34	0.14	0.15	0.12	0.11
Profit remittances by SOEs	1.83	1.65	1.8	1.35	0.02	0.14	0.27	0.21	0.13
Planned SOE losses					-1.06	-0.63	-0.95	-1.53	-2.29
Revenue from special sources					0.12	0.14	0.16	0.47	0.47
Energy and transportation fund contribution								0.2	0.2
Others	0.01	0.02	0.08	0.1	0.02	0.05	0.05	0.1	0.19
State budgetary adjustment fund									0.17
Residual	-0.12	-0.11	-0.11	-0.13	-0.35		0.02	0.01	
Total revenue	6.38	6.75	7.46	7.79	8.9	9.87	10.72	11.8	12.64
Provincial GNP (in billions)			44.306	52.377	65.154	75.199	89.293	113.201	122.849
Total Revenue as a percent of GNP			16.84	14.67	13.66	13.13	12.01	10.42	10.29
Population (in millions)			61.35	61.71	62.13	62.7	63.48	64.38	65.36
Per capita total revenue			121.60	126.24	143.25	157.42	168.67	183.29	193.39
Per capita real total revenue					123.07			110.15	99.38
Retail price index (1980=100)					116.4		166.4	194.6	
(percentages)									
Industrial and commercial taxes	69.91	73.78	73.19	80.10	86.85	85.21	85.07	87.12	92.48
Total sales taxes	54.39	57.63	53.75	46.47	66.18	66.57	66.51	70.85	74.29
Product tax				9.76	42.25	31.41	26.68	17.29	17.25
Business tax				2.31	15.39	17.63	19.03	23.56	26.50
Value-added tax		0.15	2.68	4.62	8.54	17.53	20.80	30.00	30.54
Income tax on collectives						11.65	10.45	7.97	7.52
Wage bonus tax					0.45	0.41	0.09	0.17	0.32
Urban construction and maintenance tax					3.48	3.85	3.82	4.15	4.43
Urban land use tax									0.40
Construction tax					1.12	1.01	1.31	1.02	1.19
Salt tax	1.72	1.63	1.61	1.54	1.46	1.22	1.03	0.76	0.79
Miscellaneous	13.79	14.52	17.83	32.09	14.16	0.51	1.87	2.20	3.66
Agriculture and cultivated land use tax	3.13	3.11	3.08	2.95	3.37	3.24	3.45	4.15	4.67
Agriculture tax	3.13	3.11	3.08	2.95	3.37	3.24	3.17	2.97	3.32
Income tax on SOEs					20.22	15.20	14.27	12.29	10.92
Adjustment tax on SOEs					3.82	1.42	1.40	1.02	0.87
Profit remittances by SOEs	28.68	24.44	24.13	17.33	0.22	1.42	2.52	1.78	1.03
Planned SOE losses					-12.13	-8.41	-8.86	-12.97	-18.12
Revenue from special sources					1.35	1.42	1.49	3.98	3.72
Energy and transportation fund contribution							1.69	1.58	
Others	0.16	0.30	1.07	1.28	0.22	0.51	0.47	0.85	1.50
State budgetary adjustment fund									1.34
Residual	-1.88	-1.63	-1.47	-1.67	-3.93		0.19	0.08	

^{/a} Before sharing with central government. Excludes income tax collections from centrally owned enterprises. Includes all levels of local government.

^{/b} Data obtained by adding up all subcategories of industrial and commercial taxes. The total shown here does not agree with that provided by provincial government officials.

^{/c} Before 1985, the "miscellaneous" category includes more categories of tax than it does after 1985.

Source: Data supplied by provincial government officials, September 1990.

Table 4.2: BUDGETARY EXPENDITURE IN JIANGSU PROVINCE: 1981-1989

Expenditure Category	1981	1982	1983	1984	1985	1986	1987	1988	1989
(In billion yuan)									
Capital construction	0.33	0.39	0.53	0.62	0.72	0.7	0.59	0.54	0.53
Enterprise upgrading	0.19	0.1	0.16	0.23	0.17	0.22	0.15	0.25	0.18
Construction of simple buildings	0.03	0.03	0.03	0.08	0.01	0.03	0.02	0.02	0.02
Geographic survey									
Scientific research	0.03	0.03	0.06	0.08	0.07	0.06	0.08	0.07	0.08
Working capital	0.05	0.06	0.04						
Support for agriculture investment	0.17	0.09	0.2	0.26	0.2	0.25	0.26	0.36	0.51
Operating costs for agriculture, forestry, meteorology and water resources	0.17	0.33	0.22	0.23	0.2	0.25	0.25	0.26	0.27
Operating costs for industry and transportation	0.04	0.04	0.05	0.05	0.06	0.08	0.07	0.08	0.1
Operating costs for commercial agencies					0.01	0.01	0.01	0.01	0.02
Urban maintenance	0.15	0.15	0.25	0.31	0.34	0.48	0.43	0.51	0.6
Employment of urban youth	0.02	0.01	0.02	0.01	0.01				
Operating costs for culture, education, and public health	0.74	0.86	1.04	1.22	1.45	1.73	1.61	2.2	2.54
- Education	0.48	0.55	0.65	0.76	0.92	1.07	1.12	1.41	1.6
Operating costs for research institutions	0.01	0.01	0.02	0.03	0.02	0.03	0.07	0.07	0.08
Operating costs: miscellaneous		0.04	0.05	0.09	0.12	0.2	0.25	0.22	0.28
Social security	0.13	0.13	0.15	0.16	0.16	0.21	0.21	0.24	0.28
Defence	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Administration	0.2	0.23	0.27	0.37	0.37	0.44	0.47	0.59	0.71
Public security, court, prosecutors	0.04	0.06	0.09	0.12	0.12	0.12	0.12	0.26	0.32
Price subsidy	0.53	0.61	0.4	0.35	1.18	1.56	1.69	1.82	1.94
Support for underdeveloped areas							0.01	0.01	0.01
Miscellaneous expenditure	0.06	0.04	0.06	0.06	0.08	0.12	0.31	0.18	0.31
Contingency									
"Special" expenditures					0.11	0.13	0.23	0.43	0.45
Other	-0.52	-0.7	-0.43	-0.32	-0.86	-0.01	-0.24	0.01	-0.02
Total expenditure	2.38	2.46	3.22	3.91	5.05	6.62	6.8	8.14	9.22
as a percent of provincial GNP			7.27	7.47	7.75	8.80	7.62	7.19	7.51
Per capita total expenditure			52.49	63.36	81.28	105.58	107.12	126.44	141.06
Per capita real total expenditure					69.83		75.98		72.49
(percent distribution)									
Capital construction	13.87	13.41	16.46	15.86	14.26	10.57	8.68	6.63	5.75
Enterprise upgrading	7.98	4.07	4.97	5.88	3.37	3.32	2.21	3.07	1.95
Construction of simple buildings	1.28	1.22	0.93	0.77	0.20	0.45	0.29	0.25	0.22
Geographic survey									
Scientific research	1.28	1.22	1.86	2.05	1.39	0.91	1.18	0.86	0.87
Working capital	2.10	2.44	1.24						
Support for agriculture investment	7.14	3.66	6.21	6.65	3.96	3.78	3.62	4.42	5.53
Operating costs for agriculture, forestry, meteorology and water resources	7.14	13.41	6.83	5.88	3.96	3.78	3.68	3.19	2.93
Operating costs for industry and transportation	1.68	1.63	1.55	1.28	1.19	1.21	1.03	0.98	1.08
Operating costs for commercial agencies					0.20	0.15	0.15	0.12	0.22
Urban maintenance	6.30	6.10	7.76	7.93	8.73	7.25	6.32	6.27	6.51
Employment of urban youth	0.84	0.41	0.62	0.26	0.20				
Operating costs for culture, education, and public health	31.09	34.96	32.30	31.20	28.71	26.13	26.62	27.03	27.55
- Education	20.17	22.36	20.19	19.44	18.22	16.16	16.47	17.32	17.35
Operating costs for research institutions	0.42	0.41	0.62	0.77	0.40	0.45	1.03	0.86	0.87
Operating costs: miscellaneous	0.00	1.63	1.55	2.30	2.38	3.02	3.68	2.70	3.04
Social security	5.48	5.28	4.66	4.09	3.17	3.09	2.95	3.04	
Defence	0.42	0.41	0.31	0.26	0.20	0.15	0.15	0.12	0.11
Administration	8.40	9.35	8.39	9.46	7.33	6.65	6.91	7.25	7.70
Public security, court, prosecutors	1.68	2.44	2.80	3.07	2.38	1.81	1.76	3.19	3.47
Price subsidy	22.27	24.60	12.42	8.95	23.37	23.56	24.85	22.36	21.04
Support for underdeveloped areas							0.15	0.12	0.11
Miscellaneous expenditure	2.52	1.63	1.86	1.53	1.58	1.81	4.56	2.21	3.36
Contingency									
"Special" expenditures					2.18	1.96	3.38	5.28	4.88
Other	-21.85	-28.46	-13.35	-8.18	-7.13	-0.15	-3.53	0.12	-0.22

Source: Data supplied by provincial government officials, September 1990.

Table 4.3: BUDGETARY EXPENDITURE BY LEVEL OF GOVERNMENT IN JIANGSU PROVINCE: 1983-89

Level of Government	1983	1984	1985	1986	1987	1988	1989
(in billion yuan)							
Province	0.72	0.82	1.52	1.98	2.01	2.39	2.18
Municipal	0.97	1.25	1.54	2.07	2.13	2.54	3.08
County	1.54	1.84	1.99	2.57	2.66	3.21	3.96
<u>Total</u>	<u>3.23</u>	<u>3.91</u>	<u>5.05</u>	<u>6.62</u>	<u>6.8</u>	<u>8.14</u>	<u>9.22</u>
(percent distribution)							
Province	22.29	20.97	30.10	29.91	29.56	29.36	23.64
Municipal	30.03	31.97	30.50	31.27	31.32	31.20	33.41
County	47.68	47.08	39.41	38.82	39.12	39.48	42.95
(per capita level)							
Province	11.74	13.29	24.46	31.59	31.66	37.12	33.36
population /a	6,135.00	6,171.00	6,213.48	6,269.90	6,348.00	6,438.27	6,536.00
Municipal			159.31	185.26	118.09	130.46	
population /a			966.65	1,117.32	1,803.65	1,947.01	
County			37.93	49.98	58.53	71.47	
population /a			5,246.83	5,162.58	4,544.35	4,491.26	

/a In 10,000.

Source: Data supplied by provincial government officials, September 1990

Table 4.4: BUDGETARY EXPENDITURE OF NANJING CITY GOVERNMENT: 1987-1989
(in million yuan)

Expenditure Category	1987	(%)	1988	(%)	1989	(%)
Capital construction	48	7.16	29	3.83	27	2.85
Enterprise upgrading	23	3.43	18	2.37	21	2.22
Scientific research	15	2.24	9	1.19	11	1.16
Support for agriculture investment and operating costs for agriculture, forestry, meteorology and water resources	42	6.42	53	6.99	58	6.13
Operating costs for industry, transportation and commercial agencies	4	0.60	5	0.66	5	0.53
Urban maintenance	90	13.43	111	14.64	125	13.21
Employment of urban youth	1	0.15	1	0.13	1	0.11
Operating costs for culture, education, public health and research institutions	198	25.07	195	25.73	223	23.57
Social security	23	3.43	27	3.58	29	3.07
Administration, public security, court and prosecutors	58	8.66	75	9.89	95	10.04
Price subsidy	135	20.15	179	23.61	245	25.90
Others	62	9.25	56	7.39	106	11.21
Total expenditure	670		758		946 /a	
as a percent of Nanjing GNP	6.13		5.82		6.74	
Per capita expenditure	139.58			155.33		189.20
Per capita real expenditure /b				93.35		97.23

/a Includes a small amount of extrabudgetary expenditure.

/b Deflated by the provincial retail price index (1980=100).

Source: Data supplied by city government officials, September 1990.

STATISTICAL APPENDIX

Table 4.5: BUDGETARY EXPENDITURE IN WUXI CITY: 1987-90
(in Y 10,000)

Expenditure Category	1987	(%)	1988	(%)	1989	(%)	1990 /a	(%) /a
Capital construction	1,654	3.77	986	1.92	910	1.81	1,350	2.43
Enterprise upgrading	1,579	3.60	1,854	3.62	985	1.97	448	0.81
Construction of simple buildings	17	0.04	47	0.09				
Scientific research	803	1.83	464	0.91	385	0.65	368	0.66
Support for agriculture investment	1,572	3.59	2,497	4.87	3,394	5.74	3,065	5.51
Operating costs for agriculture, forestry, meteorology and water resources	1,574	3.59	1,537	3.00	1,531	2.59	1,444	2.60
Operating costs for industry and transportation	475	1.08	652	1.27	615	1.04	583	1.05
Operating costs for commercial agencies	19	0.04	58	0.11	34	0.06	63	0.11
Urban maintenance	5,381	12.28	5,780	11.28	7,942	13.43	8,312	14.95
Employment of urban youth	20	0.05	24	0.05	21	0.04		
Operating costs for culture, education, and public health	13,499	30.80	15,768	30.77	17,657	29.87	17,373	31.25
- Education	8,409	19.18	10,015	19.54	11,328	19.16	11,303	20.33
- Personnel as a percent of education	75.15		78.72		76.88			
Operating costs for research institutions	291	0.66	286	0.56	298	0.50	289	0.52
Operating costs: miscellaneous	1,709	3.90	1,691	3.30	1,642	2.78	1,254	2.26
Social security	1,304	2.97	1,595	3.11	1,674	2.83	1,457	2.62
Administration	3,941	8.99	3,554	6.94	4,159	7.04	4,385	7.89
Public security, court, prosecutors			1,974	3.85	2,264	3.83	2,164	3.89
Price subsidy	6,576	15.00	8,664	16.91	11,548	19.53	8,662	15.58
Support for underdeveloped areas							2	0.01
Miscellaneous expenditure	1,419	3.24	2,125	4.15	3,082	5.13	3,078	5.54
Special expenditures	2,000	4.56	1,687	3.29	1,028	1.74	1,306	2.35
Others	-1		-2				-4	
Total expenditure	43,832		51,241		59,117		55,599	
Personnel as a percent of total expenditure	47.18		49.19		60.52			
Total expenditure as a percent of GNP	4.23		3.83		4.08			
Per capita expenditure	109.31		125.90		144.19			
Per capita real expenditure			75.66		74.1			

/a Budgeted amounts.

Source: Data supplied by city government officials, September 1990.

Table 4.6: EXTRABUDGETARY REVENUES IN JIANGSU PROVINCE: 1983-90

Origin of Revenue	1983	1984	1985	1986	1987	1988	1989	1990
(in billion yuan)								
Local government	0.36	0.39	0.31	0.29	0.29	0.3	0.3	0.3
Undertakings, administrative agencies, institutes	0.68	0.84	1.19	1.95	2.44	3.02	3.44	3.97
SOEs and their line ministries	2.75	3.73	4.99	5.13	6.11	6.99	7.81	7.95
Total	3.79	4.97	5.99	7.37	8.85	10.32	11.55	12.22
as a percent of GNP	8.6	9.5	9.2	9.8	9.9	9.1	9.4	9.3
as a percent of Budgetary revenue (Table 1)	50.8	63.8	67.3	74.7	82.6	87.5	91.4	91.0
Per capita revenue	61.78	80.54	96.41	117.54	139.41	160.3	176.71	-
Per capita real revenue (1980=100)			82.83			96.33	90.81	-
(percent distribution)								
Local government	9.50	7.85	5.18	3.93	3.28	2.91	2.60	2.50
Undertakings, administrative agencies, institutes	17.94	16.90	19.87	26.46	27.57	29.26	29.78	32.50
SOEs and their line ministries	72.56	75.05	83.31	69.61	69.04	67.73	67.62	65.00

Source: Data supplied by provincial government officials, September 1990.

EXTRABUDGETARY REVENUES IN CHINA: 1981-1988

Origin of Revenue	1981	1982	1983	1984	1985	1986	1987	1988
(in Y 100 million yuan)								
Local government	41.3	45.27	49.79	55.23	44.08	43.2	44.61	45
Undertakings, administrative agencies, institutes	84.9	101.15	113.88	142.52	233.22	294.22	358.41	415
SOEs and their line ministries	474.37	650.32	804.01	990.73	1252.73	1399.89	1625.72	1310
Total revenue	601.07	802.74	967.68	1188.48	1530.03	1737.31	2028.8	2270
as a percent of GNP	12.59	15.46	16.66	17.07	17.86	17.86	17.87	16.20
country GNP (in 100 million)	4773	5193	5809	6962	8568	9726	11351	14015
Per capita total revenue	60.06	79.02	94.17	114.41	145.66	163.08	187.72	207.09
population (in 10,000)	100072	101590	102764	103876	105044	106529	108073	109614
Per capita real revenue ^{/a}	58.66	75.73	88.91	105.09	122.96	129.88	139.33	129.71
retail price index ^{/b}	102.4	101.9	101.5	102.8	108.8	106	107.3	118.5
RPI-converted (1980=100)	102.4	104.3	105.9	108.9	118.5	125.6	134.7	159.7
(percent distribution)								
Local government	6.87	5.64	5.15	4.65	2.88	2.49	2.20	1.98
Undertakings, administrative agencies, institutes	14.12	12.60	11.77	11.99	15.24	16.94	17.67	18.28
SOEs and their line ministries	78.92	81.01	83.09	83.36	81.88	80.58	80.13	87.71

^{/a} Deflated by converted retail price index (1980=100).

^{/b} The base year in this index is always the preceding year.

Table 4.7: EXTRABUDGETARY EXPENDITURE IN JIANGSU PROVINCE: BY SPENDING UNIT FOR 1989

Expenditure Category	Local Government	Undertakings, Administrative Agencies, Institutes	SOEs and their Line Ministries	Total ^{/a}
(in million yuan)				
Technological modification and upgrading		110	2,070	2,180
General repair		70	990	1,060
Capital construction	10	340	940	1,290
Construction of simple buildings			20	20
Employee welfare		60	1,190	1,250
Bonus		60	770	830
Road maintenance		610		610
Urban maintenance	130	110		240
Research and development	2	8	50	60
Working capital	10	10	290	310
Institutional expenditure ^{/b}	60	1,300		1,360
Administration	10	60		70
Energy and transportation fund contribution		90	520	610
State budgetary adjustment fund		50	300	350
Supplement to cover SOE losses			70	70
Bonus tax	9	1	10	20
Construction tax		1	40	40
Other	20 ^{/c}	180	350	550
Total ^{/a}	243 ^{/c}	3,257	7,610	11,110
(percent distribution)				
Technological modification and upgrading		3.38	27.20	19.62
General repair		2.15	13.01	9.54
Capital construction	4.12	10.44	12.35	11.61
Construction of simple buildings			0.26	0.18
Employee welfare		1.84	15.84	11.25
Bonus		1.84	10.12	7.47
Road maintenance		24.87		7.29
Urban maintenance	53.50	3.38		2.16
Research and development	0.82	0.25	0.66	0.54
Working capital	4.12	0.31	3.81	2.79
Institutional expenditure	24.69	39.91		12.24
Administration	4.12	1.84		0.63
Energy and transportation fund contribution		2.78	6.83	5.49
State budgetary adjustment fund		1.54	3.94	3.15
Supplement to cover SOE losses			0.92	0.63
Bonus tax	3.70	0.03	0.13	0.18
Construction tax		0.03	0.53	0.36
Other	8.23	5.53	4.60	4.95

^{/a} Totals may not add due to rounding.

^{/b} This amount should equal Category 2 of Extrabudgetary Revenues

^{/c} Both figures are estimated.

Source: Data supplied by provincial government official, September 1990

Table 4.8: EXTRABUDGETARY EXPENDITURE IN JIANGSU PROVINCE: 1984-90

Expenditure Category	1984	1985	1986	1987	1988	1989	1990
(in billion yuan)							
Technological modification and upgrading	1.85	1.06	1.2	1.34	1.48	2.18	2.31
General repair		0.56	0.61	0.73	0.83	1.05	1.19
Capital construction	0.45	0.65	0.86	1.22	0.93	1.29	1.41
Construction of simple buildings		0.05	0.04	0.01	0.02	0.02	0.01
Employee welfare	0.91 ^{/a}	0.50	0.56	0.74	1.02	1.25	1.43
Bonus		0.48	0.56	0.63	0.6	0.83	0.72
Road maintenance		0.27	0.52	0.53	0.8	0.81	0.85
Urban maintenance	0.25	0.21	0.25	0.29	0.32	0.24	0.21
Research and development	0.04	0.03	0.03	0.03	0.04	0.06	0.07
Working capital	0.05	0.07	0.13	0.2	0.22	0.31	0.20
Institutional expenditure ^{/c}	0.24 ^{/b}	0.31	0.66	0.79	1.1	1.36	1.52
Administration		0.04	0.06	0.05	0.12	0.07	0.08
Energy and transportation fund contribution	0.37	0.43	0.44	0.54	0.56	0.61	0.59
State budgetary adjustment fund						0.35	0.35
Supplement to cover SOE losses						0.07	0.09
Bonus tax						0.02	0.01
Construction tax						0.04	0.05
Other	0.65	0.67	0.78	0.82	1.01	0.55	1.04
Total expenditure	4.81	5.33	6.7	7.92	9.05	11.11	12.13
as a percent of GNP	9.18	8.18	8.91	8.87	7.99	9.04	9.22
Per capita total expenditure	77.95	85.79	106.86	124.76	140.57	169.98	-
Per capita real expenditure		73.7			84.48	87.35	-
(percent distribution)							
Technological modification and upgrading	38.46	19.89	17.91	16.92	16.35	19.62	19.0
General repair		10.51	9.10	9.22	9.17	9.45	9.8
Capital construction	9.36	12.20	12.84	15.40	10.28	11.61	11.6
Construction of simple buildings		0.94	0.60	0.13	0.22	0.18	0.1
Employee welfare	18.92	9.38	8.36	9.34	11.27	11.25	11.8
Bonus		9.01	8.36	7.95	8.63	7.47	5.9
Road maintenance		5.07	7.76	6.69	8.84	7.29	7.0
Urban maintenance	5.20	3.94	3.73	3.66	3.54	2.16	1.7
Research and development	0.83	0.56	0.45	0.38	0.44	0.54	0.6
Working capital	1.04	1.31	1.94	2.53	2.43	2.79	12.5
Institutional expenditure	4.99	5.82	9.85	9.97	12.15	12.24	0.7
Administration		0.75	0.90	0.63	1.33	0.63	4.9
Energy and transportation fund contribution	7.69	8.07	6.57	6.82	6.19	5.49	2.9
State budgetary adjustment fund						3.15	0.7
Supplement to cover SOE losses						0.63	0.1
Bonus tax						0.18	0.4
Construction tax						0.36	8.6
Other	13.51	12.57	11.64	10.35	11.16	4.95	100.0

^{/a} This amount includes Category 6 for 1984.

^{/b} This includes Category 12 for 1984.

^{/c} This amount should equal Category 2 of Extrabudgetary Revenues.

Source: Data supplied by provincial government, September 1990.

**Table 4.8: GENERAL GOVERNMENT FISCAL POSITION IN JIANGSU PROVINCE:
(EXCLUDING SOEs)
(in billions of yuan)**

	1987	(%)	1988	(%)	1989	(%)
Total resources available	<u>14.40</u>	<u>100.0</u>	<u>16.18</u>	<u>100.0</u>	<u>17.84</u>	<u>100.0</u>
Budgetary revenues	10.70	74.3	11.80	72.9	12.84	70.9
Extrabudgetary revenues	2.73	19.0	3.05	18.9	3.47	19.5
Grants from the center	0.97	6.7	1.33	8.2	1.73	9.7
Use of resources	<u>14.40</u>	<u>100.0</u>	<u>16.18</u>	<u>100.0</u>	<u>19.27</u>	<u>100.0</u>
Budgetary expenditures	6.8	47.2	8.14	50.3	9.22	47.8
Extrabudgetary expenditures <u>/c</u>	1.7 <u>/a</u>	11.8	1.81 <u>/a</u>	11.2	3.50	18.2
Sharing with central government <u>/d</u>	5.9	41.0	6.23	38.5	6.55	34.0
Surplus (deficit) position	<u>/b</u>		<u>/b</u>		(1.43)	(7.4)
Exhibit						
Extrabudgetary revenues of SOEs	6.11		6.99		7.81	
Extrabudgetary expenditures of SOEs					7.61	
Total own source revenues as a percent of GNP	12.3		13.1		13.1	
Per capita real total resources			151.03		140.28	

/a Actual data not available. Estimated here on the assumption that resources available and resources used are in balance.

/b Included in extrabudgetary expenditures.

/c Extrabudgetary expenditures as used here excludes SOEs.

/d This is an underestimate because it reports only sharing of budgetary revenues, and some extrabudgetary expenditures are actually shared taxes.

Table 4.10: DISTRIBUTION OF EXPENDITURES IN JIANGSU PROVINCE (INCLUDING SOEs): 1987-89

Categories	1987			1988			1989		
	BUD.	E.BUD.	TOTAL	BUD.	E.BUD.	TOTAL	BUD.	E.BUD.	TOTAL
(in billion yuan)									
Capital expenditure	1.02	2.6	3.62	1.17	2.47	3.64	1.24	3.55	4.79
Social services	2.02	---	2.02	2.44	---	2.44	2.82	---	2.82
Price subsidies	1.69	---	1.69	1.82	---	1.82	1.94	---	1.94
Employee bonuses and welfare	---	1.37	1.37	---	1.62	1.62	---	2.08	2.08
Administration	0.47	0.05	0.52	0.59	0.12	0.71	0.71	0.07	0.78
Taxes and contributions	---	0.54	0.54	---	0.56	0.56	---	1.09	1.09
Other	1.6	3.36	4.96	2.12	4.26	6.4	2.51	4.32	6.83
Total expenditure	6.8	7.92	14.72	8.14	9.05	17.19	9.22	11.11	20.33
(percent distribution)									
Capital expenditures	15.00	32.83	24.59	14.37	27.29	21.18	13.45	31.95	28.56
Social services	29.71	---	13.72	29.98	---	14.19	30.59	---	13.87
Price subsidies	24.85	---	11.48	22.38	---	10.59	21.04	---	9.54
Employee bonuses and welfare	---	17.30	9.31	---	17.90	9.42	---	18.72	10.23
Administration	6.91	0.63	3.53	7.25	1.33	4.13	7.70	0.53	3.84
Taxes and contributions	---	6.82	3.67	---	6.19	3.26	---	9.81	5.36
Other	23.53	42.42	33.70	26.04	47.29	37.23	27.22	38.88	33.60
Total	100	100	100	100	100	100	100	100	100

Note: KEY #1:

Categories	Budgetary	Extrabudgetary
Capital expenditures	1,2,3,7	1,3,4,9
Social services	12,13,18	
Price subsidies	20	
Employee bonuses and welfare	5,6	
Administration	18	12
Taxes and contributions		13-17
Other	the rest	the rest
Total expenditure		

Expenditure Category

1. Technological modification and upgrading
2. General repair
3. Capital construction
4. Construction of simple buildings
5. Employee welfare
6. Bonus
7. Road maintenance
8. Urban maintenance
9. Research and development
10. Working capital
11. Institutional expenditure
12. Administration
13. Energy and transportation fund contribution
14. State budgetary adjustment fund
15. Supplement to cover soe losses
16. Bonus tax
17. Construction tax
18. Other

Table 4.11: DISTRIBUTION OF EXPENDITURES IN JIANGSU PROVINCE (INCLUDING SOEs): 1987-89

Categories	1987			1988			1989		
	BUD.	E.BUD.	TOTAL	BUD.	E.BUD.	TOTAL	BUD.	E.BUD.	TOTAL
(in billion yuan)									
Capital expenditure	1.45	2.6	4.05	1.86	2.47	4.15	1.84	3.55	5.39
Social services	2.02	---	2.02	2.44	---	2.44	2.82	---	2.82
Price subsidies	1.69	---	1.69	1.82	---	1.82	1.94	---	1.94
Employee bonuses and welfare	---	1.37	1.37	---	1.62	1.62	---	2.08	2.08
Administration	0.47	0.05	0.52	0.59	0.12	0.71	0.71	0.07	0.78
Taxes and contributions	---	0.54	0.54	---	0.58	0.58	---	1.09	1.09
Other	1.17	3.86	4.53	1.61	4.28	5.89	1.91	4.32	6.23
Total expenditure	6.8	7.92	14.72	8.14	9.05	17.19	9.22	11.11	20.88
(percent distribution)									
Capital expenditures	21.32	32.83	27.51	20.64	27.29	24.14	19.96	31.95	28.51
Social services	29.71	---	13.72	29.98	---	14.19	30.59	---	13.87
Price subsidies	24.85	---	11.46	22.36	---	10.59	21.04	---	9.54
Employee bonuses and welfare	---	17.30	9.31	---	17.90	9.42	---	18.72	10.23
Administration	6.91	0.63	3.53	7.25	1.33	4.13	7.70	0.53	3.84
Taxes and contributions	---	6.82	3.67	---	6.19	3.28	---	9.81	5.36
Other	17.21	42.42	30.77	19.76	47.29	34.26	20.72	38.88	30.64

"BUD" denotes Budgetary Expenditure; "E.BUD." denotes Extrabudgetary Expenditure.

Note: KEY #2

Categories	Budgetary	Extrabudgetary
Capital Expenditures	1,2,8,7,11	1,3,4,7,9
Social Services	12,13,16	
Price Subsidies	20	
Employee Bonuses and Welfare		5,6
Administration	18	12
Taxes and Contributions		13-17
Other	the rest	the rest
Total Expenditure		

Expenditure Category

1. Capital Construction
2. Enterprise Upgrading
3. Construction of Simple Buildings
4. Geographic Survey
5. Scientific Research
6. Working Capital
7. Support for Agricultural Investment
8. Operating Costs for Agriculture, Forestry, Meteorology and Water Resources
9. Operating Costs for Industry and Transportation
10. Operating Costs for Commercial Agencies
11. Urban Maintenance
12. Employment of Urban Youth
13. Operating Costs for Culture, Education, and Public Health
 - 13a. Education
14. Operating Costs for Research Institutions
15. Operating Costs: Miscellaneous
16. Social Security
17. Defense
18. Administration
19. Public Security, Court, Prosecutors
20. Price Subsidy
21. Support for Underdeveloped Areas
22. Miscellaneous Expenditure
23. Contingency
24. "Special Expenditures"
25. Other

**Table 4.12: DISTRIBUTION OF EXPENDITURES IN JIANGSU PROVINCE
(EXCLUDING SOEs): 1989**

Categories	1989		TOTAL
	BUD.	E.BUD.	
(in billion yuan)			
Capital expenditure	1.84	1.52	3.36
Social services	2.82		2.82
Price subsidies	1.94		1.94
Employee bonuses and welfare		0.12	0.12
Administration	0.71	0.07	0.78
Taxes and contributions		0.15	0.15
Other	1.91	1.64	3.55
<u>Total expenditure</u>	<u>9.22</u>	<u>3.5</u>	<u>12.72</u>
(percent distribution)			
Capital expenditures	19.98	43.43	26.42
Social services	30.59		22.17
Price subsidies	21.04		15.25
Employee bonuses and welfare		3.43	0.94
Administration	7.70	2.00	6.13
Taxes and contributions		4.29	1.18
Other	20.72	46.86	27.91

"BUD" denotes Budgetary Expenditure; "E.BUD." denotes Extrabudgetary Expenditure.

Table 4.13: REVENUE SHARING IN JIANGSU PROVINCE: 1981-89
(in billion yuan)

	1981 /a	1982	1983	1984	1985	1986	1987	1988	1989
Provincial government revenue, after sharing	0.69	0.67	0.56	0.55	0.68	1.22	2.41	2.35	2.84
Collections (subsidies) to provincial-government-owned SOEs	0.14	0.11	0.48	0.1	-0.44	-0.77	0.01	-0.84	-0.48
Grants from central government	0.04	0.14	0.23	0.4	0.54	0.76	0.97	1.33	1.73
Amount handed over to province by municipal and county governments	4.55	4.54	4.56	5.01	5.81	6.02	7.34	7.59	8.14
Amount passed to central government by province	4.04	4.12	4.71	4.96	5.08	5.49	5.91	6.23	6.55
Exhibit: Revenue raised	6.38	6.75	7.46	7.79	8.9	9.87	10.72	11.8	12.64
Amount retained as a percent of total budgetary revenue collections	71.3	67.3	61.1	64.3	65.3	61.0	68.5	64.3	64.4
Amount retained as a percent of amount shared with central govt.	112.6	110.2	96.8	101.0	114.4	109.7	124.2	121.8	124.3
Provincial government share of total retained amount (in percent)	15.2	14.8	12.3	11.0	15.1	20.3	32.8	31.0	34.9

/a Base includes only shared revenues.

Source: Data supplied by provincial government officials, September 1990.

Table 5.1: OUTPUT VALUE BY RURAL SUBSECTOR AND REGION, 1979-88
(growth rates and sectoral shares)

	1979-84		1985-88		1979-88	
	Growth Rate (p.a.)	Sectoral Shares (As % of 1979 Total)	Growth Rate (p.a.)	Sectoral Shares (As % of 1984 Total)	Growth Rate (p.a.)	Sectoral Shares (As % of 1988 Total)
Total rural social GVD	15.6	100	23.8	100	20.0	100
QVAO	7.6	59	5.3	46	6.3	29
Cropping	5.8	46	1.9	33	3.4	16
Forestry	5.6	1	-1.5	1	3.4	--
Animal husbandry	7.8	10	5.1	8	7.8	8
Fisheries	12.1	1	16.5	2	15.0	2
Sidelines	136.3	--	25.0	3	77.9	2
Rural industry	25.4	31	32.8	42	31.3	58
Rural construction	23.3	5	23.5	7	25.2	8
Rural transport	40.0	1	24.7	3	32.1	3
Rural commerce	9.1	4	25.5	3	17.0	3
GVAO province-wide	7.6	100	5.3	100	6.2	100
North	10.4	39	5.3	44	8.1	46
Central	5.5	38	4.5	35	5.1	35
South	5.6	23	6.5	21	4.5	20

"--" (negligible)

Table 5.2: JIANGSU RURAL LABOR 1989
(million rural laborers)

	Total Rural Labor Force	Of Which:			Estimated Rural Labor Surplus
		Ag, Forest, Animal Husb. Sidelines & Fisheries	Rural Industry & Construction	Commerce, Transport, Trade & Services	
Wuxi	1.71	0.58	0.97	0.18	
Huaiyin	4.01	3.18	0.50		0.50-1.00
Jiangsu	27.68	16.93	7.81	3.49	8.02

Table 5.3: AGRICULTURAL TAXATION

Tax\Level	1987 (million yuan)	1988	1989
Agricultural tax			
Jiangsu	340	348	417
Huaiyin			
Remitted:	27.9	28.6	33.1
Retained:	3.6	3.7	4.3
Special Products tax			
Jiangsu	8	16	39
Huaiyin	negl.	0.1-0.2	2.0-3.0

Table 5.4: AGRICULTURAL INVESTMENT AND EXPENDITURE: BUDGETARY

Expenditure/Level	1989	1990		
Jiangsu:				
Capital construction	60	70		
Supporting projects	510	630		
Ag. undertakings	270	300		
<u>Total</u>	<u>800</u>	<u>1,000</u>		
Huaiyin:				
	<u>1989 Total</u>	<u>Province</u>	<u>Huaiyin</u>	<u>Counties</u>
	<u>All Sources</u>	<u>and Center</u>		
Ag. undertakings	27.2	7.7		19.4
Water resources	6.6			
Flood prevention	2.6			
Other	18.0			
Supporting projects	69.1		12.0	
Grain Base Fund	10.0	8.1	0.9	0.9
TVE development	16.8	13.2	3.6	
Small-sc. farm w.c.	28.4		5.0	
3H Development	13.7	5.7	2.4	
Other	0.1		0.1	
<u>Total</u>	<u>96.2</u>		<u>31.4</u>	

Table 5.5: AGRICULTURE EXTRABUDGETARY REVENUES AND EXPENDITURES
(million yuan)

Expenditures	Total Expenditures	Revenue Source		
		Center	Province	Huaiyin & Counties
Huaiyin 1989				
1) State Farms Agriculture and An.Husbandry Enterprises	4		4	
2) Hongze Lake dev't	6	2	3.5	0.5
3) Old Yellow R. bed dev't	1.2		0.6	0.6
4) Lower Grand Canal dev't	1.4	0.5	0.9	
5) TVEs	16.4		16.4	
6) Other unaccounted	1.7			
<u>Total</u>	<u>30.7</u>			

Table 5.6: JIANGSU PROVINCIAL AGRICULTURAL FINANCE SUMMARY
(billion yuan, excluding central subsidies)

	1981	1982	1983	1984	1985	1986	1987	1988	1989
Tax revenues	0.20	0.21	0.23	0.23	0.30	0.32	0.39	0.49	0.59
Agricultural tax	0.20	0.21	0.23	0.23	0.30	0.32	0.34	0.35	0.42
Special product tax							0.01	0.02	0.04
Land conversion tax							0.04	0.12	0.13
Extrabudgetary revenues								0.20	
Two programs revenues									0.40
Fiscal revenues	0.20	0.21	0.23	0.23	0.30	0.32	0.39	0.49	1.19
Budgetary Expenditures	0.34	0.42	0.42	0.49	0.40	0.50	0.52	0.63	0.90
Op. costs of agric., forest., water res., and meteorology	0.17	0.33	0.22	0.23	0.20	0.25	0.25	0.26	0.27
Agric. prod. support	0.17	0.09	0.20	0.26	0.20	0.25	0.26	0.36	0.51
Underdev. area support							0.01	0.01	0.01
Capital construction									0.08
Agricultural input subsidies									0.03
Agricultural grain storage subsidies									0.02
Extrabudgetary expenditures									0.20
Two programs									0.40
<u>Total expenditures</u>									<u>1.50</u>

Table 5.7: SUMMARY FISCAL STATISTICS

Jiangsu:

1. Self-financing percent of expenditures = 42.8 percent
2. Agricultural share of Provincial (all gov'ts) expenditures:
 - budgetary = 8.7 percent
 - extrabudgetary = 1.7 percent
 - budgetary capital exp. = 15.1 percent
3. Agricultural taxes as percent of total Municipal taxes = 4.0 percent

Huaiyin:

1. Agricultural share of all expenditures:
 - budgetary = 4.0 percent
 - extrabudgetary = 16.4 percent
2. Agricultural taxes as percent of total Municipal taxes = 5.0 percent

Table 5.8: JIANGSU ABC AND CREDIT COOPERATIVE LOANS, 1989

	TVE		Agriculture					Total	Total
	Fixed Asset	Working Capital	3M Dev't	Prof.	Prof.	Ag. Serv.	Ag. Prod. Base		
				Pol. Grain	Pol. For.				
ABC Credit Cooperative	0.72	3.84	1.60	negl.	0.01	negl.	0.07	1.68	5.74
	0.74	6.38						2.15	9.21
Total	1.46	9.67	1.60		0.01		0.07	3.83	14.95

Table 5.9: STAPLE CROP PRICES 1985-90

Price (Y/T)	Wheat		Rice		Corn		Soy		Peanuts		Rape		Cotton	
	C	N	C	N	C	N	C	N	C	N	C	N	C	N
	(C contract procurement price; N negotiated sales price levels)													
1985.Lianyungang														
.Wuxi	424	470	380	474	316	462	800	840	1,352	1,660	936	1,000	3,616	
.Xuzhou	460	540	322		316	420					936		3,616	
1986.Lian'g														
.Wuxi	424	514	380	408	352	412	800	880	1,352	1,740	936	1,006	3,528	
.Xuzhou	460	540	322		316	460					936		3,528	
1987.Lian'g														
.Wuxi	460	530	415	540	316	540	700	1,160	1,038	1,300	936	1,016	3,528	
.Xuzhou	424	490	415	505	352	412					936		3,528	
1988.Lian'g														
.Wuxi	494	600	430	580	346	560	800	1,200	1,100	1,350	1,008	1,016	3,920	
.Xuzhou	470	550	415	720	352	540					1,008		3,920	
1989.Lian'g														
.Wuxi	526	900	520	840	552	680	880	1,400	1,040	1,400	1,076	1,660	4,728	
.Xuzhou	500	880	538	900	366	720					1,076		4,728	
1990														
.Jiangsu	526	850	460	820	366	720	800	1,480	1,108	1,660	1,076	1,650	6,700	
.World		1,292		835		722		1,003		952		1,202	7,743	

Table 5.10: STAPLE CROP PRICES AND PROCUREMENT, 1990

Price (Y/T)	Grains	Wheat	Rice	Corn	Soy	Peanuts	Rape	Cotton	Urea
<u>Jiangsu</u>									
<u>Domestic Prices</u>									
Contract		528	460	366	800	1,108	1,076	6,700	560
Negotiated		850	820	720	1,480	1,660	1,650		850
<u>% Production Procured</u>									
Contr. prices	17	18	15	7	8	20	13	100	10
Negot. prices	9								
<u>World Prices</u>									
1990		1,292	835	722	1,008	952	1,202	7,748	867
2000		1,184	679	861	771	832	1,202	6772	1,150
<u>Huaiyin</u>									
<u>Domestic Prices</u>									
Contract		528	460	366	800	1,108	1,076	6,700	560
Negotiated		780	760	720	1,480	1,660	1,650		850
<u>% Production Procured</u>									
Contr. prices	14	89	33			20	17	100	
Negot. prices	1								
<u>Xuzhou</u>									
<u>Domestic Prices</u>									
Contract		528	460	366	800	1,108	1,076	6,700	560
Negotiated		850	820	720	1,480	1,660	1,650		850
<u>% Production Procured</u>									
Contr. prices	13	27	33			20	17	100	
Negot. prices	1	55	38						
<u>Wuxi</u>									
<u>Domestic Prices</u>									
Contract		500	536	366			1,076		560
Negotiated		860	900	720			1,660		850
<u>% Production Procured</u>									
Contr. prices	22	31	18						33
Negot. prices	5	5	8				2		

Table 5.11: ALLOCATIONS AND SALES OF JIANGSU AGRICULTURAL PRODUCTS TO OTHER PROVINCES, 1980-88

	1980	1982	1984	1986	1987	1988
Grains ('000T)	288	866	1,276	3,020	2,644	1,869
As % Production	1	3	4	9	8	4
Vegetable oil ('000T)	11	20	25	21	19	23
As % Production	3	2	4	2	2	2
Cotton ('000T)	229	201	173	152	21	14
As % Production	55	35	26	38	6	2
Live pigs ('000)	3,864	3,388	2,055	3,704	2,898	3,575
As % Production	19	17	10	17	14	18
Sugar ('000T)	50	197	110	97	130	245

Table 5.12: JIANGSU COTTON SUPPLY AND DEMAND BALANCE, 1989-95

Cotton Supply and Demand ('000T)	1989	1990	1995
Planned cotton area target ('000 ha)	600	600	600-667
Actual cotton area ('000 ha)		580	
Planned Jiangsu cotton production		475	485
Actual production	450	435	
Planned net allocation from all other domestic producers	100	100	100
Private Jiangsu purchases from other domestic producers	25-70	30-75	30-75
Projected cotton imports	25-30	35-40	35-40
Total Jiangsu cotton supply	600-650	600-650	650-700
Total demand from all end use	800	800	650-700
Projected shortfall	150-200	150-200	0

**Table 6.1: JIANGSU: PROVINCIAL ROAD NETWORK
(1989)**

Classification	Standards	Length (km)	% of total network
By technical standard			
Class I	Asphaltic or cement concrete	231	0.9
Class II	Bituminous penetration macadam	2,533	10.3
Class III	Bituminous-coated macadam	2,898	11.0
Class IV	Bituminous-lime treatment or Gravel surface	14,880	60.5
Unclassified	Improved earth-surface road	4,267	17.3
Provincial total		24,609	100.0
By pavement /a km			
Paved		23,310	
of which:			
High-level pavement		7,547	
Mid-level pavement		14,047	
Low-level pavement		1,716	
Non-paved		1,299	
By administration			
Trunk road		6,934	
of which:			
National road		2,055	
Provincial road		4,879	
Country, village and special-purpose road		17,675	
By geographical location			
Southern Jiangsu	7,800	(28.0 km/100 km ²)	
Northern Jiangsu	16,809	(23.2 km/100 km ²)	
Provincial total		24,609	

/a High-level pavement: Asphaltic or cement concrete, bituminous penetration macadam, or fine flat stone, for expressway and classes I and II roads;
 Mid-level pavement: Earth or water aggregated gravel, rough stone or other macadam, for classes III and IV roads;
 Low-level pavement: Packed earth mixed with aggregate or other local materials, for class IV and rural roads.

Source: JPCD.

**Table 6.2: JIANGSU: PROVINCIAL INLAND WATERWAY NETWORK
(1989)**

<u>By Classification: /a</u>	<u>length(km)</u>	<u>% of total network</u>	
Class I:	0	0.0	
Class II:	94	0.4	
Class III:	404	1.7	
Class IV:	423	1.8	
Class V:	385	1.6	
Class VI:	2,824	11.9	
Non-classified:	19,623	82.5	
of which:			
Navigable for motor ships: /b	14,788	62.5	
Navigable for small non-motor boats	4,735	20.0	
Provincial total:	23,653	100.0	
(km)			
By Major waterways (Class II to V only /c)			
<u>Section</u>	<u>Depth (m)</u>	<u>Maximum ship size (dwt)</u>	<u>Length (km)</u>
North Grand Canal (Linjiaba-Yangzhou)	3.0	500	404
South Grand Canal (Jianbi-Yazhiba)	1.3-3.0	100	212
Weigang Canal (Suzhou-Shanghai)	2.0	100	161
Shen-Zhang Canal (Zhangjiegang-Shanghai)	1.5-2.0	100	184
Shen-Hu Canal (Huzhou-Shanghai)	2.5	200	187
Yan-Zhao Canal (Yancheng-Zhaobai)	2.0-2.4	100	132
Huihe River (Hongze-Lindong Shiplock)	3.0	500	163
Yangtze River (Nanjing-Shanghai)	7.0	10,000	392

/a Excluding the Yangtze River;

/b For 3.0 ton, 12 horsepower motorized barge, 1.0 m draft;

/c Including a Class VI section of the South Grand Canal (137 km).

Source: JPCD.

**Table 6.8: JIANGSU: CHARACTERISTICS OF MAJOR PORTS
(1989)**

Port	Number of berths for ships 10,000 dwt or up	Maximum ship size (dwt)	Throughput (million tons)	Main cargoes
<u>Major sea and Yangtze River ports /a</u>				
Nanjing	11	10,000	30.88 /b	Coal, oil, ores, construction materials and containers;
Zhejiang	6	15,000	11.97	Coal, oil, ores;
Zhangjiagang	7	15,000	3.82	Coal, timber, grain;
Nantong	5	15,000	10.49	Coal, ores, timber;
Liangyungang	11	85,000	11.26	Coal, steel, timber, grain, container, salt.
<u>Subtotal</u>	<u>39</u>		<u>67.97</u>	
<u>Local canal ports</u>				
Nanjing	-	100	3.21	Coal, ores, construction materials, general cargoes;
Zhenjiang	-	200	5.66	Coal, ores;
Changzhou	-	200	15.98	Coal, ores;
Wuxi	-	200	16.36	Coal, steel ores;
Suzhou	-	250	19.25	Coal, ores, construction materials;
Yangzhou	-	500	11.89	Coal, ores, construction materials;
Nantong	-	250	17.58	Coal, ores, construction materials, timber;
Yancheng	-	200	10.89	Coal, ores, salt;
Huiying	-	100	9.25	Coal, ores, oil, grain;
Xuzhou	-	200	9.26	Coal, steel, ores, fertilizer;
Lianyungang	-	150	1.14	Coal, ores.
Subtotal			<u>120.57</u>	
<u>Grand Total</u>	<u>39</u>		<u>187.94</u>	

/a Under MOC's planning jurisdiction.

/b Published throughput of 42.58 million tons includes double handling of petroleum which has been deducted in above figure.

Source: JPCD.

**Table 6.4: JIANGSU: TRAFFIC CARRIED BY THE RAILWAYS BY COMMODITIES
(1989, million tons)**

Commodities	Unloaded		Loaded	
<u>Nanjing-Shanghai line</u>	<u>40.55</u>	<u>(100.00)</u>	<u>18.28</u>	<u>(100.00)</u>
Coal	28.61	(58.29)	1.06	(5.81)
Construction materials	1.97	(4.88)	2.51	(13.77)
Steel	2.85	(7.08)	1.82	(9.98)
Petroleum	1.81	(4.46)	1.69	(9.27)
Non-metal ores	1.07	(2.64)	2.27	(12.45)
Metal ores	0.88	(2.12)	0.55	(3.02)
Cement	0.51	(1.26)	0.41	(2.25)
Grain	0.48	(1.06)	1.89	(10.87)
Fertilizer	0.10	(0.25)	0.42	(2.30)
Timber	0.70	(1.73)	0.13	(0.71)
Cotton	0.01	(0.00)	0.03	(0.16)
Salt	0.10	(0.25)	-	
Others	6.58	(16.10)	5.47	(30.00)
<u>Longhai line</u> (Haotang-Lianyungang)	<u>16.50</u>	<u>(100.00)</u>	<u>4.50</u>	<u>(100.00)</u>
Coal	12.00	(72.72)	1.00	(22.22)
Others	4.50	(27.28)	3.50	(77.78)
<u>Other lines</u>	<u>8.42</u>		<u>6.00</u>	
Total Railways Jiangsu	<u>65.47</u>		<u>28.78</u>	

Source: JPCD.

Table 6.6: JIANGSU: PROVINCIAL TOTAL FREIGHT TRAFFIC
(excluding foreign trade)

	Total /a	Rail- ways	Roads			Waterways			Pipe- line	Air ('000 t)
			Total	JPCD /b	Social /c	Total	JPCD /b	Social /c		
Tonnage (million)										
1980	326.2	66.9	143.0	44.3	98.7	102.3	64.9	37.4	14.0	1.9
1985	498.3	79.0	213.8	48.0	165.8	181.2	76.3	104.9	14.3	2.7
1986	526.2	85.0	206.8	50.3	156.5	220.1	78.3	141.8	14.3	3.4
1987	526.8	89.3	225.8	49.4	175.9	197.6	78.2	119.4	14.1	3.8
1988	544.1	92.0	228.9	44.0	184.8	208.5	76.8	131.7	14.8	5.1
1989	514.6	94.2	220.4	44.8	175.6	186.7	69.9	116.8	13.3	4.7
Annual growth rate (%)										
80-85	8.4	3.4	8.4	1.6	10.9	12.1	3.3	22.9	0.4	7.3
85-89	1.3	4.5	0.8	-1.7	1.4	0.9	-2.2	2.7	-1.8	14.9
Ton-km (billion)										
1980	37.6	16.7	3.1	1.2	2.0	11.1	9.5	1.7	4.7	
1985	55.5	24.1	6.1	2.0	4.1	20.6	15.2	5.4	4.8	
1986	61.2	26.1	6.3	2.1	4.2	24.0	16.6	7.4	4.8	
1987	65.3	27.1	7.3	2.2	5.1	26.1	16.8	9.3	4.7	
1988	67.5	27.9	7.7	2.1	5.6	26.9	17.3	9.7	5.0	
1989	68.3	29.2	8.2	2.3	5.9	26.5	17.2	9.3	4.5	
Annual growth rate (%)										
80-85	6.1	5.2	14.5	11.7	16.0	13.2	9.9	26.9	0.4	
85-89	5.3	5.0	7.6	3.2	9.5	6.5	3.2	14.4	-1.8	
Average trip distance (km)										
1980	115.2	279.3	21.7	26.0	19.8	109.5	145.6	44.1	335.0	
1985	113.7	304.3	26.5	41.7	24.7	113.6	196.9	51.6	335.0	
1989	132.3	310.5	37.1	50.7	33.6	141.8	245.8	79.5	335.0	

/a Not including Air;

/b Transport enterprises under JPCD administration;

/c Collectives, privately-owned and own-account.

Source: JPCD.

**Table 6.6: JIANGSU: PROVINCIAL TOTAL PASSENGER TRAFFIC
(1980-1989)**

	Total	Rail- ways	Roads			Waterways			Air ('000 pass)
			Total	JPCD /a	Social /b	Total	JPCD /a	Social /b	
Passengers (million)									
1980	340.1	38.6	264.6	264.6	0.0	41.8	41.8	0.0	50.0
1985	539.5	48.2	457.5	423.4	34.1	38.7	26.6	7.1	133.0
1986	534.5	49.3	457.8	409.1	48.7	27.2	22.4	4.8	230.0
1987	551.5	53.7	472.9	409.0	63.9	24.6	19.4	5.2	300.0
1988	546.7	59.8	483.1	389.9	73.2	23.4	17.1	6.4	414.0
1989	521.4	54.2	444.4	362.4	82.0	22.1	13.2	8.9	675.4
Annual growth rate (%)									
80-85	9.7	7.5	11.6	9.9	-	-4.2	-8.6	-	21.6
85-89	-0.9	3.0	-0.7	-3.8	24.5	-10.0	-16.1	5.8	50.1
Pass-km (billion)									
1980	14.02	6.16	6.83	6.83	0.00	1.03	1.03	0.00	
1985	27.37	10.75	15.62	14.34	1.28	1.00	0.91	0.09	
1986	29.71	11.78	17.08	15.34	1.72	0.89	0.81	0.08	
1987	32.28	12.94	18.53	16.65	1.88	0.81	0.72	0.09	
1988	35.15	14.70	19.88	17.09	2.59	0.77	0.69	0.08	
1989	34.64	13.85	20.09	18.92	3.17	0.70	0.55	0.15	
Annual growth rate (%)									
80-85	14.3	11.8	18.0	16.0	-	-0.6	-2.4	-	
85-89	6.1	6.5	6.5	4.2	25.4	-8.5	-11.8	13.6	
Average trip distance (km)									
1980	41.2	193.3	25.8	25.8	-	24.6	24.6	-	
1985	50.7	223.0	34.1	33.9	37.6	29.7	34.2	12.7	
1989	66.4	255.5	45.2	46.7	36.7	31.7	41.7	16.9	

/a Transport enterprises under JPCD administration;

/b Collectives, privately-owned and own-account.

Source: JPCD.

**Table 0.7: JIANGSU: PROVINCIAL FLEET OF ROAD TRANSPORT VEHICLES
Registered for Public Services
(1990)**

	Number of motor vehicles	Seat capacity (seats)	Freight capacity (tons)
A. JPCD managed			
Passenger vehicles	6,499	388,423	-
Freight vehicles	10,283	-	81,388
Subtotal	<u>16,782</u>	<u>388,423</u>	<u>81,388</u>
B. Rural managed "Collectives"			
Passenger vehicles	591	12,503	-
Freight vehicles	6,120	-	32,940
Subtotal	<u>6,711</u>	<u>12,503</u>	<u>32,940</u>
C. Own account			
Passenger vehicles	1,818	44,228	-
Freight vehicles	31,549	-	141,508
Subtotal	<u>33,367</u>	<u>44,228</u>	<u>141,508</u>
D. Private			
Passenger vehicles	4,882	59,127	-
Freight vehicles	7,866	-	37,322
Subtotal	<u>12,748</u>	<u>59,127</u>	<u>37,322</u>
Subtotal of B.C.D.			
Passenger vehicles	7,291	115,858	-
Freight vehicles	45,535	-	211,768
Subtotal	<u>52,826</u>	<u>115,858</u>	<u>211,768</u>
Grand Total of A.B.C.D.			
Passenger vehicles	13,790	454,281	-
Freight vehicles	55,818	-	293,156
Grand Total	<u>69,608</u>	<u>454,281</u>	<u>293,156</u>
Tractors/a	<u>146,651</u>	-	<u>177,930</u>

/a Registered for road transport in the whole province.

Source: JPCD.

Table 6.8: JIANGSU: ESTIMATE OF HIGHWAY EXPENDITURES AND ROAD USER'S CONTRIBUTION (1985-89, million of current yuan)

	1985	1986	1987	1988	1989
A. Highway Expenditures					
Construction & reconstruction	77.5	100.6	160.8	192.6	250.0
Road rehabilitation	126.8	171.3	171.5	199.3	200.0
Road maintenance	108.2	164.0	216.6	236.6	262.0
Overhead & administration	36.7	47.3	37.1	61.8	68.0
Total	349.2	483.2	566.0	679.2	770.0
B. Sources of Funds					
Road maintenance fees					
Total collected	389.5	498.2	536.7	740.0	790.0
of which allocated to:					
Jiangsu Province	331.1	423.5	445.5	614.2	655.0
Public security (2%)	-	-	10.7	14.8	16.0
MOF (energy/transport funds, 16%)	58.4	74.7	80.5	111.0	119.0
Other provincial resources /a	14.1	13.2	83.1	10.0	30.0
MOC allocation assistance	4.0	46.5	67.4	55.0	85.0
Total	349.2	483.2	566.0	679.2	770.0

Source: JPCD.

/a Including tolls since 1988.

Table 6.9: Jiangsu: Fuel Prices (yuan per liter)

	Before March 20, 1984			After March 20, 1984			Current (Sept, 1990)		Int'l price /f
	/a Planned	Negotiated /b	Market	Planned	Negotiated	Market	Planned	Market	
Gasoline (70 oct) /c	0.53	0.70	-	0.53	0.70	0.80	0.70	1.15	0.70
Index	100	132		100	132	151	132	217	
Gasoline (80 oct) Index	0.56	0.73	-	0.56	0.73	0.88	0.77	1.30	0.70
Diesel /d	0.36	0.68	-	0.44	0.68	0.86	0.50	1.40	0.68
Index	100	188		122	188	238	139	389	
Inflation /e	-----100-----			-----129-----			-----198-----		
Index									

/a Planned allocation prices.

/b Negotiated above quota.

/c Prices of gasoline include an aggregate of 43 percent central government fuel taxes.

/d Prices of diesel include a 13 percent central government fuel taxes.

/e Consumer price index at end-of-year 1983, 1987 and September 1990, respectively.

/f July 1990 market prices before Gulf crisis (CIF Hong Kong).

Source: JPCD.

Table 6.10: JIANGSU: ESTIMATE OF WATERWAYS EXPENDITURES AND SOURCES OF FUNDS
(1989, Y million)

<u>A. Sources of Funds</u>	
<u>Channel maintenance charges</u>	
Total collected	100.6
of which allocated to:	
Provincial waterways (75%)	<u>75.4</u>
MOF (energy/transport funds, 15%)	15.1
Provincial Readjustment tax (10%)	10.1
<u>Shiplock tolls</u>	<u>30.0</u>
<u>MOC allocation assistance</u>	<u>20.0</u>
<u>Provincial local mobilization funds</u>	<u>40.0</u>
 Total	 <u>165.4</u>
 <u>B. Waterways Expenditures</u>	
Capital construction	80.0
Major dredging and overheads	22.0
Routine maintenance	43.3
Overhead and administration	20.1
 Total	 <u>165.4</u>

Source: JPCD.

Table 6.11: TRANSPORT INVESTMENT VS. ECONOMIC OUTPUT

Year	Transport	GNP /a Investment	Transport investment as % of GNP
A. <u>For China Country Total</u> (current Y billion)			
<u>/b</u>			
1966-70 3FYP	15.0	935	1.6
1971-75 4FYP	32.0	1,323	2.4
1976-80 5FYP	30.0	1,758	1.7
1981-85 6FYP	45.0	3,039	1.5
1980	5.9	423	1.4
1981	3.7	458	0.8
1982	5.2	505	1.0
1983	7.2	565	1.3
1984	10.1	680	1.5
1985	15.9	832	1.9
1986	16.7	937	1.8
1987	17.4	1,100	1.6
1988	19.0	1,398	1.4
1989	20.9	1,567	1.3
B. <u>For Jiangsu Province</u> (current Y million)			
1980	194.7	32,180	0.6
1981	112.7	35,091	0.3
1982	230.8	39,235	0.6
1983	338.2	44,306	0.8
1984	456.9	52,377	0.9
1985	606.8	65,154	0.9
1986	811.5	75,199	1.1
1987	995.8	89,293	1.1
1988	868.9	113,201	0.8
1989	894.4	122,849	0.7

/a For Jiangsu: GDP;

/b Investment of FYPs includes Post and Telecommunications (about 4 percent of total).

Source: Transport Yearbooks of China; Statistical Yearbooks of China.

**Table 8.12: JIANGSU: TRANSPORT INFRASTRUCTURE INVESTMENT BY MODE IN COMPARISON
WITH TOTAL PUBLIC SECTOR INFRASTRUCTURE PROVINCIAL INVESTMENT /a
(current Y million)**

	1985	1986	1987	1988	1989
I. Transport Sector					
Highways / <u>b</u>	77.51	100.55	160.75	192.61	250.00
Railways	78.61	231.73	247.45	216.84	228.00
Ports/Waterways	414.71	450.70	553.53	440.46	397.00
Pipeline	10.87	4.28	3.08	0.88	0.00
Airports	8.07	9.31	5.68	7.41	6.00
Handling Equipment	17.08	14.94	25.25	10.74	18.00
Subtotal	<u>608.83</u>	<u>811.51</u>	<u>995.75</u>	<u>868.92</u>	<u>894.00</u>
II. Post/Telecommunications	23.84	36.24	37.53	54.42	95.00
III. Primary Sectors /<u>c</u>	2,627.00	3,418.00	5,051.00	6,079.00	4,822.00
IV. Social Service Infrastructure /<u>d</u>	1,178.00	1,401.00	1,277.00	1,443.00	1,390.00
V. Public Administration/others	300.00	376.00	528.00	640.00	521.00
Total Public Investment	4,735.47	6,042.75	7,889.28	9,085.34	7,512.00
Transport Sector as % of Total Investment	12.8	13.4	12.6	9.6	11.9

/a Not including periodic maintenance/rehabilitation of existing assets.

/b Including new road construction and reconstruction/upgrading.

/c Agriculture, industry (including housing), power, commerce, mining, etc.

/d Including health, education, sports, etc.

/e Including science research, banking, etc.

Source: Statistical Yearbook of Jiangsu Province, 1990 and PPC.