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CURRENCY EQUIVALENTS

(As of January 1995)

Currency Name	=	Renminbi
Currency Unit	=	Yuan (Y)
1 Yuan	=	100 fen
Y 1.00	=	\$0.11
\$1.00	=	Y 8.5

FISCAL YEAR

January 1 - December 31

WEIGHTS AND MEASURES

Metric System

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ACRONYMS AND ABBREVIATIONS

ABC	-	Agricultural Bank of China
AIP	-	Annual Investment Plan
BMD	-	Budget Management Department
BOC	-	Bank of China
BOT	-	Build Operate Transfer
CC	-	Capital Construction
CCD	-	Capital Construction Department
CEM	-	Country Economic Memorandum
CIECC	-	China International Engineering Consulting Company
CITIC	-	China International Trust and Investment Corporation
EBF	-	Extra Budgetary Funds
FAO	-	Food Agriculture Organization
FDI	-	Foreign Direct Investment
FEBF	-	Fiscal Extra Budgetary Funds
FYP	-	Five Year Plan
GDP	-	Gross Domestic Product
GNP	-	Gross National Product
ICBC	-	Industrial and Commercial Bank of China
IMF	-	International Monetary Fund
ITIC	-	Investment and Trust Corporation
JV	-	Joint Venture
LMS	-	Large and Medium Size
MCC	-	Municipal Construction Commission
MPB	-	Municipal Planning Bureau
MOF	-	Ministry of Finance
MOFTEC	-	Ministry of Foreign Trade and Economic Cooperation
NBFI	-	Nonbank Financial Institution
NPC	-	National People's Congress
PBC	-	People's Bank of China
PCBC	-	People's Construction Bank of China
PCC	-	Provincial Construction Commission
PFB	-	Provincial Finance Bureau
PICC	-	People's Insurance Corporation of China
PIP	-	Public Investment Program
PPB	-	Provincial Planning Bureau
PRC	-	People's Republic of China
PSD	-	Provincial Sector Department
RCC	-	Rural Credit Cooperatives
SAEC	-	State Administration for Exchange Control
SDB	-	State Development Bank
SERC	-	Securities Exchange Regulatory Commission
SETC	-	State Economic and Trade Commission
SIC	-	State Investment Corporation
SIDC	-	State Investment Development Corporation
SPC	-	State Planning Commission
SRC	-	State Commission for the Restructuring of the Economic System
SOE	-	State-Owned Enterprise
SOU	-	State-Owned Unit
TIC	-	Trust and Investment Corporations
TT	-	Technical Transformation
TVE	-	Township and Village Enterprises
UCC	-	Urban Credit Cooperative
WDR	-	World Development Report

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SUMMARY AND RECOMMENDATIONS

A. MAIN FINDINGS

*China has been successful in allocating substantial resources into "public" investments.*¹ Infrastructure investments reached 6.5 percent of GDP in 1993, well above the developing country average (4 percent) and close to the effort recommended in the 1994 World Development Report (7 percent). By comparison, social sector investments are low and declining. Education and health expenditures in 1993 were 3.5 percent of GDP, below the average (5.2 percent of GDP) for a group of fifteen Asian developing countries. China's achievements in infrastructure were predicated largely upon increased resource mobilization rather than a shift in allocation. The increased savings effort (9 percentage points of GDP since 1982) allowed the authorities to allocate incremental resources to infrastructure, without confronting the need to modify investment incentives and management in the rest of the economy.

The main finding of this report is that *China's investment system provides considerable scope for efficiency gains because investment reforms remain incomplete.* While the Chinese investment effort will have to remain strong in order to maintain high levels of economic growth, investment reforms can generate efficiency gains which would allow, at the

CHINA: SELECTED INVESTMENT INDICATORS		
(in percent)		
	1982	1993
<i>As percent of GDP</i>		
Total fixed asset investment	23.7	36.5
State investment	16.3	22.4
Central government investment	7.4	7.9
State infrastructure investment	3.1	6.5
State social sector investment	0.9	0.8
<i>Financing: as percent of fixed investment</i>		
Budget	22.7	3.7
Domestic credit	14.3	23.5
Foreign	4.9	7.3
Self-raised and other	58.1	65.5

¹ The term "public" investment refers to the (public goods) nature of the investment and not to ownership. State investment covers investment by state-owned units (SOUs) at all levels of government but not by collectives, which are also publicly-owned. SOUs comprise enterprises as well as governmental entities.

same time, for more rapid increases in per capita consumption, and in government expenditures targeted at sustainable development.

While the role of the government as investor has declined and there has been considerable diversification in sources of investment finance, *much of state investment remains centrally planned, with administrative controls rather than market forces determining its allocation.* This reflects government efforts to maintain control over investment decisions even while most of the Chinese economy now operates on a market basis. The consequences of this tension between increasing decentralization in economic decision making, on the one hand, and continued reliance on detailed investment programming and strict centralized control over the allocation of funds, on the other, are discussed below:

- (a) **Dominance of the state sector.** State-owned unit fixed investment is very large, and shows no tendency to decline; state industrial investment is also much larger than the size of the state sector (share in output) would warrant, suggesting that *the state industrial sector uses investment resources less efficiently than the rest of the economy. Credit rationing which favors the state sector in good times, does so even more during periods of tightening.*

Within the state sector, central government investment has remained substantial despite ongoing decentralization. Furthermore, it is largely shielded from the impact of cyclical downturns.

- (b) **Dwindling budgetary resources and dispersion of government effort.** Despite the shrinking share of budgetary investment funds, the government has continued to invest in nearly all sectors of the economy, creating *serious difficulties in directing resources to areas where the need for direct government involvement is greatest.*
- (c) **Pervasive government role in resource allocation.** *There is a substantial mismatch between the large government role in making investment decisions and allocating investment funds, on the one hand, and the limited importance of government financial resources, on the other.* The perceived need to support investment in many areas leads the government to maintain an onerous investment approval mechanism and to direct financial resources (domestic bank credit, foreign borrowing, enterprise bonds and equity shares) to designated state projects in a way that crowds out other investment. Furthermore, while an increasing proportion of total investment is carried out with funds generated by the investing units, for the bulk of own funds, there are significant restrictions on the extent to which managers can respond to differences in risk and rate of return.

Financial planning in China serves the dual purpose of managing monetary aggregates and directing resources towards designated projects. When the credit plan is successful in directing resources to their intended uses, it undermines enterprise autonomy in investment decisions. When it is unsuccessful, as in recent episodes of credit leakages, it assumes an expansionary bias as financing is sought from the People's Bank of China (PBC) to ensure availability for priority uses. *The credit plan serves well neither its*

aggregate demand management purpose nor its objective of channelling resources to priority projects.

- (d) **Limited financial autonomy for local governments.** *Local governments have few funds for investment given limited tax autonomy and a prohibition on borrowing. This has several problematic consequences: efficiency gains remain unexploited, local government's borrow through enterprises under their direct control; the allocation of capital transfers through the planning system distorts local preferences and may reduce local fiscal effort; extrabudgetary funds proliferate, undermining the efficacy of the budget process; and governments continue to influence the use of enterprise retained earnings.*
- (e) **Inappropriate incentives structure.** *Current incentives continue to encourage overinvestment (given the low cost of capital and limited enterprise assumption of risk), aggravating economic cycles and lowering investment efficiency. In particular, the procyclical nature of local investment has systemic causes and effects. Local governments face a binding credit and administrative approval constraint on investment during periods of economic tightening; this induces overinvestment in periods of looser credit, thereby contributing to the likelihood of a contractionary phase in the future and to protracted investment periods.*

The state investment system's efficiency at converting inputs into outputs remains low and unchanged from the early 1980s, when economic reform had just begun. The large volume of incomplete construction (15-16 percent of GDP) and long completion times reflect the fact that resources, and in particular government resources, are spread too thinly over existing projects. Individual projects are underfunded and planning, organizational, and design capabilities are stretched beyond optimal points.

B. ISSUES FOR REFORM

China's transition from a planned to a market economy requires both the development of market institutions and a fundamental change in the role of the government in economic decisions. The Chinese authorities face an important challenge in further sharpening the distinctions between public ownership, on the one hand, and the provision and financing of public services, on the other. This involves reducing government involvement in SOEs to the more restricted exercise of ownership rights but remaining intimately engaged in the institutions, mechanisms and financing requirements for the provision of public goods. Reform of the investment system is an essential ingredient in this process and must take into account the following considerations:

- (a) **Role of the Government.** *The government's willingness to refrain from influencing directly the overall pattern of investment and to allow greater decentralization in investment decisions is critical for further progress toward the establishment of a market economy. This requires delineating clearly the government domain in investment and sharpening the distinction between public ownership, on the one hand, and the provision and financing of public services, on the other. The present classification of investment into three categories is an*

improvement but the categories are too broad, and the concepts used too vague to be operationally useful.

- (b) **Financing.** Unlike most transitional economies, *China does not need to mobilize additional resources in order to reach the minimum acceptable levels of (public) investment.* Rather, the challenge is two-fold: (i) how to reduce overall investment demand to levels compatible with macroeconomic stability even while maintaining the flow of resources to public investments; and (ii) how to accommodate China's public investment financing needs in ways which do not compromise the further development of the financial system and increased enterprise autonomy.

The system of investment planning, with its current reliance on quantitative allocation of financial resources, constitutes a major impediment to financial sector reforms. While the government's objective of separating policy and commercial lending is good, it is not enough by itself for the commercialization of the banking sector. Specialized banks are still subject to project-specific lending quotas; are obliged to provide working capital loans to SOEs; can only lend for government-approved projects; and have to finance the State Development Bank (SDB) through compulsory purchases of its bonds. *Banks cannot operate on a commercial basis until project-specific credit allocation has been eliminated.* Eliminating the credit plan's resource allocation function can, however, be contemplated only if alternative mechanisms are available for channeling resources to public investments.

- (c) **Incentives and Links to Other Reforms.** The government's objective of shifting project implementation responsibility to enterprises is a useful start in enhancing accountability and reducing cost-overruns. However, *the fundamental issue of project risk remains unaddressed.* While benefits accrue to the enterprises, the bulk of investment risk in the state sector still conveys to the government. This reflects incomplete reforms in the enterprise sector and the investment system. *First*, in the absence of hard budget constraints for enterprises and/or clear title or adequate equity stakes in investment projects, managers of investment projects remain the agents of the government in carrying out investment. *Second*, appropriate enterprise governance structures that protect and limit the rights of the government as owner have yet to be developed. *Third*, the cost of capital (thanks to low interest rates and payment defaults) is so low that investment demand continues to be insatiable. *Fourth*, extensive government involvement through its approval (SPC) and financing (SDB) institutions serves, to some extent, to absolve investors of the responsibility for the failure of a project.
- (d) **Process and Institutions.** *The investment planning process reinforces incentives for overinvestment.* Investment planning currently has a one year time horizon, even though most investments take several years to implement. In the absence of a multiyear programming framework, it is difficult to counteract the systemic incentives for presenting a constant stream of new projects for approval and always ending up with too many projects, with too little funding.

As it currently stands, the investment budget is not a meaningful instrument for implementing the government's priorities. The budget lacks transparency; monitoring and control of investment expenditures are split among three departments; foreign and domestic components of the same project are handled by different departments; consideration of linkages and trade-offs between recurrent and capital expenditures is inadequate; and clear guidelines on eligibility and terms for budgetary funding are often lacking.

Project approval involves too many steps and too many agencies, with occasional duplication of functions. This is further complicated by the continued distinction between capital construction and technical transformation investments, which hinders a consideration of trade-offs. Furthermore, the project approval threshold remains too low.

C. RECOMMENDATIONS

This report's recommendations focus on areas for improvement in *public investment* management and financing. Equally important for the reform of the investment system as a whole is continued progress in the establishment of a market economy, which would remove incentives for overinvestment. Particularly important in this regard are the imposition of hard budget constraints on enterprises and financial institutions, through appropriate governance structures and competitive market discipline, completion of price reforms, and interest rate levels that reflect the scarcity value of capital. Recommendations for the reform of the public investment system are detailed below.

Role of the Government. In line with the preferences of the government, revealed through the actual uses of budgetary funds, this report recommends *a more focused role for the government in investment, which uses budgetary resources more effectively while allowing continued progress in the commercialization of the financial and enterprise sectors.* A public investment program of 6-10 percent of GDP would appear appropriate and would include investments by all levels of government in administration, social sectors, most infrastructure sectors and initially a few competitive sectors which display dynamic externalities. This would result in roughly equal shares for local and central investments. The program would exclude the bulk of competitive activities, notably in light industry, construction and commerce. This does not imply that the entire financing of the public investment program would have to come from budgetary sources, although the gap between budgetary resources currently available for investment and public investment financing requirements would shrink considerably, reducing pressures for off-budgetary financing.

The transition toward a more-focused role for the government in investment does not obviate the need for continued supervision of the use of state assets, however. Mechanisms and institutions need to be established to ensure the protection of the state's rights as shareholder, including the proper remuneration of its capital.

Institutions and Process. *It is recommended that a rolling medium term public investment program (PIP) be prepared that resembles the current annual investment program in terms of project and financing detail, but covers a 3-5 year period. However, the scope of the PIP would be more limited. Instead of planning investments of the entire state sector, the PIP would be limited to those projects that use government or government-controlled resources.*

Every year the program should be updated and moved forward a year. The PIP should be presented to the State Council for approval and may also be submitted to NPC's consideration as an annex to the budget.

SPC's functions would remain largely unchanged even though the scope of its interventions would be reduced: it would remain in charge of overall coordination for the PIP and its approval would be required for medium and large scale projects but the threshold would be increased. The Ministry of Finance (MOF) should become more involved in the management of the budget and strengthen its capacity for doing so. *First*, a more comprehensive investment budget should be prepared. *Second*, the distinction between capital construction and technical transformation expenditures should be eliminated. *Third*, responsibility for budget execution should be centralized in one department.

While the allocation of expenditure responsibility by level of government appears reasonable overall, SPC and MOF should establish specific guidelines to determine which local government projects qualify for transfers from the center. Instead of substantial project specific funding flows from the center, it might be preferable to *adjust the system of general transfers so that it better matches local spending responsibilities, perhaps supported by the provision of limited matching capital grants for specific purposes*. Incomplete financial market reforms, a nascent capital market and the lack of transparency in fiscal accounts of both central and local governments make local government borrowing in China undesirable at this stage. However, China's authorities should consider a program of capital market and fiscal reforms that would in the future give local governments some access to capital markets.

The authorities may wish to consider a multiyear fiscal plan (MYFP) to complement the PIP and further improve allocative efficiency for government resources. In particular, the MYFP would allow the budget to take into account the recurrent expenditure implications of investment projects included in the PIP and to consider the trade-offs between capital and current expenditures in a multiyear framework. A strengthened budgetary process would also obviate the need for earmarking. In the longer-run, when resort to offbudget resources is further reduced, the PIP may be subsumed under the MYFP, in line with current practice in most OECD countries.

Finance. *Budgetary funding should be limited to investment projects which are unable to tap commercial sources of finance*. Even when government support is needed, it should be additional to, rather than supplanting, commercial financing whenever possible. The budget should contain full funding only for public goods with little or no potential for cost recovery. But, fiscal reform needs to be pursued to ensure that governments at all levels have adequate resources to assume their financial obligations with respect to public investments within their jurisdiction. In particular, *there is a clear case for devoting additional resources to the social sectors so as to prevent the erosion of substantial past achievements in these areas, which are crucial for the long-term sustainability of China's growth objectives*.

Depending on the project, the government could leverage its resources with other funds--including enterprise savings, foreign borrowing and domestic credit. If public investment projects cannot be fully funded from government-controlled sources, and are unable to attract commercial financing, *a formal government loan guarantee can be a useful instrument to reduce the risk to the lender, especially a foreign lender*. Because such guarantees create a potential

liability to the government, they should be reflected in the budget and be subject to an overall ceiling.

Reform of fiscal extrabudgetary funds (FEBFs) requires distinguishing between the types of entities that benefit from them. SOUs that provide government services and rely predominantly on general budgetary allocations or on earmarked levies, taxes and surcharges should be considered part of government and integrated into the budgetary process. Earmarked taxes and surcharges levied on marketable products should ideally become part of the relevant prices. This would imply some loss of government control over investment resources and may be problematic in the short term, in view of the incomplete nature of enterprise reforms and constraints on alternative sources of investment funding for local governments. In the short-term, integrating FEBFs into the budget may require retaining earmarking in some cases.

The state's project-specific financing plan should be limited to the public investment program. Until appropriate mechanisms are developed for indirect monetary management, the authorities will have to rely on quantitative restrictions on credit. However, a shorter term objective should be to eliminate reliance on the financing plans (credit, bond and equity) for influencing the *pattern* of investment. This implies continued imposition of *aggregate* credit ceilings, which could be allocated across banks based on the growth of their deposits, but without direction of credit into specific uses.

Given the limited scope for budgetary financing in the short term, uncertain prospects for rationalizing fiscal extrabudgetary funds, rudimentary capital markets and commercial bank exposure to term transformation risk, *investment financing institutions, like SDB, may serve a useful function during the transition to a more robust fiscal capability and more mature financial system.* However, there is a need to clarify SDB's role and operating procedures and to safeguard its financial viability.

- *First*, the authorities need to clarify the extent to which SDB should form its own investment agenda independently of the SPC. The report recommends that SDB be assigned specific policy objectives, that it be able to implement these objectives as it sees fit through its investment portfolio, and that it not be seen as a financing window for priority projects that fall outside its mandate. As envisaged, SDB would finance key infrastructure projects and support industrial policy objectives. However, SDB's autonomy, which is currently limited to the exercise of an (exceptional) veto on individual projects proposed by SPC, should be expanded in the future. In the medium-term, and once SDB has built strong independent project appraisal capability and established a solid track record, SDB could be given authority to select projects within its mandate, unencumbered by political preferences.
- *Second*, although it is desirable to structure SDB's operations and institutional set-up so that its performance is subject to the extent possible to market discipline, SDB will remain a quasi-fiscal entity by virtue of its mandate and the ultimate assumption of liability by the state. In this context, setting up separate entities to channel hard and soft loans should be considered, along the lines of the World Bank Group (IDA and IBRD). Performance on hard loans could be subjected largely to market discipline while effectiveness of soft loans would be evaluated based on administrative criteria.
- *Third*, SDB should establish rigorous project evaluation and selection criteria, clear approval procedures, and strict supervision practices. It would be in SDB's strong interest not to

inherit a substantial portfolio of old investments, as this will make its financial position less transparent, may saddle the SDB with vested interests in new lending operations, and may burden the institution with costly but largely futile collection efforts. SDB should give consideration to incorporating incentives for loan collection in its agency contract with PCBC; in the medium term, competitive bidding for these services would further efficiency.

- *Fourth*, interest rates on SDB's hard loans should reflect the full cost of funds and administrative expenses. Lending rates will contain an element of subsidy, however, to the extent that SDB benefits from a sovereign guarantee on its borrowing and its capital is not subject to remuneration.
- *Fifth*, SDB should require adequate collateral or coguarantors for its loans; initiate collection procedures in case of nonpayment; provision for potential bad debts promptly and fully; and get its fiscal contributions (whether for capital or interest rate subsidies) in annual appropriations not tied to specific loans or projects. These appropriations must be made consistent with budget financing capabilities. At the same time, the scope of SDB's soft lending operations should strictly reflect the level of fiscal contributions, so as to prevent decapitalization of the bank.
- *Sixth*, SDB's access to funding from commercial banks or capital markets should be stable but subject to explicit limits set by the government. In the medium term, the objective should be voluntary placement of SDB bonds; in the interim, bond rates should be set in relation to prevailing commercial lending rates of equivalent maturity. SDB bonds should carry a sovereign guarantee, at least in the short term when these bonds are still subject to administrative placement. Also, as it is unlikely that the government would allow a quasi-fiscal entity like the SDB to go under, even in the longer term it may be beneficial to grant an explicit sovereign guarantee upfront.
- *Finally*, the SDB should not be allowed to mobilize deposits nor to fund loans directly from PBC credit. There is no reason for an institution of these characteristics to be involved in direct resource mobilization; rather, it should delegate this retail function to commercial banks and attract its resources wholesale.

D. CHINA - PUBLIC INVESTMENT AND FINANCE: MATRIX OF KEY RECOMMENDATIONS

Objective	Area	Short term	Medium term	Long term
<i>Reduce Role of the Government in Investment</i>		Limit government involvement in project planning, financing and approval to sectors with public goods characteristics—i.e. social sectors, public administration, most infrastructure sectors and some strategic industries with dynamic externalities.	Reduce government involvement in strategic sectors.	
<i>Improve Public Investment Management</i>	Public Investment Program (PIP)	<p>Establish a multiyear (3-5 year) rolling PIP, initially for all key state projects.</p> <p>Define criteria for inclusion in PIP; increase project approval threshold.</p> <p>SPC to be in charge of overall coordination for PIP and approval for large projects.</p>	<p>Extend PIP coverage; eliminate annual investment program and key state project designation.</p> <p>Present PIP to the State Council and to NPC as an annex to the budget.</p> <p>Eliminate distinction between capital construction and technical transformation projects.</p>	<p>Incorporate PIP in multiyear fiscal plan.</p> <p>Revise SETC's mandate to focus on promoting "private" investments.</p>
	Budget	<p>Continue to provide budgetary grants to sectors with limited potential for cost recovery.</p> <p>Provide capital contributions and interest subsidies to SDB.</p> <p>Consider loan guarantees to attract commercial funds to projects in the PIP.</p> <p>Establish explicit criteria for central government support for local projects.</p>	<p>Initiate a multiyear fiscal plan (MYFP) to complement the PIP.</p> <p>Set a ceiling on guarantees and include a provision for contingent claims in the budget.</p> <p>Establish a general intergovernmental grants scheme that takes into account capital needs of local government functions.</p>	<p>Present MYFP to NPC's consideration.</p> <p>Implement general grants scheme supplemented, if needed, by limited matching grants for specific purposes.</p>
	Extrabudgetary Funds	Classify fiscal extrabudgetary funds by nature of recipient institution.	Incorporate into the budget earmarked funds for government services.	Restrict use of earmarking.

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D. CHINA - PUBLIC INVESTMENT AND FINANCE: MATRIX OF KEY RECOMMENDATIONS

Objective	Area	Short term	Medium term	Long term
			Incorporate surcharges on marketable products into relevant prices and tariffs.	
<i>Promote Commercialization of Financial Sector</i>	Financing Plans	<p>Reduce coverage of credit plan, move toward aggregate credit ceiling for investment, with project-specific credit allocation only for the PIP.</p> <p>Institute disclosure requirements for enterprise bond issues.</p> <p>Improve disclosure for equity issues.</p>	<p>Continue reducing investment credit allocation, in line with the shrinking scope of the PIP.</p> <p>Institute a global quota for enterprise bond issues with project-specific allocation only for the PIP.</p> <p>Institute a global quota for equity issues with project-specific allocation only for the PIP.</p>	<p>Eliminate the credit plan, with the MYFP and the financial sector assuming respective responsibilities.</p> <p>Eliminate global quota.</p> <p>Eliminate global quota.</p>
<i>Ensure Adequate Financing for Public Investment: Role of SDB</i>	Policy and Institutional Framework	<p>Issue detailed implementing regulations based on SDB's charter.</p> <p>Limit SDB operations to projects with no prospects for commercial funding due to low financial (but high social) profitability, high risk or long gestation.</p> <p>Establish "hard" and "soft" loan windows and formulate lending criteria for each.</p> <p>Set annual limits for SDB lending consistent with its policy function and the development of commercial banking sector.</p> <p>Establish clear criteria for lending to strategic industries, for maintaining financial discipline in protected industries, and for phasing out SDB financing.</p>	<p>Increasingly co-finance projects with commercial banks.</p> <p>Reduce SDB involvement in strategic industries.</p>	<p>Transfer "soft" loan window into MOF. Either disband SDB or turn it into a commercial venture.</p>

D. CHINA - PUBLIC INVESTMENT AND FINANCE: MATRIX OF KEY RECOMMENDATIONS

Objective	Area	Short term	Medium term	Long term
		<p>SPC/SETC and SDB to confer on SDB's loan portfolio with veto power for SDB.</p> <p>Clarify SDB's relations with SIDC and ensure SDB's control over its subsidiary.</p> <p>Agency contract with PCBC to incorporate incentives for loan collection.</p>	<p>Increase SDB's autonomy to identify and finance part of the PIP in line with its mandate.</p> <p>Introduce competition in selection of agency relationship.</p>	
	Liability Management	<p>Fiscal contributions (capital contributions and interest subsidies), to be disbursed quarterly but not on a project by project basis.</p> <p>Annual interest subsidies to cover difference between cost and uses of SDB's funds to prevent erosion of its capital.</p> <p>Extend an explicit sovereign guarantee on SDB borrowing.</p> <p>Set SDB bond rates in relation to commercial lending rates for loans of equivalent maturity.</p> <p>Refrain from direct PBC financing of SDB's operations.</p> <p>Maintain prohibition on direct resource mobilization from the public.</p>	<p>Consider tapping equity market for new capital if SDB's performance merits.</p> <p>Evaluate need for continued sovereign backing.</p> <p>Introduce voluntary placement of bonds; extend maturity of bonds to reduce term transformation risk.</p> <p>Restrict indirect financing through discounting of SDB paper.</p> <p>Review scope for bond issuance directly to the public.</p>	
	Asset Management	<p>Set up the opening balance sheet for SDB and clarify the status of policy loans made in the past by specialized banks. Preferable not to transfer these assets to SDB.</p>	<p>Evaluate the quality of assets acquired and make appropriate adjustments to balance sheet.</p>	

D. CHINA - PUBLIC INVESTMENT AND FINANCE: MATRIX OF KEY RECOMMENDATIONS

Objective	Area	Short term	Medium term	Long term
		Provision for bad debt and adequately account for interest is suspense.		
	SDB Staff and Training Needs	Recruit new staff with financial background. Set up a management information system.	Improve risk and liquidity management; upgrade financial appraisal and project supervision capability.	
Promote Private Financing for Infrastructure Investments	Policy Framework		Set up a transparent regulatory framework for "private" participation in infrastructure. Eliminate policy induced risks for investors—e.g. on prices/tariffs, access to foreign exchange, uncertainty on permissible rates of return.	
	Financing		Consider promoting the establishment of specialized infrastructure investment funds which would mobilize domestic equity financing.	

1. BACKGROUND AND TRENDS IN CHINA'S INVESTMENT

A. INTRODUCTION

1.1 Over the last decade, China has experienced high rates of growth, spurred largely by an increasing savings and investment effort. In 1994, total investment in fixed assets stood at 36.4 percent of GDP, up from 23.7 percent in 1982. With the exception of the retrenchment in 1989-90 when investment levels declined by as much as 7 percent of GDP, this represents a steady increase in the rate of capital accumulation. Despite such impressive levels of investment, however, a number of infrastructure bottlenecks emerged during the recent growth spurt. The sustainability of high levels of growth in China depends in large part on the country's ability to convert its remarkably high domestic savings into economically profitable investments. Even the more modest growth targets of 8-9 percent for the coming decade will require massive investments, particularly in infrastructure but also in the social sectors.

1.2 The economic incentive structure facing investors has changed substantially, in particular through price reforms and the opening up of the economy to foreign trade and investment. While most of the Chinese economy now operates on a market basis, the investment system remains largely unreformed. The current investment system evolved out of the former planned economic system and continues to bear the marks of that system, including its shortcomings. Investment by state-owned units is very large, and shows no tendency to decline; despite ongoing decentralization, central government investment has remained substantial; the government's investment effort is too dispersed to have sufficient impact on sectors with traditional public goods characteristics; the government continues to influence all investment decisions through its investment approval mechanisms and the credit plan, thereby interfering with the assumption of greater autonomy by enterprises and lenders alike; the risks of investment remain socialized and the cost of capital is largely negative in real terms.

1.3 The current investment system can best be seen as a pragmatic adaptation to the challenges presented by economic reform and rapid economic growth. In some respects, that pragmatic response has been successful, especially in sustaining fairly high levels of infrastructure investment overall. Infrastructure investment represented almost 30 percent of state investment or some 6.5 percent of GDP in 1993; preliminary data indicate that it will be a slightly larger share of GDP in 1994, mostly due to surging investment in transportation and telecommunications. This compares favorably with average infrastructure investment levels of 4 percent of GDP for developing countries.¹ China's achievements remain considerable also when (physical) indicators are used to evaluate the stock of social and economic infrastructure in a set of comparator countries.

¹ Infrastructure investments ranged from 40 to 60 percent of public investment and 2 to 8 percent of GDP for a group of twenty developing countries analyzed for the 1994 World Development Report.

1.4 But at the same time, the failure up until the present to reform and restructure the investment system has meant a continuing inability to reap significant efficiency gains from an improved investment and financial system. Performance indicators do not show any improvement in the effectiveness with which invested resources are converted into new fixed assets; these remain at the levels of the unreformed communist economies of the 1980s. The government remains starved for resources to finance an overly ambitious investment program, and in its attempts to generate resources, puts pressure on the country's financial system, distorting the reform and healthy development of that sector. Moreover, the partial reforms in the enterprise and financial sectors interact with the unreformed investment system and inappropriate investment incentives to generate significant macroeconomic imbalances that tend to lead the Chinese economy into stop-and-go cycles.

1.5 Greater market orientation in the economy as a whole requires and depends on fundamental changes in the role of the government. Increased devolution of economic decisions to enterprises is important for efficiency. Equally important, however, is an appropriate legal, social and economic infrastructure which promotes growth while safeguarding long-run sustainability. The process of separating government from enterprises started in China in 1984 with fiscal reforms but remains one of the largest challenges on the government's reform agenda. It is indicative of the ambiguity of enterprise-government relations that the Chinese statistical system does not distinguish between investments of state-owned enterprises and governmental agencies.² Essential for this separation is the delineation of an appropriate role for the government in investment, the establishment of appropriate institutions and instruments to perform that role and the development of noninflationary sources of finance.

1.6 The Chinese investment effort will have to remain strong in order to maintain high levels of economic growth. However, investment reforms can generate efficiency gains which would allow, at the same time, for more rapid increases in per capita consumption, and in government expenditures targeted at sustainable development. The shortcomings of the current investment system are widely recognized in China. Current proposals for investment reform represent an important step forward but need to be pursued further. This report is intended to contribute to the ongoing reform process. It has a strategic and institutional focus and should constitute a framework for future work which would deepen the analysis through more detailed sectoral treatment and widen the scope through examination of current public expenditures. The report starts with a review of trends in investment in the remainder of this chapter and focuses in Chapter 2 on the issues raised by the current investment planning and finance system. Chapter 3 concludes the report with the presentation of a framework for public investment.

B. TRENDS IN INVESTMENT

1.7 This section highlights some of the important trends in investment flows over the last decade. In particular, the discussion includes an analysis of ownership patterns, sources of financing and sectoral composition. Chinese data report investment by ownership, funding source, type of investment (see Box 1.1) and sectoral composition; sectoral data are quite detailed for the state sector but highly aggregate for the economy as a whole.³ The analysis in

² They are both classified under the category state-owned unit (SOU) investment.

³ The Statistical Yearbook does not report sources of financing by sector or by level of government. The mission was able to obtain some additional, if inconsistent, data from the SPC Investment Institute as part of a background paper for this report.

this section is on global investment patterns, with particular emphasis on the state sector. Public investment—as distinct from state investment—is examined in the next section.

Ownership

1.8 Chinese investment data report investments by state-owned units (SOUs), collectively-owned entities and individuals. SOUs include enterprises owned by the various levels of government as well as governmental agencies or units. Their investments are subdivided into capital construction, technical transformation or other investments (see Box 1.1). Collective and individual investors are either urban or rural. Joint ventures and shareholding enterprises constitute yet another category of investors which until recently was included in the state sector.

Box 1.1: CHINESE INVESTMENT TERMINOLOGY

Investment is divided into “capital construction,” “technical renovation,” “other”, and “commodity housing.” The boundary between these different categories of investment is extraordinarily vague. In fact, the divisions correspond clearly to institutional differences in the way investments are managed, and only secondarily to the nature of the investments themselves.

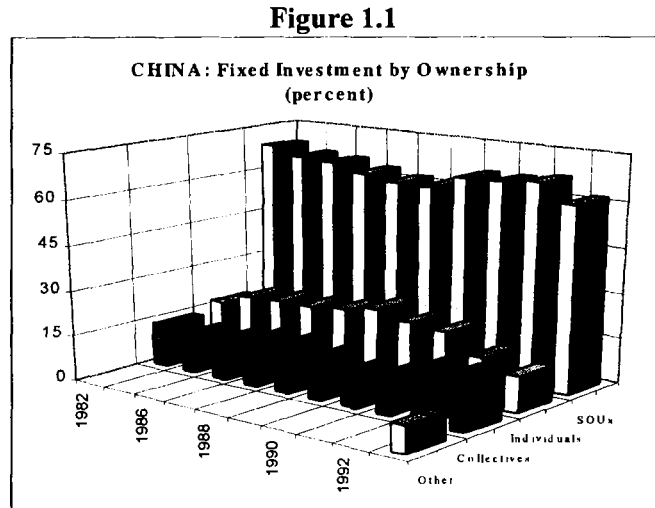
“Capital construction” refers to new projects or major expansions of existing firms that involve significant construction. In practice, the capital construction plan is managed by the State Planning Commission and, at the local level, by Provincial Planning Commissions. The Planning Commission exerts control over capital construction investment in two ways: (1) it approves individual projects and (2) it has predominant influence over the allocation of resources to specific projects or to sectors and regions.

“Technical transformation” (or renovation, replacement or renewal investment) consists primarily of investments carried out by existing enterprises, for which civil works constitute less than 30 percent of total project costs. Initially, this category of investment was established to cover investments made by enterprises out of their own financial resources—retained depreciation funds and, subsequently, retained profits. Thus, this type of investment was distinguished by funding source. However, with the ongoing reform of the investment system, and the accompanying diversification of investors and funding sources, the distinction is no longer clear. Both enterprise funds and bank loans are now significant sources of technical transformation investment. Indeed, 41 percent of technical transformation was funded by domestic credit in 1992 (compared to 28 percent of capital construction); while various kinds of retained funds (not necessarily enterprise retained funds) accounted for 49 percent of technical transformation and 41 percent of capital construction investment. In the current environment, technical transformation investments are not necessarily small in size, nor are they always limited to existing facilities. Technical transformation investments are concentrated in industry: 74 percent of the total in 1992, compared to 48 percent of capital construction. Moreover, management of technical transformation investment is carried out not by the Planning Commission, but by the State Economics and Trade Commission (SETC). In general, the SETC’s surveillance of technical transformation investment is less intrusive than the SPC’s oversight of capital construction. Since projects are on average smaller and more dispersed, and since the organizations carrying out the investment are more likely to be funding them out of their own resources, the SETC does not attempt to control them as closely. Moreover, the banks that lend to enterprises for technical transformation investments have substantially more operational autonomy than is the case with capital construction lending.

“Other” investment simply refers to investment that the Chinese government does not attempt to restrain. This category includes certain specific categories of earmarked funds collected and used in designated fashion. In practice, a few funds account for the bulk of this category. Most important are oilfield depletion allowances (69 percent of the total); highway maintenance funds (22 percent) and mine depletion allowances (6.5 percent) for coal, iron ore and other minerals. These funds are simply left to the discretion of the managing agency. Because they accrue primarily to the centralized petroleum industry, most “Other” investment (72 percent) is carried out by the central government. The government’s attitude is that in these cases, the more investment, the better. Note that “Other” investment bears no relationship to the category of “Other” in funding sources. Most “Other” investment is financed by retained funds.

Since 1990, the government has also separately collected data on “commodity housing.” Before 1990, housing investment is classified according to the sector of the organization or enterprise that carried out the investment. (In other words, housing built by steel mills is classified as steel investment.)

1.9 Dominance and relative inefficiency of the state sector: Despite the growing importance of the nonstate sector in the economy, state-owned units continue to account for the bulk of investment at a relatively stable share of two-thirds (Figure 1.1).⁴ An analysis of the industrial sector confirms the dominance of the state sector in investment despite a steady decline in its share in total industrial output (Table 1.1). In 1982, the state sector accounted for 75 percent of industrial output and some 87 percent of industrial investments. By 1992, the state sector accounted for less than one-half of total industrial output but continued to absorb three-quarters of total investment in the sector.⁵



Note: "Other" investors were included in SOU category prior to 1993.

Source: China Statistical Yearbook.

	<u>1982</u>	<u>1987</u>	<u>1992</u>
Output	74.4	59.7	48.1
Investment	86.5	80.2	74.3

Source: China Statistical Yearbook, various issues.

1.10 The sheer size of the state investment effort is worthy of note (22.4 percent of GDP in 1993) and raises issues of crowding out of nonstate investments. Equally important, however, are the implications of these numbers for the efficiency with which capital is utilized by state-owned units (Figure 1.2). Two mitigating factors are that state-owned units are likely to engage in more capital-intensive activities, and that their output is more likely to be priced at below market

levels. However, in 1993, the state sector accounted for 43 percent of industrial employment—same as its share in industrial output—even while absorbing the bulk of investment resources. Also, by the end of 1992, prices of 90 percent of all consumers goods (in terms of sales value) and 80 percent of industrial raw materials had been deregulated.

1.11 It would appear, therefore, that state industrial investment is much larger than the size of the state sector would warrant. Alternatively put, *the state industrial sector appears to use investment resources less efficiently than the rest of the economy.* Analysis based on fixed asset

⁴ The decline in 1993 (to 61.5 percent) is due to a change in statistical reporting; investments in which the state has a stake (particularly Sino-foreign joint ventures), which were previously included in the state sector, now constitute a new category of investors ("other"). Information is not available to reconstruct the series on the basis of the new convention but the 1993 figure would have to be 70.5 percent to be comparable to earlier years. In 1994, the figure was even higher at 71.3 percent.

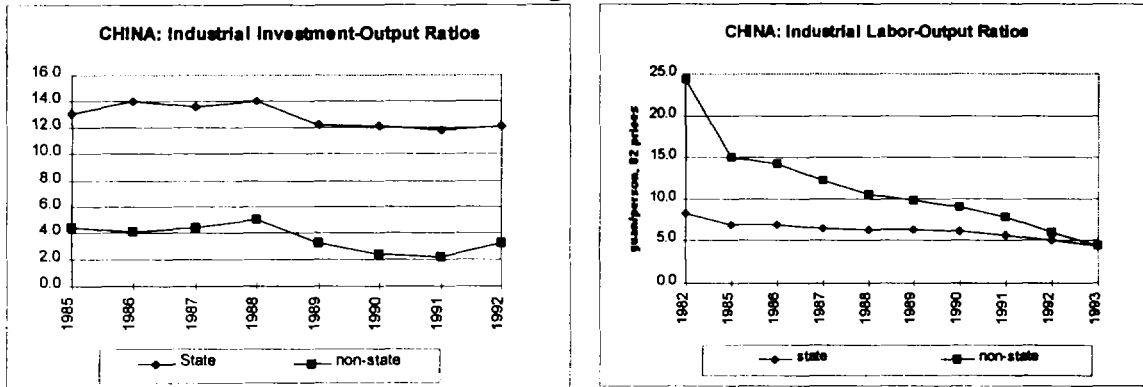
⁵ There is a problem with comparability of the share of the state sector in investment and output as joint-venture enterprises are excluded from the output, but not the investment, of the state sector. Correcting for this (by including the industrial output of these enterprises in the state sector) would reduce the magnitude of the decline in the state share of industrial output; the latter would go from 75 percent in 1982 to 55 percent in 1992.

to output ratios at the subsector level supports this conclusion. These ratios are higher in the state sector for all 40 industrial subsectors for which data are available (Tables 1.2 and A1.1).

Table 1.2: CHINA'S INDUSTRIAL ENTERPRISES: FIXED ASSETS TO NET OUTPUT RATIOS FOR THE STATE AND NONSTATE SECTORS, 1993			
	Original Value of Fixed Assets over Net Output of Industry (All)	Original Value of Fixed Assets over Net Output of Industry (State)	Original Value of Fixed Assets over Net Output of Industry (Nonstate)
National Total:	2.0	2.6	1.2
Grouped by Light & Heavy Industry			
<i>Light Industry -</i>	1.5	1.9	1.2
<i>Heavy Industry -</i>	2.3	2.9	1.2
Selected Sectors			
Coal Mining & Processing	3.7	4.4	1.1
Food Processing	1.4	1.6	1.0
Food Manufacturing	1.7	2.2	1.3
Beverage Manufacturing	1.7	1.8	1.4
Tobacco Processing	0.5	0.5	1.0
Textile Industry	1.8	2.4	1.4
Garments & Other Fiber Products	0.8	1.2	0.8
Furniture Manufacturing	1.3	2.4	1.2
Papermaking & Paper Products	2.7	5.6	1.5
Cultural, Educational & Sports Articles	1.2	1.5	1.1
Petroleum Processing & Coking Products	2.1	2.2	1.2
Raw Chemical Materials & Chemical Products	2.5	3.4	1.2
Medical & Pharmaceutical Products	1.4	1.6	1.2
Chemical Fibers	3.3	3.8	2.9
Rubber Products	1.4	1.6	1.2
Plastic Products	1.8	2.7	1.6
Metal Products	1.1	1.8	1.0
Ordinary Machinery Manufacturing	1.6	2.2	1.0
Transport. Equip. Manuf.	1.4	1.8	0.9
Electric Equip. & Machinery	1.2	1.7	1.0
Electronic & Telecommunications	1.6	2.2	1.2
Electric Power, Steam & Hot Water Production & Supply	6.1	6.1	6.4
Gas Production & Supply	14.2	14.7	6.3
Tap Water Production & Supply	5.2	5.3	4.4

Source: Statistical Yearbook, 1993 and Annex Table A1.1.

Figure 1.2



Source: China Statistical Yearbook, various issues.

1.12 **Strong central government presence.** There has been some decentralization of investment to lower levels of government, but this remains limited especially given the inclusion of enterprise investments in the “local” category (see Box 1.2). The share of central government projects declined from 46.6 percent in 1978 to 37.7 percent in 1993, but remains substantial⁶ (Figure 1.3). In 1978, investment in central government projects amounted to 8.7 percent of GDP, and in 1993 it was 7.9 percent of GDP. During the same period, local government investment increased from 9.9 percent of GDP in 1978 to 10.9 percent in 1992 before climbing to 13.1 percent in 1993. Among central government investments, surprisingly, the share of technical transformation projects increased while capital construction projects declined in importance, accounting in 1993 for only one-fourth of state investments, down from 40 percent in 1978.

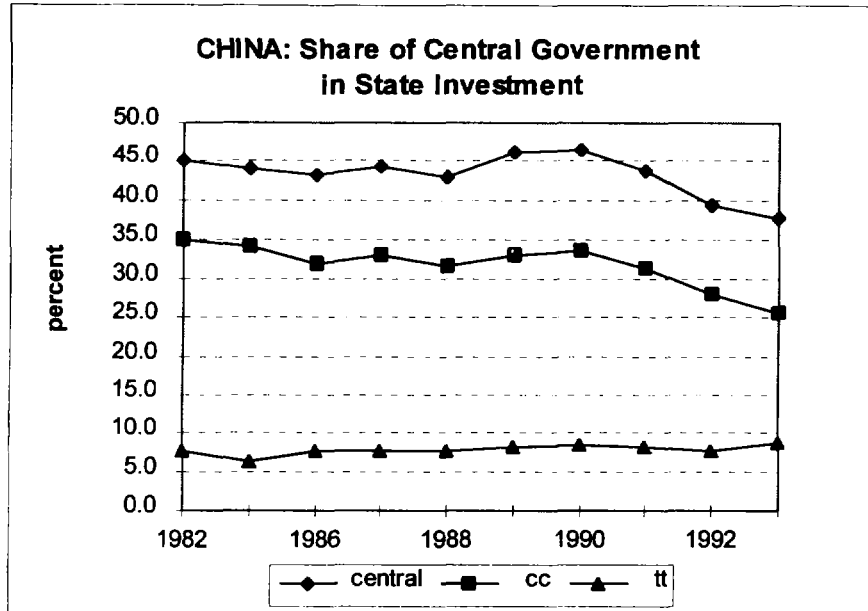
Box 1.2: CENTER VS LOCAL

The Category of “state” investment in China includes both central and local government investment. All state investment is classified according to the level of subordination of the enterprise with the primary responsibility for the investment project. Local projects are those subordinate to the provinces, municipalities, prefectures or counties. Projects can have financial participation from more than one level of government—thus, a province can contribute funds to a central government project, and is often called upon to do so when the project benefits a particular province. For example, most electricity projects are central, but the central government generally requires the provincial government where the project is located to contribute funds. However, for data collection purposes, all the expenditure on such a project is classified as central.

The categories of “central” and “local” are not symmetrical. Central government investment which is coordinated through the State Planning Commission, generally reflects central government policy, and is roughly equivalent to government investment in other developing countries. By contrast, local investment in state-owned units is the aggregate of investment by local governments as such (for example, urban infrastructure investment), and of state-owned enterprises (SOE) nominally under the authority of local governments. In practice, many SOEs have gained considerable autonomy in recent years, and their activities correspond to that of parastatals in other developing countries.

⁶ The 1993 figure excludes housing investment (6 percent of total state investment) as there is no information available on the breakdown by level of government.

Figure 1.3



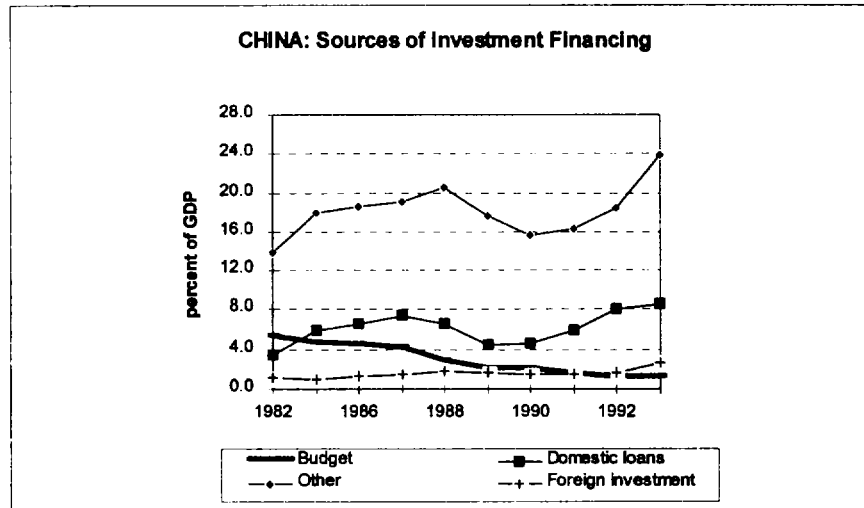
Source: Various Statistical Yearbooks, Statistical Materials. Central share of "other" investment is estimated for 1980-85 and 1990-94, based on data for 1986-89.

Sources of Finance

1.13 Chinese statistics separate funding sources into five categories: budget, domestic credit, foreign capital, own-funds ("self-raised", retained, or extrabudgetary funds), and other. Chinese investment, both in aggregate and in individual projects, relies on a combination of funding sources. The balance of these sources has been changing over time, with a trend decline for the share of budgetary funds, and increasing reliance on domestic credit and own funds (Figure 1.4).

1.14 **Dwindling budgetary resources for investment.** China's large investment effort has been sustained despite a steady decline in government budgetary contributions. Budgetary outlays for investment which financed almost the full amount of state investment in 1978 have since declined steadily as a share of GNP. In the early years of reform, the decline was due to increased enterprise autonomy as SOEs were no longer required to remit all profits to the budget. In later years, however, reduced budgetary contributions were the consequence of a shrinking tax base (as a percentage of GDP). Increased competition that reduced monopoly profits of SOEs contributed to this decline but systemic problems have become increasingly more important. These include increasing resort to legal and illegal exemptions and a weak tax administration which is unable to capture into the tax net a growing number of enterprises, in particular in the nonstate sector.

Figure 1.4



Source: China Statistical Yearbook Various Issues.

1.15 Budgetary and investment data are consistent in showing this steady decline (see Figure A1.1). However, investment expenditures in the budgetary accounts are substantially greater than the figures reported in the investment statistics, which are compiled based on information collected at the project level. Although budgetary data are likely to be more accurate regarding the aggregate level of government investment financing, most of the analysis in this report is based on the investment statistics, for internal consistency and details on sectoral composition. There are two reasons for the discrepancy: the definitions of the two concepts vary in ways which would make the investment data smaller; and some investments funded by the budget are misclassified by the recipient investment.⁷ Judging by the investment data, budgetary funds amounted to only 1.5 percent of GDP and accounted for only 6 percent of state investment in 1993. Information from the Ministry of Finance (MOF), on the other hand, puts budgetary funding of investment at 3.9 percent of GDP, or 17.3 percent of state investment in the same year. In either case, *there appears to be a substantial mismatch between the large government role in making investment decisions and allocating investment funds, on the one hand, and the limited importance of government financial resources, on the other.*

1.16 **Increasing reliance on credit and own funds.** Bank credit for fixed investment has been increasing steadily throughout the reform era. Fueled by high levels of savings, the banking system has played an increasingly important role in transferring household surpluses to the enterprise sector, often in ways that privilege SOEs, and especially state industrial enterprises.

⁷ The investment data refer to completed investment—i.e., to bricks laid and machinery installed; the budgetary data refer to allocations of money. Thus, budgetary allocations transferred to the account of investing units show up as completed investment only after a time lag, and with a certain wastage. Since investment grows annually, the investment data will always be less than the budget data. The misclassification is as follows: the budget appropriates funds which are disbursed by PCBC as repayable, interest-bearing loans. From the standpoint of the individual investment project, these may often be classified as bank loans, even though they are budgetary. In a similar fashion, foreign capital borrowed by the central authority and disbursed through the budget may sometimes be classified as “foreign capital” rather than budgetary funds.

1.17 Several data series are available on fixed investment lending (see Box 1.3). While these differ substantially in the scale of investment credit, they are consistent in showing increasing reliance on domestic credit for fixed asset investment.⁸ Domestic credit, including bonds, financed 24 percent of investment in 1993—equivalent to 9.3 percent of GDP, up from 3.4 percent in 1982. The bulk of this credit takes the form of bank lending. Available information indicates that officially-approved bond issues did not exceed one-third of domestic credit for fixed asset investment in 1992, up from 14 percent in 1987.⁹

Box 1.3: CREDIT FOR INVESTMENT: WHAT IS THE OUTSTANDING STOCK?

There are various sources for data on investment credit which are difficult to reconcile. Domestic loans for investment, as reported in the Statistical Yearbook, include government-approved enterprise bonds in addition to borrowing from the financial system. At the end of 1992, there were some 104 billion Yuan of enterprise bonds outstanding, including those issued by the central government and the state investment corporations (SICs). According to financial data, state banks had a total of 392 billion Yuan worth of fixed investment loans on their books as of the end of 1992. These figures cover only a part of the outstanding liabilities to financial institutions.

There are substantial loans from nonbank financial institutions which fall into two categories. The first consists of rural and urban credit cooperatives, which had between them 196 billion Yuan in loans to nonagricultural enterprises, but do not provide breakdowns into fixed and working capital investment. The second category consists of state-owned or joint stock investment and insurance companies. None of these publish data on fixed asset investment. Most of these institutions are of moderate size, but taken together they probably had loans against fixed asset investment projects of 30-40 billion Yuan at the end of 1992. Nor can it be presumed that the available figures for state banks cover all state bank lending to fixed investment projects. For example, during the first half of 1992, the banks lent 15.9 billion Yuan to investment projects in order to allow them to pay off overdue bills (as a way to clear up the problem of interenterprise debt chains); there are many kinds of special loans, a significant portion of which finance fixed investment; and anecdotal evidence suggests that part of the quota for working capital loans is diverted for fixed investment lending during periods of credit tightening. It is extremely unlikely that all of these loans are included in the aggregate fixed investment lending figure.¹ Total long-term credit outstanding probably exceeds 600 billion Yuan.

¹ Zhongguo Jinrong Nianjian 1993 (Almanac of China's Finance and Banking 1993), pp. 356-57, 373, 424, 438, 457.

1.18 Investment credit goes primarily to the state sector, and in particular to state-run industry. The state sector overall claimed 66.6 percent of fixed investment lending in 1993, larger than its share of total fixed investment. During 1992, 71 percent of state capital construction and technical transformation loans went to industry, again larger than the 57 percent industrial share of that investment (excluding other and commercial housing). Thus, in both 1992 and 1993, about half of all bank credit for fixed investment went to state-run industry, even while state industry accounted for less than 20 percent of GDP.¹⁰

⁸ Investment data place domestic credit for investment, including officially-approved enterprise bonds and borrowing from the financial system, at 293 billion Yuan in 1993. For the same year, financial institutions reported net investment lending of only 127 billion Yuan. The analysis in this section is based on data collected at the project level.

⁹ This assumes that only a small proportion of treasury bonds were used to finance investment.

¹⁰ State-owned industry accounts for 42 percent of gross industrial output and industrial value-added represents about 45 percent of GDP.

1.19 *Allocation of bank credit reflects both the continuing high priority assigned to industrial investment and the priority given to the state sector.* Collective enterprises are actually slightly more dependent upon bank funds for investment than are state enterprises but the explanation lies with the large share of industry in collective investment compared with that in state investment. Foreign invested enterprises, on the other hand, have limited access to bank credit, despite their heavy concentration in manufacturing (61 percent of foreign investment). Individual and private investment is almost entirely self-financed; only 3.6 percent was funded through bank loans, reflecting in part the secondary importance of private ownership of manufacturing enterprises, particularly in capital-intensive sectors (Table 1.3).

	Credit Share	Industry Share
SOU's	25.4	46.6
Collectives	31.0	70.0
Foreign-invested	21.2	
Individual	3.6	

Source: China Statistical Yearbook, 1993.

1.20 **Own-Funds.** An increasing proportion of total investment is carried out with funds generated by the investing units themselves. Exactly 50 percent of total fixed investment in 1993 was carried out with enterprise retained funds, private funds, or other self-raised funds. This suggests that investment as a whole is gradually becoming more sensitive to risk and the cost of funds. The aggregate figures are misleading, however, as the Category of own-funds is a heterogeneous assemblage that covers many different types of financial resources (see Box 1.4 and Table 1.4).

1.21 The extent to which own-funds are allocated freely in response to risk and return varies widely. At one extreme, taking into account household investments in state and collective fund-raising, perhaps a quarter of the total consists of household funds (Table 1.4). Households must allocate their savings among safe but low yielding bank deposits, risky and unregulated—often technically illegal—investments in existing state or collective firms, or household businesses. About half of independent funds are controlled by enterprises.¹¹ The potential uses of these funds are highly restricted. The largest portion, depreciation funds, are supposed to be used for replacement or expansion of fixed assets in the same location and activity as the original assets. Even retained profits are subject to an array of restrictions, though these are less binding on township and village enterprises (TVEs) than on state firms. Finally, another quarter of “own” funds are effectively controlled by governments at various levels. While governments may in

¹¹ These include retained enterprise funds (18 percent of investment) and “fund-raising” (9 percent of investment). The largest component of retained enterprise funds is depreciation funds with retained profits accounting for most of the remainder. Within state-owned industry, the slide in profitability in recent years has taken a toll, and profits are a modest source of investment, accounting for only about 2 percent of total investment. However, retained profits of township and village enterprises, and some transport and communications enterprises, have been substantial. The “fund-raising” category includes issuance of promissory notes and unregistered securities, borrowings, and collection of funds in other forms, but not the proceeds of formally registered bonds, which are classified as domestic borrowing. This category includes significant borrowing of funds from households, but also collections from other enterprises in the form of investments, compensatory trade, and disguised user fees. For example, an electricity plant might collect investment funds in return for a promised supply of electricity at a guaranteed price.

some cases have the ability to shift funds among different uses, and thus face real opportunity costs, this is not generally the case. A large proportion of these funds are earmarked for specific uses. Moreover, government managers are relatively insensitive to the risk involved in investing these funds. Thus, *for about three-quarters of own funds, there are significant restrictions on the extent to which managers can respond to differences in risk and rate of return.*

Box 1.4: OWN-FUNDS (RETAINED AND SELF-RAISED)

Within the state sector, own-funds can be broadly divided into enterprise retained funds (depreciation and profit); funds raised informally; and government retained and earmarked funds. See Table 1.4 for an estimate and breakdown of these funds.

There are a wide variety of retained and earmarked funds. These are best discussed in relation to specific sectors. Since the late 1980s, new earmarked funds have proliferated. Perhaps the most significant is the power development fund, levied by a charge on each kilowatt hour of electricity generated. Although this is essentially an earmarked tax on electricity, it is treated as an "extrabudgetary" fund and managed separately from other budgetary revenues. Levied beginning in January 1988 as a 2 fen per kilowatt-hour surcharge, this fund would have generated 15 billion Yuan in 1992 if it were universally collected. Another important earmarked fund is that for railroad construction, levied at the rate of 1 fen per ton/kilometer. If uniformly levied, this would yield 11.6 billion in 1992. Road maintenance fees (effectively a vehicle sales tax) actually paid out in 1992 came to 14.8 billion. These three funds together came to over 40 billion Yuan in 1992, compared to total own-funds investment of 246 billion—a sizable proportion. Although some localities may not have levied all of these surcharges, the overwhelming majority did. Moreover, there are a range of additional surcharges and fees that some localities levy, including airport construction fees, port construction surcharges, and long distance telephone surcharges. The total amount of such earmarked funds is undoubtedly considerably more than 40 billion Yuan.

These funds have in common the characteristic that they are managed by governmental agencies rather than enterprises. Typically, the provincial line bureaus are responsible for collecting the fees, and provincial planning commission and finance bureau closely supervise their use. Such a procedure has certain advantages, in that funds can be allocated directly to priority projects wherever they are (within a given province). They thus serve as a stop-gap alternative to well-functioning capital markets. However, they have many drawbacks as well. The funds are an alternative to price reform, which would allow similar funds to accumulate at the enterprise level. Instead of allowing enterprises to earn and reinvest these funds, government agencies appropriate and reallocate them. As funds proliferate, it becomes increasingly difficult to maintain accountability and transparency, and abuses mount. As a stop-gap alternative to price reform, these taxes that are not called taxes should be phased out as quickly as feasible.

1.22 **Limited destination for foreign funds.** The Category of foreign funds in the investment figures includes both foreign loans and direct foreign investment. Foreign funds financed 7.3 percent of total investment in 1993, up from 4.9 percent in 1982.¹² Approximately one-half of foreign funds were utilized by the state sector (accounting for only 6 percent of state investments), with joint venture investments absorbing the bulk of the remainder. Wholly-owned subsidiaries of foreign companies accounted for 6.48 billion Yuan of foreign funds in 1993 out of a total of 90.7 billion.

¹² Foreign financing of investments represents yet another area where statistical problems abound. In particular, there is a wide divergence between FDI flows as recorded for balance of payments purposes and foreign financing of investment as recorded in the investment data. FDI flows in 1993 were some \$26 billion, or 150 billion Yuan at the official rate—significantly higher than foreign financing of investment in 1993, which also includes foreign loans.

1.23 Recent data show overwhelming concentration of foreign investment on the competitive manufacturing sectors. Of a total investment stock of \$23.2 billion at the end of 1992, 61 percent has been in manufacturing. Textiles and clothing account for 13 percent of the total; electric machinery and electric power for 9.4 percent; plastic products for 4.6 percent; and nonmetallic manufactures and other miscellaneous manufactures for 8 percent of the total. Although direct investment in infrastructure sectors has become significant in 1993-94, it does not yet show up in available Chinese data sources.

Sectoral Composition of State Investment

1.24 Despite reforms in trade, tax and pricing policies and considerable diversification in ownership, the industrial sector¹³ continues to account for a large part of state investment. SOU investments in industry accounted for 8.1 percent of GDP in 1993, roughly unchanged since the early 1980s (Table 1.5).^{14 15} While industrial sector investment maintained its share of GDP during the reform periods, the marginal investment effort was directed at other sectors. In particular, infrastructure absorbed more than one-half (or 3.4 percent of GDP) of the total increase in the state investment effort since 1982 (Figure 1.5). Changes in sectoral investment shares reinforce this point. Between 1982 and 1993, the share of infrastructure in total investment increased from 19 to 29 percent while industry's share declined from 49 to 36 percent. The table also shows that social sector investments, which stagnated as a share of GDP, accounted in 1993 for a mere 3.3 percent of state investments, down from 5.4 percent in 1982.

1.25 *Any future increases in infrastructure and social sector investments (as a share of GDP) will have to come from a reallocation of investment resources rather than through an increase in the overall investment effort.* At 37 percent of GDP, the Chinese investment effort is already remarkable.

Table 1.4: FINANCING OF TOTAL FIXED INVESTMENT, 1993 (in percent)

Sources of Finance	% of Total
Budgetary	3.7
Bank Loans	23.5
Foreign Investment	7.3
Own-Funds (Retained and Raised)	50.0
Private Firms & Households	10.0
Joint Stock & Coops	3.0
State & Collective	37.0
Enterprise retained	18.0
"Fund-raising"	9.0
Government earmarked	10.0
Other ^{/a}	15.6

^{/a} By definition, "other" is a hard category to pin down, particularly since more than 40 percent of "other" funding goes to "other" sectors. Two important subcategories, however, are "coal conversion funds" designed to finance the conversion of oil-burning furnaces and generators to coal; and revenues raised from the lease of land-use rights, particularly in coastal areas.

Source: 1994 Statistical Yearbook, pp. 140-141. Breakdown of own-funds based on sample surveys, Zhongguo Jinrong Nianjian 1993 [Almanac of China's Finance and Banking 1993], p.268, 277-78 and Zhongguo Touzi Nianjian 1993 [China Investment Yearbook 1993], pp. 16-17.

¹³ Excluding power generation and water supply which are included in infrastructure.

¹⁴ The 1993 figure is not comparable to earlier years as it excludes investments (3.2 percent of GDP) by foreign-owned entities and companies in which the state has a stake. Assuming these investments were in industry, the 1993 share of the industrial sector would rise to 11.3 percent.

¹⁵ Industry also accounts for 70 percent of collective investments—an additional 4 percent of GDP.

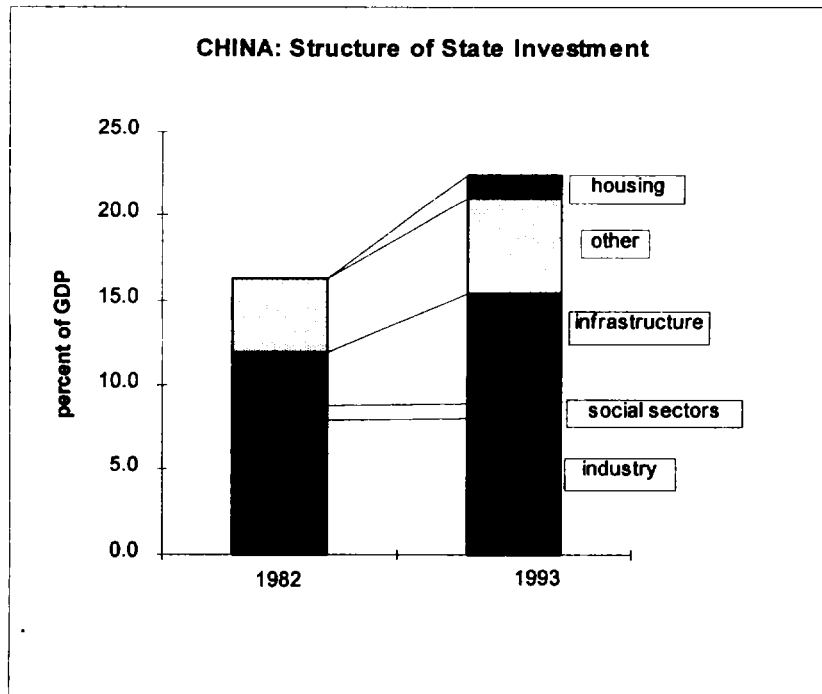
Table 1.5: SECTORAL COMPOSITION OF STATE INVESTMENT

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993	1993 ^a
% of GDP											
Infrastructure	3.1	4.4	4.9	4.9	4.5	3.9	4.1	4.5	5.1	6.5	6.5
Social sectors	0.9	1.3	1.3	1.2	1.0	0.8	0.8	0.7	0.8	0.8	0.8
Industry	7.9	9.1	9.9	10.2	10.2	8.0	7.7	7.7	8.2	8.1	11.3
Other	4.3	4.8	4.3	4.0	3.9	3.1	2.2	2.6	3.8	5.5	5.5
Housing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1.0	1.2	1.9	1.4	1.4
Total	16.3	19.6	20.4	20.3	19.6	15.9	15.7	16.7	19.8	22.4	25.6
% of State Investment											
Infrastructure	19.1	22.6	23.8	24.3	23.1	24.3	26.3	27.0	25.7	29.2	25.5
Social sectors	5.4	6.6	6.2	5.9	5.3	5.4	5.0	4.4	3.9	3.7	3.3
Industry	48.8	46.4	48.8	50.3	51.7	50.6	48.7	46.1	41.3	36.0	44.0
Other	26.7	24.4	21.2	19.5	19.9	19.7	13.7	15.6	19.4	24.7	21.6
Housing	0.0	0.0	0.0	0.0	0.0	0.0	6.4	6.9	9.6	6.3	5.5

^a Including joint ventures in the state industrial sector to make 1993 comparable to earlier years.

Source: China Statistical Yearbook, various issues.

Figure 1.5



Note: There was no separate housing Category in 1982.

Source: China Statistical Yearbook Various Issues.

C. PUBLIC INVESTMENT: ACHIEVEMENTS TO DATE

1.26 In this section, the discussion will focus on China's achievements in the area of "public" investment as distinct from "state" investment. The term public is used in its economic sense rather than to connote ownership. This section will provide an evaluation of Chinese efforts to channel resources into sectors with public goods characteristics, based on a pragmatic definition of the concept, which includes investments in infrastructure and the social sectors.¹⁶ This will involve analyzing investment flows as well as the state of the country's physical and social infrastructure stock.

Overview: China's Public Investment in International Perspective

1.27 The following discussion focuses on infrastructure and social sector investments of the state sector, at different levels of government.¹⁷ Infrastructure consists of power, transportation, telecommunications, urban water supply and rural water conservation. Social sector investment comprises education and health and welfare construction.¹⁸ Some attention is also given to investment in primary energy extraction, since government investment policy in this area has evolved in tandem with policy toward the electric power sector.

1.28 By this definition, *China has been reasonably successful in maintaining a substantial flow of resources into "public" investments.* Public investment surpassed 5 percent of GDP in 1984, and has generally maintained at least that level since. It was cut along with total investment during the 1989-90 contractionary period, but it subsequently recovered. Since 1992, public investment has grown rapidly, and it reached 7.4 percent of GDP in 1993 (Figure 1.6). This compares favorably with the pattern in other developing countries. The 1994 World Development Report (WDR) estimates that public infrastructure investment averages some 4 percent of GDP for developing countries, with a range of 2 to 8 percent of GDP, and recommends a target of 7 percent of GDP for the near term. By this standard, China fares very well indeed. State infrastructure investments represented 6.5 percent of GDP in 1993, well above the developing country averages and close to the recommended investment effort. Social sector investments are low, by comparison. State sector health and education expenditures in 1993 were respectively 1.5 and 2.0 percent of GDP (investments alone were only 0.9 percent of GDP), below levels in a set of comparator countries, including India (2.0 and 3.3 percent), Indonesia (1.0 and 3.6 percent) and Malaysia (7.4 and 2.9 percent) (Figure A1.2).¹⁹

1.29 As discussed earlier, China's accomplishments, especially in infrastructure, reflect the impressive savings and investment levels achieved over the last decade, and were predicated upon an increased resource mobilization effort rather than a shift in allocation. Indeed, infrastructure investment accounted for no more than one-third of state investment and less than

¹⁶ This definition includes the provision of goods and services which are clearly private in the sense of rivalry and excludability; a more rigorous definition of the term public good is discussed in Chapter 4.

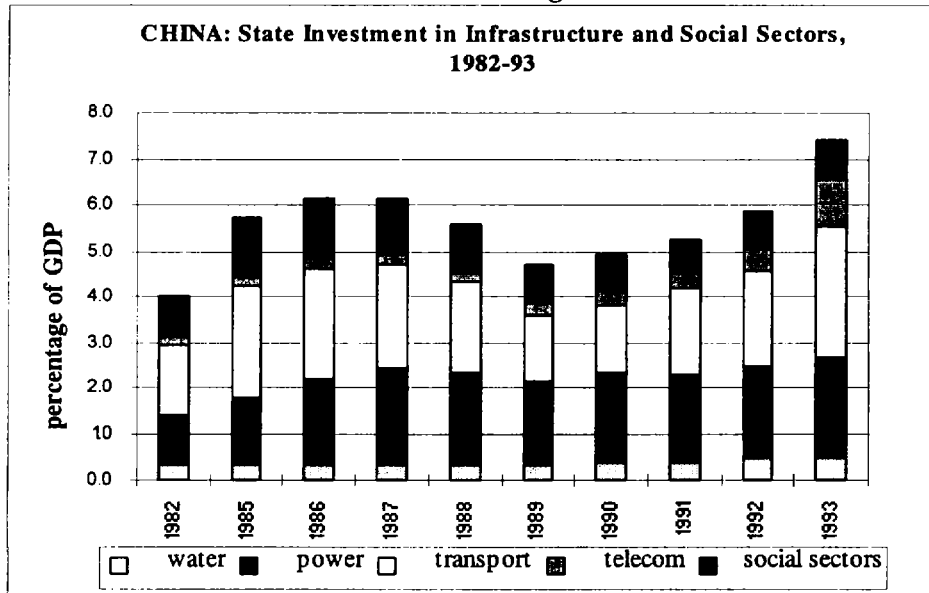
¹⁷ Inadequate disaggregation of nonstate sector investment data precludes a systematic analysis of global investments in infrastructure and social sectors. However, the bulk of nonstate investment is in the industrial sector (70 percent for collectives) and in rural construction (70 percent for individuals).

¹⁸ Available figures also include investment in sports facilities and some "cultural" activities.

¹⁹ In *Investing in Health*, World Development Report, 1993, China's total health expenditures were estimated at 3.5 percent of GDP in 1990, with the public sector accounting for 2.1 percent of GDP. In the same year, the average for all developing countries stood at 4.7 percent for total and 2.3 percent for public sector health expenditures.

20 percent of total investment. These figures compare with averages cited in the 1994 WDR of 40-60 percent of public and 20 percent of total investment for a sample of developing countries.

Figure 1.6



Source: China Statistical Yearbook, various issues.

1.30 Figures A1.3-A.1.8 provide international comparisons for the state of China's social and physical infrastructure.²⁰ China's infrastructure is significantly above expected levels (given per capita income) for access to safe water and electricity; somewhat above for paved roads; and somewhat below for telephone mainlines. Additional indicators show the evolution of China's infrastructure (Figures A1.9-1.21). While increases in per capita paved roads (since 1980) and electricity production (since 1970) are impressive, per capita coverage of all roads (including unpaved), railroads and telecommunications appears stagnant since 1965. This is particularly striking for telecommunications (and to a lesser extent for roads) when comparator countries, like Thailand, Mexico and Brazil, have registered significant gains during the same period and reflects China's late interest in the telecommunications sector.²¹

1.31 While overall progress has been substantial, China's rapid rate of growth has placed considerable stress on the country's infrastructure. Even in power generation, where capacity more than doubled between 1980 and 1990, this was substantially below (40 percent) expected increases based on the rate of growth of the economy.²² The strains on China's infrastructure are reflected, in particular, in the increased congestion in the railway network which carries some 57 percent of all freight and 45 percent of all passenger traffic, and in the frequent power losses and brownouts, despite measures to ration the supply of electricity and new connections.

²⁰ Source: World Development Report, 1994.

²¹ Given the recent spurt of growth in telecommunications investments, it is likely that China's indicators for these sectors would look comparatively better in 1994.

²² World Development Report, 1994 and Kali Kondury, *East Asia and the Pacific: Investment in Infrastructure, Past Trends and Future Requirement*, October 1994.

1.32 Social indicators (A1.7, A1.8) have remained strong both for education and health, reflecting in part achievements made in the prereform period. Among education indicators, adult illiteracy rates have declined, but are still above rates in Brasil, Indonesia and Colombia, while primary school net enrollment remains high at 97.2 percent in 1992. Primary pupil/teacher ratios have been declining and are substantially below comparator countries; this suggests that there is scope for cost savings. Among health indicators, life expectancy has improved substantially since the early seventies and now stands at 69 years; China's relative ranking among the countries selected for this comparison has declined, however, as Colombia, Korea, Malaysia and Mexico all post higher life expectancy at birth. Infant mortality rates were halved (from 80 to 40 per 1,000 live births) between 1967 and 1977 and declined further since 1987 to 32 per 1,000 live births in 1992; among comparator countries, only Malaysia has done better. Finally, China fares well with respect to the prevalence of malnutrition under age 5, especially given its low per capita income.

1.33 National indicators hide, however, substantial disparities in social services and status by region, ethnicity and gender. A recent World Bank report provides considerable evidence for the continued poor status of health and education indicators among the poor.²³ The report shows that children in many poor villages are as likely to be illiterate today as they were 10 years ago, and throughout much of the country, children are now less likely than before to attend secondary school. More than 80 percent of the 4.8 million school age children who dropped out of school in 1990 were girls, mostly from rural and remote mountainous areas and from minority groups, and there are still more than twice as many illiterate women as men. A 1989 survey of health services and status in 300 poor counties found that infant mortality averaged 68 per 1,000, about 50 percent more than the national average. Maternal mortality averaged 202 per 100,000 for the survey counties, more than twice the national average. There is little evidence of significant change in health services or status in the poor areas during the 1980s—the health status of the absolutely poor appears to be at least as miserable at present as it was in the late-1970s.

Sectoral Trends

1.34 In general, fluctuations in “public” investment parallel fluctuations in state investment as a whole. However, there is considerable variation among the sectors. **Energy** investment (including coal mining and gas and oil extraction, as well as power generation and distribution) has been a priority of government officials since early in the reform period. Energy investment climbed steadily during the mid-1980s, and reached 4.8 percent of GDP in 1987 (Figure A1.22). That level has been sustained since. The power sector alone displays a very similar pattern, climbing to 2 percent of GDP in 1987 and maintaining that level subsequently. In 1992 and 1993, electricity investment again began to increase more rapidly than GDP, a trend that was maintained in the first half of 1994. The energy sector has been insulated from the investment fluctuations that have been so disruptive to the rest of the economy. Energy investment declined only slightly during the contraction of 1989-90, and as a result its share of total state investment reached a historic high of 29 percent. Conversely, during 1993, as total investment surged, energy investment's share of the state total slipped somewhat to 20 percent.

1.35 Both rural **water** conservancy and urban water supply (Figure A1.23) present pictures of fairly steady growth. Both sectors were stable at relatively low levels between 1985 and 1990.

²³ *China: Strategies for Reducing Poverty in the 1990s*, World Bank, 1992, Report No 10409-CHA. See also *China: Regional Disparities*, World Bank, 1993.

Since that time, both have grown fairly rapidly. In 1993, investment in these two sectors together accounted for 0.5 percent of GDP.

1.36 Overall, **transport** investment has fluctuated sharply along with investment fluctuations as a whole (Figure A1.24). From a temporary low of around 1.2 percent of GDP in 1981, transport investment climbed steadily to 2.5 percent of GDP in 1985, remaining near that level through 1987. The economic crisis of 1989 pushed transport investment down to only 1.4 percent of GDP, but it began to climb sharply after 1991, and reached a high of 2.9 percent of GDP in 1993.

1.37 Trends in transport subsectors show substantial variation. Railroad investment is extremely unstable, and the most strongly correlated with overall investment fluctuations. During the major contractionary episodes of 1981 and 1989, railroad investment was cut sharply to about 0.5 percent of GDP in both cases. During expansionary phases, railroad investment tends to rise above 1.0 percent of GDP, as it did in 1993. By contrast, other components of transport investment are much more stable. Though not entirely immune from cyclical fluctuation, nonrail transport has generally maintained a range of 1-1.3 percent of GDP, but climbed to nearly 1.8 percent of GDP in 1993.²⁴

1.38 **Telecommunications** was not a priority sector during the first half of the 1980s and investment remained roughly constant through the 1980s at 0.2-0.3 percent of GDP (Figure A1.25). Since then, however, telecommunications investment has soared, reaching 0.5 percent of GDP in 1992 and over 1 percent in 1993. The share of telecommunications investment in GDP can be expected to increase further in the next few years. During the first half of 1994, telecommunications investment increased 98 percent in nominal terms compared to the year previous period.

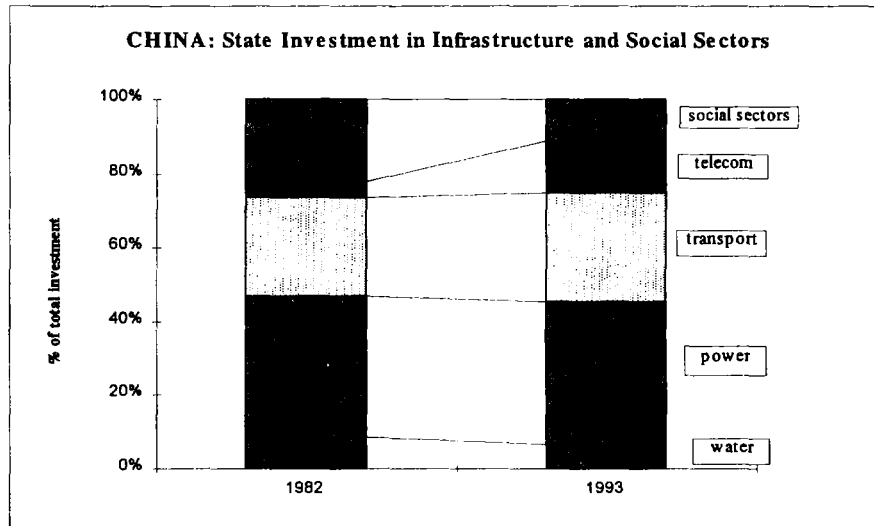
1.39 Investment trends in the **social sectors** have been very different. Investment in education and health peaked as a share of GDP in 1985, and has since slipped (Figure A1.26). The decline is particularly marked in the case of education investment, which reached 1 percent of GDP in 1985 before slipping back to only 0.6 percent in 1990. The decline in health investment was slightly less precipitous, going from 0.3 percent to 0.2 percent in 1990. *The social sectors together have experienced an erosion in investment from 1.3 percent of GDP in 1985 to only 0.8 percent in 1993, notwithstanding the general surge of state investment that has occurred during that time period.* As a result, social sector investment declined from 6.6 percent of total state investment in 1985 to only 3.7 percent in 1993. Weak social sector investment seems directly attributable to the state's continuing fiscal difficulties and the absence of any satisfactory alternative financing arrangements.

1.40 This review of "public" investment shows that the Chinese investment effort has been substantial and generally adequate. The exception is the eroding share of social sectors (Figure 1.7) which is a cause for concern. China's public, and in particular infrastructure investment, effort must nonetheless be considered a major success of Chinese economic policy during the past decade, and one of the obvious explanations for rapid growth during the economic

²⁴ With the new statistical system for investment adopted in 1993, a large category of subsidiary transportation services was carved out of the previous subsectoral categories for transport. Trends in the sectoral distribution of transport investment are, therefore, difficult to gauge but the surge in railroad investment in that year is well attested.

transition. Unlike most transitional economies, the Chinese do not need to mobilize additional resources in order to reach the minimum acceptable levels of infrastructure investment. *There is, however, a clear case for devoting additional resources to the social sectors so as to prevent the erosion of substantial past achievements in these areas, which are crucial for the long-term sustainability of China's growth objectives.*

Figure 1.7



Source: China Statistical Yearbook, various issues.

Level of Government

1.41 The central government controls about 40 percent of total state investment, a proportion that has been fairly constant in recent years (Table 1.6). The telecommunications and power sectors are dominated by the central government whereas local governments perform the bulk of investment in water supply, health, and education. Transport investment, is divided between the central and local governments.

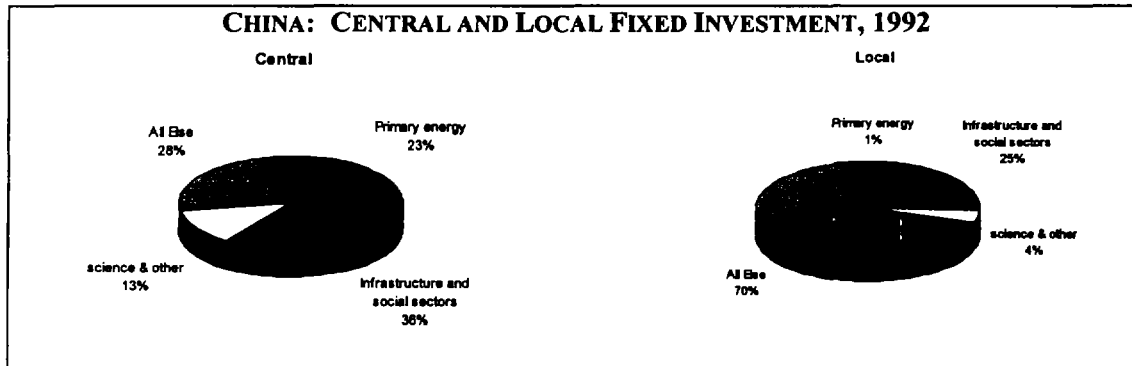
	Billion Yuan	Center (%)	Local (%)
Total SOU investment	527.4	39.2	60.8
Infrastructure	136.2	53.4	46.6
Water	11.6	16.1	83.9
Transport	56.0	40.7	59.3
Power	54.3	67.0	33.0
Telecom	14.3	81.5	18.5
Social sectors	19.5	19.9	80.1
Education	15.6	22.2	77.8
Health	3.8	10.5	89.5

1.42 The sectoral composition of central and local investment varies significantly. The central government spends a greater share on infrastructure, provides nearly all the investment in coal and gas and oil and has substantial outlays for scientific research and "other", both of which presumably involve national security considerations. As a result, in the central government's investment outlays, infrastructure, social sectors, primary energy, and science and other together account for 72 percent of central government investment (Figure 1.8).

Source: SPC Investment Research Institute.

Only 28 percent of central government investment is available for other uses, and in practice much of this is taken up by investments in industrial sectors characterized by substantial economies of scale: metallurgy, chemicals, and some machinery sectors, particularly transportation machinery. By contrast, only 30 percent of local investment goes to infrastructure, social sectors and primary energy, and science. Local entities thus have 70 percent of total investment to commit to potentially competitive sectors: ordinary manufacturing, commerce, housing, etc.

Figure 1.8



Source: SPC Investment Research Institute.

2. INVESTMENT SYSTEM: EVOLUTION, PLANNING AND FINANCE

A. ECONOMIC REFORMS AND THE INVESTMENT SYSTEM

2.1 The contemporary investment system can best be understood in terms of the interplay between the planned economic system and powerful trends generated by economic reforms (see **Annex** for a detailed description of the institutions and processes involved in China's investment and finance planning). Of particular importance are: (i) the diversification of economic activity, which limited the government's direct role in most income-generating sectors; and (ii) the decline in budgetary resources, which reduced substantially the government's capacity to finance investments. Despite these decentralizing forces, however, much of state investment remains centrally planned, with administrative controls rather than market forces determining its allocation. This reflects government efforts to maintain control over investment decisions by influencing the allocation of resources through its elaborate investment and financial planning mechanism. Rather than accommodate decentralizing forces in the economy, investment reforms have often sought ways to regain government control. This has often conflicted with the second objective of reforms: to increase the efficiency of state investment.

The Planned Economic System

2.2 Before economic reform, government managed nearly all new fixed asset investment, and the majority of investment was funded through the government budget. The division of labor between enterprises and government was not carried out according to any consistent or economically meaningful principles. Enterprise investment was supposed to be concentrated in upgrading and expansion of existing firms, while government handled new investments and major expansion projects, but even this distinction was blurred in practice. More importantly, investment priorities were set in a unified manner by the central government, and local government investments merely replicated those priorities. Thus, even rural industry investment reflected the heavy industrialization priorities that guided Chinese development policy in the 1950s. Central government, local governments, and enterprises all invested in the same priority sectors.

2.3 At the time, the government had an ample supply of financial resources at its disposal, because of its monopoly control of industry. Profits in state-owned industry were large relative to GDP, and these were remitted to the budget, and shared between central and local levels. Thus, the investment program was fully funded from budgetary revenues (or from enterprise retained funds). The government did not borrow to finance fixed investment, nor were fiscal deficits significant.

Economic Diversification

2.4 The onset of reform in 1979 changed this system. The government monopoly over industrial production and investment was terminated and new producers, including TVEs and new locally-run state firms, entered the economic arena. Not surprisingly, entry was most rapid in those sectors where profits were high, and entry barriers low. As a result, ample new investment flowed into many manufacturing sectors, creating a rapid expansion of supply. New entry was important both in decentralizing the state-owned system and in diversifying the ownership structure of the economy. Although many of the new entrants were state-owned enterprises controlled by local governments, investment from collectives and individuals also increased rapidly. From a starting point in 1978 when over 90 percent of investment was in the state sector, the state share dropped quickly to 69 percent in 1981. This sharp decline was especially significant because much early entry was into labor-intensive sectors where investment needs were modest.

2.5 Diversification of investment and entry of new producers were of limited importance in two major areas: infrastructure services and capital intensive industrial sectors characterized by substantial scale economies. Entry into infrastructure sectors was modest in part because of public goods characteristics and tendencies toward natural monopoly. However, *the technological characteristics of the goods or services in question were in practice less important than government pricing policy*. Many infrastructure sectors with significant revenue potential were often handicapped by the government's pricing policies. As a result, most infrastructure sectors had low profitability, and entry of new firms into transport, power supply, and communications was initially anemic.

2.6 Entry was also modest into manufacturing sectors characterized by substantial economies of scale. However, in these sectors—petroleum, metallurgy, chemicals, and transportation equipment—the same entry barriers also ensured that profits remain relatively high. State pricing policy was not a major obstacle to profitability (except in coal and petroleum extraction) so entry barriers protected initially high profits. Thus, although new entrants did not become a significant source of new investment, existing producers were able to generate substantial funds from their own earnings for investment. However, the government tended to maintain relatively close supervision of these “strategic” sectors, and the government monopoly remained generally intact.

2.7 Significant efficiency gains were made in the process of economic diversification, largely due to substantial liberalization in product markets. Further progress towards the establishment of a market economy has been hampered, however, by continued inefficiencies in the allocation of financial resources. With inadequate progress in the reform of banking institutions, slow development of capital markets and continued government direction of credit toward the state sector, collectives, individuals, or joint ventures continue to have difficulties in assembling the large financing packages required to enter capital-intensive sectors at an efficient scale even after more than a decade and a half of reform. *As a result, in crucial capital-intensive sectors, entry has remained limited, output growth has lagged behind needs and the efficiency enhancing benefits of vigorous competition have not been realized.*

Erosion of Government Budgetary Resources

2.8 Budgetary revenues declined from 35 percent of GDP in 1978 steadily to 14 percent of GDP in 1993. In large part, this was due to the separation of government and enterprise accounts, with enterprise retained earnings increasing at the expense of budgetary revenues. However, the differential entry process discussed above was also a factor. Because entry was disproportionately into those sectors with initial high profitability, surplus profits were competed away. The decline in revenues and the need to protect certain kinds of government spending, such as education and administration, reduced budgetary savings from 15 percent of GDP in 1978 to 1.7 percent in 1993. Given a low tolerance for budgetary deficits, budgetary outlays for investment declined rapidly, from 14 percent of GDP in 1978 to only 4 percent of GDP in 1993.²⁵ By the 1990s, the government had very little to spend on investment.

2.9 Accelerating economic growth increased demand for infrastructure even while budgetary investment resources dwindled. The central government responded by devoting an increasing proportion of its investment resources to infrastructure and “strategic” industrial sectors, while cutting back its intervention in competitive sectors. The result was the emergence of a *de facto* division of labor between competitive sectors with investment from local state-run units and nonstate units, and central government-dominated sectors. By 1992, state firms produced less than 20 percent of garments, plastic products, and simple metal manufactures, and less than 45 percent of building materials, electric machinery, textiles, and electronics. However, state firms produced more than 90 percent of the electricity, crude oil, and refined product, and more than 75 percent of the finished steel and chemical fibers.²⁶

Investment Reforms

2.10 Early reforms of the investment system were aimed at increasing the efficiency and accountability of resource utilization by state-owned units, by controlling project cost overruns, emphasizing financial viability (not just physical production targets), and increasing the cost of (government-supplied) capital. In addition, government efforts focused on finding mechanisms to ensure continued funding to “priority” projects in the face of declining budgetary funds.

2.11 **Improving Accountability.** Prior to 1978, China allocated all investment funds as grants, without repayment provisions or interest charges.²⁷ The price of investment funds to SOEs was usually zero. The only cost of capital for the enterprise was the opportunity cost of using its own retained funds to purchase new assets. As a result, investment reform focused initially on converting investment financing from grants to loans. Experiments with interest-bearing budgetary loans were begun as early as 1979, but it was not until the end of 1984 that a decision was made that all state investment financing for profit-earning sectors ought to be on a repayable basis. After 1985, the share of government investment disbursed as loans increased; at

²⁵ According to budgetary statistics compiled by the Ministry of Finance.

²⁶ Approximated by adding village-level rural output to the sales data of independent accounting units. Source: 1993 Statistical Yearbook, pp. 417-18, 426, and 442.

²⁷ China was the only socialist country in this position. The Soviet Union and all the Eastern European socialist countries has adopted some form of capital charges as a result of partial reforms during the 1960s. China, undergoing the Cultural Revolution at that time, missed this stage in the evolution of the socialist experiment.

the same time, however, loan repayments were made deductible for tax purposes, equivalent to debt forgiveness of up to 55 percent of the amount due.

2.12 In 1988, six "investment corporations" (SICs) were established under the SPC to serve as investment funds, managing existing assets, receiving loan repayments, and reinvesting funds as repayments were received.²⁸ They were set up to improve the collection of budgetary loans, not least through greater attention to the financial viability of projects, and to reduce project costs (especially cost overruns). This was to be achieved through a "contractual" arrangement between SPC and the SICs whereby the relevant SIC would undertake a specific project at a specific cost. Underruns would constitute additional resources for the SIC, freely available for investments outside the mandatory SPC-determined central government investment program. A significant shortcoming of the arrangements was that no sanctions were specified in the case of either cost-overruns or nonpayment of loans. Furthermore, in the absence of any risk-capital with which to absorb losses, the SICs could not be held financially responsible.

2.13 As Table 2.1 shows, the share of government investment disbursed in loan form increased through 1990. In 1990, 95 percent of the budgetary funds provided to industry, transport, and telecommunications were interest-bearing loans, and only 5 percent grants. In health, education, science and technology and government administration, by contrast, 97 percent of budgetary investment funds were disbursed as grants. After 1990, however, the share of grants increased again both in the economic sectors such as industry and transport, and overall. This occurred as evidence was accumulating that the program had failed to achieve its initial aims.

	Industry, Transport & Telecom	Agriculture	Health, Education & Administration	Other	Total
1988	18	86	97	68	40
1989	16	87	97	53	38
1990	5	60	97	76	30
1991	9	65	97	88	35
1992	13	75	97	75	39
1993	13	75	97	61	39

Source: SPC Investment Research Institute.

2.14 The government has received very little in the form of repayment for past investment loans, frustrating hopes that repayment of budgetary loans would become a significant new

²⁸ This section draws on two internal World Bank papers by Peter Harrold, *Investment Reform in China: The Role of State Investment Corporations*, September 1989, and Peter Dittus, *China: The State Investment System*, April 1989.

source of fiscal resources for government investment.²⁹ The significance of shifting to repayable loans was undermined by gradual implementation. Initially, only high profit projects were required to repay investment funds. Subsequently, the requirement was extended to all “profitable” projects. In practice, this has meant that whenever repayment difficulties arise, a project may always hope to be reclassified as a nonprofitable project. Actual repayment of investment funds has largely been optional. Even if repayment were universally enforced, interest rates on budgetary loans have only occasionally been above the rate of inflation. For a period in 1990-91, real interest rates on budgetary loans were significantly positive. However, both before and after that episode, real interest rates have either been zero or significantly negative.

2.15 The experience of the investment corporations varied, but on the whole was not good. One investment corporation was already paying penalty interest by 1990. The Machinery and Light Industry Investment Corporation had the most success, since the sectors it serviced were relatively profitable and smaller projects are appropriate: by the end of 1990, it had loaned out 1.6 billion Yuan and received 247 million in repayments.³⁰ Banks such as PCBC, which acted as the agent in disbursing these budgetary loans, are now carrying substantial nonperforming loans on their books, albeit as the agent of the government rather than on their own account. As of end-1993, the volume of agency loans in PCBC’s books was Yuan 324 billion, equal to about 70 percent of lending financed from own sources, or 80 percent of its deposit base.³¹ These numbers clearly illustrate the extent to which PCBC had been a fiscal agent of the government in the past.

2.16 **Mobilizing Resources.** Finding itself perennially short of funds, the government undertook a series of measures short of real fiscal reform designed to increase the flow of resources into priority sectors. *First*, beginning in 1982, it created a program of priority, or key state, investments which were given preferential access to allocated materials (at low state-set prices), funds, and local government support services. *Second*, new financial resources were created (within the broad Category of extrabudgetary funds) that were tied to specific public goods sectors. *Third*, credit resources (including bank loans and stock and bond issues) were earmarked for use in state-approved projects. *Fourth*, the government maintained, and in some ways strengthened, the traditional investment plan and approval mechanism in an attempt to restrain nonpriority investments and to encourage priority investments.

2.17 **The key state projects**, which cover some 10-15 percent of state investment, were instrumental in China’s substantial progress on infrastructural development. Initially, the

²⁹ From the inception of budgetary loans until the end of 1990, a total of slightly over 110 billion was disbursed on central government projects, but 30 percent of this amount was subsequently forgiven. Of the slightly over 70 billion of loans which were not forgiven, the contracts specified that 14 billion should be repaid by the end of 1990, but only 68 percent of that amount was actually repaid. During 1991, another 2.4 billion in contracted repayments were due, but only 78 percent of this was actually repaid, and an additional 14 billion in debt was forgiven or rescheduled. *Zhongguo Jinrong Nianjian 1992* [Almanac of China’s Finance and Banking 1992], Beijing: Zhongguo Jinrong, 1993, p. 296.

³⁰ Chen Jinhong, “There is much that can be done in securing the return of capital construction investment,” *Zhongguo Touzi yu Jianshe*, 1990: 10, pp. 37-38; “An undertaking that is just beginning to flourish,” *Zhongguo Touzi yu Jianshe*, 1992: 1, pp. 23-24.

³¹ Considering that entrusted loans tend to have longer maturities and a much poorer repayment record than PCBC’s own loans, the value of PCBC entrusted loans in the books is underrepresented because of their higher exposure to inflation.

program was also devoted to metals and chemicals. As those competing uses have faded, it has been able to give a larger share to transport (Table 2.2). Energy of all kinds, including power, remained strong throughout the period. The 1994 plan for key state projects reached some 100 billion yuan and showed a large increase in allocations to the telecommunications sector—one third of the total.

Table 2.2: KEY STATE PROJECTS: SECTORAL COMPOSITION

	1982-85	1986-89	1993
Total, Billion Yuan	18.9	30.8	76.8
(as percent of total)			
Transport	18.4	16.2	34.8
Electric Power	18.8	26.4	25.7
Water Conservancy	0.5	0.1	0.9
Telecommunications	0.7	1.3	0.3
Nonindustrial	0.8	2.6	0.6
Infrastructure	39.2	46.6	62.2
Primary Energy Extraction	22.1	17.5	18.7
Infrastructure & Energy	61.3	64.1	80.9
Memo: Metals & Chemicals	32.9	30.4	13.7

Source: SSB Investment Section 1991; SPC Investment Research Institute.

2.18 Through various mechanisms designed to influence the flow of extrabudgetary funds, the government has been successful in allocating substantial investment resources to the state sector, in general, and to certain priority projects, in particular. While economic growth has been impressive, *the heavy-handed nature of government interventions has compromised the development of the financial system, the efficacy of the budget process and enterprise efficiency.*

2.19 **Recent Reforms.** Recently the government has taken a number of further steps to establish a more market-oriented basis for investment decisions. These include a clearer definition of the role of the various types of investors as well as of the categories of projects they are expected to be involved in, establishment of the SDB as a means of separating “policy” loans from commercial lending, streamlining SPC’s approval system, and the introduction of a new system of investment managers (*yezhu*) with greater and more clearly specified contractual responsibility for project implementation.

2.20 Investments are now to be classified into social, “basic industry and infrastructure” and competitive projects, with the intention of linking each type of project with the main types of investors and sources of funds. This is an important first step towards delineating the respective responsibilities of government and enterprises. The separation of “policy” and commercial lending through the creation of SDB is also significant. This policy aims to remove quasi-fiscal responsibilities from the specialized banks and PBC, thereby facilitating the commercialization of the banking sector and monetary management. It also seeks to increase accountability for the use of budgetary and quasi-fiscal funds and makes the nature and extent of directed lending more transparent. The policy to shift project management responsibility from line ministries/government departments to enterprises will also help to increase accountability of

investors, and separate project management from sector-wide planning and policy-making responsibility. It is also intended to make the investor accept the risk of the investment. A related aspect of this policy is the requirement that investors put a minimum of equity into new projects (10 to 20 percent).

2.21 Finally greater flexibility in project approval is helping to decentralize project decision-making: only projects with a total cost in excess of Yuan 50 million have to be submitted to SPC. And, if projects over this limit can be funded from local government or self raised funds, they can be approved by the provincial authorities. In fact, if an enterprise can finance a project, whatever its size, entirely from its own resources, and arrange for its construction itself, it does not have to submit it to government for approval, provided it meets all legal requirements, and is in line with the government's industrial policy. In the future, once commercial and policy banking have been separated, it is the government's intention that investments in "competitive" projects would not be subject to SPC approval regardless of size or source of financing.³²

2.22 The measures mentioned above are all steps aimed at lessening the use of administrative controls over investment and decentralizing decision-making. In that sense they help to prepare the transition to a system in which the market will play a central role in allocating investment resources.

B. ISSUES

2.23 The government investment program remains large in the aggregate, and the modest budgetary resources available are dispersed over a broad range of activities. The dispersion of government effort combined with limited fiscal resources creates serious difficulties in directing resources to areas where the need for direct government involvement is greatest. At the same time, the perceived need to support investment in many areas leads the government to maintain an onerous investment approval mechanism and to direct bank lending to designated state projects in a way that crowds out other investment. Additionally, given limited tax autonomy and credit constraints imposed by the center, local governments have responded by setting up a plethora of extrabudgetary funds, undermining the efficacy of the budget process. Finally, current incentives continue to encourage overinvestment (given low cost of capital and limited investor assumption of risk), aggravating economic cycles and lowering investment efficiency.

2.24 China's transition from a planned to a market economy requires both the development of market institutions and a fundamental change in the role of the government in economic decisions. While progress has been made in spinning off the commercial activities of ministries and local governments into state-owned enterprises, much remains to be done to clarify further the rights and obligations of ownership as distinct from day to day management. The domain of investment decisions and funding is one where China has made little progress. In 1992, the government adopted decisions designed to enhance the ability of state-owned enterprises to function as commercial entities; of the 14 "rights" specified in this decision, granting enterprises autonomy in investment decisions has been among the most problematic.

2.25 The Chinese authorities face an important challenge in further sharpening the distinctions between public ownership, on the one hand, and the provision and financing of public services, on the other. While the government will reduce its involvement in SOEs to the

³² Assuming no budgetary or SDB funds.

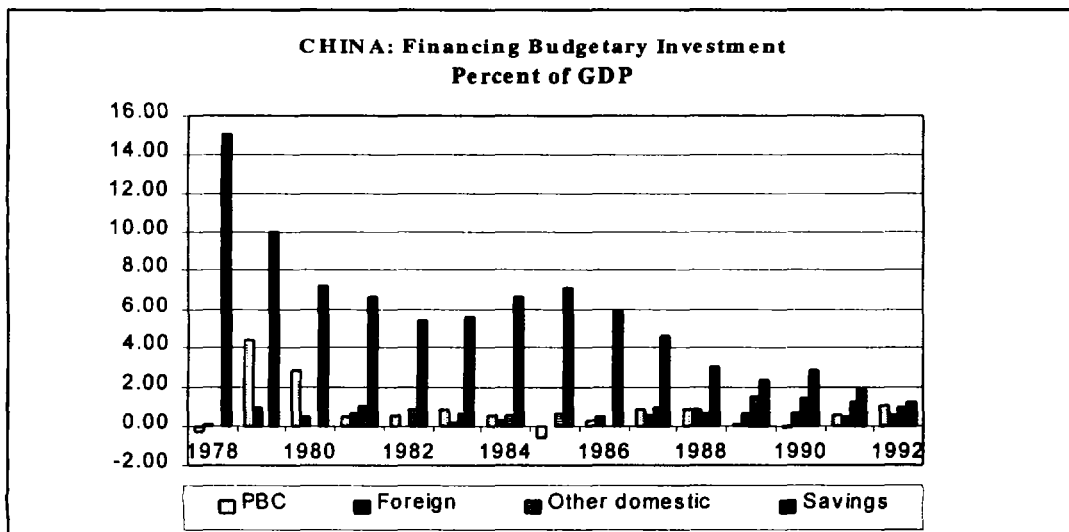
more restricted exercise of ownership rights, it will remain intimately engaged in the institutions, mechanisms and financing requirements for the provision of public goods. At the same time, further delegation of authority, which is one of the objectives of reform, will make it more difficult to ensure that the pattern of investment is in line with the government's development priorities. How to balance the often conflicting aims of decentralization and control the level and composition of investment planning is a fundamental question facing the authorities.

2.26 This section is organized around the principal issues arising from the current investment planning and finance system. These cover issues in direct government financing of investments which can occur through three channels: the budgetary accounts, extrabudgetary accounts and the central bank's quasi-fiscal activities. The discussion focuses in particular on the role of the budget in financing public investment; center-local relations in investment finance; proliferation of extrabudgetary funds and prospects for their rationalization; and reducing reliance on PBC funds. The remainder of the section discusses the implications of the government's pervasive role in investment decisions for financial sector development, marcoeconomic instability and investment efficiency.

Budgetary Finance and the Dispersion of Government Effort

2.27 Since 1978, budgetary investment has declined strongly, both as a percentage of GDP and as a percentage of total expenditures. Whereas in 1978 over 43 percent of expenditures, or about 15 percent of GDP was devoted to capital expenditures, this had declined to about 20 percent of the budget, or 2.6 percent of GDP by 1994.³³ This development was driven by the precipitous decline in budgetary savings. As budgetary resources have declined, extrabudgetary funds and PBC's quasi-fiscal activities have gained in importance with adverse consequences for effective budget and monetary management. The share of bonds and PBC finance in overall budgetary investments has thus increased since 1978 (Figure 2.1).

Figure 2.1



³³ MOF data.

2.28 Despite the shrinking share of budgetary investment funds, the government has continued to invest in nearly all sectors of the economy. In 1992, budgetary investments were made in 26 of the 36 industrial sectors that recorded significant investment. While there is a good case for government financing in sectors where potential for cost recovery is limited, in China, *the financing of investment bears little relationship with the economic characteristics of given sectors.*

2.29 Financing for most sectors is provided through a very similar mix of retained funds, bank loans, budgetary funds, and foreign investment (Table 2.3). It is particularly striking how little infrastructure financing varies from the financing of overall investment, especially with respect to the role of budgetary funds. (See also Tables A2.1-A2.2).

	Budget	Loans	Retained, Self-Raised	Foreign	Other
Social Service Facilities					
Education	25.2	4.5	60.9	3.3	6.1
Health	13.9	6.0	72.4	3.1	4.5
Infrastructure					
Rural Water	39.6	7.0	35.1	5.1	13.4
Urban Water Supply	4.7	23.4	53.6	13.6	4.9
Transport	7.4	22.6	56.0	7.7	6.2
Electricity	4.7	29.3	35.7	10.2	20.1
Telecommunications	2.7	9.4	72.7	12.6	2.7
Industry					
Coal	21.2	28.0	35.8	4.7	10.4
Gas & Oil	4.1	10.5	61.2	17.7	6.6
Metallurgy	1.2	35.1	47.6	11.6	5.2
Refining	2.8	37.8	39.4	4.8	15.1
Chemicals	2.0	40.9	31.2	17.0	8.8
Transport Machinery	8.8	44.4	35.1	7.5	4.2
of which: Autos	3.5	54.0	35.9	3.1	3.5
Machinery	3.5	54.0	35.9	3.1	3.5
Electronics	5.9	50.5	27.4	13.0	3.2
Infrastructure Investment	7.4	23.1	58.4	9.3	11.7
All Investment	6.3	30.4	46.6	8.0	8.7

Source: SPC Investment Research Institute, 1994.

2.30 Only rural water, health, and education rely significantly more on budgetary funds than does investment as a whole. Power and telecommunications are substantially less reliant on budgetary funds than investment as a whole, and these are the infrastructure sectors dominated by the central government. While the central government controls these strategic sectors, they now generate substantial revenues on their own, and do not require much in the way of central

government budgetary resources (see Table A2.3 for details of sources of funding for electricity investments). Indeed, infrastructure investment overall is characterized by a somewhat greater importance of own-funds, and less reliance on bank loans, than is investment as a whole. Conversely, budgetary participation is especially high in the coal industry, where budgetary contributions (representing 16 percent of total budgetary funds for investment) have clearly been provided as an alternative to deregulation of historically low coal prices.³⁴ Equally striking is direct budgetary investment in “strategic” industrial sectors. Gas and oil, transport machinery, and electronics all receive significant budgetary contributions, notwithstanding the fact that these are commercial manufacturing sectors devoid of public goods characteristics. Transport machinery and electronics, moreover, are highly profitable in the Chinese context due to high import duties. Overall, industry receives almost 5 percent of its investment through the government budget, only slightly below the 6.3 percent of total investment received through the budget, and the 7.4 percent of infrastructure investment funded through the budget.

2.31 The government’s investment effort is thus too dispersed to have sufficient impact on sectors with traditional public goods characteristics. The erosion in social sector investments discussed in Chapter 1 is one unfortunate outcome of misplaced government priorities. Because the scope for budgetary financing will remain limited for some time until tax administration is modernized and the tax base expanded, there is a pressing need to direct budgetary resources where the need for government involvement is greatest.

Financing Local Government Investment: Efficiency, Equity and Macroeconomic Control

2.32 The *de facto* allocation of expenditure responsibility by level of government in China appears broadly consistent with international practice although *de jure* assignation would enhance transparency, reduce overlap, improve coverage and assist long-range planning. Financing local investment poses several challenges, however. Local government capital expenditures can be financed by local government savings, borrowing, and capital transfers. In China, reforms in intergovernmental fiscal relations introduced in early 1994 aim to reduce the local share in total tax revenues without a commensurate reduction in expenditure responsibilities. An intergovernmental grants scheme is envisaged to allow local governments to maintain the provision of their services. In the absence of local tax autonomy, alternative sources of funds assume particular importance for local government investment capacity. The discussion below focuses on the relative merits of local borrowing and a capital grants scheme. The future of extrabudgetary funds, which are particularly prevalent at the local level, are discussed subsequently.

2.33 **Local Borrowing.** China’s 1994 Budget Law forbids local government borrowing. However, many local enterprises that provide public services can borrow from banks and on the capital market—despite their dependence on government subsidies of various kinds which often makes them *de facto* government agencies. This creates contingent liabilities for local government, and given the lack of transparency, is less easily controlled than explicit government borrowing. Financing local government capital expenditures by savings alone restricts intertemporal efficiency, and is therefore undesirable. On the other hand, local government borrowing may affect macroeconomic stability, or may be a contingent liability for the central government if the latter is forced to bail out local governments in financial trouble.

³⁴ Most coal prices were decontrolled in 1993-94. This might relieve the government of the responsibility to invest directly in coal mining.

Governments around the world, therefore, seldomly allow unrestricted capital market access for local governments (see Box 2.1).

Box 2.1: LOCAL GOVERNMENT BORROWING

The macroeconomic implications of unrestricted capital market access for local governments can be contained only when capital markets discipline local governments that borrow too much—by increasing risk premia in interest rates or denying access altogether to those that are fiscally irresponsible. The literature on market discipline identifies four conditions for this to work:

- First, capital markets must be relatively free and open so that interest rates can respond to the demand for loans and the risk profile of the borrower;
- Second, lenders should possess enough information on the fiscal performance of the borrower to fully assess creditworthiness. This information is usually provided by the borrowers voluntarily, as failure to do so would result in exclusion from the market. In many economies, rating agencies such as Standard and Poor and Moody's provide ratings for borrowers, which are a necessary condition for listing on securities exchanges;
- Third, the central government and the state banks must be able to credibly commit not to bailout a borrowing government in the case of imminent or actual default. In many countries, there are regulations governing default by a subnational government. The conditions of bailout are generally so severe that borrowers seek to avoid them at all cost.
- Fourth, the borrower must respond to market signals. This requires in general a certain level of scrutiny from representatives of local constituents, who will in the end bear the burden of financially irresponsible behavior of local authorities.

The United States and Canada rely on the market to restrict local government borrowing and although crises have occurred, the system has worked reasonably well. Others, such as Germany and the Scandinavian countries, do not restrict overall access to capital markets, but limit borrowing to investment outlays. In addition, many countries put additional restrictions on borrowing which limit the overall debt service that a subnational government can assume.

In Australia, borrowing by the States is coordinated in the Loan Council. All borrowing by central, state and local government and public enterprises is decided in the council, consisting of the prime minister of central government and the prime ministers of the six states. Decisions on the annual allocation of loans entitlements across the states and central government require unanimity, but failing that, the central government prevails. The Loan Council only allocates the right to borrow, and actual borrowing is the decision of the individual state and central government. The central treasury administers the issue while the central bank acts as an issuing agent.

2.34 Incomplete financial market reforms, a nascent capital market and the lack of transparency in fiscal accounts of both central and local governments make local government borrowing in China undesirable at this stage. This situation, however, implies that efficiency gains are unexploited. Moreover, current arrangements are also problematic. Local government borrowing through enterprises under their direct control poses substantial risks; the allocation of capital transfers through the planning system distorts local preferences and may reduce local fiscal effort. China's authorities should therefore consider a program of capital market and fiscal reforms that would in the future give local governments access to capital markets.

2.35 **Capital Transfers to Local Governments.** In 1995, the central government budget provides Y 245 billion in grants to local governments, or over half of total central expenditures. The bulk of these grants, Y 190 billion of "tax refunds", relates to the new tax arrangements in effect since 1994, which assign the majority of tax revenues to central government but guarantee local governments at least the 1993 revenue base. The tax refunds finance the general budgetary outlays of local government and are not earmarked for specific purposes. The rest of the central

grants are earmarked for such purposes as social security, health and education, price subsidies and SOE subsidies. No specific capital grants are listed in the budget, although the specific purpose grants may contain grants for investment projects.

2.36 The central government may want to influence the level and pattern of investment in lower levels of government for equity reasons and regional development concerns. In China, local government entities receive capital transfers from central government. For revenue generating projects, these are usually loans, and for nonrevenue generating projects they are grants. The transfers are allocated by SPC on a project by project basis for large and medium sized projects, and on a province by province basis for small projects. These allocations do not appear to follow explicit criteria, and are decided in negotiations between central and local planning authorities.

2.37 An alternative to the allocation of capital grants on a project by project basis is a general capital transfer scheme. This would relieve central authorities of project selection and approval responsibility and place more responsibility and discretion at lower levels of government. Experience with transfer schemes is varied (see Box 2.2).

2.38 Separate capital transfers may not be efficient. Transfers from central government usually aim to increase local governments' capacity to perform a bundle of functions, or to perform a specific function in which central government takes interest. Providing capital grants for public service delivery biases local government decisions toward capital formation. However, the rationale for decentralizing the function in the first place is that local governments have better information on local demand and cost conditions. Distorting local government choice toward capital formation may therefore be inefficient. A general grants scheme that takes into account the capital needs of the functions to be performed by local government is preferable, as it leaves the choice between capital formation and recurrent expenditures to local government.

Proliferation of Extrabudgetary Funds

2.39 Given high investment demand and limited financing, extrabudgetary funds are proliferating at all levels of government. China has an increasing amount of extrabudgetary funds generated from public services (see Box 2.3). These fiscal extrabudgetary funds (FEBFs) are estimated to finance about 3.6 percent of GDP of investment.³⁵ For local governments, which control most of these funds, they have become an important source of revenues, sometimes amounting to 40-50 percent of budgetary funds. Some of the FEBFs come from user charges, others are surcharges on prices, or taxes. While rules have been laid down as to who should approve the establishment of such funds (usually the State Council) and who should manage them, these rules are not always observed.

2.40 Many of the FEBFs are earmarked for purposes such as investments in electricity, highways, and pollution control. Earmarking should be distinguished from user charges. User charges are principally prices for excludable, private goods provided by the public sector, such as water and electricity. Financing certain publicly provided private goods from user charges collected and managed by the delivering agencies provides no special problem for budgeting, except for the governance issues that also play a role in earmarking.

³⁵ FEBFs amounted to 4.2 percent of GNP in 1993, or about 30 percent of budgetary revenues.

Box 2.2: CAPITAL TRANSFERS: INTERNATIONAL EXPERIENCE

Australia has an extensive system of current grants, administered by the Grants Commission. General purpose (untied) capital grants from central government to state governments never played a large role, and declined in importance over the years, to be abolished altogether in 1994.

Some countries use explicit criteria for allocating capital transfers among subnational governments. The rationale for choosing a formula allocation of capital transfers is predominantly that of equity. Using explicit, objective criteria also reduces the scope for rent seeking, and will reduce negotiations and lobbying.

India allocates capital transfers—both grants and loans—by means of a formula, approved by the National Development Council. After determining the overall availability of funds, the Development Council sets aside 30 percent for 10 “special states.” These funds are distributed on the basis of state-formulated projects, in the form of 90 percent grants and 10 percent loans. The other 70 percent of the funds is distributed to the other 15 states, with 60 percent weight for population, 25 percent for state per capita income, 7.5 percent for fiscal management factors, and 7.5 percent weight for special problems. The grants/loan ratio for these states is 30/70. In addition to these capital transfers, current transfers by the Finance Commission, and central government projects in the states add to the states’ investment resource envelope. In general, the transfers of the Planning Council and Finance Commission have equalizing properties, but the central projects, and the States’ own access to capital have a regressive effect on the distribution of investment resources.

In Indonesia, provincial, district and village level governments receive general development grants from central government. When they were established, the use of the grants was almost completely restricted to development expenditures. In recent years, however, these restrictions were relaxed, and current expenditures can now be financed from them. The village development grant can only be used for buying material, and labor is to be provided by the village. The formula for the provincial share is based for 85 percent on equal shares for each province, and the remainder on the area of the provinces. For the District development grants, each district receives an equal sum accounting for 11 percent of the total in 1992, and a share based on population, constituting the remaining 89 percent. Each village receives an equal amount in village development grants. Apart from these general development grants, Indonesia has a number of specific grants, in part for development purposes such as road improvement grants, and in part to cover both current and capital expenditures for certain government functions, such as the primary school grant.

In Korea, the Local Transfer Fund provides finance for predominantly capital expenditures for roads, regional development and water conservancy projects. The fund is fed by earmarked taxes, and distributed according to a needs-based formula. The National Treasury Subsidies are specific grants for certain capital expenditures on a project by project basis.

In the European Union, various schemes for regional equalization of public investment exist, administered by the European Investment Bank (EIB), the European Regional Development Fund (ERDF), and the European Social Fund. These institutions disburse over 60 percent of their funds to regions with a per capita income less than 75 percent of the EU average. The ERDF is the main fund for regional structural adjustment, and finances predominantly on a grant basis large infrastructure projects, and to a lesser extent, industrial projects. The Fund used to finance individual projects, but since reforms in 1989, it now contributes to financing the regional development plans of backward areas. The ERDF’s funding is usually complementary to that of the government of the country with the backward region. The EIB funds projects on near commercial terms, but its resources are—like those of the ERDF—directed for more than two-thirds to structurally weak regions. The EIB not only finances projects directly, but also uses loan guarantees to enable public and private entities in the regions to raise funds on the capital markets themselves. Since 1994, the EIB administers the European Investment Fund, that provides guarantees and equity participation for small and medium sized enterprises, again predominantly in backward regions.

Box 2.3: OFF-BUDGET AND EARMARKED FUNDS

There is a multiplicity of off-budget accounts which are specifically earmarked to finance construction at various levels of government. A Yuan 0.02/Kwh electricity surcharge is destined for new construction of power plants. It is collected by the local power bureau and the funds are managed by the PPCs and the MOF. In addition, a Yuan 0.004/Kwh surcharge destined to the Three Gorges Project is collected and appropriated directly by MOF.

The Ministry of Communications manages a road construction fund that collects a vehicle purchase fee (equal to 10 and 15 percent of sales price for domestic and imported cars, respectively).¹ In turn, provincial governments may collect fees that are earmarked for highway construction and maintenance: (i) a 15 percent tax on gross revenues of freight and passenger transport companies (part of which is used for road construction); (ii) a monthly fee on car ownership (25 percent of which is for investment); and (iii) local collections of fuel tax in excess of agreed targets may be used to finance local investment in energy and communications. Provincial road construction funds are managed by the PPCs. Proceeds from road tolls can also be set aside to repay construction loans or to finance new roads. In addition, there may be some smaller fees set by the municipality.

There are railway construction funds at the central and provincial levels. The Ministry of Railways levies a 1 fen per ton/km; the Fujian provincial government, for instance, levies an additional 1 fen per ton/km. The petroleum development fund (that accumulated the proceeds from taxation of the quota of petroleum not sold at the price fixed by the State) was abolished only recently with the liberalization of coal prices.

There are other charges on airports, harbors, long-distance telephone, and other large infrastructure facilities that go into specialized funds. These charges represent effective price increases and are meant to be transitional arrangements, to be eliminated as price reform proceeds. These funds must be approved by the State Council. In most cases, various line government departments, rather than the relevant enterprises themselves, are responsible for raising and using the funds. It is not clear how much of these funds is used for current operations as opposed to investment.

Proceeds from land-right transfers constitute another source of extrabudgetary funding. Revenues from leasing of land accrue to the municipalities, which must pass on about a third of collections to the central government. These funds are not specifically earmarked, although the bulk appears to be used for capital construction.

Municipal governments rely on a peculiar amalgam of budgetary and extrabudgetary resources to finance urban infrastructure. In fact, there is little rationale for the division of funds into budgetary and extrabudgetary categories. Many of the extrabudgetary funds at the disposal of the municipal government are actually local taxes on goods and services. Moreover, the budgetary and extrabudgetary funds are actually amalgamated into a single "Urban Maintenance Fund" and budgeted directly by the municipal financial authorities.

In Zhengzhou city, for example, total budgetary outlays in 1992 were 793 million *yuan*. Urban infrastructure construction and maintenance amounted to 205 million *yuan*, or just over one-quarter of the municipal budget. However, only a minority of this 205 million *yuan* consisted of budgetary funds, in the form of the 88 million *yuan* urban maintenance tax, which is levied as 7 percent of turnover taxes (including product, business and value-added tax) collected in the city. The remaining funds, which are from surcharges levied on electricity, water, and other public services and from hook-up fees charged to developers, are considered "extrabudgetary." The full breakdown is as follows:

<u>Zhengzhou Urban Infrastructure Funds (million <i>yuan</i>)</u>	
Urban Maintenance Tax (budgetary)	88
Local Surcharges (extrabudgetary)	34
[of which: electricity]	[23.5]
[water]	[6.0]
[post & telephone]	[2.8]
[public transport]	[1.7]
Other Fees and Charges (extrabudgetary)	83
[of which: developer hook-up fees]	[57.5]
TOTAL	205

¹ For more on highway finance in China, see "China: Highway Development and Management Issues, Options and Strategies," World Bank Report No. 11819-CHA, dated February 24, 1994.

2.41 Earmarking sets aside a certain share of a tax for a specific goal by rules separate from the general budget procedures (Box 2.4). Thus, general revenue is kept outside the regular budget process, but is designated for a specific type of expenditure. Examples of earmarking in China are the surcharge on the turnover taxes designated for urban construction, and the extrabudgetary charges on retained earnings for Energy and Transportation. Currently, the Environmental Protection Agency is preparing for environmental taxes to be earmarked for environmental projects. Revenue sharing among levels of government is also conceptually equivalent to regional earmarking of general revenues. The increasing dependence on earmarking undermines the efficacy of the budgetary process and investment planning. Reform in this area is likely to be highly contentious, however, and will require addressing the revenue needs of local governments and enterprises which benefit from earmarked funds.

Box 2.4: EARMARKING: WHEN IS IT JUSTIFIED?

Earmarking constrains the choice of government in allocating funds. This can only lead to welfare improvements if it corrects other imperfections in the budgetary allocation process. Practical economic considerations provide some justification for earmarking. Earmarking can protect high-priority expenditures from inefficiencies in the budgetary process; it may reduce resistance against the taxes levied; and it may increase efforts to raise the revenues, if this is done by the organization that needs it for its own expenditures.

However, there are also a number of theoretical and practical objections against earmarking. In practice, it is difficult to match the earmarked share of a tax with the exact expenditure needs of a given function. This problem is exacerbated in China's inflationary environment and would require frequent adjustments of the earmarked rates. Moreover, in the case of capital expenditures, balanced budgets are usually not desirable. But if the agencies that use earmarked funds do not have the right to borrow then deficits would reintroduce the interaction with the general budget, thereby defeating the purpose of the earmarking.

Earmarking may bring government expenditures out of line with current priorities, notably when these change fast, as they would in a transition economy like China. More generally, earmarking undermines the authority of the legislature over the budget. Moreover, in practice, earmarking seldom achieves its goal of isolating certain expenditures from intervention, as earmarking rules are regularly changed in time of budgetary pressures. In China, a good example of this is the change in intergovernmental relations that took place in 1994 under the pressure of the decline in the central budget. Finally, earmarking does not do away with the problem of allocating resources, but the budgetary decision is merely turned into a decision on what agency gets the earmarked funds. For instance, road agencies and environmental agencies may both put claim on petrol taxes, thereby competing for the same tax base. Earmarking is still widely used in countries in which the budgetary process is imperfect, such as in Africa. However, in many western countries earmarking has been given up in favor of general budgetary allocations. Many Latin American countries that used extensive earmarking in the 1960s and 70s have strongly reduced this practice in the course of the 1980s, which saw great improvements in budget procedures in the aftermath of the debt crisis. Earmarking has in general been more successful, when it is done for a broad use (social security, revenue sharing), and less successful when the purpose is narrowly defined (housing, highways).

If earmarking is to be used as a budgeting tool, a number of rules may reduce its disadvantages: (i) earmarking works better in an environment where the beneficiary agent has some statutory autonomy, with a transparent governance structure, and incentives and capacity for proper use of the funds; (ii) estimates of earmarked funds to various agencies should be shown in the annual budget; (iii) a "sunset clause" may be appropriate for automatic reconsideration of the arrangement; and (iv) measures to reduce the inefficiencies in the budget process that earmarking tries to overcome should complement the introduction of these arrangements.

Reducing PBC's Quasi-Fiscal Activities

2.42 PBC no longer finances public investment directly, as it is expressly forbidden from direct lending or holding equity stakes in enterprises. In the past, PBC assumed direct responsibility for lending to poverty-stricken areas, but this also appears to be no longer the case. Since 1994, the PBC also no longer finances budgetary investment, because the government

cannot borrow from PBC, does not have an overdraft facility at PBC, and PBC cannot purchase Treasury securities. However, PBC has provided the specialized banks with ample credit earmarked for government policy purposes. These *policy loans* include loans for: (a) financially viable ventures with long payback periods such as power and transport infrastructure; (b) technological renovations; (c) rural development and poverty alleviation; and (d) working capital for loss-making SOEs. It is estimated that 60 to 80 percent of PBC credit to specialized banks is devoted to policy loans, amounting to 2.9 or 3.9 percent of GDP (see 1994 CEM). For PCBC, for example, at end 1993, PBC credit stood at Yuan 170 billion, roughly equal to 42 percent of PCBC's deposit base or 37 percent of its own-lending portfolio. PBC credit to PCBC exceeded PCBC's deposits with the PCB by 54 percent. Thus, PCBC was heavily supported by PBC credit, reflecting its deep involvement in policy lending.

2.43 PBC policy lending through the specialized banks is at subsidised rates, compared to prevailing interest rates for nonpolicy purposes. In addition, the repayment record for policy loans is abysmal, adding to the subsidy element in these loans. Since specialized banks do not carry credit risk on policy loans, the losses are financed by the PBC. The PBC finances this *quasi-fiscal* deficit by means of reserve money creation. It is only because of the high and growing demand for liquidity of China's economy that this practice has not led to higher inflation than the economy has already experienced.³⁶

2.44 The new policy banks were set up to reduce PBC financing for policy purposes. This would be done by: i) reducing the pool of policy loans in the system through better targeting (separation of policy and commercial lending should reduce leakages); ii) improving repayment performance through more rigorous project selection; and iii) express budgetary support for projects not viable at prevailing interest rates. The success of this effort will depend on the size of policy lending required by government (including for current expenditures) and SDB's ability to deliver a sound portfolio of projects. While the direct links between PBC and policy objectives have been severed, PBC remains vulnerable to government pressure for indirect policy lending (e.g. rediscount facility for SDB bonds) through the specialized banks. The recently promulgated Central Bank Law places PBC under the leadership of the State Council, curtailing PBC's autonomy in the conduct of monetary policy.

Pervasive Government Control Over Investment

2.45 With the liberalization of pricing, trade and marketing policies, investment approval and control over financial resources remain the primary instruments available to the government for guiding investment decisions. Through an elaborate system of investment selection and a high degree of coordination between investment and financial planning (see [Annex](#)), the government continues to maintain control over the level and composition of investment, and state investment in particular. This control extends beyond government resources (budgetary and fiscal extrabudgetary funds) to domestic bank credit, foreign borrowing, enterprise bonds and equity shares. Specific plans determine the utilization of these resources, which are in turn guided in large part by the annual investment plan managed by SPC. *Financial planning in China therefore serves the dual purpose of managing monetary aggregates and directing investable resources towards designated projects.*

³⁶ See 1994 CEM for further analysis of this issue.

2.46 There is an obvious *tension between increasing decentralization in economic decision making, on the one hand, and continued reliance on detailed investment programming and strict centralized control over the allocation of credit to influence investment patterns, on the other.* Markets already play a vital part in most of the Chinese economy; the exception (in addition to labor and housing) is investment planning and credit allocation where administrative controls still prevail. To consolidate the advantages of the transition to a market economy also requires liberalization of the financial markets. But, the system of investment planning, with its current reliance on quantitative allocation of financial resources, constitutes a major impediment to financial sector reforms. It also contains incentives which aggravate economic cycles and compromise investment efficiency.

2.47 The principal issue in the investment system is *how to accommodate China's public investment financing needs in ways which do not compromise the further development of the financial system and increased enterprise autonomy.* Given a pool of national savings, there has to be a mechanism for displacing on the margin other types of investments, in both the state and nonstate sectors. This is particularly important in an environment of *investment hunger* induced by soft enterprise budget constraints, weak financial discipline and negative real interest rates.

2.48 The current vehicle for securing financing for public investment—and for rationing other uses—from the existing pool of financial savings is the annual State credit plan. When the credit plan is successful in directing resources to their intended uses, it undermines enterprise autonomy in investment decisions. When it is unsuccessful, as in recent episodes of credit leakages, it assumes an expansionary bias as PBC financing is sought to ensure availability for priority uses. The necessary resort to periodic credit “crack-downs” to restrict access to credit markets, especially for nonstate units, has further destabilizing effects in macroeconomic cycles; uncertainties in the investment climate actually induce overinvestment in periods of looser credit as units seek to take advantage of bank credit while it is available. In sum, *the credit plan serves well neither its aggregate demand management purpose nor its objective of channelling resources to priority projects.*

2.49 While the objective of separating policy and commercial lending is good, it is not enough by itself for the commercialization of the banking sector. Specialized banks are still subject to lending quotas, are obliged to provide working capital loans to SOEs, can only lend for government-approved projects, and have to finance SDB through compulsory purchase of its bonds. Banks cannot operate on a commercial basis until project-specific credit allocation has been eliminated.

2.50 Eliminating the credit plan's resource allocation function can, however, be contemplated only if alternative mechanisms are available for channeling resources to public investments. Given the limited scope for budgetary financing in the short term and uncertain prospects for rationalizing fiscal extrabudgetary funds, extrabudgetary institutions (such as SDB) can play a useful role, during a period of transition, in channeling resources to projects which are socially viable but currently not “bankable.” However, there is a need to clarify SDB's role and how it is to operate, if it is to avoid the fate of the now defunct SICs. The main issues relate to SDB's mandate and level of autonomy; the treatment of old policy loans; safeguards for financial viability; and mechanisms for accountability. There are also substantial prospects for channelling greater resources to infrastructure projects, in particular through facilitating FDI flows, BOT schemes and domestic equity financing.

2.51 Despite the government's considerable interest, however, only limited foreign financing has so far been mobilized for infrastructure projects. The absence of a clear regulatory framework and exposure to policy-induced project risks constitute significant disincentives to foreign equity investors. Particularly problematic are: (i) the lack of a legally sanctioned, unified code on foreign investments in infrastructure; (ii) restrictions on foreign ownership stakes which generally prevent foreign controlling interests; (iii) pricing policies on the inputs and outputs of such ventures which are believed to be geared towards fixing the rate of return on foreign-invested infrastructure projects (at 12-15 percent of capital per year); (iv) restrictions on the term of foreign investments to horizons that are often insufficient to capture adequate returns on long-dated infrastructure investments; (v) policy risks relating to construction delays and cost overruns incurred with State-owned contractors, and input supply and off-take contracts with or controlled by the government; and (vi) foreign exchange balancing requirements and general foreign exchange risk since the revenues on infrastructure projects are largely denominated in yuan, which is not fully convertible.³⁷ There is also a lack of sufficient clarity in accounting and business practices. Furthermore, SOU joint-venture shareholders have only limited resources to spare which can result in a drag on the entire venture. In summary, "the real problem is not access to international capital; the capital is circling the People's Republic of China looking for a place to land. The problem is finding a well-structured way to insert the capital" into Chinese infrastructure sectors.³⁸

2.52 Further progress toward the establishment of a market economy depends in no small part on the willingness of the government to refrain from influencing directly the overall pattern of investment and to allow greater decentralization in investment decisions. This requires delineating clearly the government domain in investment and developing instruments other than credit allocation to complement budgetary finance of projects. The present classification of investment into three categories is an improvement but the categories are too broad, and the concepts used too vague, to draw firm conclusions as to the precise role of government in investment or the relative responsibilities of central vs local government. For example, investments in competitive projects are supposed to be the responsibility of enterprises, and their financing left to the market, yet a number of potentially competitive industrial activities are considered too "important" to be left to market decisions alone. On the other hand, while social projects are considered government responsibility, SOEs and the private sector are also to be encouraged to invest in such projects. Thus, responsibilities of the various investors and the categories of projects need to be defined more precisely for the distinctions to be operationally useful.

2.53 The government's objective of shifting project implementation responsibility to enterprises is a useful start in enhancing accountability and reducing cost-overruns if contracts are properly designed and enforced. However, the fundamental issue of project risk remains unaddressed. While benefits accrue to the enterprises, the bulk of investment risk in the state sector still conveys to the government. This reflects incomplete reforms in the enterprise sector and the investment system. *First*, in the absence of hard budget constraints for enterprises and/or clear title or adequate equity stakes in investment projects, managers of investment projects

³⁷ For a concise business perspective on these issues see "Infrastructure Investment Tips" by Alexa C. Lam, *The China Business Review*, September-October 1994, pp. 44-50.

³⁸ Robert R. Bruce and Xioming Li, "New Mechanisms for Attracting Private Investment in the Telecommunications Sector of the PRC: A Discussion Paper," The World Bank, September 26, 1994, p.8. This quote applied to the telecom sector in the original.

remain the agents of the government in carrying out investment. *Second*, appropriate enterprise governance structures that protect and limit the rights of the government as owner have yet to be developed. *Third*, the cost of capital (thanks to low interest rates and payment defaults) is so low that investment demand continues to be insatiable. *Fourth*, extensive government involvement through its approval (SPC) and financing (SDB) institutions serves, to some extent, to absolve investors of the responsibility for the failure of a project. The decision to approve government funding, particularly central government funding, is ultimately made by SPC. Inevitably, this means that SPC bears some responsibility when projects fail to perform as expected. Nonprofitable projects can always point to the involvement of higher governmental levels in the approval of the project, and use this to argue for exemption from repayment responsibilities.

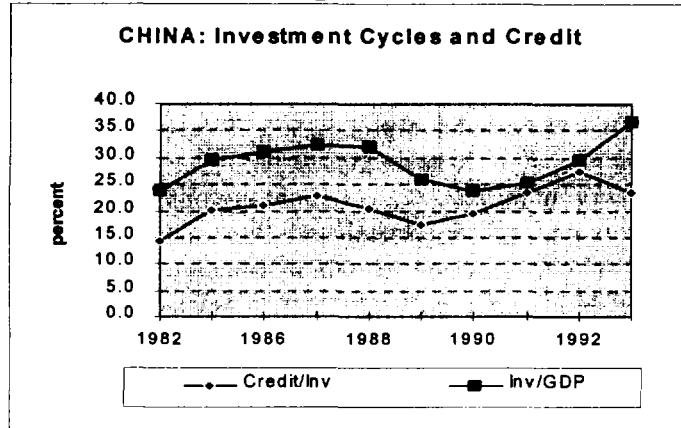
Stop-Go Cycles

2.54 Over the last decade, China averaged a GDP growth rate of 9 percent annually, ranging from a high of 13 percent in 1992-93 to a low of 4 percent in 1989-90. Investment played a critical role during both the expansionary and contractionary phases of the cycles. Surging investment demand was an important factor in generating inflationary pressures during the recent (1993-94) overheating episode, in particular. Administrative measures to clamp down on new investment projects, especially in real estate, were combined with overall credit tightening to reduce aggregate demand pressures during both episodes. This led to substantial declines in fixed investment levels—for example, from 32 percent of GDP in 1988 to 26 percent in 1989. During the recent tightening, the 1994 ratio of investment to GDP remained unchanged from its 1993 level but restrictive policies are expected to continue through 1995 in light of continued high inflation.

2.55 Periods of economic tightening provide important insights into the development priorities of the central government and the efficacy of the various instruments at its disposal. Credit for investment is cyclical, suggesting that control over domestic loan financing of investment influences the investment to GDP ratio (Figure 2.2). However, 1993 is notable for signalling a divergence from past patterns as investment rates continued to climb despite a fall in the share of credit finance. This is consistent with the assessment made in other Bank reports (1994 CEM, and “China: Banking Sector Reforms: Current Status and Issues”, 1995) about the reduced effectiveness of the credit plan. Disintermediation from the banking system and mobilization of domestic funds outside the traditional channels (notably through NBFIs and unapproved enterprise bonds) were particularly important in 1993. The categories of self-raised and other funds, which capture this activity, amounted to 24 percent of GDP in 1993, up from 18.4 percent the year before.

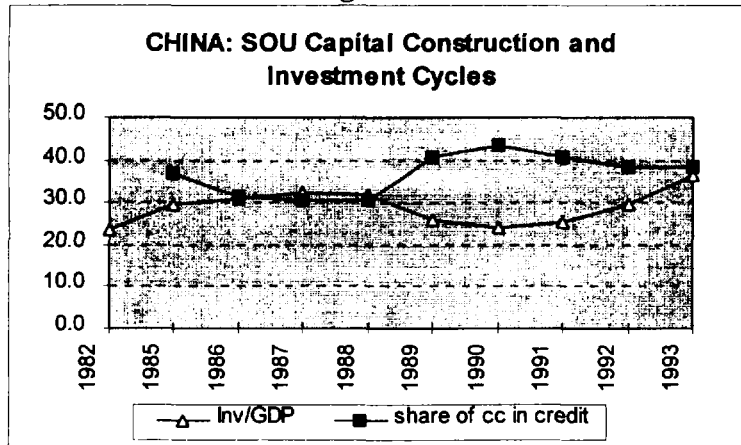
2.56 The nonstate, and in particular the collective, sector appears to bear the brunt of economic downturns. Credit rationing favors the state sector in good times; it does so even more during periods of tightening. In 1990, almost 80 percent of total investment loans went to the state sector. Within the state sector, capital construction investment receives highest priority in access to credit. Figure 2.3 illustrates the countercyclical nature of credit to the state sector for capital construction investment. Most likely, this reflects the decision to continue funding key state projects during downturns even while credit allocation to other projects is curtailed. This is also likely to be responsible for the correlation between economic cycles and the size of SOU capital construction projects: small projects appear to be crowded out during downturns (Figure 2.4).

Figure 2.2



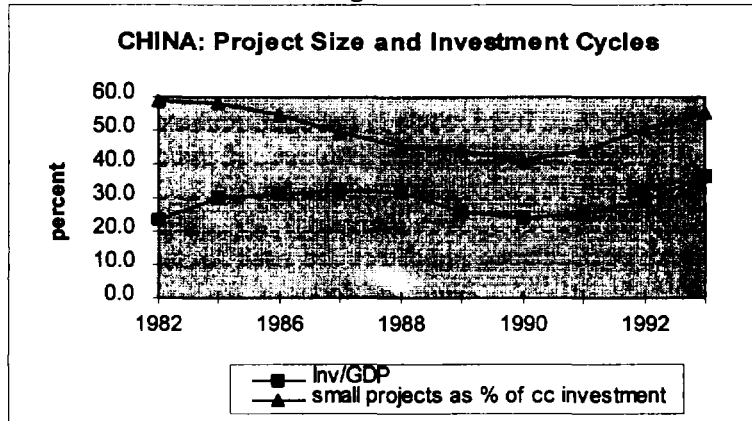
Source: China Statistical Yearbook Various Issues.

Figure 2.3



Source: China Statistical Yearbook Various Issues.

Figure 2.4

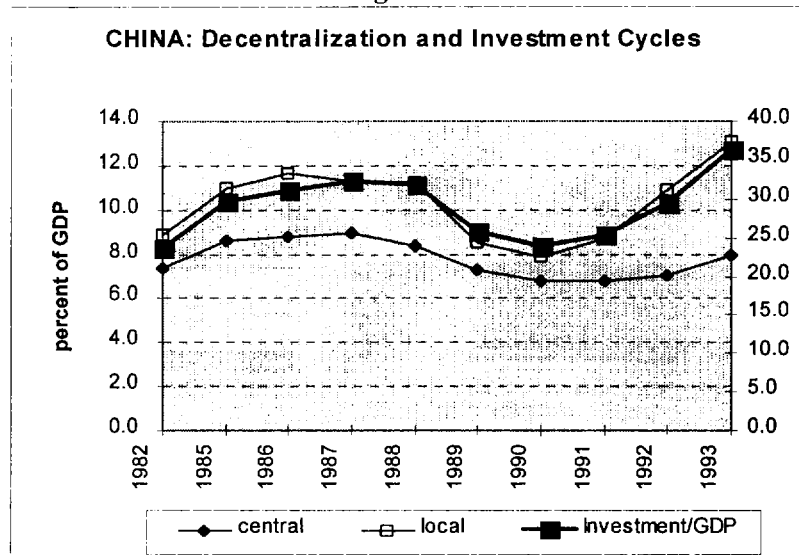


Note: Investment/GDP ratio is on the right scale.

Source: China Statistical Yearbook Various Issues.

2.57 Within the state sector, central government investments are largely shielded from the impact of cyclical downturns, notwithstanding a secular decline in the share of central projects in state investment. This is consistent with the observations made above between investment cycles and project type and size. Central government investments are predominantly in capital construction (more than two-thirds) and large projects. Figure 2.5 illustrates clearly the impact on local projects of credit and administrative measures to clamp down on investment in 1989-90 and the subsequent relaxation in 1992-93. *The procyclical nature of local investment has important systemic causes and effects.* Local units face a binding credit and administrative approval constraint on investment during periods of economic tightening; their response is to initiate as many projects as possible during periods of relaxation, thereby contributing to the likelihood of a contractionary phase in the future and to protracted investment periods.

Figure 2.5



Source: China Statistical Yearbook, various Issues.

Investment Efficiency

2.58 Investment is a complex phenomenon, and there is no single indicator that adequately describes the efficiency with which investment is carried out. The ultimate test of an investment system is its ability to create productive assets which generate a high rate of return. In this sense, the economy-wide rate of return to fixed assets is the appropriate performance indicator for the investment system as a whole. In this section, two sets of indicators are used to assess the efficiency of investment and the investment system. In the first set, physical indicators of public service delivery (e.g. percentage of power delivered) are used as proxies for investment efficiency. In the second, performance indicators are used to assess the effectiveness of the investment system, narrowly defined. Here the focus is on how efficiently the investment system converts inputs into output, without attempting to determine how productive that output ultimately turns out to be. For this purpose, the two most useful performance indicators are the size of the stock of unfinished investment projects and the rate at which investment is converted into usable fixed assets.

2.59 China gets high marks based on the first set of indicators (see Figures A2.1-A2.4).³⁹ Its performance is average in only one of the categories analyzed (percentage of paved roads in good condition) and it is superior in the other three (faults per telephone lines, percentage of power delivered and percentage of accounted for water). In the case of communications, service delivery is efficient despite the relatively poorly developed coverage of the network.

2.60 The second set of indicators, however, point to systemic inefficiencies and the potential for significant resource savings. The stock of incomplete investment projects provides important information about investment efficiency. This stock is a positive function of the time it takes to complete individual projects. Incomplete projects proxy for delays in the investment process. At the same time, they provide an indication of the resource costs implied by delays in completing investment projects. China has generally carried a stock of incomplete investment roughly equal to the value of annual state investment, and equal to 15-16 percent of GDP (Table 2.4).

Table 2.4: INVESTMENT EFFICIENCY MEASURES

	Incomplete Investment			Rate of New Fixed Asset Formation	
	(Billion Yuan)	% of Annual State Investment	% of GDP	Capital Construction	Technical Transformation
1981	70	110.3	14.7	86.6	73.3
1982	78	97.2	15.1	74.4	75.1
1983	86	97.7	14.9	76.3	76.5
1984	100	94.7	14.4	71.8	78.4
1985	134	88.0	15.7	68.2	70.5
1986	148	82.3	15.2	79.1	75.7
1987	185	88.2	16.4	71.4	76.8
1988	230	90.1	16.4	70.6	70.4
1989	258	110.3	16.1	76.0	80.7
1990	270	102.4	15.3	80.0	87.1
1991	314	100.0	15.5	70.8	83.9
1992	408	91.1	16.7	65.6	75.6
1993				59.8	69.8

Table Notes: Investment refers to the sum of state capital construction and technical transformation. There are no data available on "Other" state investment. Rate of new fixed asset formation is the value of productive assets turned over for use as a percentage of the value of completed investment in that year. Sources: Investment Statistics 1981-1985; Statistical Yearbooks 1986-1993.

2.61 Two important points emerge from these figures. First, there is no secular tendency to improvement. Although cyclical fluctuations are evident, the total volume of incomplete investment is generally unchanged, whether scaled to annual investment or to GDP. This is in striking contrast to other areas of the Chinese economy. There is substantial evidence that total factor productivity has improved in manufacturing and agriculture, as well as in GDP as a whole. But *the state investment system operates at a general level of efficiency unchanged from the early 1980s, when economic reform had just begun.*

2.62 Second, the stock of incomplete investment in China is high. It is as high, and sometimes even higher than, comparable ratios in the former Soviet Union and Eastern European socialist countries *before economic reform.* During the period 1975 through 1980, incomplete

³⁹ Based on World Development Report, 1994.

investment as a percent of annual investment averaged 106 percent in Bulgaria and 111 percent in Czechoslovakia, but only 82 percent in Hungary and 84 percent in the Soviet Union. The Chinese average between 1987 and 1992 falls between these two groups at 97 percent.⁴⁰ Incomplete investment in the United States is unlikely to be more than two or three percent of GDP.⁴¹ China pays a substantial economic cost for maintaining such high levels of unfinished construction.

2.63 Both performance indicators shown in Table 2.4 reflect the time it takes to complete the average investment project. In China, that time is long: over five years for the average capital construction project. This is certainly much longer than comparable time periods in developed market economies, where even the very largest construction projects rarely take as long as five years. The large volume of incomplete construction, low turnover rates for fixed assets, and long completion times all reflect the fact that resources, and in particular government resources, are spread too thinly over existing projects.⁴² Individual projects are underfunded and planning, organizational, and design capabilities are stretched beyond optimal points.

2.64 These problems reflect systemic deficiencies in the incentive structure for investment. Because government-approved investments continue to be relatively risk-free and low-cost, the demand remains excessive. There is intense and lively political competition for investment approval. Ironically, precisely because the government sometimes withholds permission for investment projects, the competition for project approval becomes even more intense.⁴³

2.65 The investment planning process reinforces incentives for overinvestment. Investment planning currently has a one year time horizon, even though most investments, especially large infrastructure projects, take many years to implement. In the absence of a multiyear programming framework, it is particularly difficult to counteract the systemic incentives for presenting a constant stream of new projects for approval. Project sponsors put strong pressure on planning authorities to secure financing for the first year of the project in the hope that, once the project has been started, it will have preferential access to funds in the future. As a result, there are always too many projects, with too little funding. Each individual project runs into funding shortfalls, despite the huge flow of resources into investment as a whole.

⁴⁰ Figures on the Soviet Union and Eastern European economies are from Jan Winiecki, *The Distorted World of Soviet-Type Economies*, New York: Routledge, 1988, pp. 26-28. Differences in data collection procedures imply that this indicators is not completely comparable on a cross-country basis.

⁴¹ Kohn, Martin, "The Stock of Unfinished Construction in the USSR," Unpublished Yale University Ph.D. dissertation, 1970. Market economies do not typically collect data on incomplete investment because this is not considered a significant problem.

⁴² Despite the growth of the Chinese economy, there has been a small reduction in the real annual financial commitment available for each large government project. Assuming that government projects have not become smaller (and they are more likely to have increased in average size), that means that the proportion of each project that can be completed in a year has not increased (and has probably declined).

⁴³ Chinese respondents describe the investment process as a two stage one, involving both project approval and assembling funding. The common metaphor used to describe this was that project approval was like digging a hole to plant a tree; assembling a funding package was like actually planting the tree. The metaphor implies that one would always seek project approval whenever possible. The cost of digging excess holes being negligible, it is always wise to do so, especially because there is always the possibility that the government, having approved your hole, will provide some assistance with the tree planting.

2.66 This relationship has a cyclical dimension. When government policy is relaxed, and approval of new projects becomes easier, there is typically a rush to start new projects. New projects are initiated at the local level (typically smaller projects) and central agencies may also be encouraged to begin many new large projects. When the investment surge is ultimately reined in, however, the economy is left with a larger stock of incomplete construction than before. This is precisely what seems to have occurred in 1993. Surging investment resulted in rapid initiation of new projects (Figure A2.5) and the rate at which investment was converted into usable new assets declined sharply (columns 4 and 5 of Table 2.3). *This portends some deterioration in investment efficiency in the near future.*

2.67 Aside from the systemic concerns raised above, there are some inefficiencies in current investment planning and implementation practices. Two areas for improvement are identified below:

- (a) The way the **investment budget** is presented and managed could be improved. The budget lacks transparency, with investment expenditures included in other parts of the budget, outside the investment budget proper. While decisions on the utilization of funds on the whole rest with SPC, they are sometimes made by line ministries and other agencies. The role of the newly-created Capital Construction department is not well-defined. Monitoring and control of investment expenditures are split between the Budget Management and Capital Construction departments; foreign and domestic components of the same project are handled by different departments. Clear guidelines are often lacking, e.g. on the question whether a budget contribution should be provided as a grant or as a loan (and on what terms), or which projects qualify for matching grants;
- (b) The **project approval** process, in particular for large and medium scale projects, while thorough, seems overly bureaucratic, involving too many steps and too many agencies in project review, with occasional duplication of functions. This is further complicated by the continued distinction between capital construction and technical transformation investments, which has outlived its usefulness, and hinders a consideration of trade-offs between investments. Furthermore the project approval threshold remains too low. Finally, while the project evaluation methodology is internationally recognized and properly applied at the central level, there are some doubts about local government evaluation capacity.

2.68 It is likely that the investment system is the part of the Chinese economy *that has been the least successfully reformed, and therefore the area in which the unrecaped potential gains in efficiency are the greatest.* In recent years, the chronic problems with the investment system have become more acute. The acceleration of growth and reform since 1992 has placed additional strains on the investment system. Growth has implied more rapidly increasing demand for infrastructure, while accelerated marketization has meant that the bulk of the Chinese economy is now functioning on a market basis, and requires a well-functioning investment system and well-functioning financial markets in order to fulfill its potential.

3. A FRAMEWORK FOR PUBLIC INVESTMENT

3.1 This Chapter presents a framework for public investment in China which builds on the analysis of the current system and its shortcomings. Section A introduces a normative discussion of the role of government in investment and tests it against the government's revealed priorities. Section B focuses on the institutional requirements for public investment programming. Section C evaluates the prospects, mechanisms and institutions for securing adequate financing for public investment. Finally, Section D collects the basic principles and criteria developed to propose a framework for financing public investment.

A. THE GOVERNMENT'S ROLE IN INVESTMENT: WHAT SHOULD IT BE?

3.2 The discussion in the previous Chapters has highlighted some of the issues arising from the current level of government involvement in investment decisions. These include, in particular, the dispersion of government effort, interference with the commercialization of enterprises and the financial sector and efficiency concerns. This section argues for a more focused role for the government in investment in the future and develops some proposals based on the nature of the investment and the government's revealed priorities.

3.3 Many of the problems in the Chinese investment system arise from the sheer size of the government's program. While it is difficult to determine how much of the Chinese investment effort is driven or directed by government (at various levels), several indicators suggest that this share is large. In particular, the role of SPC and local planning commissions in approving investments and allocating financial resources remains extensive and seems to have been strengthened recently. Clearly, government influence does not extend to the entirety of state investment (36.5 percent of GDP in 1993), in view of burgeoning enterprise autonomy over investment decisions. But it is substantially above the share of investment financed through budgetary resources (1.4 percent of GDP in 1993, according to investment data), given government control over certain extrabudgetary funds and government direction of investment credit. While it is relatively straightforward to identify the central government's, or SPC's, influence zone (all projects which require SPC approval),⁴⁴ it is far more difficult to do so for local governments as the relationship between enterprises and governments is particularly murky at the local level.

Scope of Government Involvement: Normative Framework

3.4 The theory of public finance provides important insights into the types of investments which require government intervention. In its pure form, government intervention is called for only when there is market failure, either due to the nonrival nature of the consumption (a marginal user of an uncongested road) or to the inability to exclude potential beneficiaries

⁴⁴ SPC's influence extends, however, beyond its approval authority over medium and large projects and projects with central funding (which includes not just central budget but also SDB funds). The state industrial policy, which is prepared by SPC, contains a negative list for investment projects.

(national defense) even when consumption is rival. Market failure results because it is inefficient to charge the beneficiary in the first instance (marginal cost is zero) and because it is not feasible to do so in the second. A mechanism other than the market is therefore necessary for deciding on the level and allocation of these public goods and services.

3.5 It is possible to extend the concept of public goods and therefore the need for government involvement to include cases where there are social externalities. These would constitute investments in goods and services that are largely private in nature but may have substantial social benefits—e.g. basic health and education, water supply. While the bulk of the benefits of primary education, for example, accrue to the individual in the form of higher future earnings, there is general agreement that some social externalities may be present in the form of a more disciplined workforce, lower fertility etc. In theory, this does not imply that the entire subsector should be classified in public investment. Instead, a rigorous definition would include in public investment only the difference between the socially and privately optimal levels of investment.

3.6 It is also useful to make a distinction between public provision and public financing. The concept of a public good stems from the inability of a private producer to cover costs by charging all those who benefit; the existence of a public good or social externalities calls, therefore, for public financing but not necessarily public provision. Public provision may be efficient when the extent of government involvement and support is so overwhelming that the degree of governance and control exercised by commercial funding sources is extremely limited or when it is not possible to design adequate contractual performance criteria for the private delivery of a public function.

3.7 In its pure form, the concept of a public or private good provides useful guidelines for investment policy. However, there is a sufficiently large gray area in between that it is not possible in practice to derive the appropriate level of government involvement from this concept. Technological characteristics of various industries have been changing, making them more amenable to competition and cost recovery than they were previously. When combined with government policies to create conditions for a competitive market through regulation and appropriate pricing, these industries have become candidates for private provision and financing. At the same time, recent literature on growth notes that technological change is endogenous, and shows substantial correlation between social and economic infrastructure and growth performance. Despite inability to document the level of social externalities, their presence strengthens the case for increased government involvement. Investment policies that encourage externality-generating activities (improvements in education) or introduce increasing returns (improvements in physical infrastructure) can be good for growth.⁴⁵ Furthermore, recent studies have found a correlation between income distribution and growth performance; this suggests that greater equality is desirable not only as an end in itself (a public good) but also because it may be growth promoting. Whether or not income distribution objectives are properly pursued through investment or other (e.g. transfer) policies, however, is open to debate. Finally, there is support in some quarters for government involvement in certain industries which might benefit from dynamic externalities.

3.8 While economic theory provides useful guidance, the eventual decision as to the level of government involvement in investment will reflect a complex balancing of social preferences,

⁴⁵ The Challenge of Development, World Development Report, 1991.

historical factors and economic constraints. In addition, an important consideration in transition economies is the level of development of various market mechanisms. Some market failures will remain during the process of establishing a mature market economy, justifying government intervention during an interim period.

Public Investment Program: Alternative Definitions

3.9 Table 3.1 evaluates the size of the public investment program based on different criteria. The analysis is based on detailed sectoral and financing data provided to the mission for the year 1992.

3.10 **Sector-based definitions.** Table 3.1 includes three (sector-based) definitions for public investment, going from restrictive to more inclusive, based on an evaluation of various subsectors along a public to private continuum. The first definition (including water, roads, post, primary health, basic education and administration) approaches more closely the economic interpretation of a public good as discussed above. The second definition covers investment in all infrastructure and social sectors (and public administration) regardless of the potential for cost recovery in specific projects and therefore for private provision and financing. The third definition extends the concept further to include “strategic” industries as identified by the government; these include “basic” industries, such as “coal, gas, petroleum”, “iron, steel and nonferrous metals” and forestry, and “pillar” industries, such as petrochemicals, automobiles, machinery, electronics and high-tech industries. This definition includes potentially highly competitive sectors which the government is interested in promoting for industrial policy reasons.

3.11 Based on 1992 data, these three definitions yield public investment levels ranging from only 1.9 percent of GDP in the most restrictive case to 6.6 percent of GDP for the second definition to 11.5 percent of GDP in the most inclusive case. This compares with state investment in that year of 19.8 percent and total investment of 29.5 percent of GDP. It is interesting to note that central projects claim an increasing share (from 27.5 percent to 51.2 percent) of total public investment as the definition is extended to include private goods. At the same time, the importance of the budget as a source of funds declines, from 14.6 percent to 9.1 percent. This is consistent with observations made earlier about the respective investment focus of the different levels of government and the greater importance of budgetary funds for the social sectors and water supply.

3.12 **Revealed Preferences.** While the budgetary financing of investment does not adequately convey the level of government involvement in China, it does provide useful insight into government investment priorities. In view of the operational limitations of the public goods concept discussed above, the fourth definition of public investment included in the table is based on the preferences of the government (center and local) as revealed through its willingness to use budgetary funds to finance a substantial proportion of investments in a particular subsector. Three cut off points were used, based on the share of budgetary funds in sectoral investments—6.3 percent (average for all investment in 1992), 10 percent and 15 percent—yielding the following levels of public investment as percent of GDP (budgetary share in total financing), respectively: 6.4 (20), 4.3 (30) and 1.7 (75). The resulting sectoral mix under each cut-off is interesting. In the most restrictive case (budgetary funds finance more than 15 percent), the public investment program would include projects in the area of scientific research, forestry, water, education and administration—not entirely dissimilar in magnitude or composition to the

first public goods definition, with the notable exception of health and roads. In the middle case (10 percent), the coverage of public investment would extend to health, construction, "coal, gas and petroleum", "other" pillar industries and "other" agricultural investments. The third cut-off (6.3 percent) extends public investment also to transport. Absent from the list are investments in the bulk of the "strategic" sectors, which are highly competitive and rely largely on domestic credit, and some infrastructure sectors (power, telecom) which rely heavily on extrabudgetary and self-raised funds.

Table 3.1: CHINA: "PUBLIC" INVESTMENT, 1992

	Level of Government			Sources of Financing					
	Total	Center	Local	Budget	Loans	Extra-budgetary	Self-raised	Foreign	Other
Billion Yuan									
1. "Public" goods	49.53	12.85	36.68	7.24	7.32	16.31	12.30	2.76	3.53
2. Infr + soc sectors + admin	174.97	81.03	93.93	18.86	33.93	51.64	39.01	13.41	18.14
3. "2" + strategic sectors	305.63	156.49	149.13	27.75	74.55	86.05	65.17	25.31	26.82
4. a. Bbudget finances > 10%	114.68	64.74	49.94	19.83	13.97	36.53	27.79	8.06	8.55
b. Budget finances > 6.3%	170.71	87.55	83.17	23.98	26.52	54.43	41.29	12.39	12.03
c. Budget finances > 15%	44.09	10.71	33.38	11.83	2.84	14.35	10.87	1.05	3.17
5. Total SOU investment	527.36	206.96	320.41	33.24	160.14	140.08	105.68	42.12	46.10
Shares (%)									
1. "Public" goods	100	25.9	74.1	14.6	14.8	32.9	24.8	5.6	7.1
2. Infr + soc sectors + admin	100	46.3	53.7	10.8	19.4	29.5	22.3	7.7	10.4
3. "2" + strategic sectors	100	51.2	48.8	9.1	24.4	28.2	21.3	8.3	8.8
4. a. Budget finances > 10%	100	56.5	43.5	17.3	12.2	31.9	24.2	7.0	7.5
b. Budget finances > 6.3%	100	51.3	48.7	14.0	15.5	31.9	24.2	7.3	7.0
c. Budget finances > 15%	100	24.3	75.7	26.8	6.4	32.5	24.7	2.4	7.2
5. Total SOU investment	100	39.2	60.8	6.3	30.4	26.6	20.0	8.0	8.7
As % of GDP									
1. "Public" goods	1.9	0.5	1.4	0.3	0.3	0.6	0.5	0.1	0.1
2. Infr + soc sectors + admin	6.6	3.0	3.5	0.7	1.3	1.9	1.5	0.5	0.7
3. "2" + strategic sectors	11.5	5.9	5.6	1.0	2.8	3.2	2.4	0.9	1.0
4. a. Budget finances > 10%	4.3	2.4	1.9	0.7	0.5	1.4	1.0	0.3	0.3
b. Budget finances > 6.3%	6.4	3.3	3.1	0.9	1.0	2.0	1.5	0.5	0.5
c. Budget finances > 15%	1.7	0.4	1.3	0.4	0.1	0.5	0.4	0.0	0.1
5. Total SOU investment	19.8	7.8	12.0	1.2	6.0	5.3	4.0	1.6	1.7
As % of state investment									
1. "Public" goods	9.4	2.4	7.0	1.4	1.4	3.1	2.3	0.5	0.7
2. Infr + soc sectors + admin	33.2	15.4	17.8	3.6	6.4	9.8	7.4	2.5	3.4
3. "2" + strategic sectors	58.0	29.7	28.3	5.3	14.1	16.3	12.4	4.8	5.1
4. a. Budget finances > 10%	21.7	12.3	9.5	3.8	2.6	6.9	5.3	1.5	1.6
b. Budget finances > 6.3%	32.4	16.6	15.8	4.5	5.0	10.3	7.8	2.3	2.3
c. Budget finances > 15%	8.4	2.0	6.3	2.2	0.5	2.7	2.1	0.2	0.6
1 = Water, roads, post, primary health, basic education, administration.									
2 = Water, transport, telecom, power, health, education, scientific research, administration.									
3 = "2" plus basic and pillar industries.									
4c = Scientific research, forestry, water, education, administration.									
4a = 4c plus other pillar industries, construction, health, other agriculture, "coal, gas & petroleum."									
4b = 4a + transport.									

Source: SPC Investment Institute.

3.13 The revealed preferences of the government suggest *a more focused role for the government in investment which uses budgetary resources more effectively while allowing continued progress in the commercialization of the financial and enterprise sectors*. A public investment program of 6-10 percent of GDP would appear appropriate and would include investments in administration, social sectors, most infrastructure sectors and initially a few competitive sectors which might display certain dynamic externalities. This would result in roughly equal shares for local and central investments. The program would exclude the bulk of competitive activities, notably in light industry, construction and commerce. This does not imply that the entire financing of the public investment program would have to come from budgetary sources, although the gap between budgetary resources currently available for investment and public investment financing requirements would shrink considerably, reducing pressures for off-budgetary financing. Implications for the institutional and financing framework for public investment are discussed below.

B. INSTITUTIONS FOR MANAGING PUBLIC INVESTMENT

3.14 A more focused role for the government would have implications for the institutional arrangements for managing public investment. There would be a continued need to ensure that aggregate investment levels are consistent with macroeconomic stability. But this would be achieved principally through monetary and fiscal policies without the need for intrusive and cumbersome approval procedures. The government would influence the composition of investment principally through its control over public investment as defined in this report.

3.15 With respect to public investment, this report recommends building on the current mechanism for annual investment planning with some important modifications. These include changes in coverage (in line with a more focused government role) and in planning horizon. In addition, while there would be a continued need to coordinate public investment programming through the SPC, the budget would acquire a more prominent role in the allocation of resources for public investment.

Medium Term Investment Program

3.16 The existence of many underfunded projects points to the importance of extending the investment planning horizon to determine what would be a realistic level of public investment over the next few years. Expenditure claims of ongoing and new projects would be set against projected available resources. This serves several purposes: it reduces project delay, it discourages further efforts on projects that are not included in the medium term program, it helps to restructure public investment by indicating priorities for the outer years of the program, and it is a useful instrument for guiding foreign financing to priority areas. More effective public investment programming would reduce the level of resources tied up in unfinished projects (currently 15 percent of GDP) and result in substantial efficiency gains. Every year the program should be updated and moved forward a year.

3.17 The five year plan, which is not updated, has limited operational usefulness. *It is therefore suggested that a rolling medium term public investment program (PIP) be prepared that resembles the annual investment program (AIP) in terms of project and financing detail, but covers a 3-5 year period*. However, the scope of the PIP would be more limited than that of the AIP. Instead of planning investments of the entire state sector as the AIP does, the PIP would limit itself to those projects that use government or government controlled resources. Those

include the budget, fiscal extrabudgetary funds, SDB, and projects covered by a formal government guarantee. The use of these resources would in turn be guided by the considerations laid out above regarding the (“public good”) nature of the investment and industrial policy objectives. Just as with the AIP, separate PIPs could be prepared for the central government and each of the provinces.

3.18 Much of the work going into the preparation of a PIP is being undertaken already for the AIP. Each project is subjected to a thorough review and the AIP presents details on project financing by source of funds. In addition, however, there is a need for: preparing a medium term program showing the future financing needs of the projects currently in the AIP, making resource projections for the PIP period, and deciding on priorities for new projects. Accurate resource projections are the key to a realistic and hence operationally useful PIP. The capacity to make such projections requires strengthening, both in MOF and SPC, and these two institutions would need to collaborate closely in this area.

3.19 The introduction of the PIP could be phased. Initially, it might be limited to key state projects and/or selected local governments. It could then be extended to all projects falling within its scope.

3.20 While the experience with PIPs in other countries has been mixed (see Box 3.1), China meets many of the conditions for establishing an effective medium-term investment program: a planning agency with authority, a detailed annual investment plan, well-prepared development plans for key sectors, and close cooperation between the core economic agencies.

3.21 SPC’s functions would remain largely unchanged even though the scope of its interventions would be reduced. SPC would continue to be responsible for macroeconomic planning, along with MOF and PBC. It would also be in charge of the preparation of the public investment program. This would involve ensuring consistency between macroeconomic targets and the size of the PIP; between government objectives and the sectoral mix of the PIP; between sectoral strategies and individual projects; and between project costs and the financing package. While SPC would remain in charge of overall coordination, it would rely to varying degrees on capabilities elsewhere in the government for the detailed work required for these assessments. In particular, line ministries would continue to have primary responsibility for drawing up sectoral strategies and proposing a pipeline of projects consistent with these strategies; SDB would be in charge of putting together the financing package for projects in which it is involved; and provincial planning commissions would continue to assume responsibility for subnational projects. SPC approval would be required for medium and large scale projects but the threshold would be increased; the criteria currently used for the designation of key state projects might serve as a guideline for this requirement. Once the distinction between capital construction and technical transformation projects is eliminated (see below), SPC would have the approval responsibility for public investment projects while SETC’s mandate could be transformed to focus on promoting “private” investments. In this context, shifting responsibility for industrial policy formulation to SETC may be considered.

Box 3.1: PUBLIC INVESTMENT PROGRAM

A PIP consists of a list of investment projects the government intends to finance over the medium term (3 to 5 years). Project expenditures are matched, year by year, with funds expected to be available from various sources. Annually, the PIP is updated and moved forward one year.

Purpose. The main purpose of a PIP is to bring about a more rational allocation of the resources available for public investment. This is achieved by establishing priorities among the many demands for investment finance, by linking investment proposals with available funding, and by taking into consideration that the financing needs of projects stretch over several years. A PIP can also be a useful vehicle for attracting foreign financing. Finally, a PIP serves as a guide for preparing the annual investment budget.

Coverage. A PIP should be comprehensive and cover all projects in which the government has a financial stake. That excludes investments by state enterprises unless these receive government support in some form, including formal loan guarantees. Projects over a certain size are listed individually, while smaller projects are usually lumped together, whenever possible into programs.

Project selection. A key function of a PIP is setting investment priorities. Thus, all projects have to be screened and must meet certain selection criteria. In addition to the economic rate of return or similar criteria based on cost/benefit analysis (if applicable), other factors should also be taken into consideration. These should include the extent to which the project supports sectoral development priorities, implementation capacity, possible claims on the budget to cover future operation and maintenance costs etc.

What does a PIP look like? The substance of a PIP consists of details on costs and financing for each project, or group of smaller projects, arranged by sector. Cost estimates include total project cost, what has been spent so far, expenditures for each of the PIP years, and the balance to complete the project. It further shows expected financing from various sources: budget (central and local), domestic borrowing, external financing, own funds etc. Data are usually presented in constant prices. Information for the first year of the PIP is quite firm, with financing for ongoing and new projects secured. Subsequent years include new projects that may not yet have been fully prepared and appraised. Some of these projects may later have to be dropped and replaced by others. If the PIP is also a means of securing foreign funding for projects, it will often include a brief description of development objectives and strategy for each of the sectors and of how the projects fit into that. Project summaries are attached for the main projects for which financing is sought.

Responsibility for PIP preparation. Projects are prepared and appraised by line ministries and local governments, and then submitted to the agency responsible for putting together the PIP, usually the planning or finance ministry. The agency in charge of the PIP has to maintain close links with other central economic agencies, notably those responsible for the macroeconomic framework, for fiscal projections and for preparation of the annual budget. Collaboration with the latter in particular is vital to ensure that the PIP is based on realistic assumptions on budgetary funding and that it is used as the basis for allocating the investment budget.

Experience with PIPs. OECD countries don't practice investment programming, as described here. Investment decisions tend to be delegated to government departments and local authorities, and budgets are often prepared within a medium-term framework (MYFP) that allows multiyear commitments to be taken into consideration. Many countries outside the OECD have adopted PIPs, with mixed results. A number of basic conditions have to be met if a PIP is to be an effective planning tool: (i) the funding assumptions underlying the PIP need to be realistic and the PIP should not contain more projects than can be financed; (ii) the PIP/planning agency needs to have sufficient authority; (iii) PIPs should be based on a set of coherent and well-defined development priorities and not a mere collection of disparate projects; (iv) the usefulness of a PIP depends very much on the quality of the projects submitted by the spending agencies and hence on the agencies' capacity for preparing and analyzing projects.

3.22 The PIP would be presented to the State Council for approval and may also be submitted to NPC's consideration as an annex to the budget. It should be possible to do away with the key state project designation. The PIP would include project-specific information on important projects and inclusion in the PIP should constitute a sufficient guarantee of access to resources as the bulk of these resources will be under the direct control of the government, either through the budget or through SDB.

3.23 Because China continues to accord high priority to maintaining state ownership, institutions and mechanisms to deliver and finance public services will have to be complemented by others designed to protect the rights of the State as owner. The establishment of appropriate shareholder control mechanisms are important both for limiting undue interference from current "owners" (line ministries and local governments) and as a substitute for SPC/PPC oversight over all SOE investment decisions.

Management of the Investment Budget

3.24 Once the bulk of resource allocation is left to the market, the government would exercise direct influence over the pattern of investment mainly through the projects it finances from its own resources. Depending on the project, the government could leverage its resources with other—including enterprise, foreign and credit—funds. It can also use loan guarantees and interest subsidies to that end.

3.25 With the relinquishing of government control over credit allocation, the budget will become the primary source of investment funds for the government's program. Budgetary resources would account for almost half of financing requirements for a narrowly defined public investment program, as defined above. This change will require strengthened and more meaningful budgetary management.

3.26 Under current arrangements, while responsibility for the budget rests with MOF, the ministry has delegated the allocation of the investment budget to others, notably SPC. MOF should become more involved in the management of the budget and strengthen its capacity for doing so. To begin with, it would be useful to have a more comprehensive investment budget that includes capital expenditures now listed elsewhere in the budget, and to separate loans, grants and own expenditures on capital goods.⁴⁶ Furthermore, eliminating the distinction between capital construction and technical transformation expenditures would help to simplify the budgeting process. This would also make it easier to give responsibility for managing all capital expenditure to a single department, which should cover project financing from both domestic and foreign sources in order to ensure proper coordination of flows from these two sources.

3.27 MOF's responsibility for investment expenditure goes beyond determining the overall financial allocation for investment. It is in charge of budget execution as well, which means keeping track of project implementation delays, cost overruns, loan recovery etc., and their implications for the budget. This is now done to an extent by PCBC, as an agent. MOF should begin to play a more active role in this area, initially at least covering the more important projects.

⁴⁶ Central budget transfers to local authorities or SOEs to finance investments should be classified as capital transfers, not capital expenditure.

3.28 Clearer guidelines should be established, by SPC and MOF together, to determine which local government projects qualify for transfers from the center. At present, the financial participation from the center in local projects is considerable, but the criteria and conditions for the provision of such funding are not clear. This encourages rent-seeking and diminishes scope for decentralization of investment decisions. As discussed earlier, instead of substantial project specific funding flows from the center downwards, it might be preferable to adjust the system of general transfers so that it better matches local spending responsibilities, perhaps supported by the provision of limited matching grants for specific purposes.

3.29 The recent creation of the Capital Construction department appears to have added to the complexity of the budgetary process and to duplication of responsibilities. If SPC retains primary responsibility for directing and approving the PIP; if SDB and line ministries become the primary agents for channeling government funding; and if PCBC is in charge of disbursements and financial supervision, the case for a separate CC department is not compelling.⁴⁷ Centralizing responsibilities for budget execution in one department would be more effective. While it may be useful to have some functional specialization for capital and current expenditures, respectively, an investment division within the Budget Department would allow for greater coordination between the two.

3.30 Beyond organizational changes, the authorities may wish to consider a multiyear fiscal plan (MYFP) to complement the PIP and further improve allocative efficiency for government resources. In particular, the MYFP would allow the budget to take into account the recurrent expenditure implications of investment projects included in the PIP and to consider the trade-offs between capital and current expenditures in a multiyear framework. A strengthened budgetary process would also obviate the need for earmarking. In the longer-run, when resort to extrabudgetary resources is further reduced, the PIP exercise may be subsumed under the MYFP, in line with current practice in most OECD countries (see Box 3.1).

Loan Guarantees

3.31 If priority public investment projects cannot be fully funded from government-controlled sources, and are unable to attract commercial financing, a formal government loan guarantee can be a useful instrument to reduce the risk to the lender, especially a foreign lender. To the government, guarantees are a way of channeling funds to priority projects and so enhance its influence over the composition of investment. Formal guarantees are currently issued by banks, but not by the central government. Such government guarantees, which create a potential liability to the government, would normally be listed in the budget document submitted to the NPC for approval. A ceiling may be set on the total value of guarantees to be issued by the government and the budget should include a provision for potential claims. Projects covered by a guarantee should require SPC approval, and meet the same criteria as government-funded projects.

Fiscal Extrabudgetary Funds

3.32 Earmarked funds from fiscal EBFs exceed the budget as a source of financing state investment. While they thus do provide the government with substantial additional resources for

⁴⁷ The case could be made for establishing an investment department in MOF if the authorities intend to build on this entity for an eventual assumption of the investment planning function in MOF.

investment, they are by nature an inflexible and fragmented financing instrument. Having so many different pots for specific purposes, at various levels of government, and managed by different departments, considerably complicates the task of managing public investment. To the extent that the surcharges and fees are levied on price controlled goods and services, they run counter to the government's objective of increasing financial autonomy of SOEs by earmarking resources that properly belong to enterprises.

3.33 Reform of fiscal EBFs requires distinguishing between the types of entities that benefit from them. On the one hand, state-owned units that provide government services and rely predominantly on general budgetary allocations or on earmarked levies, taxes and surcharges should be considered governmental and integrated into the budgetary process. This would include some of the SOEs that currently perform nonmarket services. On the other hand, earmarked taxes and surcharges levied on marketable products should ideally be eliminated and prices allowed to adjust. This would imply some loss of government control over investment resources and may be problematic in the short term, in view of the incomplete nature of enterprise reforms. Also, given the scramble for resources at the local level to meet the demand for investment, (a principal reason for establishing FEBFs in the past), it may be difficult to effectively implement such a measure, as individual departments would be reluctant to relinquish control over resources. In the short-term, integrating FEBFs into the budget may require retaining earmarking in some cases.

C. FINANCING PUBLIC INVESTMENT

3.34 This section discusses the prospects for financing China's public investment needs over the short and medium term. The various avenues open to satisfying public investment needs more fully fall into three broad categories: (a) *increasing* the overall level of resource mobilization; (b) *capturing and transforming* the existing pool of domestic savings into a form more suitable for financing public investment; and (c) *redirecting* the pool of investment financing towards priority public investments.

Prospects for Increasing Resource Mobilization

3.35 Public investments can be funded from savings drawn from domestic or foreign sources. Given the already extraordinarily high domestic savings rate (39 percent in 1993), the prospects for increasing domestic savings would appear to be slim. Even after adjusting GDP for underestimation, savings remain high (see Box 3.2). During the 1989-94 period, the marginal savings rate was a remarkable 59 percent; arguably, the Chinese should start improving their welfare through increased consumption.

3.36 The potential for increasing foreign savings, on the other hand, is large, given modest levels of external indebtedness (total debt outstanding is less than 20 percent of GDP and the debt service ratio is about 10 percent) and sound debt structure. The main constraints to increased foreign borrowing relate to unsustainable aggregate demand pressures; at issue are the ability of both the real economy and the monetary sector to absorb higher capital inflows. In 1994, the Chinese economy invested 36.5 percent of GDP (in fixed assets) even while running a current account surplus of some 2 percent of GDP. High investment demand threatens macroeconomic balance and price stability. In fact, the government's target is to stabilize the investment to GDP ratio at around 30 percent in the medium-term. This means that higher

public investment needs cannot be made *additional* to the overall level of investment in the economy today.

Box 3.2: HOW MUCH DO THE CHINESE REALLY SAVE?

Incomplete price reforms and inadequate statistical reporting overstate the Chinese savings rate. China's gross savings rate for 1993 is officially reported as 39 percent, but after adjustments to GNP for underreporting and low valuation of certain sectors, it is estimated at 33 percent. China's standing relative to a set of comparator countries adjusts accordingly:

Gross Domestic Savings Rates, 1993	
Country	Savings Rate
China, Official	39
Malaysia	38
Thailand	36
Korea, Republic of	35
Japan	33
China, Adjusted	33
Indonesia	31
India	24
Germany	22
Turkey	22
Brazil	21
Kenya	21
Nigeria	19
Mexico	16
United States	15

Source: World Bank data banks and staff calculations based on World Bank Report No. 13580-CHA, China: GNP per Capita (December, 1994).

The adjusted national savings rate reflects two kinds of corrections to official Chinese national accounts statistics. The first is a correction for underreporting, which has been significantly reduced recently, following a service-sector census. The second is a correction for extremely low pricing in the service sector, especially for housing services. China's government also acknowledges low housing prices. Since consumption expenditures, not investment, account for nearly all service-sector output, these adjustments result in significant reductions in China's national savings rate. For details of this analysis, see two recent World Bank research publications: Report No. 9557-CHA, *China: Statistical System in Transition* (September, 1992) and Report No. 13580-CHA, *China: GNP per Capita* (December, 1994).

Mechanisms for Capturing and Transforming Domestic Savings

3.37 Given a certain *level* of savings, how can these be channelled most efficiently and reliably to fund public investment? The pool of domestic savings arises from savings by various levels of government, SOEs and the nonstate sector (including households). In China, households and enterprises account for roughly one-half of total national savings, with the state budget contributing a small and declining share⁴⁸ (Table 3.2). The relative merits of funding public investments from the different sources of savings are discussed below.

⁴⁸ Enterprise savings are overstated (and fiscal savings understated) by the amount of fiscal extrabudgetary savings.

3.38 **Budgetary Savings.** *First*, national savings to be devoted to public investment can be channelled through the government budget. In effect, national savings would be extracted from the economy through taxation and redeployed through government-directed and funded investments. Assuming no change in private savings behavior and in government current expenditures, the reduction in private savings would be offset by an increase in public savings.

3.39 Government intermediation of national savings through the budget and the corresponding heavy-handed allocation of

resources would undermine enterprise and financial sector reforms by curtailing accountability and autonomy. The benefits of decentralization and financial discipline would also be foregone. Furthermore, this would aggravate the struggle for control over fiscal resources between the different levels of government. The State's role in capturing and directing national savings through the budget should, therefore, be limited to those cases where private financing is not feasible. Even when government support is needed, it should be additional to rather than supplanting commercial financing whenever possible. The budget should contain full funding only for public goods with little or no potential for cost recovery. But, fiscal reform needs to be pursued to ensure that governments at all levels have adequate resources to assume their financial obligations with respect to public investments within their jurisdiction.

3.40 **Enterprise Savings.** *Second*, a larger proportion of national savings can be channelled directly to enterprises (whether public or private). This would be consistent with greater specialization of functions as between government and enterprises. While continued reforms would likely increase the retained earnings of many enterprises in the infrastructure sector, in some instances, they might lead to a progressive erosion of monopoly and other privileges which would tend to reduce enterprise retained earnings (see Box 3.3).

3.41 Pricing policies in the past resulted in underinvestment in certain sectors (especially in infrastructure), justifying, in turn, government involvement in planning and credit allocation. In each of the key infrastructure areas, the former situation in which prices to the end-user were fixed at low levels that did not permit the internal generation of investment funds has been largely changed. The recent successes in power generation and telecommunications are clearly related to price/tax policies that enable those sectors to become self-supporting.

3.42 However, price reform remains partial. Rather than completely reforming prices, a series of temporary surcharges have been added on to enterprise-level prices. The result is that prices are a confused mixture of multiple pricing systems. Electricity tariffs vary according to the age of plant, financing source, etc. Moreover, much of the new revenue does not accrue to the enterprise at all, but rather to provincial management agencies. For example, proceeds from toll roads tend to go into road construction and/or maintenance funds administered at the provincial level.

Table 3.2: SOURCES OF SAVINGS (% of GDP)		
	1982	1993
State budget	5.6	1.7
Enterprises and other ^{/a}	13.9	19.4
Households	11.4	18.0
Total	30.9	39.1
^{/a} Calculated as a residual; mainly state and collective enterprises and extrabudgetary operations.		
<i>Source:</i> IMF.		

Box 3.3: GOVERNMENT POLICY AND ENTERPRISE SAVINGS

Various government policies influence the level of enterprise savings. Most important are tax,¹ trade/competition and pricing policies. Tax policy, including tax rates and the calculation of taxable income, influences directly the level of enterprise after-tax profits. While additional improvements can be made, with the recently adopted reforms, China's tax regime is approaching international standards.

Trade protection, barriers to entry and other restrictive policies distort the level of enterprise profits by enabling prices to exceed their equivalents in competitive markets. In China, certain industries continue to benefit from substantial trade protection and entry barriers, inducing a sub-optimal pattern of investment across industries.² The authorities should consider modifying the incentive structure facing investors rather than attempting to counter policy-induced distortions through administrative regulations.³ Increased competition would lower enterprise retained earnings, reduce incentives for new entry and improve the efficiency of the allocation of investment resources without requiring government intervention.

The level of retained earnings of enterprises in infrastructure sectors, on the other hand, tends to be low due to regulated prices and/or earmarked surcharges which accrue to governmental entities. Reflecting in part the mixed impact of government policy on enterprise savings, the table below shows that Chinese enterprise reliance on internal funds for investment is about average in a group of comparator countries.⁴

How Firms Finance Investment ^(a)

	Retained Earnings	Loans	Equity
Korea	12.8	45.4	40.3
Mexico	17.1	2.9	76.0
Thailand	17.3		
Turkey	18.1	15.5	60.5
China	22.7	25.4	1.0
India	36.1	45.6	11.0
Malaysia	42.4	2.1	31.4
Pakistan	58.3	16.1	12.3

^(a) Figures for China are for state-owned unit investments in 1993, for other countries sample periods vary but are the 80s (see Source) and figures represent the median for each category.

Source: Figures for China are based on Table 1.4. Figures for other countries from Michael Atkin, Jack Glen, "Comparing Corporate Capital Structures Around the Globe," *The International Executive*, Vol. 34 (5), September/October 1992.

Beyond pricing, there are issues which relate to the way in which governments exercise ownership rights in enterprises under their control, given inadequate delineation of enterprise-government links and the absence of direct remuneration of government capital (through dividends). Retained earnings have traditionally been considered resources belonging to the locality in which the enterprise resides and therefore their use subject to direction by the local authorities. This was particularly true when creative accounting and tax exemptions increased enterprises' after-tax earnings at the expense of revenues accruing to the central government. Reforms in tax assignment and tax administration are reducing incentives for enterprise-government complicity at the subnational level. However, continued enterprise reliance on hand-outs from the government (either directly through subsidies or indirectly through directed credit) will imply continued limitation on the use of own-funds.

¹ For example, in China depreciation allowances for the enterprise income tax are below economic rates and labor costs are only partially deductible, resulting in reduced after-tax profits.

² A common complaint on the part of Chinese officials is production scale (e.g. for motor vehicles) which appears suboptimal in comparison with international norms. It is clear that both international and domestic trade policies are contributing to increasing the profitability of projects which would not otherwise be undertaken.

³ SPC's industrial policy document prohibits certain investments, including in plants below a certain size.

⁴ Chinese figures are not strictly comparable to figures from other countries because they include investment by all state-owned units and not just enterprises. The share of retained earnings is, therefore, understated.

3.43 Although utility price reform is desirable on efficiency grounds, incomplete enterprise reforms will require continued government presence in planning infrastructure investment. Enterprises' role in directing and managing infrastructure investments must be monitored as long as their financial and operating structure does not embody a full governance and financial accountability system. SOEs are very thinly capitalized and have soft budget constraints; the regulatory and oversight functions of line ministries and other government agencies are not clearly established; enterprises operating at different geographic levels respond to competing local political interests; etc. In this environment, it is not realistic to expect that channelling domestic savings directly to enterprises through price policies will result in an efficient pattern of public investment.

3.44 A prerequisite for hardening enterprises' budget constraints is to endow them with an adequate level of capital with which they can absorb changes in business conditions without having to resort to the State for financial redress or to automatic rescheduling of their loans from (publicly-owned) banks. Debt only has meaning as such if there is another class of claims that bear more down-side cashflow risk. As enterprise reforms are consolidated, the government would be able to revert gradually to a decentralized system with market pricing and autonomous decision-making in all sectors with significant potential for cost recovery. This would take pressures off the budget, reduce the need for directing credit and increase investment efficiency.

3.45 **Financial Intermediation.** *Third*, financial markets and institutions can be used to channel part of national savings to fund public investments. The vehicle for tapping the pool of financial savings can be the formal banking system, specialized investment funds or capital markets.

3.46 In the case of bank intermediation, the main problem is how to achieve the *term transformation* that is needed to convert the current pool of mainly short-term deposits into the long-term loans required to fund infrastructure projects, in particular. Banks tend to give loans of up to 3-5 years for infrastructure projects, which is clearly shorter than the payback period of the investment. Yet this already represents some extension of maturities between banks' deposit base and loan portfolio, which is not adequately hedged. Neither bank borrowers nor lenders seem to be very concerned about the mismatch between bank deposits, bank loans and underlying investments because: (i) the State effectively guarantees refunding once the project is in the investment plan; and (ii) interest rates are controlled and hence there is little expectation of dramatic future movements in interest rates. In other words, refunding risk (in terms of access to credit and future interest rates) is not borne by either borrower or lender, but by the State. This represents a common form of "softening" of budget constraints. With hard budget constraints, this maturity structure would be ultimately unsustainable.

3.47 Part of the job of intermediating domestic savings towards fixed investments can be delegated to domestic capital markets. Given the need to preserve banks' portfolio quality and the relative shortage of long-term deposits, capital markets should be increasingly relied upon to provide a sufficient volume of private risk capital and long-term debt to finance long-gestation infrastructure projects. Specialized investment funds that embody some public-private partnership can be used to mobilize equity and long-term funding for large infrastructure projects. Providing liquidity to long-dated financial instruments would make them more attractive to a larger pool of potential investors (see Box 3.4). The government is also encouraging foreign direct investment (FDI) in infrastructure and other public investment ventures to help meet the need for equity financing. This source of capital could be used more

intensively if there was a defined, clear and nondiscriminatory regulatory framework for FDI, and for BOT projects in particular.

Box 3.4: SPECIALIZED INFRASTRUCTURE INVESTMENT FUNDS

Infrastructure projects are financed largely through user fees, earmarked funds and through medium term debt. With declining budgetary resources, capital grants have become negligible. At the same time, equity markets have not been promoted aggressively because of the danger of disintermediation. These factors have resulted in very little use of equity instruments.

In the future, infrastructure financing will need to come increasingly from nongovernmental sources. This will release the State from funding obligations, facilitate the transfer of technology and expertise, and provide the basis for a competitive environment which will induce greater efficiency. As a prerequisite, the government will need to achieve a corporatization and commercialization of broad infrastructure sectors so that they can be opened up to private financing. This entails introducing an appropriate legal and regulatory framework, simplifying administrative authorizations and controls, permitting competition in the provision of infrastructure and rationalizing tariffs. In parallel with these sectoral policy reforms, the government will need to permit—and in some cases even induce—appropriate vehicles for private financing. Private financing in infrastructure can be attracted by offering appropriate government guarantees and/or through limited or nonrecourse financing.

Given China's massive infrastructure needs, it might be necessary to provide for an institutional structure to facilitate the channelling of guarantees and to provide seed financing and structuring expertise for project financing schemes. Such institutions should be geared towards the mobilization of risk and long-term capital from foreign as well as domestic sources. There could be a variety of infrastructure investment funds operating independently and competitively, and could have mixed ownership.¹

In the short and medium term, a larger proportion of infrastructure will have to be met through equity rather than long-term debt for several reasons. First, long-term domestic resource mobilization through debt instruments is difficult while financial and capital markets remain controlled. Second, the legal debt contract enforcement framework is lacking and credit discipline is weak. The cost of enforcement of debt contracts might be very high. Third, the substantial macroeconomic and policy risk environment inherent in infrastructure investments might be better addressed through a less structured (leveraged) financing structure. Fourth, encouraging domestic share distributions will help relieve the government's concerns about predominant foreign ownership of key infrastructure projects. Finally, a lower debt-equity ratio will reduce the expected return on equity, and hence will be more easily compatible with the rate of return restrictions imposed by the government on foreign investors.

Given that a very high proportion of domestic savings are held by individuals rather than institutional investors, equity investments must be made palatable to them. Market liquidity is essential, so that households can meet their current income needs. Portfolio diversification options should be readily and cheaply available to unsophisticated investors. This can be achieved by encouraging the formation of domestically-traded closed-end equity funds intermediating individual corporate shares. A liquid long-term bond market would also provide for growth in contractual savings and would be a mechanism for bringing the resources raised by nonbank financial institutions into the financial mainstream. Capital market deepening should be seen as an integral part of an investment reform program, and requires substantial regulatory and institutional reforms (see parallel study *on China: The Emerging Capital Market*).

¹ For a concrete proposal of a "capital development operation" designed to finance investments in the power sector, see The World Bank, "China Mission Report: Mobilizing Domestic and Foreign Savings: Options for the Power Sector," May 1994.

Mechanisms for Allocating Investments

3.48 The challenge for the government is to reduce overall investment demand to levels compatible with macroeconomic stability even while maintaining adequate financing for the public investment program as outlined above. For "private" investments, this requires further

progress in the establishment of a market economy which would remove incentives for overinvestment. Particularly important in this regard are the imposition of hard budget constraints on enterprises and financial institutions, through appropriate governance structures and competitive market discipline, completion of price reforms and interest rate levels which reflect the scarcity value of capital. For public investments, given the adequacy of current levels of domestic savings and the unexploited potential for additional foreign savings, this requires institutions and mechanisms for *redirecting* the existing pool of investment financing towards (the more narrowly-defined) priority investments. The remainder of this section is devoted to these considerations.

3.49 Financing Plans. The principal challenge here is to ensure adequate financing for the public investment program through mechanisms which do not impede further progress toward the establishment of competitive markets in the rest of the economy. Until appropriate mechanisms are developed for indirect monetary management, the authorities will have to rely on quantitative restrictions on credit. However, a shorter term objective should be to eliminate reliance on the financing plans (credit, bond and equity) for influencing the *pattern* of investment. This implies continued imposition of *aggregate* credit ceilings, which could be allocated across banks based on the growth of their deposits, but without direction of credit into specific uses. *The state's quota-bound financing plan should be limited to the public investment program*, which would be funded primarily through budgetary expenditures and fiscal extrabudgetary funds. Bank participation in investment financing should be sought in cases where it is commercially viable, and can be induced with appropriate fiscal (subsidies or loan guarantees) contributions to the project, in cases where it is not. Through (moderate) fiscal contributions, the government can induce commercial financing of specific projects without significantly affecting the risk/reward structure and incentives of banks and project sponsors. Thus, budgetary appropriations (directly or indirectly through the SDB) could become the prime tool for ensuring financing of the government's priority projects, even if these are funded in part from commercial sources.

3.50 Extrabudgetary Institutions for Financing Public Investments. Budgetary resources (including fiscal EBFs) are currently insufficient to finance China's public investment program while capital markets remain rudimentary and term transformation risk makes commercial bank financing problematic. Investment financing institutions may serve a useful function during the transition to a more robust fiscal capability and more mature financial system. This section discusses the role and operations of SDB but not its institutional structure.⁴⁹

3.51 Policy Framework: SDB's Mandate. SDB has been set up ostensibly to finance priority areas of government policy, in particular in infrastructure and key industries. The experience with policy lending in China has shown that: (i) targeting funds to the desired projects is difficult; (ii) the interaction of policy banking and monetary policy tends to loosen the latter; (iii) there is low repayment on policy loans; and (iv) there are frequent cost overruns in projects financed by policy lending. The design of SDB should therefore address these endemic problems. As SDB seeks to define its role and strives to carve itself a niche, the question that must be asked is: how is it going to be different from the previously specialized banks and the erstwhile SICs?

⁴⁹ There has been substantial policy dialogue about the SDB's internal and external institutional environment in the context of preparations for a second financial sector technical assistance project.

3.52 Currently, SDB's role is not sufficiently well-defined. At the most basic level, the authorities need to clarify the extent to which SDB should form its own investment agenda independently of the SPC. The degree of desired decision-making autonomy has implications for the set of skills needed by SDB and for accountability criteria. It must be very clear from the outset whether SDB is expected to make a profit or actually intended to lose money. If it is expected to be profit-oriented on some loans and not on others, accountability is rendered more difficult.

3.53 At one extreme, SDB might be simply a financing window and an implementing agency for the government's public investment priorities. Investments are presumably deemed to be priority after careful scrutiny by SPC in coordination with line ministries and MOF, and are approved by the State Council through the investment plan. In this case it is not clear that SDB should have any project appraisal capabilities or responsibilities, as duplication of functions could lead actually to less accountability. Besides, if SDB turns down financing for a priority project, then either the government's priorities will not be met, or, more likely, the project will still be funded from other sources (budget, banks, etc). Thus, ultimately, SDB scrutiny would not serve to prevent "bad" projects from being undertaken. Under this setup, to the extent that SDB finances the government's priorities, its profit and loss should not reflect on its performance.

3.54 At the other extreme, SDB could be charged with implementing a set of broad policy *objectives* for which it would design its own investment plan. Unlike in the previous case, part of the public investment program would be delegated to rather than implemented through SDB. In this case, SDB needs to be fully responsible for project appraisal and selection, should be set up as a fully autonomous institution, and profitability might be an adequate performance criterion.

3.55 Although it is desirable to structure SDB's operations and institutional set-up so that its performance is subject to the extent possible to market discipline, SDB will remain a quasi-fiscal entity by virtue of its mandate and the ultimate assumption of liability by the state. It is therefore important for the government to monitor closely SDB's performance. Such monitoring is easier if SDB's objectives are narrowly defined and its performance and impact can be evaluated. Where the test of the market is not wholly relevant, there is a need for strict performance standards, and these are much harder to implement effectively if SDB's mandate is loose, broad-based and shifting. In this context, setting up separate entities to channel hard and soft loans should be considered, along the lines of the World Bank Group (IDA and IBRD). Performance on hard loans could be subjected largely to market discipline while effectiveness of soft loans would be evaluated based on administrative criteria.

3.56 Accordingly, we recommend that SDB be assigned specific policy objectives, that it be able to implement those objectives as it sees fit through its investment portfolio, and that it not be seen as a financing window for key priority projects that do not fall under the purview of those objectives. Specifically, and as currently envisaged, SDB could be given responsibility for supporting industrial policy objectives and financing key infrastructure projects. SDB's autonomy, which is currently limited to the exercise of an (exceptional) veto on individual projects proposed by SPC, should be expanded in the future. In the medium-term, and once SDB has built strong independent project appraisal capability and established a solid track record, SDB should be given authority to select projects within its mandate, unencumbered by political preferences.

3.57 SDB's role in **infrastructure** finance will vary depending on the projects. In some subsectors, where the potential for cost recovery is limited, SDB will become a channel for the allocation of budgetary funds. In others, where projects have social externalities or are potentially commercially viable but do not have access to term loans, SDB would assume responsibility for arranging co-financing from commercial sources by making the financing package sufficiently attractive. This could be done through provision of interest subsidies or credit guarantees (to extend maturity) to commercial banks or through extending subsidized credit. While there is a case for SDB involvement in infrastructure projects which are unable to attract commercial funding in the current environment, there is by the same token little justification for wholly SDB-financed projects. In this context, SDB should play an active role in promoting a policy and financing framework that would be conducive to increased private participation in infrastructure investment.

3.58 In the area of supporting **industrial policy** objectives, the key operational challenges would be: (i) how to continuously identify the shifting narrow band of sectors that deserve its financial support; (ii) how to maintain discipline in protected industries and firms; and (iii) how to prevent support to industries that are not using its resources effectively from becoming entrenched. Rules for "graduation" from SDB financing for industrial policy objectives should be established at the outset. Policy lending by SDB should reinforce the general policy environment instead of simply compensating for deficiencies therein.

3.59 The favorable Japanese and Korean experience, notwithstanding, policy or development banks are a dangerous policy instrument. They often subvert monetary policy, constitute a fiscal burden, weaken financial discipline and perpetuate distortions and inefficiencies. Successful policy lending appears to be predicated on market-friendly administrative guidance (see Box 3.5).

Box 3.5: POLICY LENDING IN JAPAN AND KOREA: THE INGREDIENTS OF SUCCESS

The success of Japanese and Korean policy-based finance lies to a large extent in the way in which priority sectors were chosen. Extensive consultation between government, enterprises and other financial institutions would generate a consensus over priority sectors, a consensus which was then "sealed" by government with policy financing. The number of priority sectors was limited, and the modalities of support fairly standardized and simple. Policy lending in Japan explicitly targeted for an increase in competition in the supported sectors. Market competition was replaced by performance contests within protected sectors so that discipline would not slacken. There was extensive monitoring of financed enterprises and rewards were granted for the successful ones. Policy lending was channelled through financial intermediaries that had adequate capitalization, access to low cost funds (postal savings), administrative capability in appraising projects and monitoring performance and had independent, professional management.

3.60 **Asset Management.** In carrying out its functions, SDB should establish rigorous project evaluation and selection criteria, clear approval procedures, and strict supervision. SDB's financing should be provided only if the project managers and/or sponsors have a substantial stake in the project, and should be limited in magnitude and scope. This will allow for other commercial stakeholders—banks, shareholders, bondholders—to perform the supervision function for which SDB is not well equipped given its limited geographic presence. Therefore, SDB should adopt strict exposure limits by borrowers (in relation to project size as well as equity position).

3.61 Sound operational procedures are essential for microeconomic efficiency and SDB's creditworthiness. SDB should build up the capacity to appraise projects, to supervise their implementation and to enforce timely loan repayment from the very beginning. Although some of the expertise will be built up only in the course of operations, it is essential for SDB's reputation to start out with a sound framework that is superior to the present channels of policy lending. In the same spirit, it would be in SDB's strong interest not to inherit a substantial portfolio of old investments (whether from the SICs or PCBC) as this will make its financial position less transparent, may saddle the SDB with vested interests in new lending operations, and may burden the institution with costly but largely futile collection efforts.⁵⁰

3.62 Loan implementation, delivery and supervision will be difficult given SDB's very limited geographic coverage. Its agency agreement with PCBC will remain a problem as PCBC will have no incentives to treat SDB's better than its own portfolio—and every incentive to treat it worse. Disbursement and repayment records—a key to monitoring loan performance—will be no better than PCBC's. Accordingly, SDB should give consideration to incorporating incentives for loan collection in its agency contract with PCBC. In the medium term, competitive bidding for these services would further efficiency.

3.63 Interest rates on SDB's hard loans should reflect the full cost of funds and administrative expenses. Lending rates will remain below market rates, however, to the extent that SDB benefits from a sovereign guarantee on its borrowing and its capital is not subject to remuneration.

3.64 **Liability Management.** SDB should jealously guard its financial viability and creditworthiness in order to avoid unnecessary disruptions in the future. It should require adequate collateral or coguarantors for its loans; initiate collection procedures in case of nonpayment and provision for potential bad debts promptly and fully. Loan losses, on the other hand, should not be directly fiscalized but charged against the bank's capital. It is especially important to adopt adequate accounting treatment of interest in suspense so that repayment problems can be detected quickly. Openness to public scrutiny would also serve to expose problems early and to reduce the possibilities of abuse.

3.65 To ensure operational autonomy, SDB should get its fiscal contributions (whether for capital or interest rate subsidies) in annual appropriations not tied to specific loans or projects. These appropriations must be made consistent with budget financing capabilities. At the same time, the scope of SDB's soft lending operations should strictly reflect the level of fiscal contributions, so as to prevent an implicit decapitalization of the bank.

3.66 SDB's access to funding from banks or capital markets should be stable but subject to explicit limits set by the government. Recognizing the quasi-fiscal nature of the SDB and the potential for crowding out commercial credit institutions, there need to be clear limits on the credit resources the SDB can attract even if its bonds are placed voluntarily and competitively.

⁵⁰ The government needs to design an overall solution to the problem of bad debt in the banking system for several reasons. First, the distinction between policy and nonpolicy loans is unclear. Second, SDB should not be turned into a bad debt collection agency if it is to deliver on its mandate. Third, depending on whether SDB or PCBC is given authority to select which policy loans to transfer, one or the other would end up with all the bad loans. Fourth, consideration needs to be given to which entity would be most successful in collection efforts.

In the medium term, the objective should be voluntary placement of SDB bonds; in the interim, bond rates should be set in relation to prevailing commercial lending rates of equivalent maturity.

3.67 Whether or not SDB bonds should carry a sovereign guarantee is debatable but this report recommends that they should, at least in the short term when these bonds are still subject to administrative placement.⁵¹ On the one hand, the existence of a sovereign guarantee would reduce incentives for good performance and isolate SDB further from the test of the market. On the other hand, in the absence of a sovereign guarantee, SDB would not be able to benefit from lower cost funds and explicit budgetary subsidies would have to compensate if SDB's capital is to remain intact. More importantly, it is unlikely that the government would allow a quasi-fiscal entity like the SDB to go under and it may be beneficial to grant the sovereign guarantee upfront. Finally, the SDB should not be allowed to mobilize deposits nor to fund loans directly from PBC credit. There is no reason for an institution of these characteristics to be involved in direct resource mobilization; rather, it should delegate this retail function to commercial banks and attract its resources wholesale.

D. A FRAMEWORK FOR FINANCING PUBLIC INVESTMENTS

3.68 In this section, a comprehensive investment financing framework is developed building on the government's current reform plans and taking into account the above criteria for financing public infrastructure. What the framework would actually look like is illustrated at the end.

Building on Government Reforms

3.69 In order to clarify the scope of government responsibility in the economy, current Chinese reforms propose a tripartite division of investment projects. Category I consists of social investment projects (such as those in health and education) which would be funded from the budget. Category II consists of "basic industries" (including infrastructure, key raw materials and some priority manufacturing sectors) which would get support through SDB policy loans. Finally, investments in "competitive" industries would be funded from commercial sources.

3.70 While this classification is a step forward, it is done according to broad sectoral categories which do not always reflect intrinsic economic characteristics of investments. Hence, this classification does not lead to clear implications for appraisal criteria or financing mechanisms. Sharper distinctions across categories that take into account the nature of the investment and the rationale for government involvement would permit a deeper specialization of investment planning and financing institutions. Investment reform objectives would be clearer and better pursued with some redefinition of these broad investment categories along the following lines.

3.71 Category I should include public investments with little or no prospect for cost recovery. This category includes pure "public goods" that provide a good to the general public that cannot be targeted to specific individuals or entities. Basic infrastructure like rural roads provides

⁵¹ Once SDB bonds are placed on a voluntary basis, consideration should be given to extending their maturity to reduce term transformation risk for SDB. Extending maturities now would increase risk exposure for the specialized banks, which are obliged to purchase SDB bonds.

benefits, but no fees can (should) be collected because of nonexcludability of access and nonrivalry in consumption. Similarly, the financial cost of cleaning up polluted rivers is difficult to recover because benefits are widely dispersed and offenders can not be charged.

3.72 Category I should also include social projects which in principle could be operated on the basis of cost recovery through fees but which the government wishes to subsidize or provide free of charge for social reasons. This might include basic education and public health.

3.73 Category II should include those projects that can earn significant revenues by charging direct users, but which produce additional public benefits beyond those enjoyed by the users or for which efficient pricing precludes full cost recovery. One type of such projects could be called "semi-public goods," such as infrastructure projects in railways, ports, water and sewage, electricity transmission and distribution and local telephone service.

3.74 The other type of investments in Category II would be those supported in pursuit of the country's industrial development objectives. Such investments should be limited to projects where there is a temporary, short-term justification for government intervention either to compensate for existing transitional market distortions (e.g., lack of price reform) or to generate new skills and technical know-how in developing industries. Because the rationale for public support for such investment projects is premised on "infant industry" arguments based on dynamic externalities, support should be limited both in scope and duration. This temporary protection should be combined with measures to correct market distortions and to complete transition reform policies.

3.75 Projects in Category II require an element of subsidization. This could be provided in several ways: (i) budget financing of the entire project cost; (ii) government provision of a fiscal subsidy in the form of a capital grant of sufficient magnitude to make the project commercially viable; (iii) government provision of a guarantee on commercial borrowings; or (iv) government provision of subsidized credit through a specialized institution (the SDB).

3.76 Budget financing of the entire project cost should be avoided wherever possible to minimize budgetary impact and to permit some market scrutiny and supervision of the project. The latter three financial mechanisms can be fiscally equivalent *ex ante* for any particular project and there is an argument for giving SDB the mandate to decide on the financial mix, subject to strict control over the level of financial resources at its disposal.

3.77 The current priority sectors identified by the government within Category II are too numerous and broad for SDB support to have an impact. Priority sectors in Category II currently include "pillar" industries (including electronics and automobiles), critical raw materials, high-tech industries and other "basic" industries (such as fertilizers). It is hard to justify support for some of these sectors on the basis of technical spillovers. Many of the sectors in Category II will hence need to be moved on to Category III, i.e., financed from commercial sources.

3.78 Projects in Category I and those that benefit from budgetary or SDB funds in Category II would constitute the public investment program as discussed in the first section. The size of this program would be strictly circumscribed through budgetary appropriations and limits placed on SDB borrowing; these government-controlled resources would be further leveraged through commercial and enterprise funding.

3.79 The government intends to give freer rein to SOEs for “competitive” investments under Category III—i.e., for investments for productive, commercially viable purposes. Financing for such investments would be solely the responsibility of enterprises, without explicit State support (other than through capital contributions to SOEs undertaking the investment). In order to accommodate the increasing freedom of SOEs to make “competitive” investments, administrative project approval and detailed financial planning requirements will have to be eliminated as these responsibilities are delegated to enterprises and their financiers.

Who Would Invest in What and How Much?

3.80 Table 3.3 illustrates how the state sector might utilize investment resources in the aftermath of reforms in public investment programming recommended in this report. The figures in the table are only indicative.

	Budget	SDB	Commercial	Enterprise	Total
1. Public Goods ^{/a}	2.0				2.0
2. Infrastructure	2.5	2.0	1.0	1.5	7.0
3. Strategic Sectors	1.0	1.0	2.0	1.0	5.0
4. Competitive Sectors			2.0	3.8	5.8
Total	5.5	3	5	6.3	19.8
Memorandum: total investment/GDP					33.0

^{/a} Not including infrastructure.

Notes:
 Budget includes central and local budgetary appropriations (including to SDB), fiscal extrabudgetary funds and official investment grants or credit.
 SDB includes only SDB borrowing.
 Commercial sources include bank credit, corporate bonds and stocks (domestic and foreign).
 Enterprise includes internal funds of enterprises.

3.81 Assuming an overall investment rate of 33 percent of GDP and assuming further that the state share is 60 percent, this yields state investments of 19.8 percent of GDP. The breakdown of this figure across different types of projects is based in part on the current structure of investment (Table 3.1) and in part on policy targets. Hence infrastructure investments are targeted at 7 percent of GDP and investment in social sectors (and administration) is set at 2 percent of GDP, incorporating the need to reverse the declines registered in the last decade. Assuming investments in “strategic sectors” of 5 percent of GDP (1992 level), this leaves 5.8 percent of GDP for competitive investments by SOEs.

3.82 With respect to funding sources, a budgetary contribution of 5.5 percent of GDP is assumed. This is based on the current scope of the investment budget and the incorporation into the budget of some fiscal EBFs; it also reflects the need to take on to the budget the responsibility for the provision of a social safety net, currently assumed by the enterprises. It is

proposed that SDB's scope be limited to some 3 percent of GDP, roughly its level in 1994. Assuming domestic and foreign credit for investment (not including SDB) of 5 percent of GDP, enterprise funds would constitute the remainder. The latter corresponds to the Category of self-raised funds in Table 3.1 and part of extrabudgetary funds that would remain at the enterprise level through further price reforms.

The public investment program would cover projects from the first three categories with access to budgetary and SDB funds (8.5 percent of GDP). Depending on the extent of averaging, the PIP would represent 9-11 percent of GDP.

ANNEX

ANNEX: THE INVESTMENT PLANNING AND FINANCE SYSTEM

A. PREPARATION OF THE ANNUAL INVESTMENT PLAN (AIP)

Scope of the AIP

1. Every year the government prepares a national investment plan, which sets out the investment intentions of the state sector and includes a projection of nonstate investment. This plan is in principle guided by the Five Year Plan (FYP), which outlines national objectives and priorities, and includes investment targets and a list of major projects to be initiated in the course of the plan period. However, as the actual pace of investment has consistently exceeded the FYP's targets, the latter's guiding role is limited.

2. The AIP is conceived within a macroeconomic framework. It sets a target for aggregate investment which is broken down into state and nonstate investment. While the nonstate share is forecast only in aggregate, state investment is planned in considerable detail: investment targets are set for line ministries and provincial governments by type of investment, i.e. capital construction (CC) and technical transformation (TT), and provincial targets are broken down by sector. All investment allocations have identified sources of financing. The AIP also contains expenditure and financing details of large and medium size (LMS) projects of both central and local government. These receive priority in the allocation of resources. Within the Category of large and medium size projects, some investments are considered top priority and given "key project" status.¹ Key projects, which require State Council approval, constitute the core investment program. Their financing is guaranteed and identified in the AIP.²

Investment Planning Process

3. Overall responsibility for preparing the AIP lies with SPC which liaises closely with the Ministry of Finance (MOF), People's Bank of China (PBC), State Economic and Trade Commission (SETC) and others (see Box 1). The AIP is a consolidation of separate investment plans of the central government and the provinces. The provincial investment plans include the plans of the municipalities, which in turn integrate investments by the counties. While the plans by line ministries and local governments provide details on the individual projects for which they are responsible, the AIP only lists large and medium size projects, whether of central or local government, that have been approved by SPC or SETC.

¹ The 1994 investment plan contains 596 large and medium scale capital construction projects, of which 151 were key projects.

² Within SPC, a special Department for Key Projects coordinates the work on these projects while in the provinces, this task is undertaken either by a 'key project' office within the Provincial Planning Bureau or by a separate department.

Box 1: STAGES IN THE PREPARATION OF THE ANNUAL INVESTMENT PLAN

Guidelines to agencies. The first step in the AIP preparation cycle is the provision of guidelines to government agencies. In July of each year SPC's Comprehensive Department sends a "Notice regarding the next annual plan" to all ministries and provincial governments. This includes a set of development indicators, including preliminary plan projections of GDP growth, the rate of inflation and total investment broken down into state and nonstate investment. SPC also provides them with its "report on economic trends" for the first half of the year.

Ministries and local governments prepare investment plans. During the period July through September, line ministries and local authorities draw up investment plans covering their respective areas. The sector investment plans of the line ministries are prepared taking into account agreed development priorities as well as the planned expenditures for ongoing projects and proposals for new projects submitted by centrally-controlled SOUs. While ongoing projects generally receive priority, their implementation may be delayed if new projects are considered essential or are included as a result of international contracts. At this stage SPC sometimes organizes a conference to discuss investment priorities in a particular sector (e.g. electric power), to which officials from provinces, relevant ministries and the State Development Bank (SDB) are invited.

A similar process takes place at the provincial level, where the provincial planning bureau (PPB) receives sector investment plans from the functional bureaus based on submissions by provincial SOUs. Following consultations with municipalities and counties on their investment intentions, and in collaboration with the ETC bureau (on TT investment), the PPB determines the aggregate level of investment which includes a figure for total nonstate investment. State investment is then broken down by sector and level of government. The provincial plans list all provincial projects and those municipal projects that are large or require provincial financial support. They also include an aggregate figure for municipal and county projects that do not need provincial funding.

All plans of line ministries and provinces include a breakdown of expenditures by source of finance, and each of the large and medium size projects has identified funding. SOUs are now encouraged to obtain preliminary approval of their projects from banks before submitting them to the planning agencies—a provision instituted as part of the increasing control exercised on SOU investment in 1994. This close linkage between expenditures and their financing is an important means for SPC to control investment.

Aggregation by SPC. By end September, all plans are submitted to SPC. However, already during these initial months SPC holds informal discussions with line ministries and provinces. Once all investment proposals have been received, financing requirements are aggregated and SPC starts the process of matching investment needs with available funding. In discussions with MOF, PBC and others, agreement is sought on the resource envelope for investment, in particular on the contribution from the budget, the share of credit expansion to be allocated to investment, and the expected amount of foreign financing. Once the financing is agreed, the draft AIP is prepared, involving decisions on allocations for large and medium size (including "key") projects, investment quota for line ministries and provinces, the balance between CC and TT investment etc. The investment quota for each line ministry and each province is also broken down by major source of funding.

When data on the outturn for the first 9 months of the current year are available, SPC organizes a seminar to discuss the outlook for the Chinese economy and the strategy for investment. Towards the end of December, a national planning conference is held with representatives of PBC, SETC, line ministries and provincial governments to review the draft investment and credit plans. Finally, both plans as well as any unresolved issues (e.g. between SPC and PBC on the credit plan) are submitted to State Council for approval and decision.

Project Approval

4. In the past, project approval together with control over the allocation of funds, materials and foreign exchange, were the principal means by which the government determined the composition of investment. Only approved projects would receive the necessary inputs. With the implementation of economic reforms and decentralization of decision-making, government control over investment has declined, and with it the role of project approval. Nevertheless, it remains a significant instrument for directing resources to priority projects, in particular large projects.

5. In principle, all investment projects (state or nonstate) require government approval. In the case of nonstate projects or projects relying entirely on own resources, the purpose of their approval is to ensure compliance with the government's industrial policy and avoid resources going to activities the government considers wasteful.³ All other projects that require funding from outside in one form or another have to pass a screening process to assess their technical soundness and economic merit.

6. The approval process takes place at all levels of government and involves several agencies. At the central level, SPC (for CC projects) and SETC (for TT projects) have to approve all (central and local) large and medium size projects, all (central and local) projects requiring central government funding (i.e. from the budget or SDB), as well as the small central projects that need official blessing if they are to be given access to credit. All these projects are also submitted to the respective line ministry, which reviews them in the light of sector objectives and priorities and passes its comments on to SPC and SETC. Similar procedures apply in the provinces, where the provincial planning bureau and the provincial branch of the SETC receive project submissions through the functional bureaus. They review all provincial projects (except for those going to SPC) as well as lower level projects that are requesting financial support from the provincial government.

7. Generally, projects are approved at the level of government where they originate unless they need funding from a higher level. Large and medium size projects, however, wherever they originate, require SPC/SETC approval. The threshold that determines whether a project has to be submitted to SPC/SETC has been changed many times. It used to vary by type of project (CC or TT), by sector, and even by province. Currently there appears to be a uniform threshold for LMS projects of Yuan 200 million. Foreign-financed investments have an approval limit of \$30 million in the coastal provinces and \$10 million in the inland areas.

8. The approval process is long and involves many agencies (see Box 2). It takes typically 3-5 years from initiation to approval of an investment and different organizations carry out similar analyses in a sequential fashion. A large project is presented to SPC/SETC first in the form of a preliminary proposal. If it is approved, it goes back to the SOU where it originated, which orders a feasibility study. Following review by other agencies, the project is then resubmitted to SPC for final approval. To be approved a project must meet the standard technical, financial and economic appraisal criteria which are set out in SPC's manual. Other factors taken into account include whether the investment is in a priority sector, how it fits into the sector's development strategy, what its social impact is, and whether it is acceptable from an environmental point of view.

Project Implementation

9. Physical implementation of projects is monitored by the agency supervising the SOE undertaking the investment, i.e. the line ministry or local sector bureau or, increasingly, the enterprise charged with managing investments in the sector. This also applies to "key" projects. SPC and provincial planning bureaus are concerned with monitoring plan implementation, but not individual projects. However, both at the central and local levels separate units have been set up within the planning agencies to coordinate arrangements for key projects. The Construction Commission at the relevant level is responsible for the technical aspects of projects; it monitors

³ This rule is not always observed. E.g. in Henan province many nonstate projects are not 'registered'.

the progress of construction as well as its quality. In the case of some large projects the Commission undertakes on-site inspection.

10. PCBC and ICBC play an important role in the financial monitoring of projects. The investment funds provided by the budget and SDB channelled through PCBC (or ICBC), which disburses funds in accordance with the project's progress. PCBC also monitors the use of funds and collects interest and repayment on loans. Enterprises are required to submit monthly progress reports to the bank and the Construction Commission (sometimes every ten days). For some large projects, PCBC sets up a branch office on the project site. PCBC reports monthly to the relevant line ministry or provincial department, which in turn reports to MOF or the Finance department and to SDB in order that funds may be released. Within MOF, the new Capital Construction department administers the flow of budget funds to CC projects.

Box 2: THE PROJECT APPROVAL PROCESS: AN EXAMPLE

In the process from project conception to the start of project implementation a number of distinct steps may be identified. As an illustration of this process, the case of a large project of the Fuzhou Waterworks (FW), in Fujian province, is presented below. FW is a municipal enterprise and is supervised by the Municipal Construction Commission (MCC).

- (a) FW identifies a project and puts together a project proposal in consultation with MCC; this involves a prefeasibility study that is undertaken by the local design institute that comes under MCC; if bank financing is needed discussions are held with banks (PCBC or SDB) and a preliminary financing plan is drawn up; the proposal is then submitted to the Municipal Planning Bureau (MPB) for review.
- (b) With MPB's comments the proposal is sent to the Provincial Construction Commission (PCC) and the Provincial Planning Bureau (PPB), which review it and, with their comments, send it to
- (c) The central line ministry, which looks at how it fits into the sectoral context, and to SDB (if its funding is sought) which does a preliminary assessment of its financial viability (esp. repayment capacity).
- (d) SPC reviews the proposal and the various comments, approves the project, and sends it back to FW.
- (e) A feasibility study is undertaken by the same design institute that did the prefeasibility study; it should include an environmental assessment as well as a technical and economic analysis of the project.
- (f) The project (with feasibility study) is resubmitted, via the provincial bureaus involved, to the central Construction Commission and SDB, which review the feasibility study, sometimes with the help of specialized institutes or, in the case of SDB, its own in-house appraisal capacity.
- (g) SPC asks the China International Engineering Consulting Company (CIECC), a consulting firm supervised by SPC, to do a detailed economic evaluation of the project. On the basis of the recommendations of the Construction Commission, SDB and CIECC, and its own analysis, SPC makes a decision.
- (h) The initial design is done by the municipal design institute and needs to be approved by the provincial Construction Commission. Once this is approved, and land use rights have been granted to the Waterworks, a "break-ground" report is submitted to SPC.

11. With regard to Extra Budgetary Funds, MOF (or Provincial Finance Bureau) opens an account for each institution that operates an EBF into which the receipts from fees, surcharges, special levies and other income is deposited. The use of these funds for investment is strictly regulated (in some cases by the State Council). MOF and provincial finance bureaus are

responsible for monitoring the EBFs and make sure that their utilization is in accordance with the regulations. This is one of the functions of the Extra Budgetary Funds division in the Comprehensive Planning department in MOF. In practice, however, control over the use of EBF resources is not always effective.

12. In the past, direct purchase and the use of the government's own construction enterprises was the rule. However, competitive bidding is now increasingly employed; in 1993, it was used for 40.6 percent of the total building space constructed.⁴ The Construction Commission monitors bidding procedures, even though these are not well established. In the absence of clear procurement rules, MOF occasionally reviews contracts and intends to do this more frequently in the future.

B. FINANCING PLANS

13. The budget plays a limited role as a source of funding for investment, and the allocation of materials, equipment and foreign exchange to investment projects, previously the responsibility of SPC, is now largely left to the market. Thus, to ensure implementation of the investment plan the government has to rely primarily on control over the allocation of bank credit and funds from other sources. The investment plan shows a breakdown of investment by source of funding, based on financing plans of individual projects. One of SPC's key aims is to try and match available funding from various sources with the plan's requirements. To that end, it compiles an annual credit plan, guides SDB lending and regulates the issue of bonds and stocks as well as foreign borrowing by SOEs.

14. Through a high degree of centralization—and coordination at the top—of the investment and financial planning processes, the government has considerable influence over the composition of state investment, provided it closely monitors implementation of the plans.

15. Medium- and large-scale projects are approved by the SPC and included in the annual investment plan only after they have a full financing plan. Implicitly, inclusion of a project in the investment plan entails a guarantee of access to funding. At the provincial level, the provincial planning commission's investment approval signals a green light for the project to search for funding but does not imply a commitment for funding. Local governments have no credit quota allocation under their authority, cannot modify or reallocate specialized banks' overall credit quotas, and cannot otherwise formally require banks to finance particular ventures. Direct provincial government financial support may be offered in a variety of ways: (i) budgetary and extrabudgetary fiscal support (in the form of direct grants or "budgetary loans" entrusted to banks); (ii) earmarked funds under the control of provincial authorities; or (iii) loans from local government-controlled financial institutions (such as trust and investment companies). Such provincial government support may supplement financial support by municipal and county governments. However, subprovincial levels of government have very few budgetary or extrabudgetary resources for fixed investment projects.

Role of the Budget

⁴ Yao Bing, "Popularize bidding to develop the construction market," *Zhongguo Touzi yu Jianshe*, 1994: 7, p. 53.

16. The bulk of budgetary funds come from domestic resources but a portion represents foreign loans contracted by the government which pass through the budget. At the central government level, MOF decides on the size of the (domestic) budgetary contribution to investment, taking into account the funding needs of the investment plan as worked out by SPC. The allocation of the investment budget is determined by SPC for expenditures on CC projects and by SETC for TT projects. These two agencies also work out the split between the two types of investment. A similar situation exists at the provincial and municipal levels where local finance departments determine the budget contribution for investment and the planning departments and ETC branches its utilization.

17. Capital expenditures are not centralized in the budget. China's budgetary accounts distinguish between "regular" and "construction" expenditures. However, among the regular expenditures are included investment expenditures for "nonproductive" sectors such as health and education. At the same time, the construction account of the budget contains current expenditures on economic services such as geological prospecting, and a mixture of capital and current expenditure items such as urban maintenance and expenditures. The budget and the underlying accounts only provide for functional categories, and not economic ones. Thus, the budget does not distinguish among investment expenditures by budgetary units, capital grants to nonbudgetary units such as enterprises, and budgetary lending which is administered by the PCBC. The bulk of investment funds goes to the line ministries, with the rest disbursed to SDB (previously to the SICs). The budget shows allocations by ministry and province, but not for individual projects.

18. While the Budget Management Department (BMD) in MOF is in overall charge of preparing the central budget, responsibility for CC expenditures (but not for TT expenditures) rests since early 1994 with the newly created Capital Construction Department (CCD). This department submits a draft (central) CC budget to BMD in October (when SPC has completed its first assessment of financing needs), and during the year monitors expenditures and initiates the release of funds. TT investment is supervised by BMD, while the special funds are managed by line ministries or other agencies (e.g. the State Education Commission allocates the education fund). Line ministries also have discretion over the use of own resources for investment.

The Credit Plan

19. The credit plan remains the primary instrument for managing monetary aggregates in China. It is also an essential tool for guiding the utilization of credit resources. Any move toward indirect monetary management will also have to take into consideration, therefore, the allocation function which the credit plan currently performs. This function now requires a high degree of interagency collaboration to manage an elaborate system of credit allocation by type of lending, by bank, by sector and by medium and large size project. As it is currently managed, the credit plan provides little, if any, scope for commercial lending based on an independent assessment of project and investor risk.

20. **Coverage.** Specialized bank lending is circumscribed by the annual credit plan drawn up by the PBC and the SPC. Commercial banks and nonbank financial institutions (NBFIs),

including urban (but not rural) credit cooperatives and trust and investment companies (TIC),⁵ are outside the credit plan. They are free to expand their loan portfolio in step with their deposits, and can lend up to 30 percent of their loan portfolios to finance fixed asset investments. This so-called “ratio management system” is purported to be the model for the regulation of credit for the specialized banks once these are “commercialized.”⁶

21. **Process and Timetable.** In the fourth quarter of each year, banks put forth their requests for credit quotas on the basis of the funding needs of their provincial branches. The SPC seeks to ensure bank funding for key State projects and other medium- and large-scale projects that it wishes to include in the investment plan. The PBC balances these requests with its forecast of growth in the economy, the expected growth in bank deposits, the expected volume of loan repayment, and other monetary considerations.

22. The outcome of this process, which culminates in a National Planning Conference involving officials from PBC, MOF and SPC by January, is an indicative target of annual credit growth called the total “credit quota.” This is the limit of growth in net credit—it does not include new credits funded from repayment of old loans. This credit quota is submitted to the State Council for its approval. Shanghai and Shenzhen have a special status under the credit plan, as the allocation of the aggregate credit quota they receive is left to the local PBC branches.

23. The credit plan is revised quarterly. Whereas the annual credit plan is indicative, quarterly plans are mandatory. Local PBC branches and local governments do not have authority to change or reallocate the credit quotas of financial institutions within their jurisdictions. Provincial PBC branches do not need to approve individual bank loans beyond ensuring compliance with overall credit limits. Bank reporting on their credit quota fulfillment used to be monthly but was shortened to every 10 days in early 1994 as a measure to tighten credit control. In addition, local PBC branches can launch special audits and inspections of banks to monitor credit quotas.

24. **Allocation.** The credit quota is divided into three parts: (i) credit for investment in fixed assets, which in turn consists of credit for capital construction and credit for technical transformation; (ii) working capital loans; and (iii) agricultural credit. Part of the fixed investment credit quota can be used to finance working capital needs but not vice-versa.

25. Part of the credit quota is allocated to specific projects contained in the national investment plan. Quota allocation to specific projects is more extensive for the capital construction component of the total fixed investment quota than for the technical transformation component. Key State projects are given priority over other medium- and large-scale projects in the credit plan in several ways: (i) they receive the first “cut” of funding quotas in the formulation of the credit plan; (ii) they may get expansion of credit quota if needed (monetary considerations permitting); and (iii) they get preferential treatment in the timing of disbursement of funds, which gets worked into the quarterly credit quotas (Box 3).

⁵ In recent years, specialized banks owned and operated NBFIs through which they performed high interest rate operations and diverted funds from the credit plan. As part of the July 1993 austerity measures, banks have been instructed to disengage from their TICs.

⁶ In an interim phase, banks’ credit totals would be guided by both constraints, namely, a nominal quota and a ratio.

26. The residual (unallocated) portion of the new lending quota, along with the proceeds of loan repayments, is not committed to specific projects. This amount is available for lending to small SOU projects and non-SOU investments. This constitutes the funding for banks' discretionary "commercial" lending; in practice, much of it is allocated in line with the preferences of the local authorities. Banks can expand their discretionary commercial lending through early recall of loans outstanding as actual repayments in excess of estimated repayments are not in the credit plan. However, in practice actual repayments are almost always below estimated repayments.⁷

Box 3: THE 1994 CREDIT PLAN

The 1994 total credit quota was set originally at 480 billion yuan, and was increased to 520 billion yuan, with half the increase slated for fixed investment. The investment plan was also revised from its initial level of 1,300 billion to 1,550 billion yuan; the actual outcome was closer to 1,600 billion. Of the original quota amount, 158 billion yuan was destined for fixed asset investments, including 85 billion for capital construction and 55 billion for technical transformation. The 1994 fixed investment credit plan (including relending from expected repayments) was 15 percent of the total fixed investment plan. In 1993, domestic loans, including officially-approved bonds, financed 23.5 percent of fixed investment. The 1994 credit plan reflects the authorities intention to reduce investment growth. As in past periods of credit tightening, it also reflects the authorities bias in favor of state investments in general (almost 90 percent of credit quota), and capital construction investments in particular (more than one-half of credit quota (also see Chapter 1).

27. The PBC has primary responsibility for dividing the overall credit quota across banks. This is done mostly on the basis of the functional specialization of banks. Accordingly, the portion of the credit quota destined for capital construction projects is allocated to PCBC, while ICBC receives the quota for technical transformation projects. Each bank splits up its credit quota among its provincial branches in accordance with the specific credit quota allocations for projects in the investment plan. Banks are in principle free to allocate quotas for discretionary commercial lending across their branches as they see fit, but in practice proceeds of repayments tend to be relent in the province where they arose, in close consultation with the local planning authorities.

28. **The Role of PCBC.** PCBC is the main lender for capital construction projects. The PCBC's credit allocation system is currently quite centralized. This has been the case since the launching of the austerity program in July 1993, when authority over lending decisions was removed from local PBC branches and reassigned to specialized banks' headquarters. The PCBC can exercise veto power on projects proposed by the provincial government, depending on the ability of individual branch managers to withstand pressure.⁸ A large portion of its total lending for fixed assets is merely the embodiment of the central government's investment plan. PCBC itself admits that it is unusual for it to reject projects proposed by the SPC.⁹ Discretionary bank lending (i.e., lending not specifically committed to in the credit plan) also tends to be

⁷ In 1994, for instance, repayments were estimated at Yuan 11 billion, but actual repayments were closer to Yuan 4 billion. Low repayment reflects widespread rolling over of credits either because of financial difficulty of the enterprises or as a financing mechanism during project construction.

⁸ In the past, most branch managers were nominated by the local authorities, which made them particularly vulnerable to local political pressures. Now, PCBC headquarters has equal say and branches are increasingly able to resist local governments' pressure for lending to specific projects.

⁹ One official estimated that more than 90 percent of PCBC's investment loans were designated by SPC in 1994.

centralized. Branch approval levels are now very low (Yuan 10 million); in fact, branches do not even have budgetary autonomy. Local governments appear to have countered the reduction in their influence over specialized banks' credit allocation by creating their own captive financial institutions.

Policy Lending Through the State Development Bank

29. The State Development Bank (SDB) was set up in April 1994 as one of three "policy banks" designed to take on all directed investment lending which is now channelled through the specialized banks. The other two policy banks are the Agricultural Development Bank and the Import and Export Bank. The SDB's role is to help fund public investment projects which, without necessarily being entirely commercially viable, have some basis for cost recovery. The target projects would be in: (i) infrastructure, (ii) industries supplying key raw materials (e.g., iron, steel, forestry), (iii) "pillar" industries (e.g., petrochemicals, cars, electronics), and (iv) other priority State projects (e.g., in environment and high tech). In these activities, the SDB will support mostly the central government's medium- and large-scale projects. It will not fund "social" investments nor investments in "competitive" industries. The SDB will fund fixed asset investments, but may also supply supplemental working capital loans to accompany its investment loans

30. **Project Selection.** One of the key issues is the extent of autonomy SDB will enjoy in project selection. The current set-up suggests very little. The SDB can only finance projects that have been approved by SPC or SETC. It will, however, conduct its own appraisal of the projects and may formally decline financing specific projects presented to it. The SDB's approval of the project will be secured before the inclusion of the project in the investment plan, so that in practice the SDB will finance projects as envisioned in the investment plan. The nature of the consultative process preceding the inclusion of SDB financing for a project will, therefore, determine the level of SDB control over project selection. This will depend on a number of factors, including the professional competence of SDB staff and the balance of power between SDB and SPC.

31. In the near term, SDB autonomy will be particularly limited. Continued government emphasis on controlling the rate of growth of fixed investment through strict limits on new projects implies that SDB's business will largely consist of managing ongoing operations for some time. SDB now operates a portfolio of 345 medium- large-scale, including 107 key state, projects and some 1,300-1,500 small projects which it has inherited from PCBC and the former SICs. The bulk of SDB loans in 1994 have gone to fund ongoing projects; key state projects accounted for some 90 percent of lending volume. Of the 26 new projects submitted by SPC for SDB's evaluation, SDB had disbursed to fewer than 10 new projects, and approved another six.¹⁰ It is not clear whether SDB will get explicit government guarantees on any of its loans.

32. **Sources of Funding.** Whether or not SDB will ultimately look like a "bank" subject to market discipline or a "government department" subject to administrative regulation will depend in large part on the sources of its funds. The current set up suggest elements of both. The SDB will be funded from two sources. First, registered capital from budgetary appropriations which

¹⁰ Seven projects were at the feasibility stage and SDB had turned down the remaining three, indicating its unwillingness to fund these projects in the absence of an explicit government guarantee. Two of the three were chemical fertilizer projects which are unprofitable at current administrative prices.

has been fixed at Yuan 50 billion will be disbursed over four years.¹¹ MOF has so far been providing capital to the SDB on a tight leash, based on progress in the implementation of specific projects.

33. Second, the SDB places bonds with other banks and UCCs to tap into their deposit pool. In effect, this mechanism represents an extraction of resources of banks through a remunerated “reserve requirement.” These bonds are allocated compulsorily and administratively with the specialized banks and provincial commercial banks on the basis of their excess reserves. SDB bonds are guaranteed by the State, have maturities of 3 or 5 years, and are noncallable. Their rate (at 12.5 percent for 3 years and 14 percent for 5 years) is marginally higher than the interest rate on the comparable-maturity bank loans they displace in specialized banks’ portfolios. Yuan 70 billion in SDB bonds had been placed by December 1994, and another Yuan 6 billion were expected to be placed by the end of the year. The size of bond placements in future years has not been determined. The PBC has been acting as placement agent, but this function is expected to be turned over to the China Securities Exchange Center, an independent registry of securities.

34. When it was set up, the SDB received a short-term loan from the PBC for liquidity purposes, which has already been repaid. PBC credit is not supposed to (but may) be a direct source of funding for SDB loans, although PBC relending to specialized banks for the purchase of SDB bonds is likely. The SDB expects to intermediate foreign loans, either from international commercial banks or from official sources. The SDB is also considering issuing bonds directly to the public in the future.

35. **Lending.** SDB will issue both hard loans—i.e., on terms comparable to those of specialized banks—and soft loans. Proceeds of the bond issues have been relent as hard loans. Hard loans bear interest rates that are marginally higher than SDB bond rates: 13.86 percent on 3-5 year loans and 14.04 percent on loans of more than five years. Capital construction loans are expected to have maturities in the 10-20 year range, and loans for technical transformation will have maturities mostly in the 5-8 year range. Loans of less than one year for working capital purposes will have a rate of 10.98 percent, although none has yet been issued.

36. The SDB’s soft loans have been issued from its registered capital from the budget. The subsidy element on these loans (relative to the hard loans) is supposed to be covered by special budgetary appropriations to preserve the bank’s capital.¹² The Yuan 3.6 billion in soft loans issued so far had interest rates between 4.68 and 5.95 percent.

37. The SDB does not at present have a branch network, although it may open a few branches in the future. It acts in the provinces through PCBC’s local branches in an agency or trust arrangement on a commission basis. The SDB and the PCBC have signed a three-year contract for this purpose, and the PCBC’s remuneration will be 0.2 percent of disbursements. The SDB retains full responsibility for project identification, appraisal and selection. SDB loans entrusted to the PCBC do not enter into the PCBC’s balance sheet, and the PCBC does not bear any repayment risk. The PCBC’s responsibilities *vis á vis* its entrusted loans are to: (i) disburse approved funds in accordance with the progress in construction; (ii) monitor the use of the funds according to their intended use upon disbursement; and (iii) collect repayment on the loans.

¹¹ Yuan 12.4 billion was appropriated in 1994 but only Yuan 3.6 billion had been disbursed and lent out by October. PBC was expected to make up for the short-fall in budgetary funds.

¹² Yuan 1.3 billion was disbursed for this purpose in 1994, and another Yuan 2.3 billion is expected to be appropriated in 1995.

38. **Institutional Set-up.** The SDB is under the direct leadership of the State Council and enjoys ministerial status. The interest rates on SDB's bonds and loans are set in consultation with the PBC. The SDB already has a staffing of over 750, which came primarily from the previous six sectoral investment corporations and also some from the PCBC and the SPC.

39. At the time of creation of SDB, the State Investment Development Corporation (SIDC) was also created. It is meant to succeed the six SICs previously operated by the SPC to channel budgetary loans for investment projects. The relationship between the SDB and the SIDC is not entirely clear: the SDB is part owner of the SIDC but does not have clear control or responsibility over it. Rather, the SPC will exert control over the SIDC. The SIDC may borrow from the SDB, but the circumstances and terms are not clear. The SIDC will be allowed to make equity investments as well as loans. On their loan investments, the division of functions between the SDB and the SIDC is unclear.

40. The portfolios of the old SICs have been split between the SDB and the SIDC along unclear lines. The SIDC has taken on 203 old projects with an investment value of Yuan 60 billion (including loans and equity), and the SDB has taken over some Yuan 30 billion in old loans issued by the SICs. It is not clear how much can be recovered from these investments. In addition, the SDB is nominally taking over Yuan 60 billion in budgetary loans issued prior to 1988 which are of dubious recoverability. It appears that part of the capital provided by the MOF (about Yuan 2 billion) is expected to come from the recovery of these two sources of old investments. While SDB has assumed responsibility for some Yuan 100 billion of PCBC's business, there has to date been no transfer of assets or liabilities.

Tapping the Capital Markets¹³

41. Capital markets are highly restricted in China, especially since 1993, when the then blossoming secondary bond market was curtailed. Stock and bond financing of SOUs accounted for 14 percent of the value of their fixed investments in 1992.¹⁴ Chinese authorities exercise strict control over corporate access to capital markets. The oversight and control of capital markets is fragmented across a number of institutions, and there is little integration of issuance authorization criteria between domestic and foreign markets on the one hand, and between bonds and stocks on the other.

42. **Domestic Bond Issuance.** Paralleling the detailed quantitative allocation of bank credit, the government controls direct enterprise funding through the issuance of domestic securities. The PBC, in consultation with the Investment Department of the SPC, sets an annual quota for domestic bonds issues. A substantial portion of this quota is reserved for specific SPC-approved projects contained in the national investment plan, and the rest is divided among the provinces; there are no subquotas for line ministries.

43. The management of bond issues was centralized after the implementation of the austerity program in July 1993, following the flight of deposits from the banking system into enterprise bonds in 1992-3, and government concern that bonds were being used to circumvent and even subvert the credit plan. Each issue requires approval by the PBC and the planning commission

¹³ Another Bank report on "China: The Emerging Capital Market" provides more detail and analysis of some of the issues discussed in this section.

¹⁴ Not including Treasury bonds.

relevant to the project, even if a bond quota had been preallocated in the annual bond plan. The Securities Division of SPC may be called upon to perform financial analysis of the issuer to review bond repayment prospects, but they do not review all or even large projects systematically. There were instances in the past when corporate issuers exceeded their bond issuance limits or used the proceeds from bond issuance for purposes other than those originally stated. In many cases, unauthorized corporate bonds were issued as a stop-gap source of financing in the face of a cash constraint that could not be met through the credit plan.¹⁵

44. Corporate bond issuance remains a small source of investment funding. At the time of the elaboration of the annual bond plan, quota applications greatly exceed the actual quota implemented. While there is no explicit policy of directing the bond quota to SOEs, they absorb a large part of the overall quota given their large financial needs. At present, most bonds are held by individuals. The prospects for issuing a sizable amount of long-dated bonds appears to be limited given the small pool of institutional investors.¹⁶ Pension funds are poorly developed given the low coverage of the pension system (about 18 percent of the economically active population) and its complete reliance on pay-as-you-go schemes. The investment portfolio of insurance companies is currently about 1 percent of GDP, and largely tilted towards nonlife business which provides relatively shorter-term funds for investment. Significant growth in this sector can only be expected if radical reforms are implemented in the pension and insurance systems.

45. There is a State Council-approved cap on interest rates on enterprise bonds equal to 140 percent of the bank savings deposit rate of equivalent maturity. The actual interest rate of the bonds is set by the PBC and planning commission at the time of approval of the bond application. In practice, corporate bond rates are linked to Treasury bond rates, which are in turn linked to deposit rates. In all instances, bond rates are set significantly higher than deposit rates. This ensures avid demand for bonds.

46. **Domestic Stock Issuance.** The SPC's Investment Department and the Securities Exchange Regulatory Commission (SERC) set jointly the annual quota for domestic stock issuance (A-shares, which are limited to domestic investors and conducted only in Yuan). The nationwide domestic stock quota in 1994 was Yuan 5 billion. Paralleling the administration of the bond quota, a portion of this quota is reserved for "central" projects, and the rest is at least notionally divided among the provinces. Each actual stock issuance requires specific approval by the SERC whether a quota had been allocated at the beginning of the year or not, and regardless of the size of the project. The SERC does not have provincial branches and so stock issuance approval is centralized. Some provinces have set up their own parallel regulatory agencies but they have no approval authority over new stock issues. The Securities Division of the SPC may perform financial analysis of the issuer to ensure that the stocks will have favorable market prospects, but does not have approval authority.

47. B-shares (available exclusively for investment with foreign currency by foreign investors) have a more complicated approval procedure. There is notionally an annual quota for B-shares, but issuance requires approval by the SPC, the SERC, the SETC, the State Commission for the Restructuring of the Economic System (SRC) and the State Council on a case-by-case basis. Listings in overseas exchanges also require extensive approvals. As of early

¹⁵ For example, some construction companies have "sold" such bonds to their own workers.

¹⁶ These section draws on China: The Emerging Capital Market, 1995.

1994, nine companies had issued H-shares (totaling \$3 billion) on the Hong Kong stock exchange and 22 others had received authorization to do so in 1995.

48. **Foreign Borrowings.** There are similar allocation procedures and authorization requirements for foreign borrowings. The State Administration for Exchange Control (SAEC) is charged with monitoring the external debt contracted by Chinese enterprises and government agencies. The SAEC regulates the timing of all external borrowings through a registration process. The SPC sets an annual quota on new external borrowing which is split into long-term and short-term. In turn, the long-term debt quota is split into external debt for the central government (about one-third of the total) and external debt for financial enterprises. The entire short-term debt quota is for financial institutions since the government does not contract short-term debt. Foreign borrowing by foreign institutions is outside the quota system. Foreign joint ventures (JVs) and foreign wholly-owned subsidiaries can contract external debt directly, without prior approval.

Table 1: EXTERNAL DEBT OUTSTANDING AND DISBURSED, END-1993		
By Destination	\$ billion	%
Central ministries and commissions	21.4	25.6
Specialized banks	2.3	2.8
Investment and finance companies	9.5	11.4
BOC ^{/a}	29.5	35.4
Leasing companies	1.6	1.9
Foreign invested enterprises	8.1	9.6
Domestic enterprises	11.2	13.4
Total	83.5	100.0
By Source	\$ billion	%
Bilateral loans	14.3	17.1
Multilateral loans	10.5	12.6
Commercial banks	23.4	28.0
Supplier credits	8.4	10.1
Bonds ^{/b}	7.9	9.5
International leasing companies	8.0	9.6
Other ^{/c}	11.0	13.2
^{/a} Part of BOC borrowing is on behalf of central government.		
^{/b} Issued by central government, CITIC and some ITICs.		
^{/c} Includes foreign banks in China, private deposits abroad, individuals and deferred payments.		
Source: SAEC.		

49. External debt contracted by the central government is mostly from bilateral or multilateral sources (Table 1). Just a few ministries and central government agencies can be the recipients of external debt.¹⁷ Line ministries and local governments cannot contract external debt directly. They can only do so through their projects and enterprises, or through budgetary allocation from the central government.

50. The rest of the foreign borrowing quota is allocated to the provinces. Provincial SAEC branches check applications for foreign borrowings against their quota. The quota is available mostly to domestic financial institutions, including the Bank of China (BOC) and the other specialized banks, international trust and investment companies and a few finance companies of corporate groups. Some twelve financial institutions are eligible to receive such quotas allocations, and the BOC and the CITIC get the largest quotas. In addition, there are fewer than 10 nonfinancial SOEs (e.g., the

¹⁷ Central government borrowing authority is fragmented across several agencies, including the MOF for World Bank loans, the Ministry of Foreign Trade and Economic Cooperation (MOFTEC) for bilateral loans, the PBC for IMF and ADB loans, the Ministry of Agriculture for FAO loans and the BOC for commercial bank loans.

petroleum import-export company) that can get a foreign borrowing quota directly without going through a financial institution.

51. Financial institutions use their foreign borrowing quota to either intermediate or guarantee foreign loans to enterprises. Part of the quota assigned to banks is allocated to specific projects by the SPC from the outset. The rest of the quota is not preassigned to particular projects, and in fact for this portion there are no subquotas by provinces, sectors, central vs. local projects, maturity or any other parameter. The only constraint is that financial institutions must onlend foreign borrowings to projects approved by the relevant planning commission.

52. The central government does not offer any guarantees to financial institutions on their external borrowings. The SAEC reviews the creditworthiness of the intermediating financial institutions since these retain ultimate responsibility for external debt contracted in the name of SOEs under their quota.¹⁸ The SAEC also monitors the terms of the external debt contract entered into by the financial institutions. It does not monitor the performance of the domestic borrowers that ultimately receive the intermediated or guaranteed foreign loans. These onlending contracts are registered with, but not individually approved by, the SAEC.

53. **Foreign Direct Investment.** FDI flows represent the only source of funds (outside own funds of enterprises and foreign borrowing by foreign-invested enterprises) which are unconstrained by an overall ceiling or centralized administrative approval. Partly in response, inflows have increased dramatically from less than \$2 billion in 1987 to \$33 billion in 1994. The bulk goes to the coastal areas, especially the southern provinces of Guangdong and Fujian and is concentrated in skill-intensive, export oriented manufacturing. There has, however, been a shift in the sectoral distribution of FDI resources over time, especially as investments in the services sector, particularly real estate, gained momentum starting in 1992.

54. MOFTEC is responsible for approving all large foreign direct investments (FDI). Foreign investments in China may take the form of equity joint ventures, cooperative joint ventures and wholly foreign-owned enterprises. There is no specific annual FDI quota, and MOFTEC does not have an explicit plan or target to guide their policy on FDI. Projects over \$30 million (in coastal areas) or \$10 (in inland areas) only require approval by provincial authorities (specifically, by the provincial offices of MOFTEC).

55. In their approval process, MOFTEC considers several factors: (i) whether the proposed investment is in accordance with the State's industrial policy (in consultation with SPC); (ii) the extent of domestic capacity in the particular sector; (iii) the level of technology embodied in the proposed project with the intention of restricting FDI in low-technology ventures destined to the local market (e.g., shoe manufacturing); and (iv) the import content and export potential of the proposed project with a view to limiting FDI in sectors or activities with high import requirements or facing export market restrictions (e.g. because of foreign trade agreements as is the case of textiles under the multifibre arrangement). The trend is not to have special geographic rules on the direction of FDI. The venture's location is evaluated simply in the context of local needs and capacity.

¹⁸ A requirement is that the value of foreign loans intermediated or guaranteed by financial institutions be no more than 20 times the value of their equity

56. At the opposite extreme, preferential treatment is granted to some sectors, especially the more technologically advanced. Preferential treatment may be offered in three ways. First, normally lengthy approval procedures are accelerated. Second, a higher domestic sales ratio is allowed.¹⁹ Third, some tax concessions may be granted to high-technology ventures.

57. There is no general limit on the percent of foreign ownership of JVs,²⁰ rather, it depends on the sector. For instance, in air cargo the foreign investor may not hold more than 35 percent of equity. In power generation there is no stated limit, although no projects have been approved with majority foreign ownership. There is a perception that the government is undecided on how much foreign control to allow in this area, and that this is in fact delaying approval of many projects. There appears to be a substantial back-log in approval for FDI requests for large projects, especially in power. Wholly-owned subsidiaries (rather than JVs) are only allowed in high tech ventures if at least 50 percent of the output is sold abroad. The government requires a minimum equity contribution of 30 percent for projects over \$30 million.

58. China began permitting FDI in infrastructure projects in the early 1990s. The precursor private joint ventures have been in coal-fired power projects. FDI in infrastructure is now openly encouraged, especially in ports (where investors can secure tax concessions for 10 years), roads, railroads and power. There are many JVs in toll roads in Guangdong province. In ports, there are two large JVs (in Shanghai and Shenzhen) and scores of small ones. There is one railroad project under construction with foreign participation. There are also 10-20 power plants with foreign participation under construction, including a nuclear plant. In the telecommunications area, FDI can only enter into equipment manufacturing. Civil aviation (including airports) is open but restricted. There are also many JVs with hospitals, which operate on cost recovery based on fees without requiring subsidies. The authorities are reportedly studying the possibility of allowing JVs in education, but not below the university level.

59. MOFTEC is also responsible for reviewing BOT (build-operate-transfer) projects. None have been approved so far, despite the fact that provincial governments and entities are engaged in talks with many potential BOT investors.²¹ There is no official policy on BOT, and specific rules, regulations and standard contracts have not been issued.

Role of Different Actors

60. Managing public investment, including preparation and implementation of the investment plan and its financing, involves a large number of agencies in the public sector at all levels of government, ranging from actual investors to planners and financial institutions. This section recapitulates their respective responsibilities in the investment process and how the agencies interact.

(a) **People's Bank of China:** In the context of its overall responsibility for monetary management, PBC establishes, in consultation with SPC and MOF, the annual quotas for

¹⁹ On nonpreferential projects, the domestic sales ratio is not explicitly regulated but is normally fixed on the investment contract with the domestic partner.

²⁰ A project has to have minimum 25 percent foreign contribution to be classified as a foreign JV.

²¹ According to the MOFTEC, the Shajiao power plant is not technically a BOT but a "cooperative project" that entails reversion of ownership to the State in the future.

investment lending and for domestic bond issues. PBC is responsible for interest rate policy and it is also in charge of bank supervision, including SDB.

(b) **Central Government:**

- (i) **State Planning Commission:** Overall responsibility for preparation of the AIP rests with SPC. It has to ensure the plan's consistency with macroeconomic projections, sectoral objectives and strategies, and available financial resources. Within the AIP it has specific responsibility for the plan's capital construction component; this involves approving all large and medium scale CC projects and allocating CC investment quota to line ministries and provincial governments. With SETC it puts together a list of 'key' projects and ensures that these are given priority. While SPC delegates much of the detailed project work to line ministries and provincial governments, it plays a key coordinating and supervisory role, and in preparing the plan integrates inputs from many sources. SPC is also responsible for the central government investment plan and has to approve all central projects. It is assisted by a consulting agency, CIECC, in its review of central projects as well as large and medium scale projects generally. As implementing agency for the government's industrial policy, SPC makes sure that all projects, state or nonstate, are in line with the policy.

While the Investment department is most directly involved in the preparation of the AIP, many other departments in SPC contribute, notably the Comprehensive department, Long Term Planning and Industrial Policy department, Key Projects department and the various sectoral departments.

- (ii) **State Economic and Trade Commission:** SETC manages the technical transformation component in the AIP. Once SPC and SETC have agreed on the split of state investment between CC and TT, SETC determines the allocation for large and medium scale TT projects as well as the quota for line ministries and provinces. It is responsible for approving all large and medium scale TT projects.
- (iii) **Ministry of Finance:** MOF's role is limited to determining the size of the budget contribution for investment, and making a number of specific transfers to local projects. It also monitors the operation of some (e.g. energy and construction fund) Extra Budgetary Funds that finance investment. The capital construction component of the investment budget is administered by the new Capital Construction department, and the technical transformation component by the Budget Management department. MOF reviews some procurement contracts, but not systematically.
- (iv) **State Administration for Exchange Control:** SAEC is responsible for monitoring external debt contracted by Chinese enterprises and government agencies to ensure proper implementation of the annual external borrowing quota set by SPC.
- (v) **Ministry of Foreign Trade and Economic Cooperation.** MOFTEC is responsible for approving all foreign direct investments. FDI is not subject to

annual quota and MOFTEC's approval criteria are guided by the nature of the proposed project.

- (vi) **Line Ministries:** Line ministries prepare annual sector investment plans, which include all central government projects in the sector, i.e. both large (priority) and small projects.²² They review all projects to be included in the sector plan and submit the large projects to SPC for approval. Planning or design institutes attached to the Ministry are normally responsible for project review and may assist SOEs with project preparation. Ministries monitor project implementation.
- (b) **Local Government:** Provincial departments report to both the provincial government and to their functional counterparts at the central level. Their responsibilities at the local level are similar to those of the corresponding central agencies.
- (i) **Provincial Finance Bureau:** PFB determines the size of the budget allocation for investment and monitors the operation of Extra Budgetary Funds at the provincial level.
 - (ii) **Provincial Planning Bureau:** PPB prepares the AIP for the province based on sectoral plans from the functional departments and consultations with municipalities and counties. It determines the breakdown of total investment by type (capital construction and technical transformation) and by sector, and establishes investment quota for lower levels of government. PPB also approves all provincial capital construction projects (with the help of provincial design institutes) and allocates the investment component of the budget.
 - (iii) **Provincial ETC Branch:** Consults with PPB on share of plan and of investment budget to be allocated for technical transformation. All provincial TT projects are submitted to ETC for approval.
 - (iv) **Provincial Sector Bureaus:** PSBs prepare sector investment plans; they also prepare, or assist SOEs in preparing, projects and monitor project implementation. Sometimes these project related tasks are delegated to a sector wide SOE which is given specific responsibility for managing all projects in the sector (e.g. power corporation), with the department assuming a supervisory role. PSBs review projects submitted to the province by municipalities/counties.
- (c) **Banks**
- (i) **Specialized Banks:** These banks are given quotas for investment lending; PCBC for capital construction and ICBC for technical transformation projects, which are divided up between head office and the provincial branches. While much of the quota is reserved for large and medium scale projects (i.e. is

²² These sector plans cover only the areas for which the central government is responsible. E.g. for the highway sector the Ministry of Communications prepares a plan covering the National Trunk Highway System, while the provincial communications departments are responsible for the planning of provincial highways and roads of lesser importance.

directed by SPC), part of it as well as proceeds from loan repayments can be lent at the banks' discretion to 'approved' projects. PCBC (for CC projects) and ICBC (for TT projects) are also responsible for administering and financial monitoring of the SDB/SIC portfolio as well as of funds entrusted to them by the central and provincial budgets. The banks are obliged to buy bonds issued by SDB, which are the principal source of finance of the latter.

- (ii) **State Development Bank:** SDB was created in 1994 as a vehicle for policy based lending. Funded out of the state budget and bond issues, the bank lends to projects proposed by SPC and SETC, mostly in infrastructure and in 'pillar' and 'basic' industries (not in the social sectors). It provides both subsidized and hard loans, and has a strong appraisal capacity (inherited from the SICs). Projects requiring SDB financing must obtain the bank's approval before they are included in the plan. Since SDB has no branches, it uses PCBC and ICBC as agents for its loans and is not in a position to monitor its projects.

(d) **Enterprises**

SOEs typically start the project cycle: they organize project preparation (with help from the department/ministry they report to) and arrange financing. In the case of large infrastructure projects, the department or ministry often takes the initiative. In some sectors separate SOEs have been set up to take over project management and investment responsibility from government departments.²³

²³ There is no standard format for this. In many provinces development corporations have been set up to manage road investment projects. These report to the provincial communications department. In some cases a separate corporation is set up for each project while in others one corporation oversees all road projects.

**ANNEX TABLES
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Table A1.1 - China's Industrial Enterprises:
Fixed Assets to Net Outputs Ratios for the State and Non-State Sectors, 1993

	Original Value of Fixed Assets over Net Output of Industry (All)	Original Value of Fixed Assets over Net Output of Industry (State)	Original Value of Fixed Assets over Net Output of Industry (Non State)	Share of Non-State Sector in Net Output (%)	Net Value of Fixed Assets over Net Output (All)	Net Value of Fixed Assets over Net Output (State)	Net Value of Fixed Assets over Net Output (Non-State)
National Total:	2.0	2.6	1.2	43%	1.4	1.8	0.9
State-Owned Enterprises	2.6				1.8		
Collective-Owned Enterprises	1.1				0.8		
Stock Ownership Enterprises	1.7				1.3		
Foreign Investment Enterprises	1.5				1.2		
HongKong, Macao and Taiwan Funded Enterprises	1.6				1.3		
Grouped by Light & Heavy Industry							
Light Industry -	1.5	1.9	1.2	57%	1.1	1.4	0.9
Using Farm Products as Raw Materials	1.4	1.7	1.2	51%	1.1	1.3	0.9
Using Non-Farm Products as Raw Materials	1.6	2.3	1.2	68%	1.2	1.7	0.9
Heavy Industry -	2.3	2.9	1.2	35%	1.6	2.0	0.9
Excavation	3.2	3.6	1.0	16%	2.1	2.4	0.7
Raw Materials	2.6	3.1	1.4	26%	1.9	2.1	1.1
Manufacturing	1.7	2.3	1.2	51%	1.2	1.5	0.8
Grouped by Size of Enterprise							
Large	2.7	2.8	1.8	13%	1.8	1.9	1.4
Medium	2.0	2.2	1.6	29%	1.5	1.6	1.2
Small	1.4	2.4	1.1	75%	1.1	1.8	0.8
Grouped by Sector							
Coal Mining & Processing	3.7	4.4	1.1	23%	2.6	3.1	0.8
Petroleum & Natural Gas Extraction	3.4	3.4	0.9	0%	2.2	2.2	0.7
Ferrous Metals Mining & Processing	1.8	2.6	0.9	51%	1.2	1.8	0.7
Nonferrous Metals Mining & Processing	2.7	3.4	1.1	30%	1.9	2.3	0.9
Nonmetal Minerals Mining & Process.	1.7	2.6	0.9	53%	1.2	1.7	0.6
Other Minerals Mining & Process.	1.4	2.1	1.1	68%	1.0	1.4	0.8
Logging & Transport of Timber & Bamboo	2.0	2.0	0.5	3%	1.5	1.5	0.4
Food Processing	1.4	1.6	1.0	36%	1.1	1.2	0.8
Food Manufacturing	1.7	2.2	1.3	53%	1.4	1.7	1.1
Beverage Manufacturing	1.7	1.8	1.4	39%	1.3	1.5	1.1
Tobacco Processing	0.5	0.5	1.0	2%	0.4	0.4	0.8
Textile Industry	1.8	2.4	1.4	59%	1.4	1.7	1.1
Garments & Other Fiber Products	0.8	1.2	0.8	91%	0.7	0.9	0.6
Leather, Furs, Down & Related Products	1.1	1.9	1.0	85%	0.9	1.4	0.8
Products	1.5	2.6	1.1	74%	1.1	1.9	0.9
Furniture Manufacturing	1.3	2.4	1.2	91%	0.9	1.8	0.9
Papermaking & Paper Products	2.7	5.6	1.5	71%	2.0	4.1	1.1
Printing & Record Pressing	1.7	2.0	1.3	49%	1.2	1.4	1.0
Cultural, Educational & Sports Articles	1.2	1.5	1.1	85%	0.9	1.1	0.9
Petroleum Processing & Coking Products	2.1	2.2	1.2	9%	1.4	1.5	0.9
Raw Chemical Materials & Chemical Products	2.5	3.4	1.2	42%	1.7	2.3	0.9
Medical & Pharmaceutical Products	1.4	1.6	1.2	42%	1.1	1.2	0.9
Chemical Fibers	3.3	3.8	2.9	59%	2.5	3.0	2.2
Rubber Products	1.4	1.6	1.2	54%	1.0	1.1	0.9
Plastic Products	1.8	2.7	1.6	85%	1.3	2.0	1.2
Nonmetal Mineral Products	1.6	1.9	1.3	55%	1.2	1.4	1.0
Smelting & Pressing of Ferrous Metals	1.7	1.9	1.0	20%	1.2	1.3	0.8
Smelting & Pressing Nonferrous Metals	2.3	2.9	1.1	35%	1.6	2.0	0.9
Metal Products	1.1	1.8	1.0	82%	0.8	1.2	0.7
Ordinary Machinery Manufacturing	1.6	2.2	1.0	52%	1.0	1.4	0.7
Special Purpose Equipment Manuf.	1.7	2.3	1.0	48%	1.1	1.4	0.7
Transport. Equip. Manuf.	1.4	1.8	0.9	41%	1.0	1.2	0.7
Electric Equip. & Machinery	1.2	1.7	1.0	67%	0.9	1.1	0.8
Electronic & Telecomm.	1.6	2.2	1.2	65%	1.1	1.5	0.9
Instruments, Meters, Cultural & Official Machinery	1.6	2.6	0.9	60%	1.0	1.6	0.6
Other Manufacturing	1.0	6.5	0.3	89%	0.7	4.2	0.3
Electric Power, Steam & Hot Water Production & Supply	6.1	6.1	6.4	11%	4.4	4.3	4.9
Gas Production & Supply	14.2	14.7	6.3	6%	12.0	12.4	5.2
Tap Water Production & Supply	5.2	5.3	4.4	8%	4.1	4.2	3.5

Table A2.1 - Financing of State Investment: Sectoral Composition by Funding Source, 1992
(in percent)

	All Investment	Budgetary	Bank Loans	Own Funds	Foreign	Other	Central	Local
Social Sectors								
Health	0.7	1.6	0.1	1.1	0.3	0.4	0.2	1.1
Education	3.0	11.9	0.4	3.9	1.2	2.1	1.7	3.8
Infrastructure	25.8	30.3	19.7	26.9	30.0	34.6	35.1	19.8
Rural Water	1.3	8.5	0.3	1.0	0.9	2.1	0.9	1.6
Urban Water	0.8	0.6	0.7	1.0	1.4	0.5	0.0	1.4
Power	10.3	7.6	9.9	7.9	13.1	23.7	17.6	5.6
Transport	10.6	12.5	7.9	12.8	10.3	7.6	11.0	10.4
PTT	2.7	1.1	0.8	4.2	4.3	0.8	5.6	0.8
Primary Energy	9.6	15.9	5.4	10.6	15.3	8.7	22.6	1.1
Infrastructure + Energy	35.4	46.2	25.0	37.5	45.3	43.4	57.7	20.9

Table A2.2 - State Investment in Infrastructure and Social Sector 1985-1993
(Percentage of GDP)

	1985	1986	1987	1988	1989	1990	1991	1992	1993
Power	1.4	1.9	2.1	2.0	1.8	2.1	2.0	2.2	2.4
Urban Water Supply	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Rural Water	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
Transport	2.5	2.4	2.3	2.0	1.4	1.6	2.0	2.3	3.1
Telecommunications	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.6	1.1
Education	1.0	1.0	0.9	0.8	0.7	0.6	0.6	0.6	0.7
Health and Welfare	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2
Total: Infrastructure + Social	5.7	6.1	6.1	5.5	4.7	5.2	5.7	6.4	8.1

Source: Statistical Yearbooks; Fixed Investment Statistical Materials (through 1989); Investment Research Institute

Table A2.3 - Electricity Investment: 1992 Funding Source Breakdown

	<u>Billion Yuan</u>	<u>Percent</u>
Total Investment	54.3	100.0
Budgetary	2.53	4.7
of which: Capital Construction	2.4	4.4
Technical Transformation	0.1	0.2
Domestic Credit	15.92	29.3
of which: Bank Loans for Capital Construction	8.93	16.4
of which: Construction Bank	8.04	14.8
ICB	0.67	1.2
Enterprise Bonds	3.11	5.7
Technical Transformation Credit	0.76	1.4
Retained and Self-Raised Funds	19.41	35.7
of which: Fundraising (KC)	8.64	15.9
Enterprise Retained Funds	5.51	10.1
Ministerial Retained Funds	1.02	1.9
Local Government Contributions	0.82	1.5
Enterprise Retained Funds (RR)	3.19	5.9
Foreign Funds	5.52	10.2
of which: Through the Central Budget	0.37	0.7
Other	10.92	20.1
of which: Coal Conversion Fund	2.38	4.4
Energy Conservation Fund	0.27	0.5

Source: Zhongguo Touzi Nianjian, 1993 (China Investment Yearbook, (1993), p. 39.

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Figure A1.1
CHINA: Budgetary Outlays for Investment

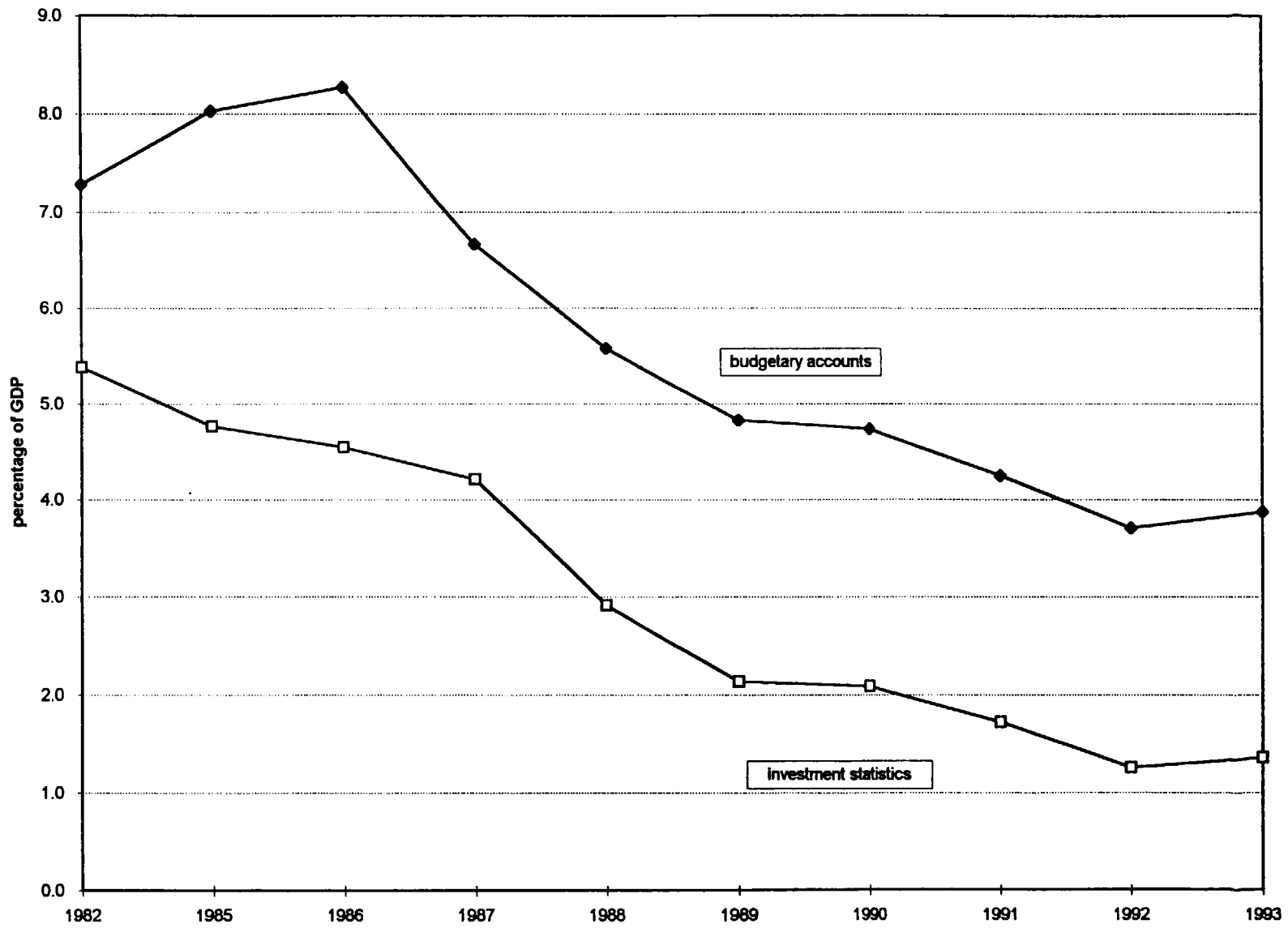
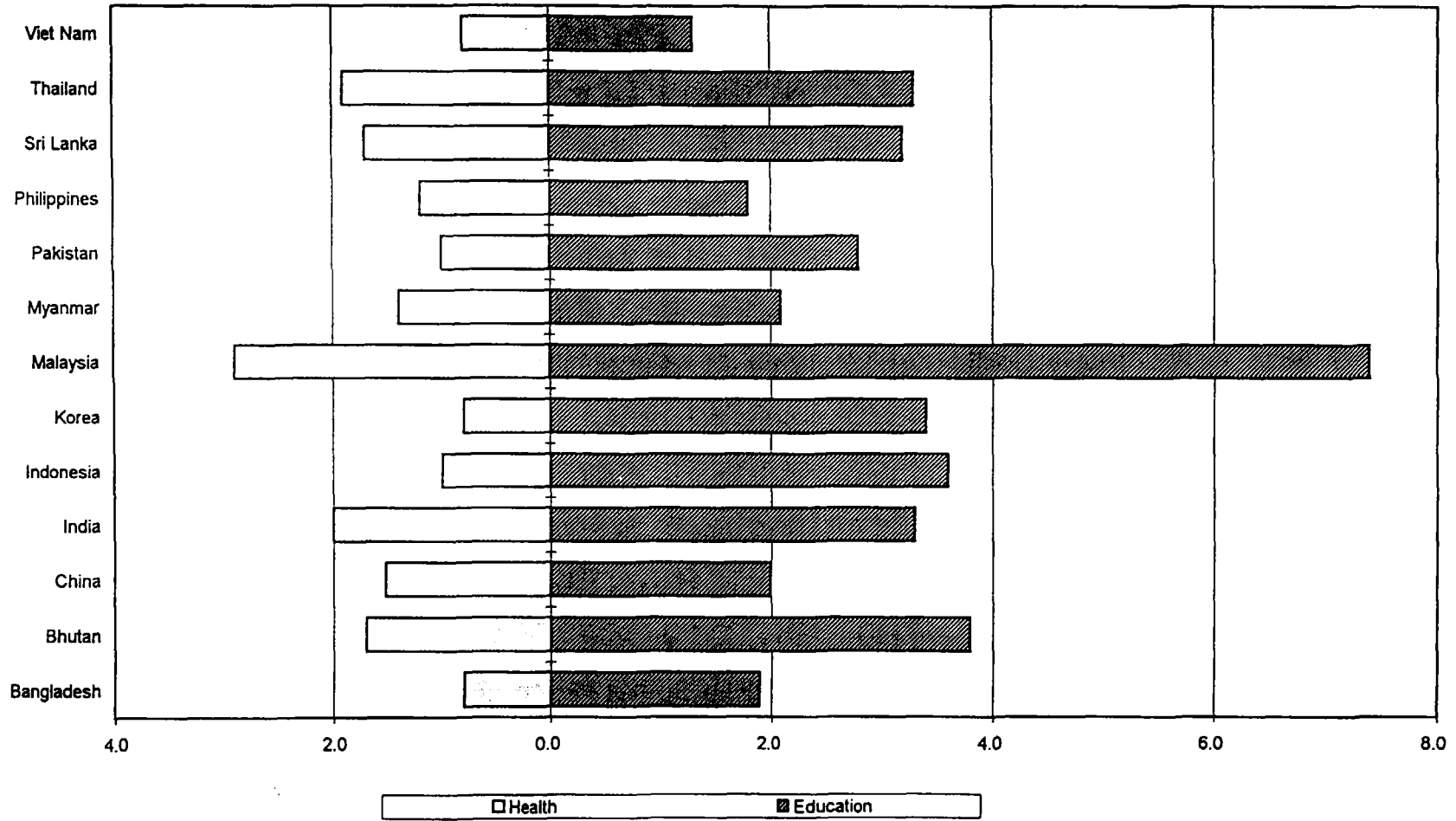


Figure A1.2
Expenditure on Health and Education as % of GDP

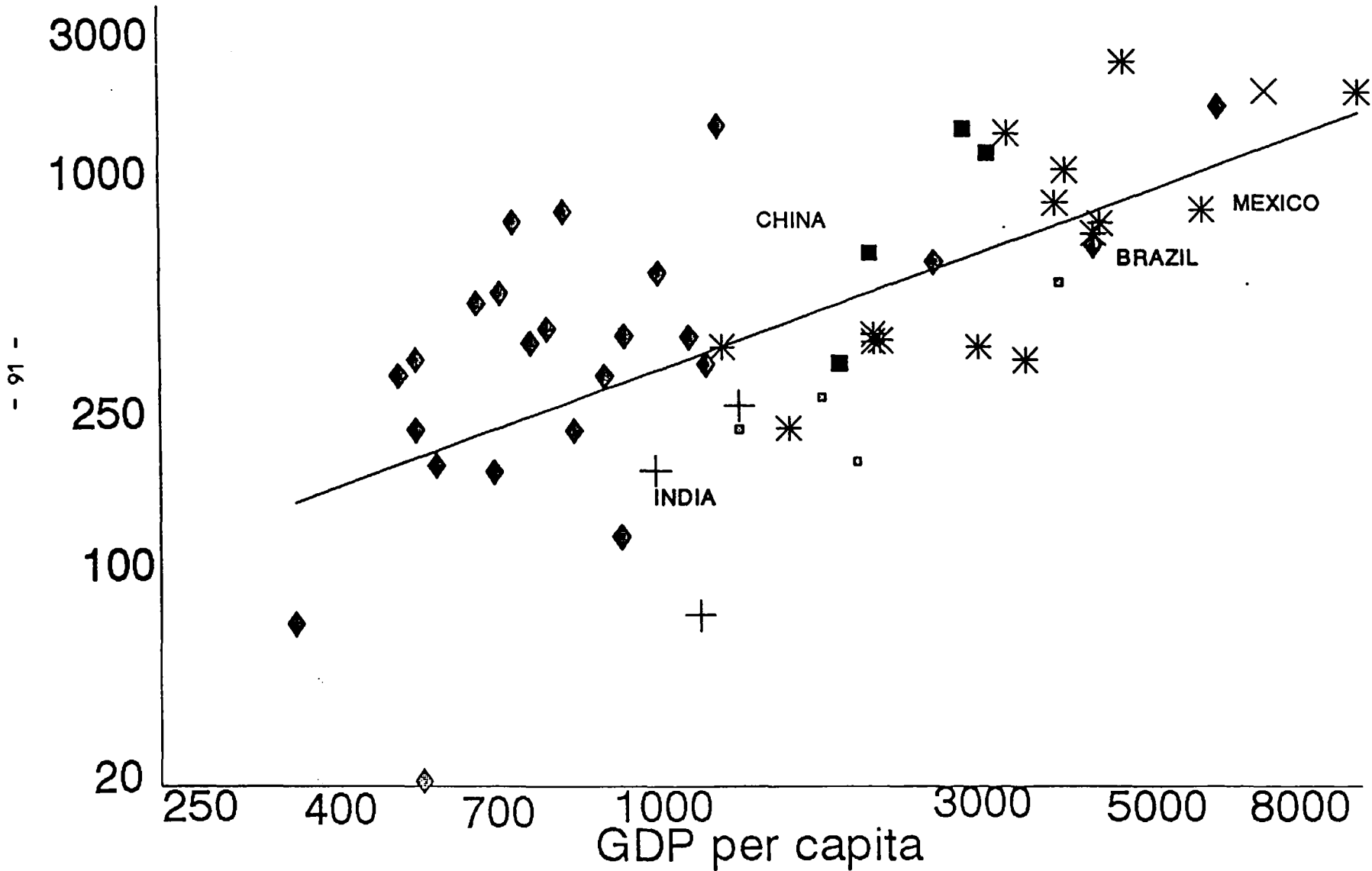


Source: China: Public Sector Expenditure Review, 1995

ROADS

Figure A1.3

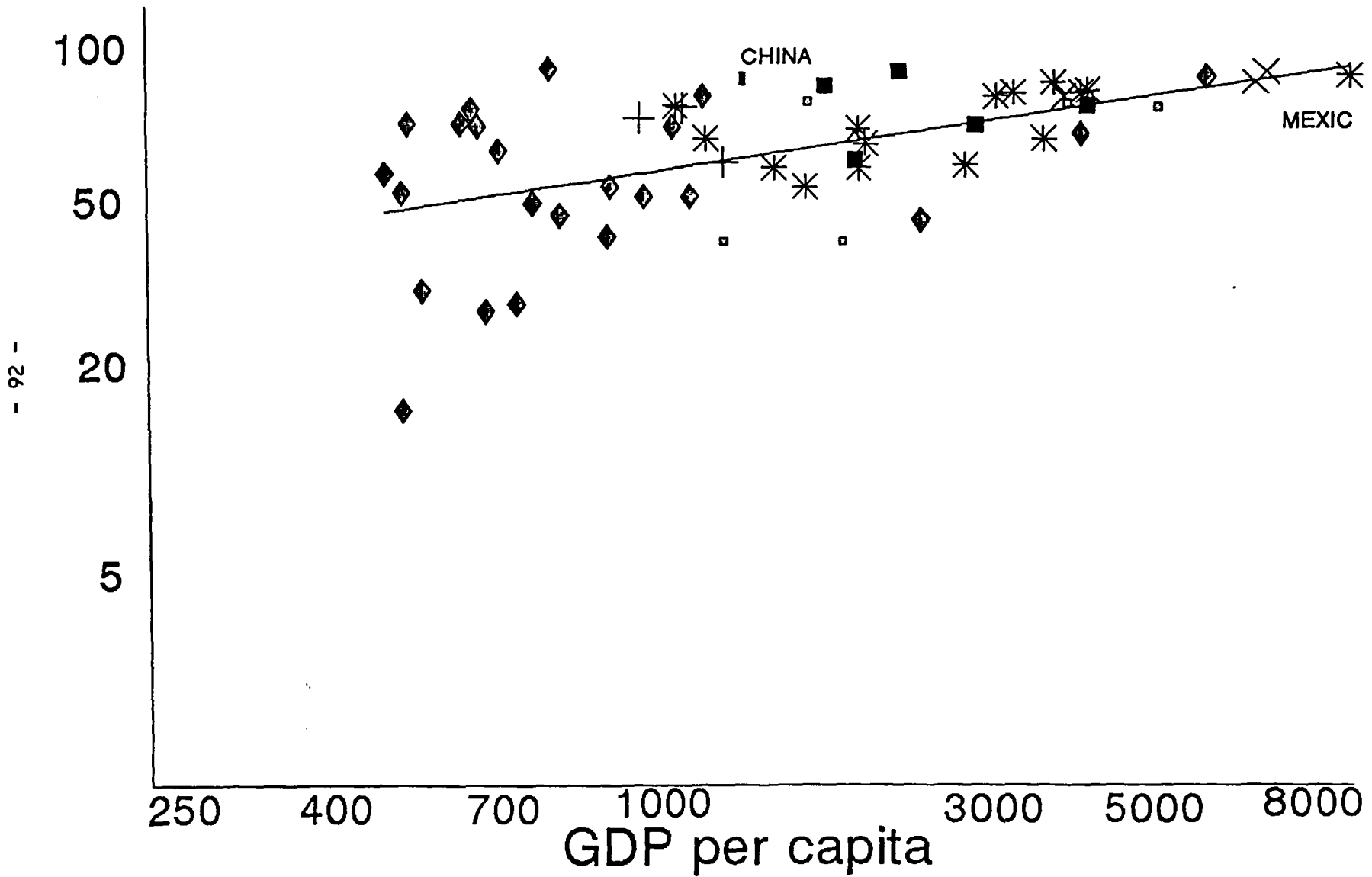
Kilometers of paved roads per million persons, 1988



WATER

Figure A1.4

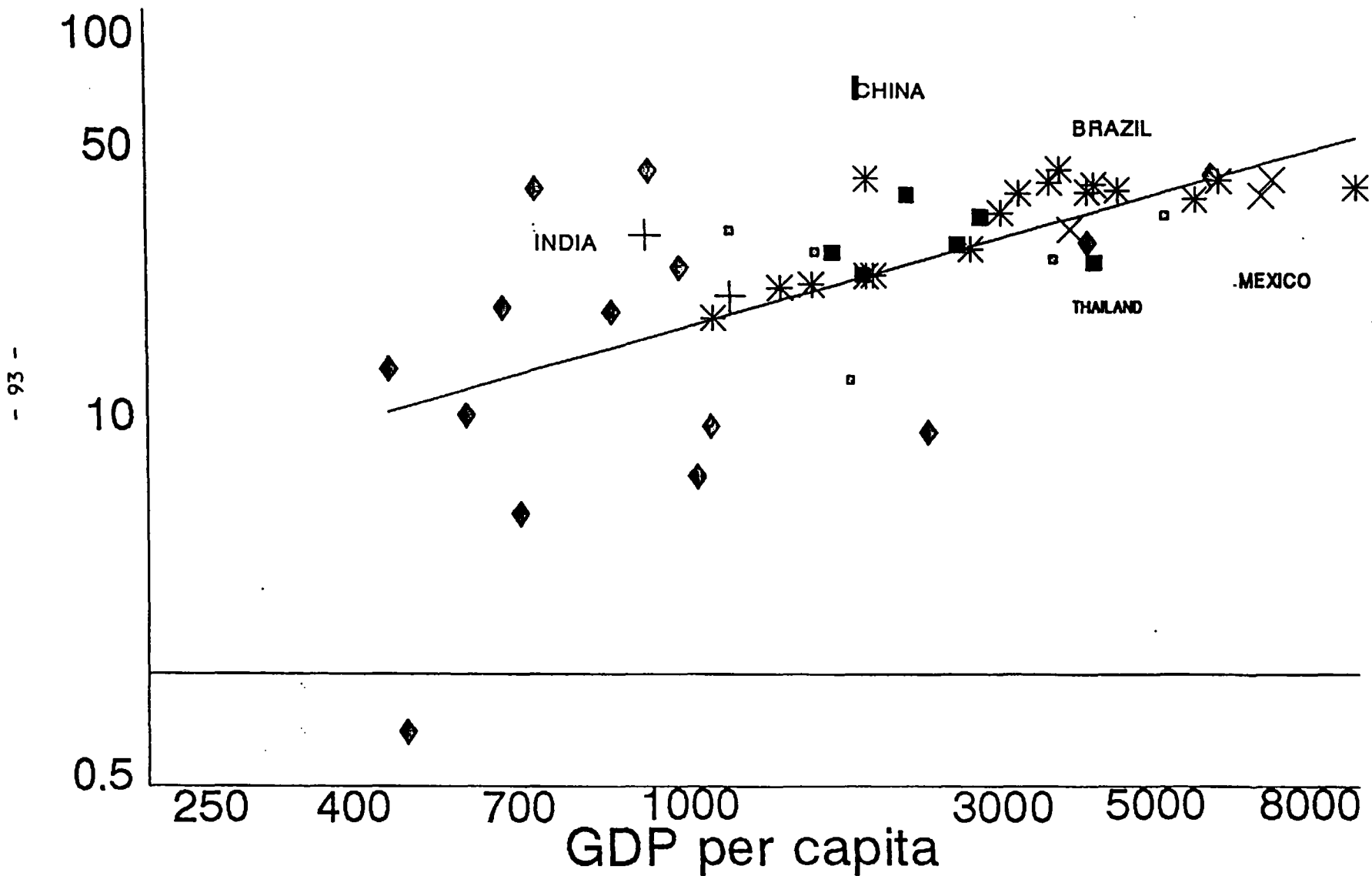
Percentage of population with access to safe water, 1990



POWER

Figure A1.5

Percentage of households with electricity, 1988



TELECOMMUNICATIONS

Figure A1.6

Telephone mainlines per thousand persons, 1990

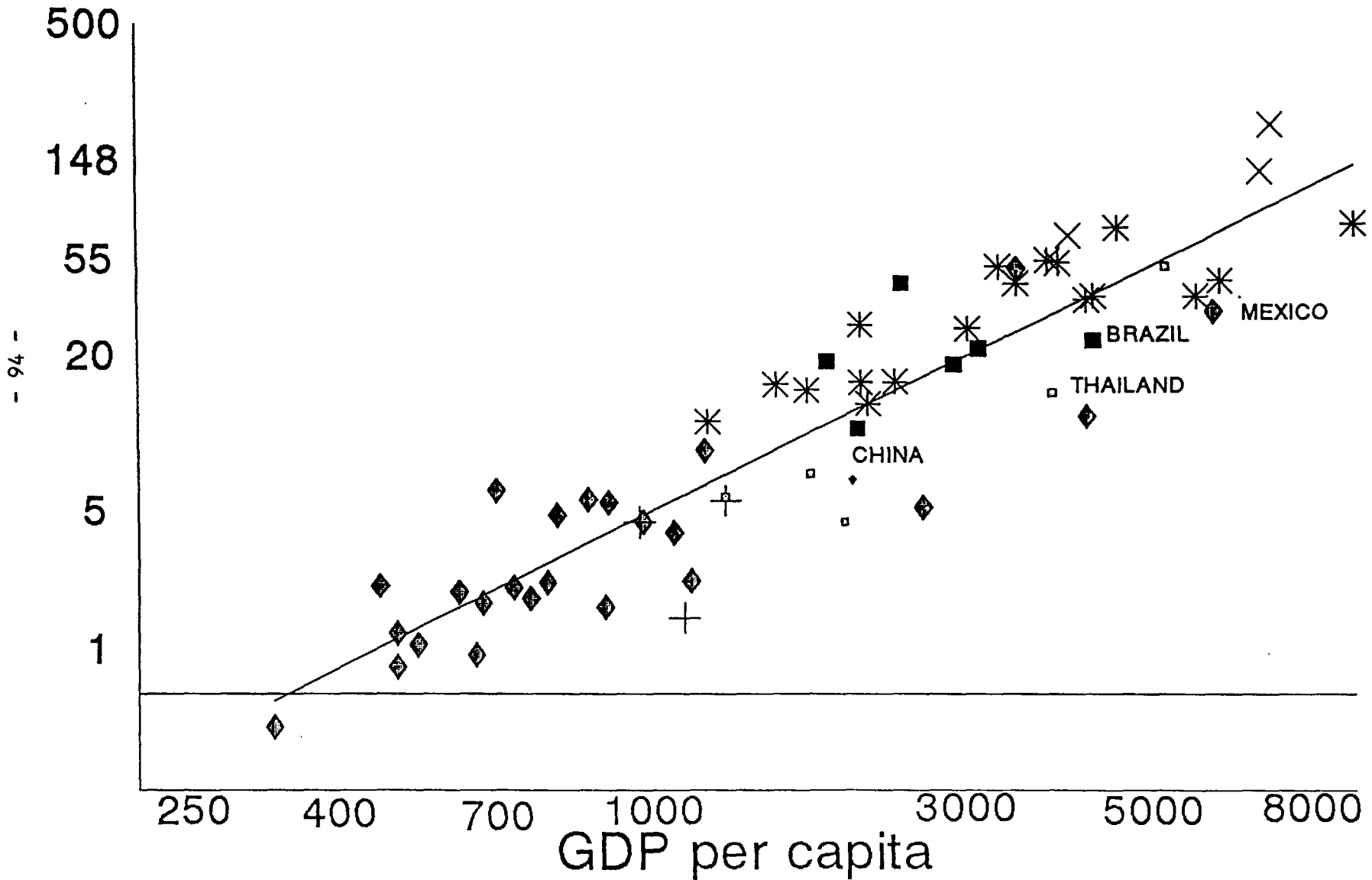


Figure A1.7a - Life Expectancy

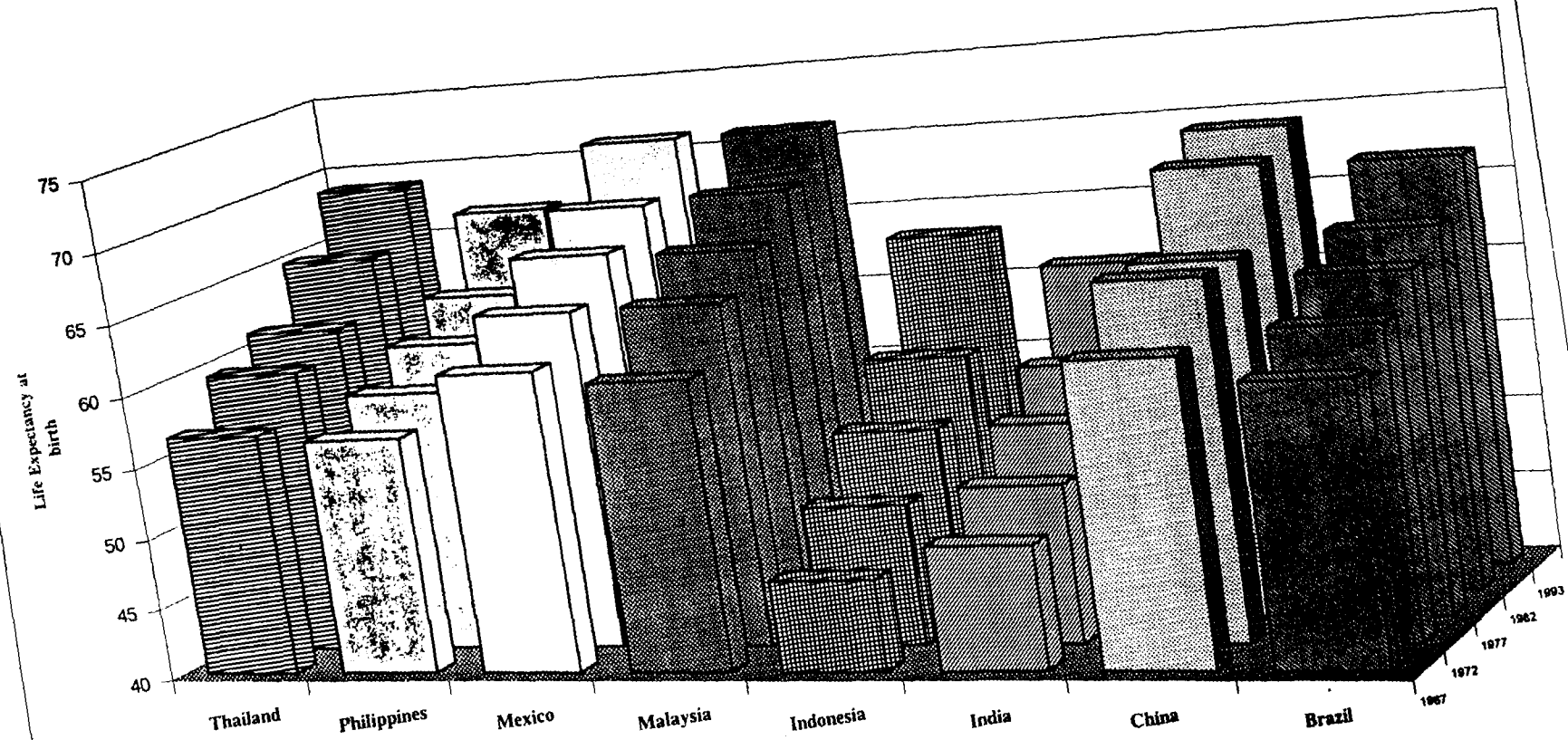


Figure A1.7b - Infant Mortality Rate

- 96 -

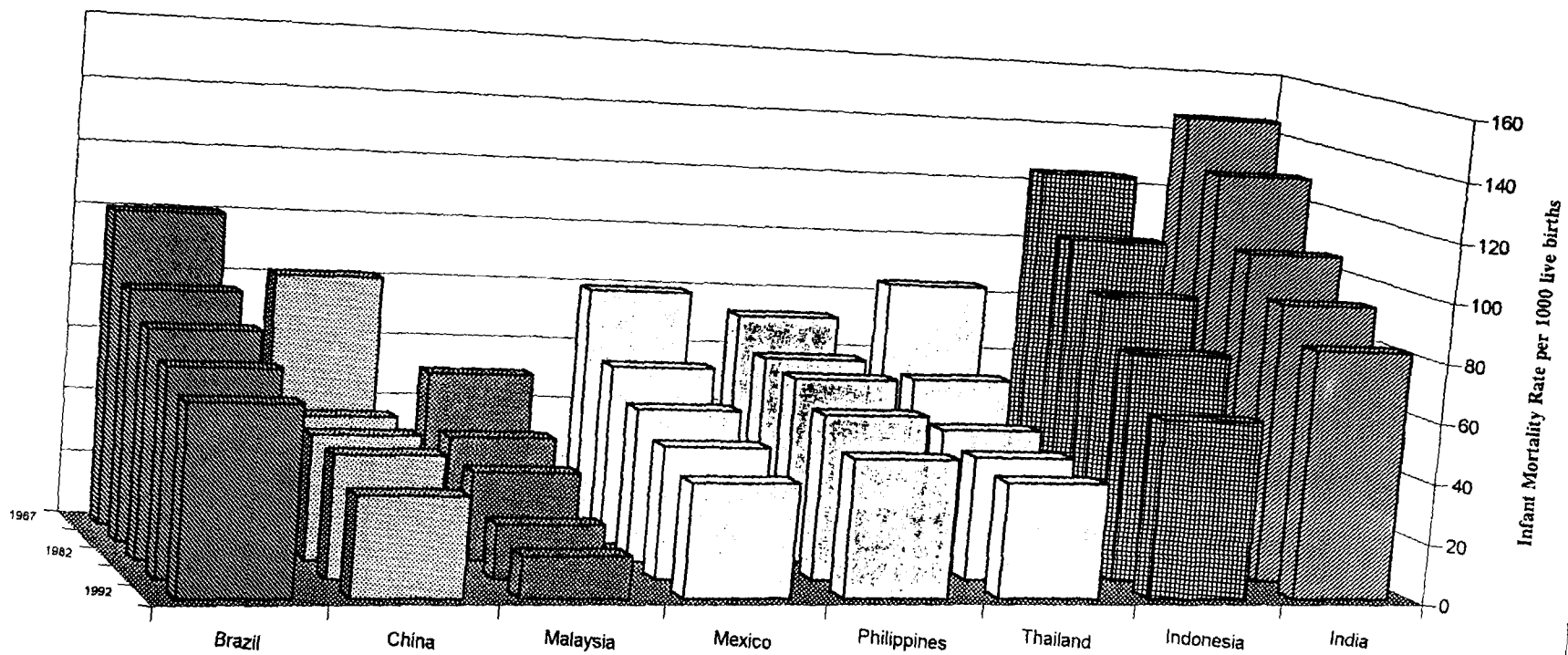


Figure A1.7c -
Prevalence of Malnutrition and Per capita GNP

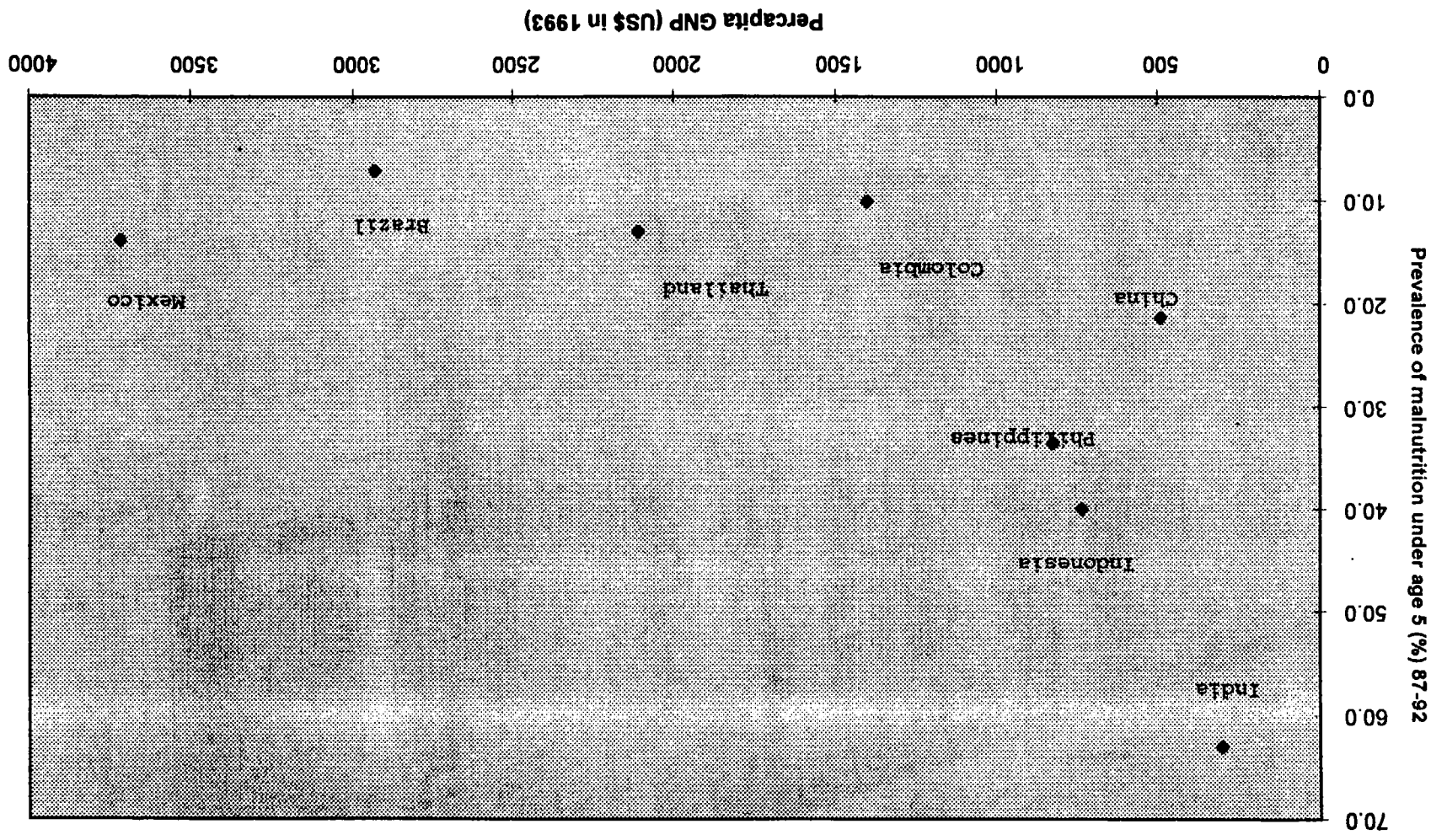


Figure A1.8a - Primary School Net Enrollment

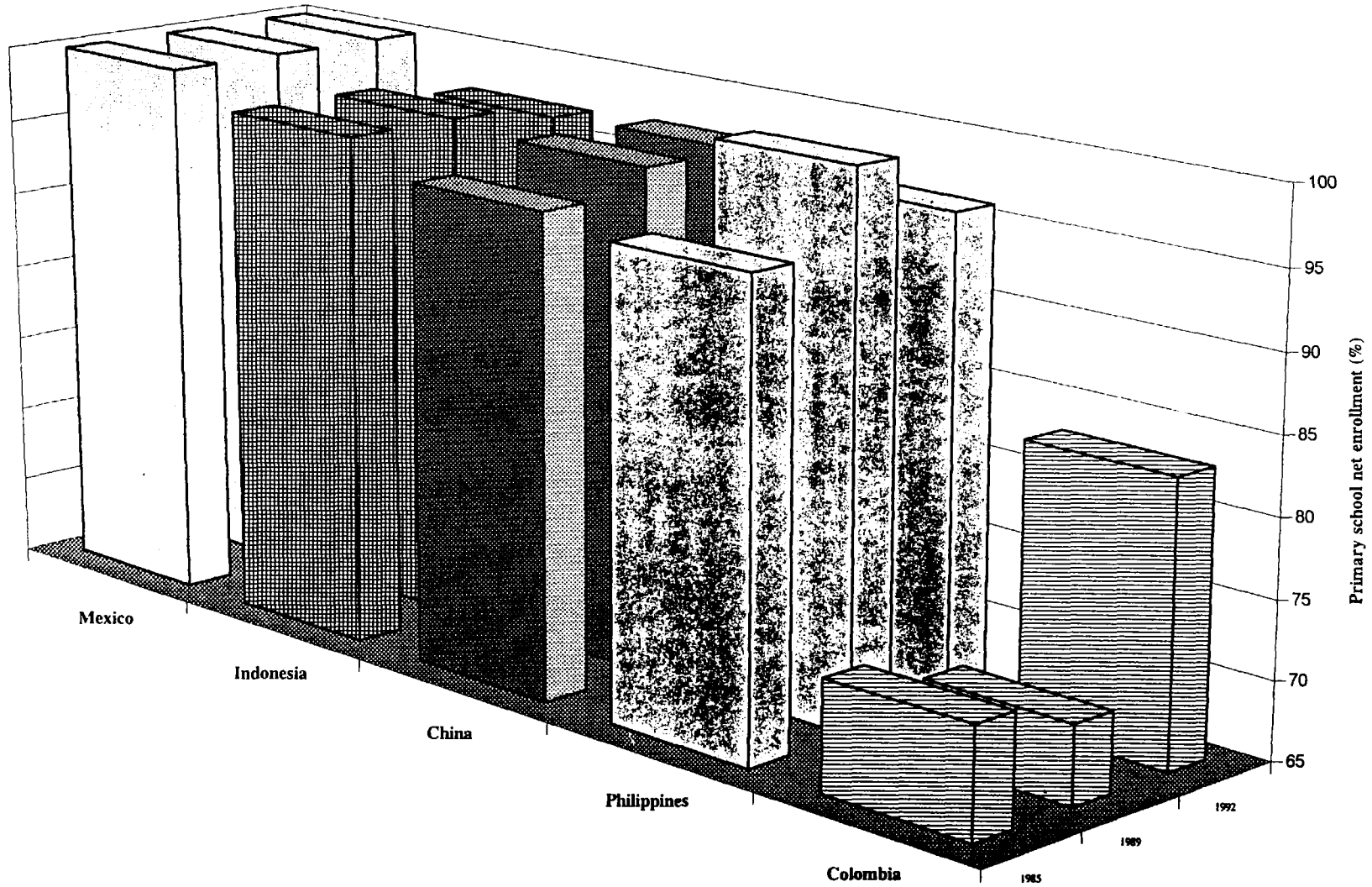


Figure A1.8b - Primary Pupil/Teacher Ratio

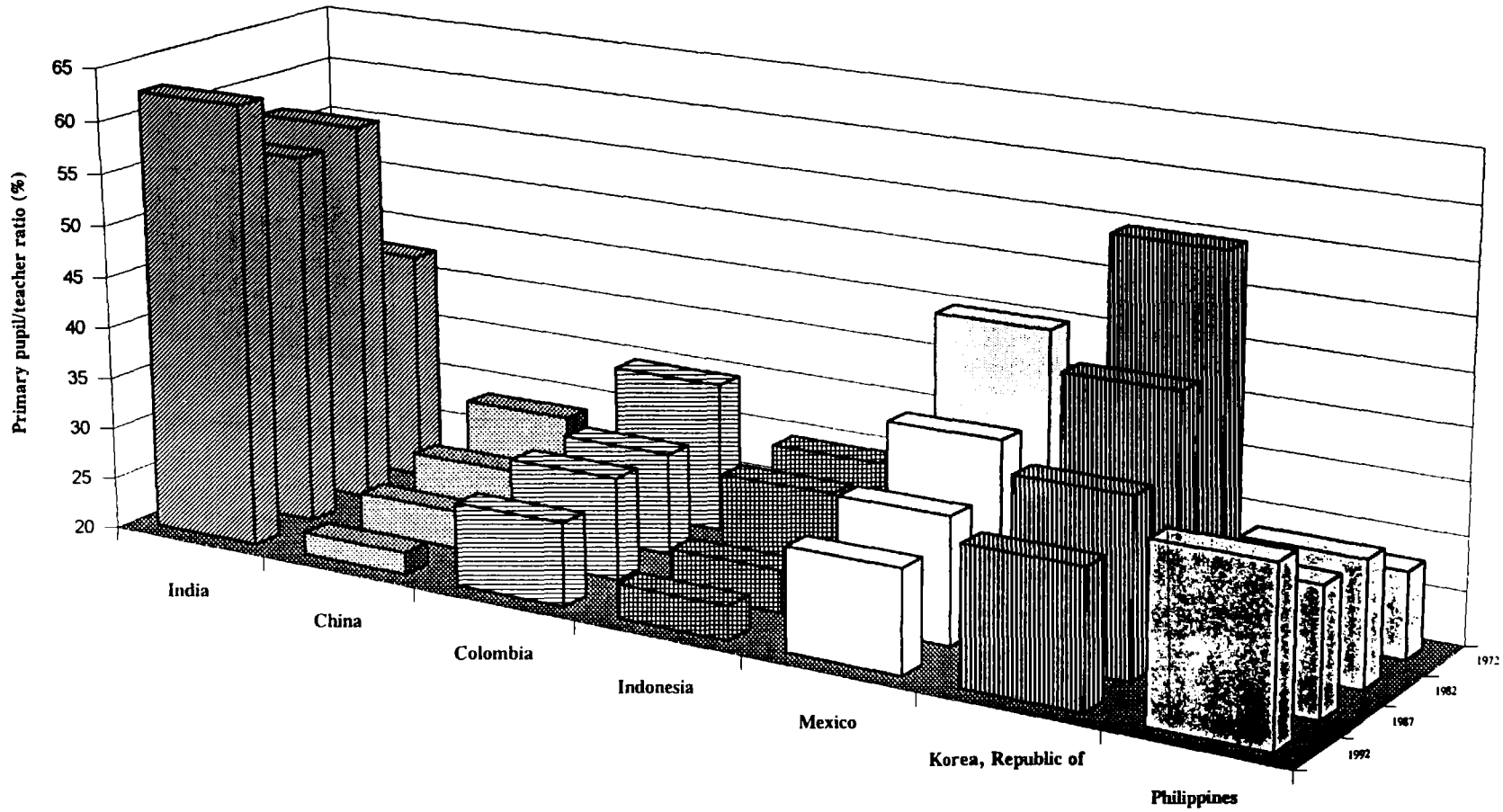


Figure A1.8c -
Adult Illiteracy Rate (%)

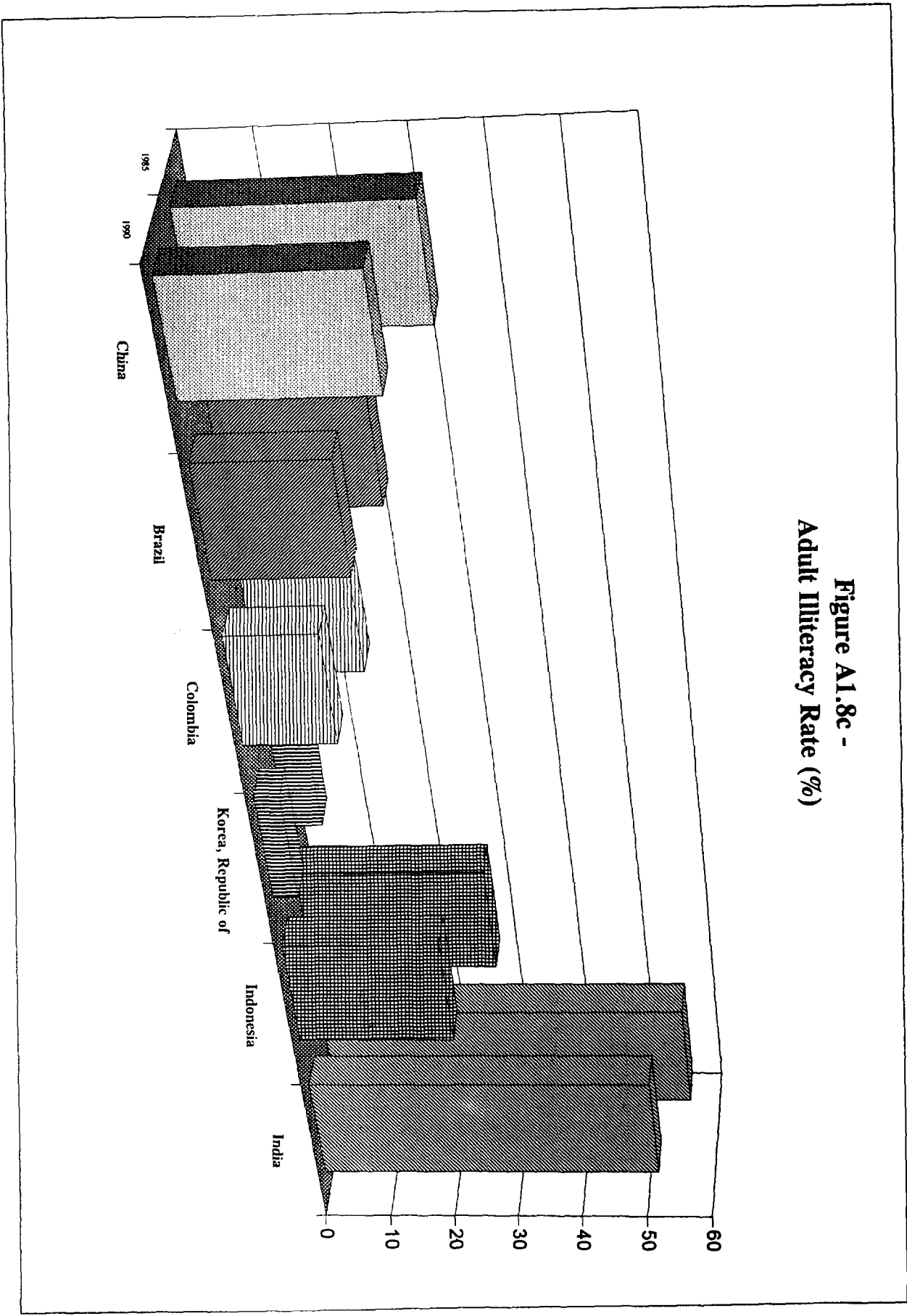


Figure A 1.9
Telephone Mainlines per 1000 persons

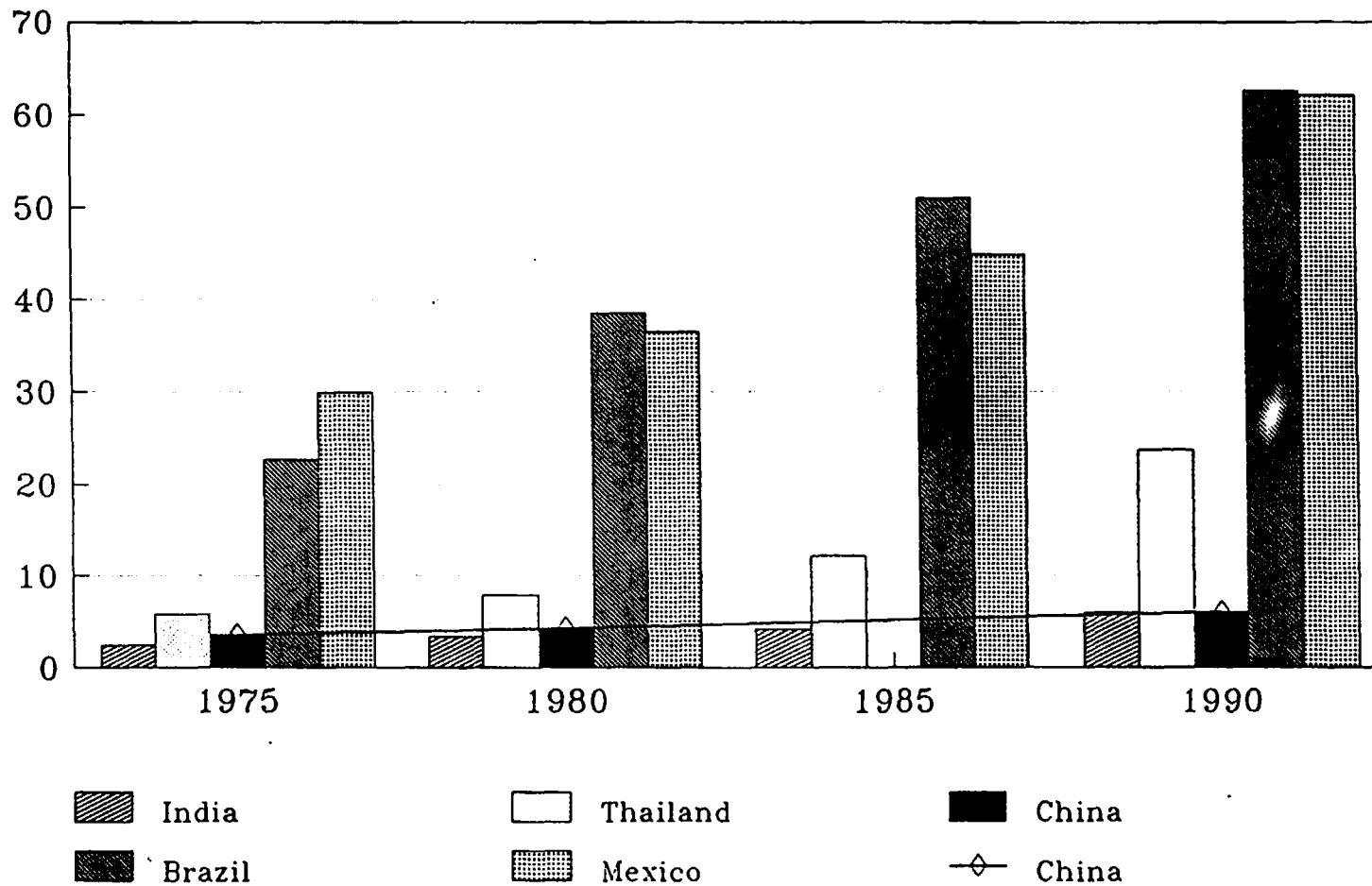


Figure A 1.10
Telephone Sets per 1000 persons

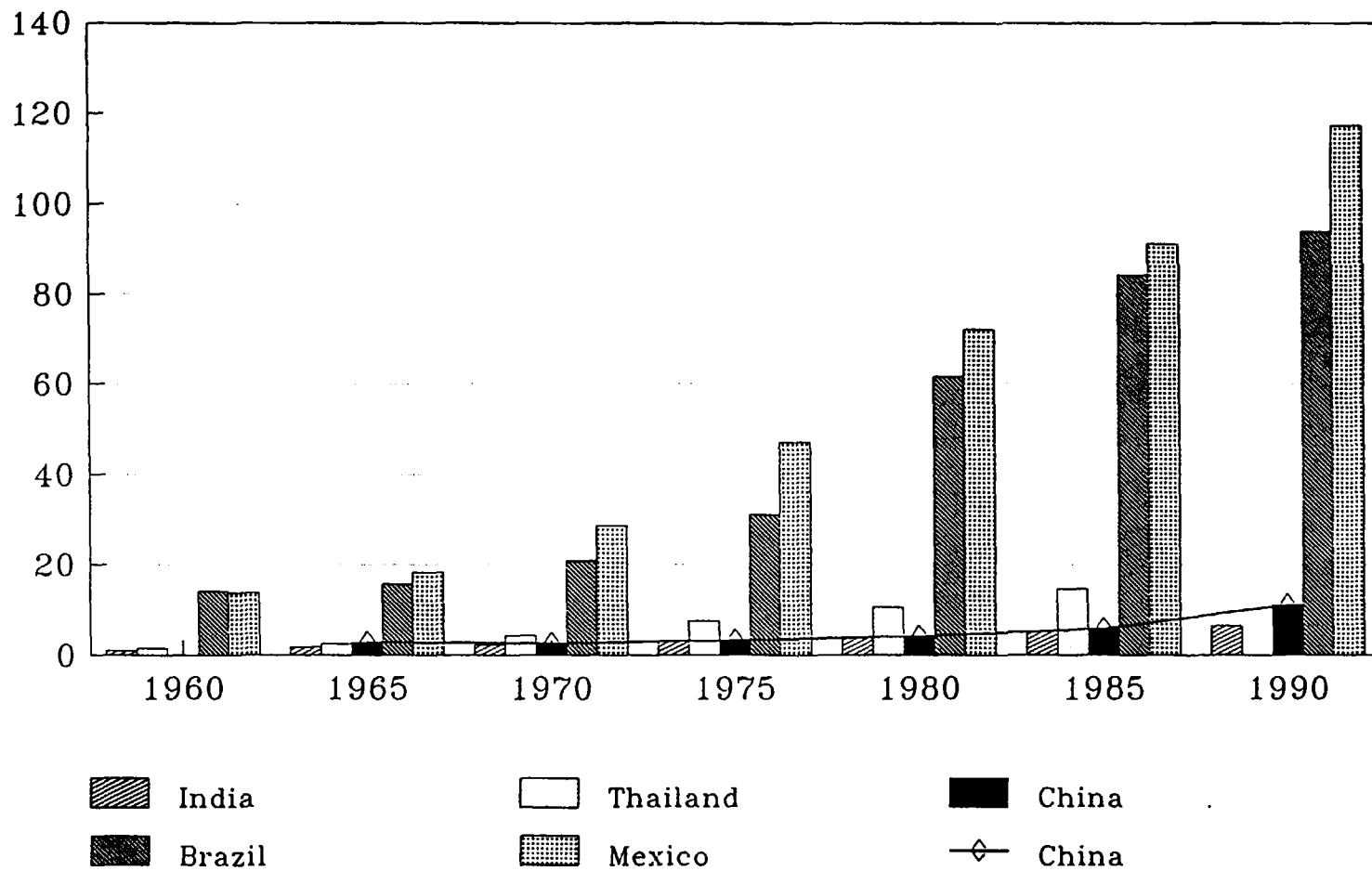


Figure A 1.11

Percapita Length of Roads (paved+unpaved)
(km per million persons)

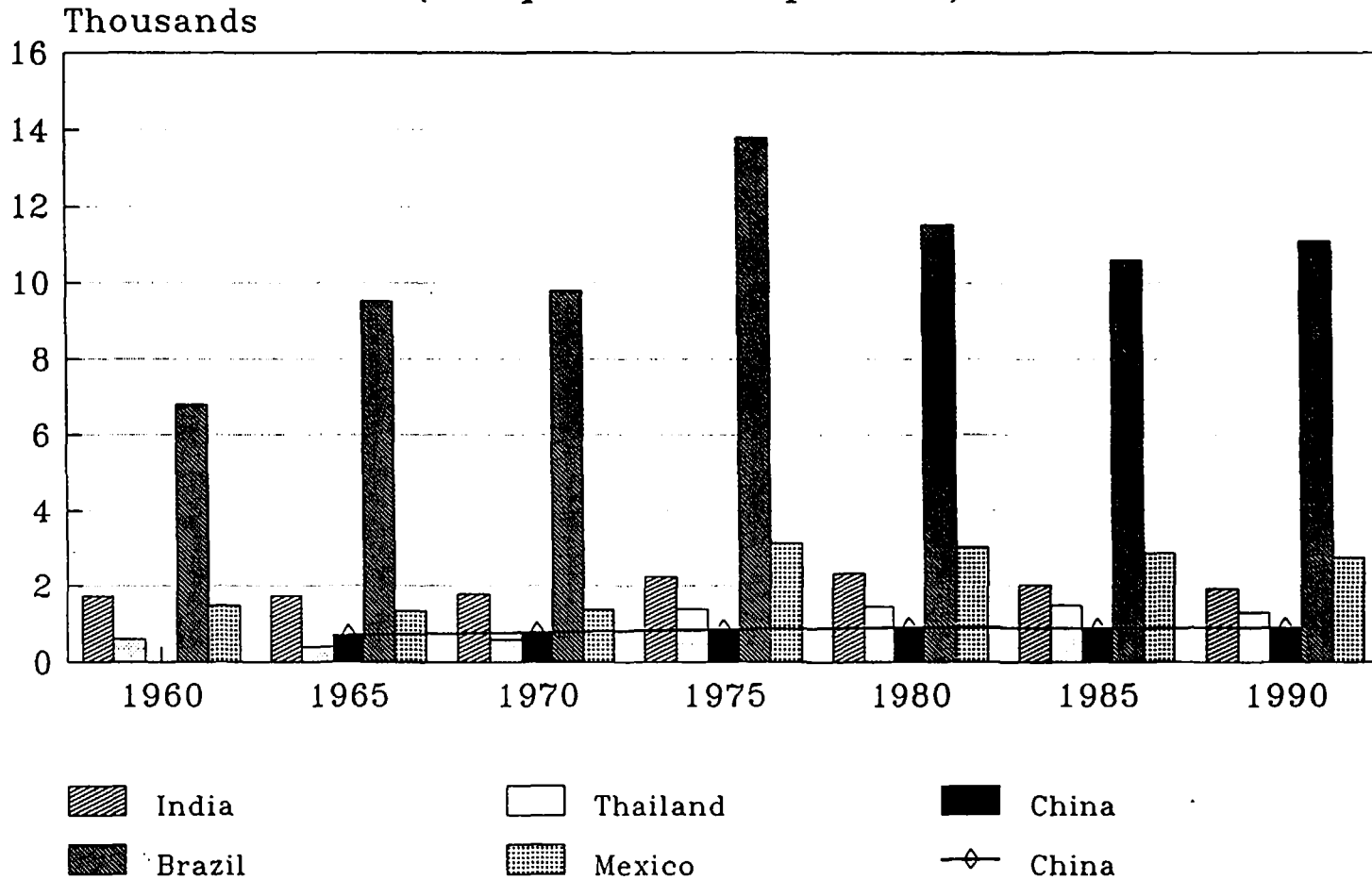


Figure A 1.12
 Percapita Length of Paved Roads
 (km per million persons)

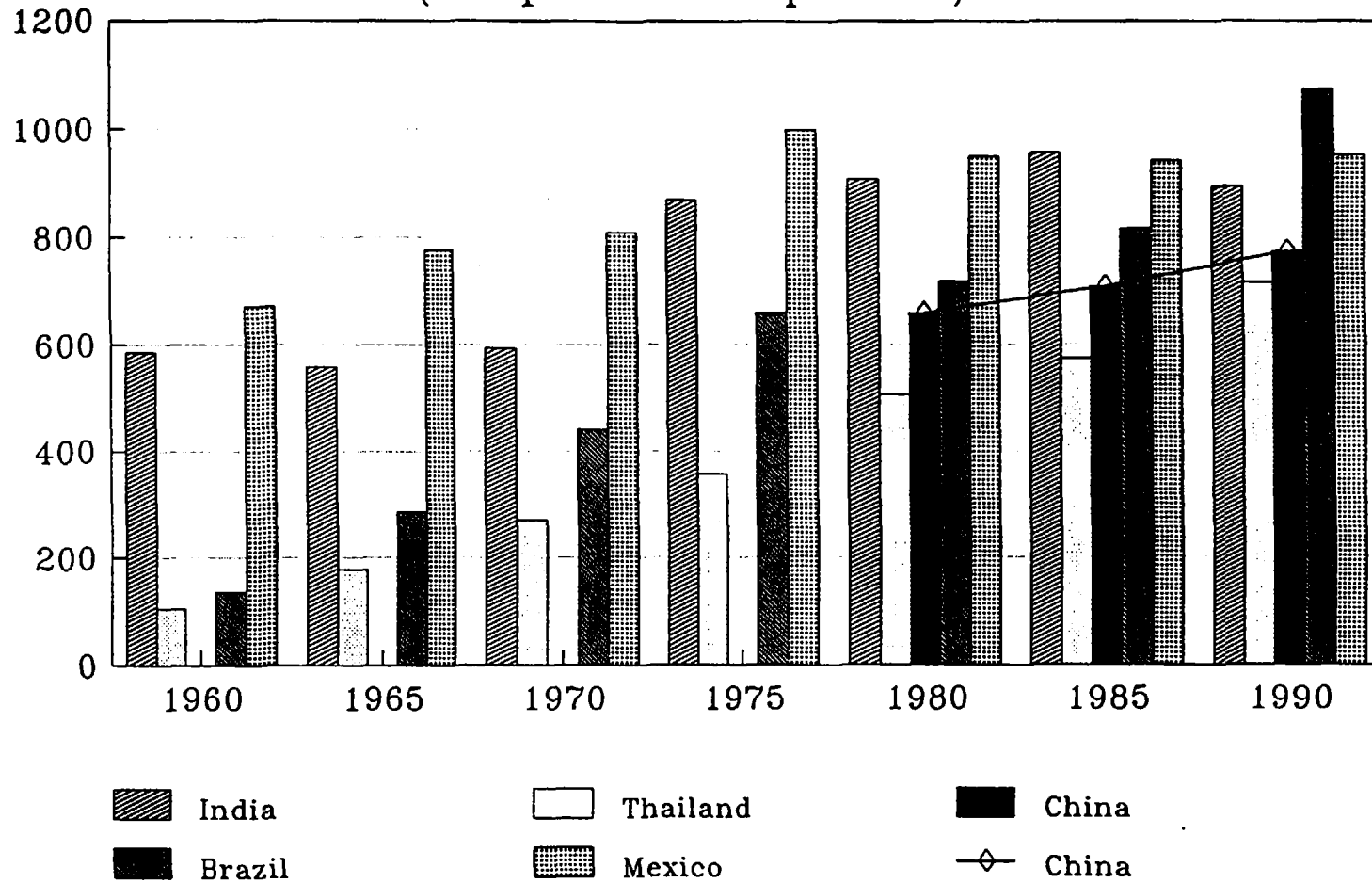
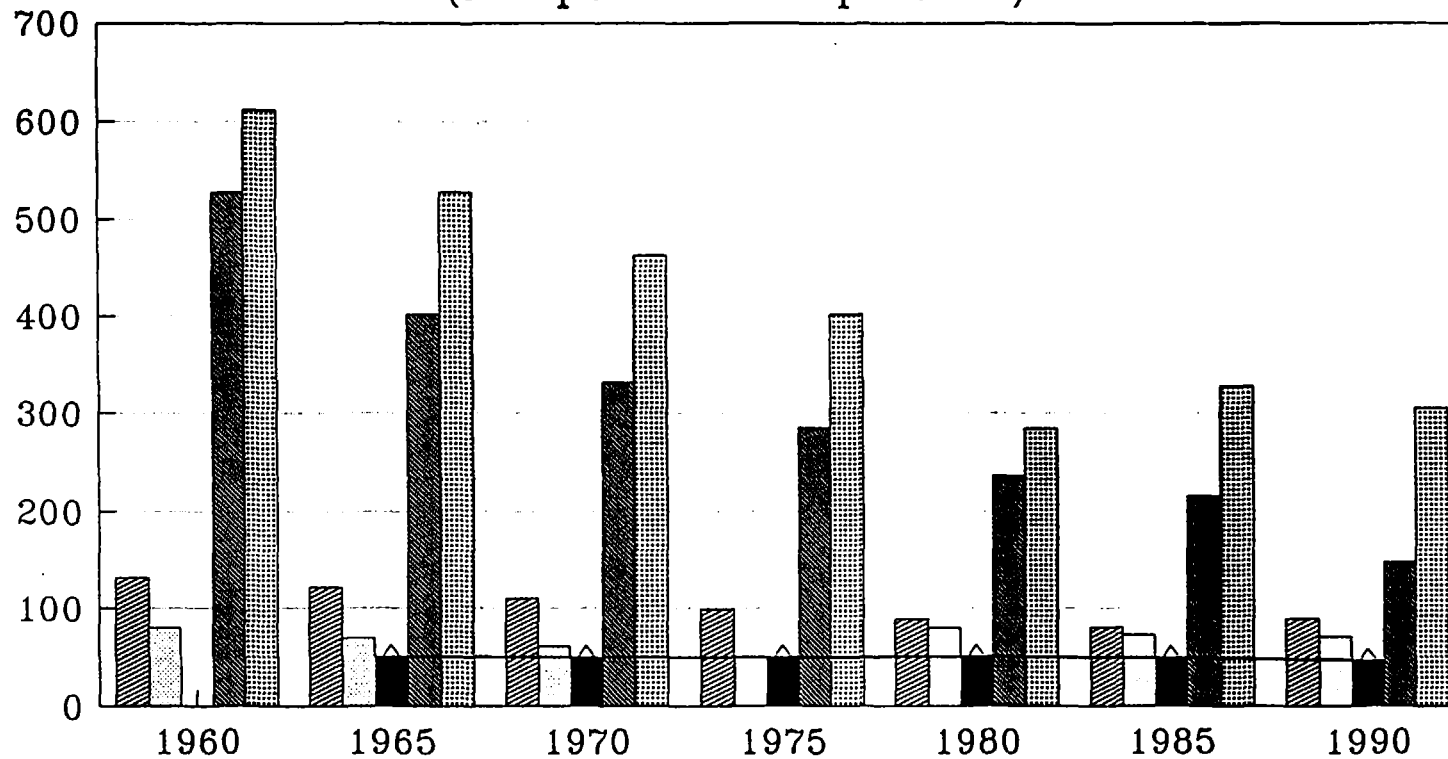


Figure A 1.13
 Percapita Length of Railroad
 (km per million persons)



India
 Brazil

Thailand
 Mexico

China
 China

Figure A 1.14
 Percapita Electricity Generating Capacity
 (kilowatts)

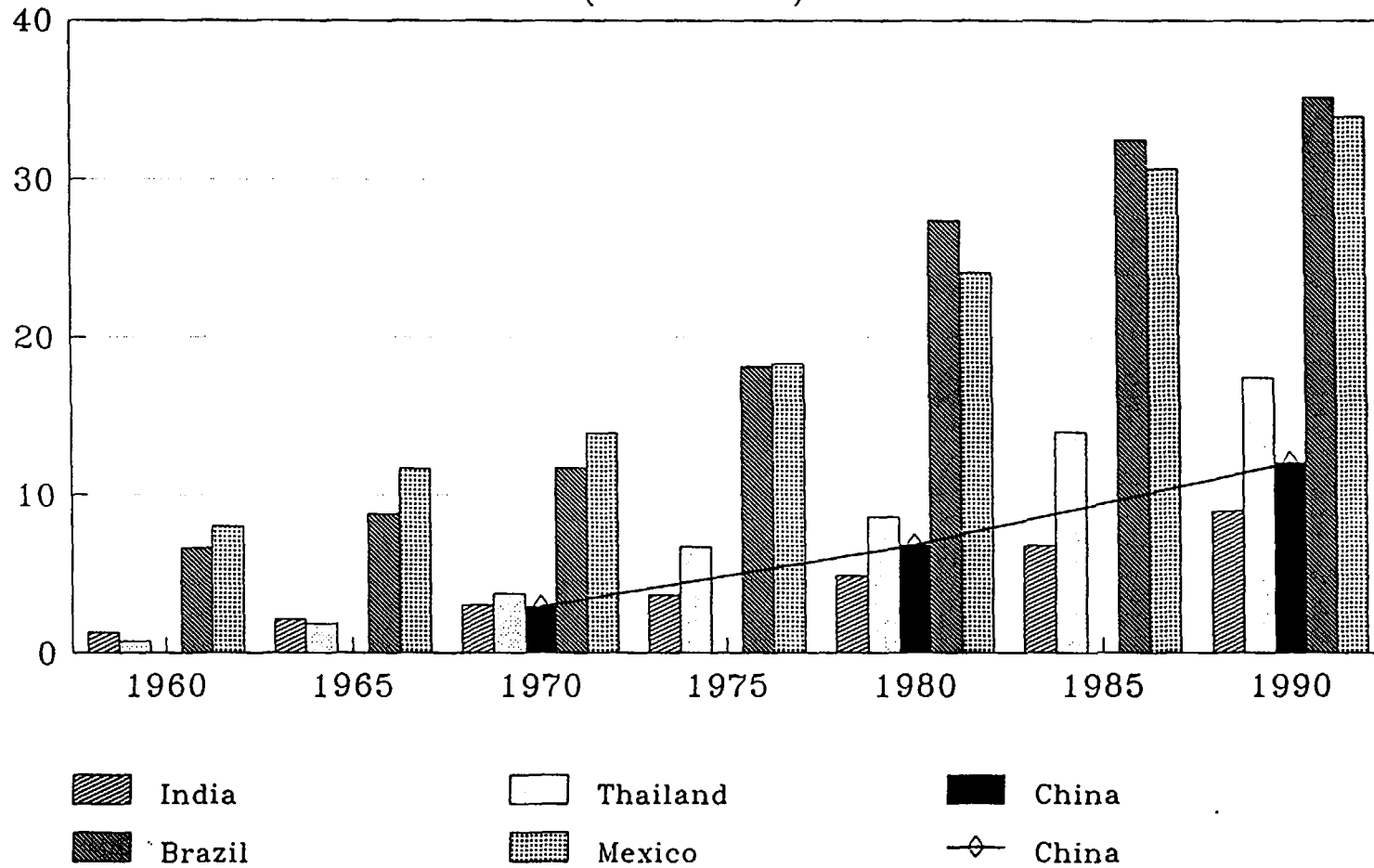


Figure A 1.15
 Percapita Electricity Production
 (kilowatt hours)

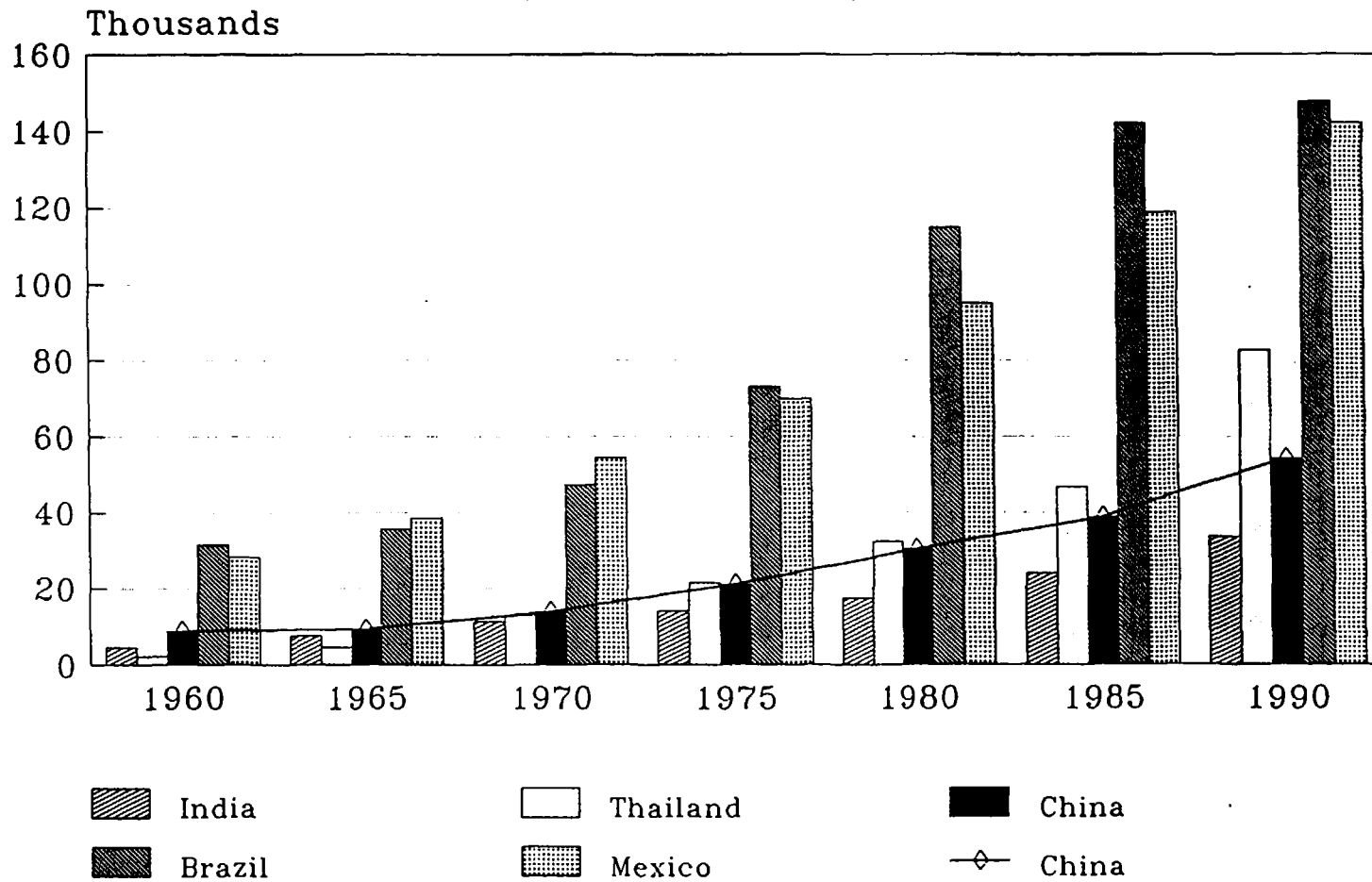
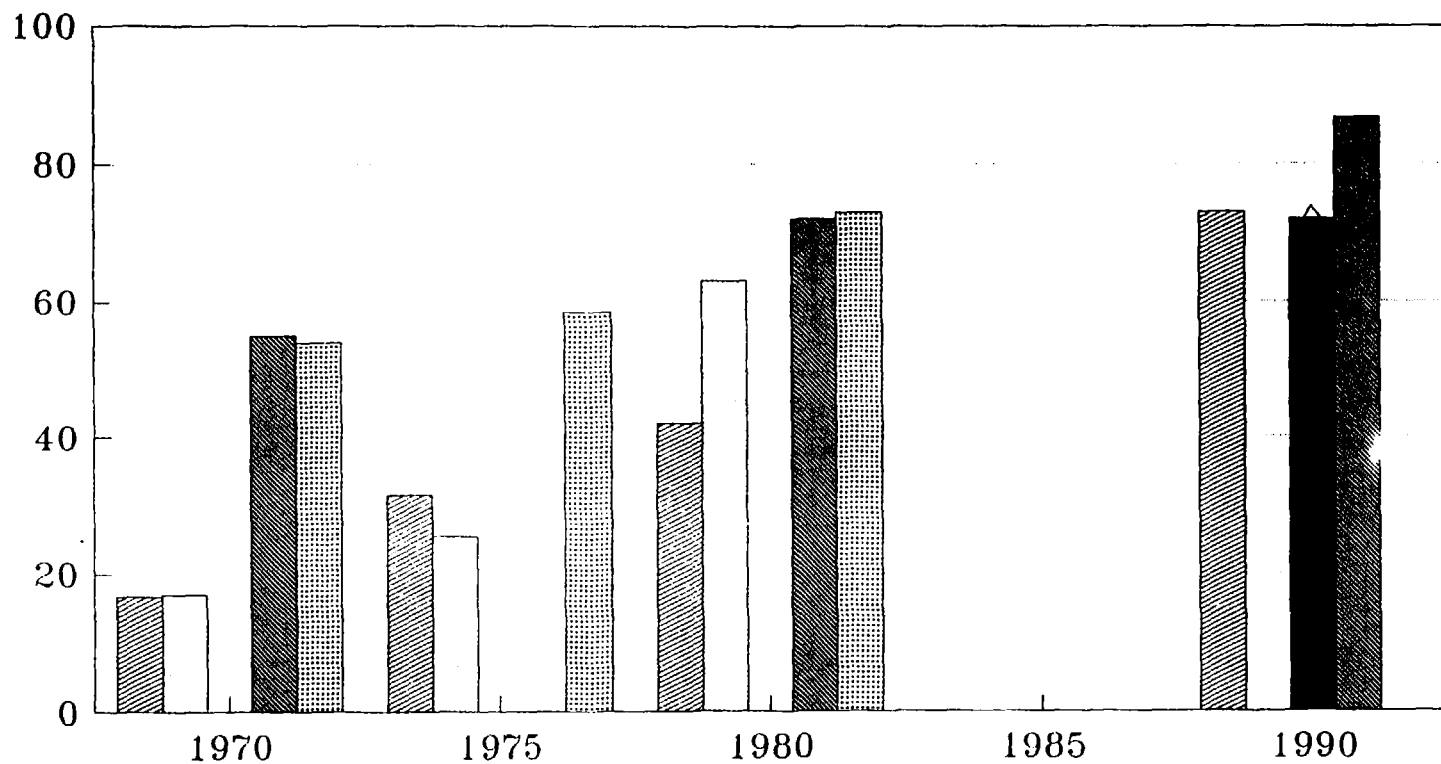


Figure A 1.16

% of Total Population with Access to Safe Drinking Water



India

Thailand

China

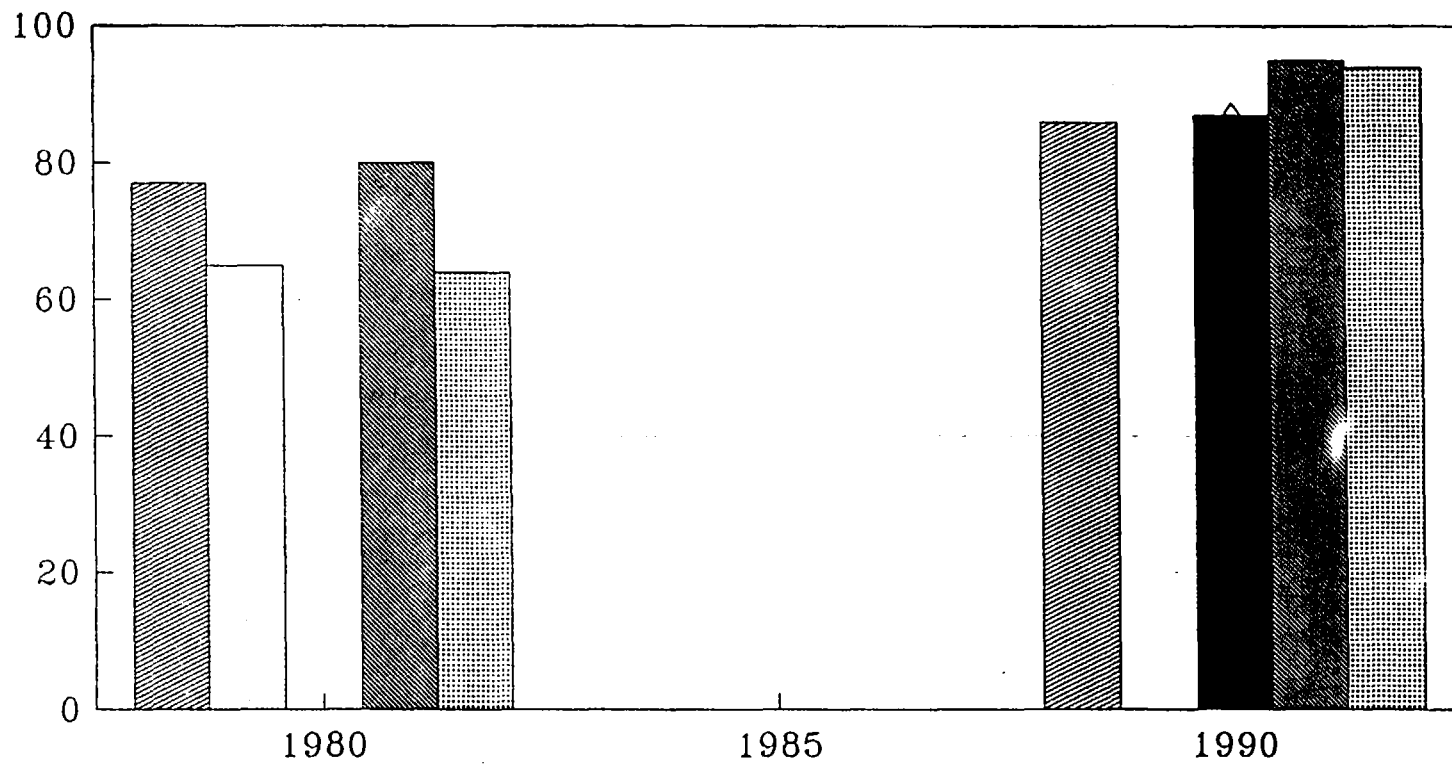
Brazil

Mexico

China

Figure A 1.17

% of Urban Population with Access to Safe Drinking Water



India
Brazil

Thailand
Mexico

China
China

Figure A 1.18
 % of Rural Population with Access to Safe Drinking Water

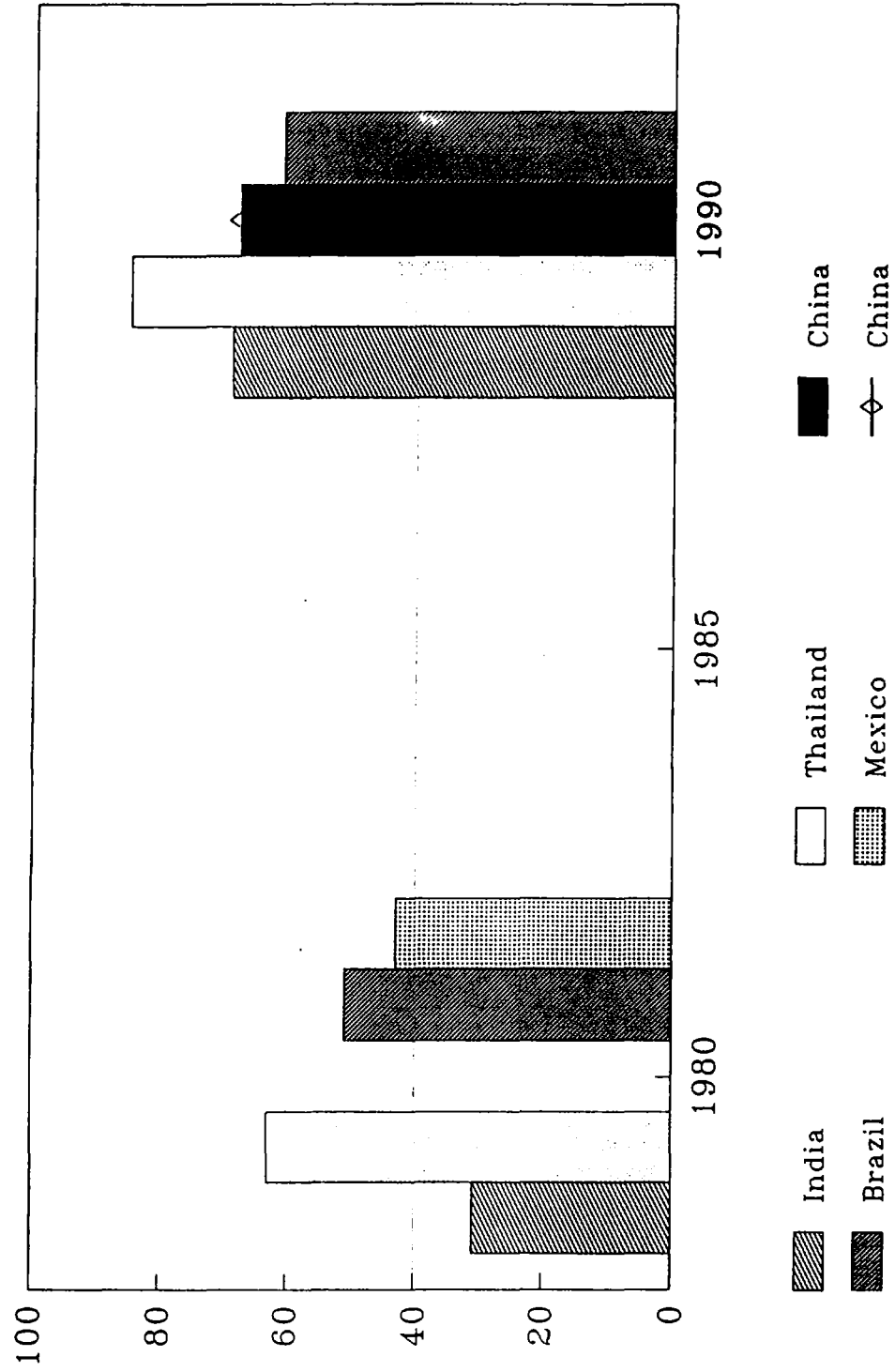


Figure A 1.19
% of Total Population with Access to Sanitation

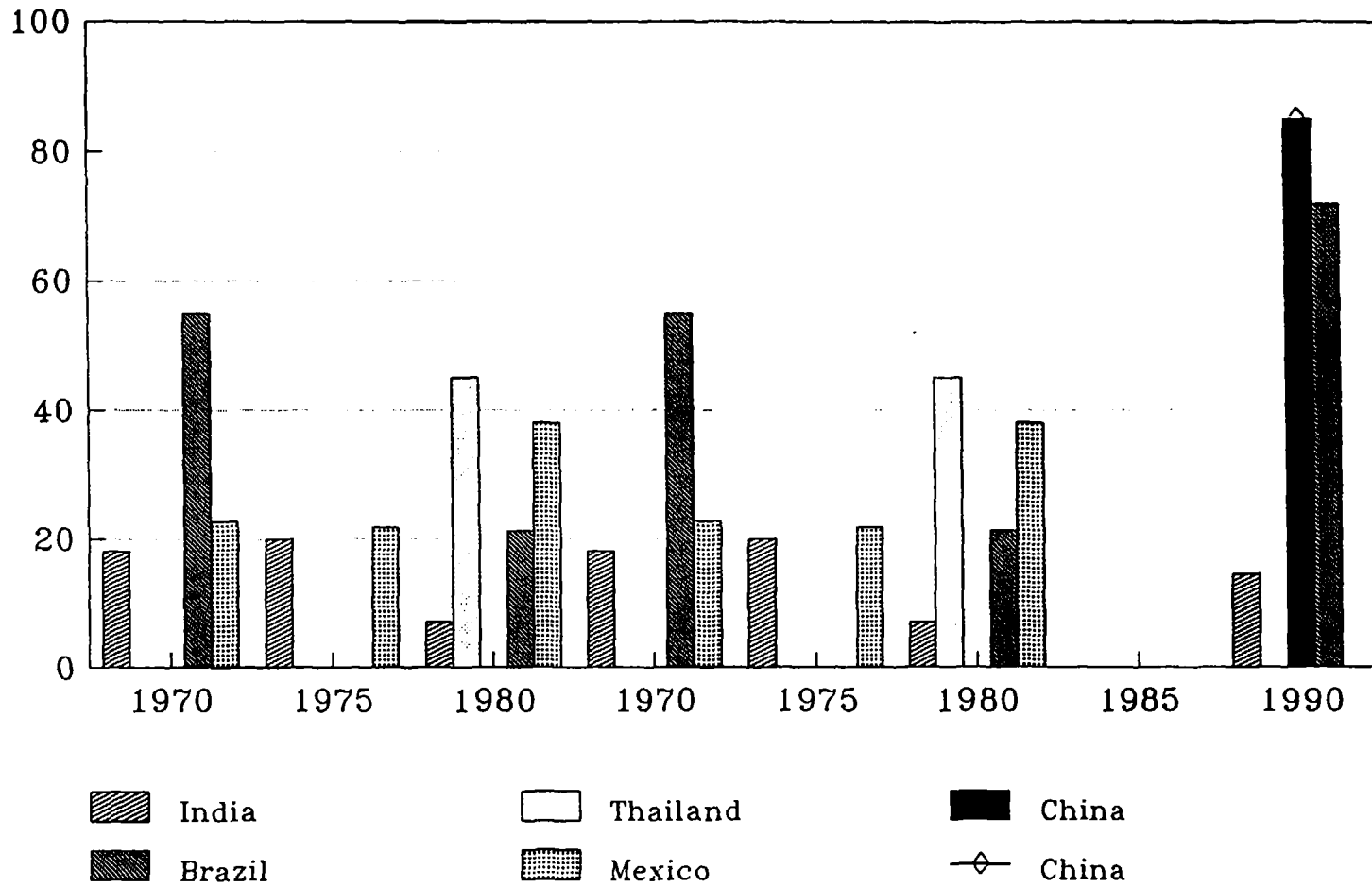
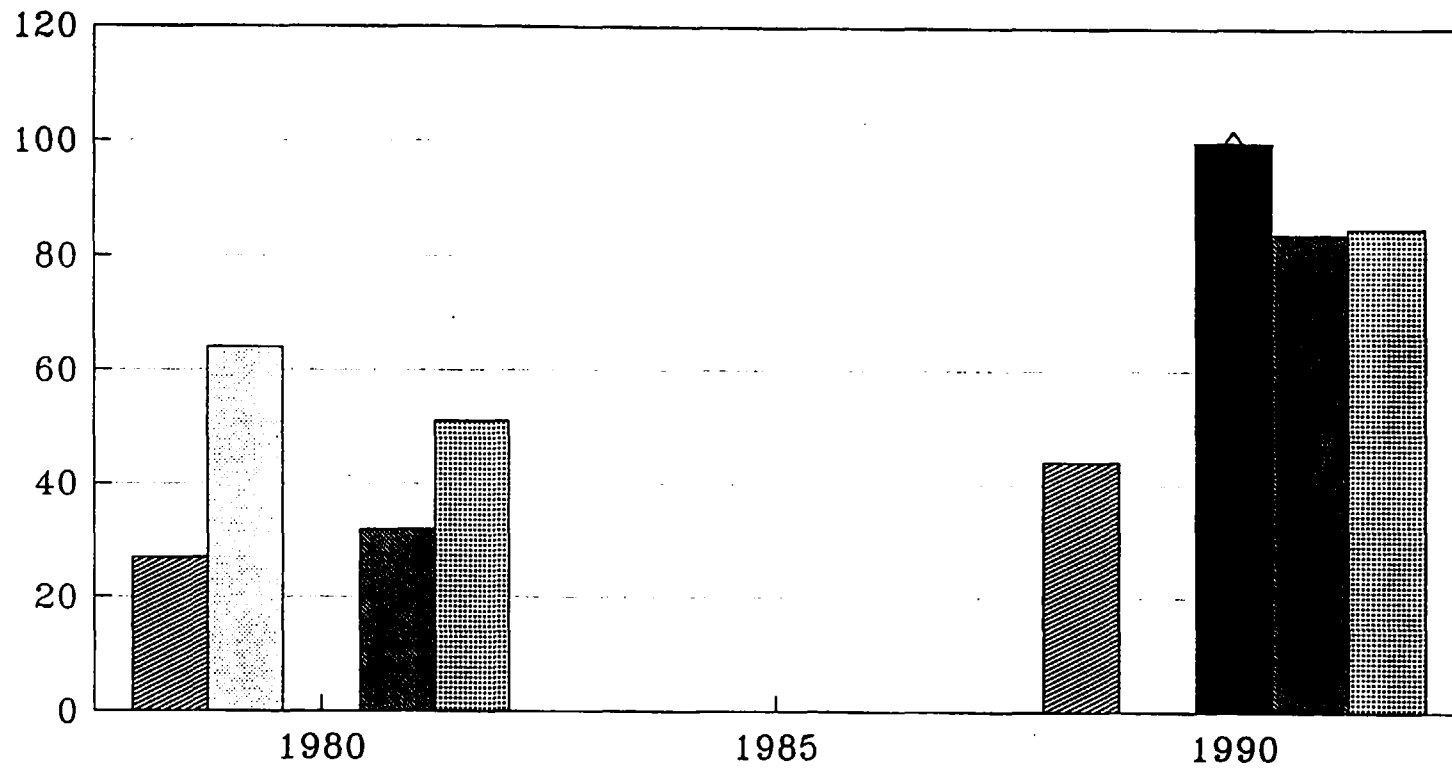
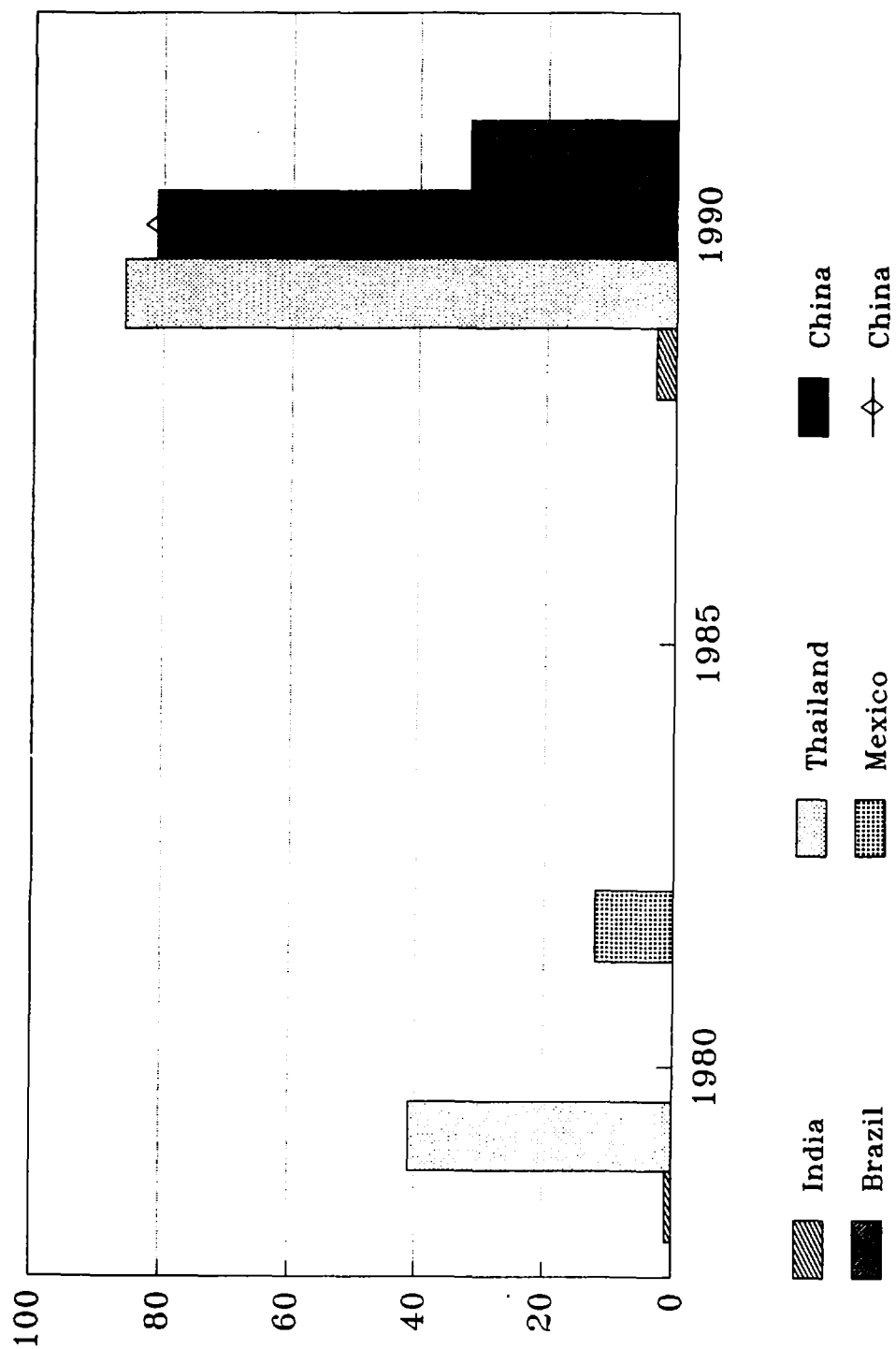


Figure A 1.20
% of Urban Population with Access to Sanitation

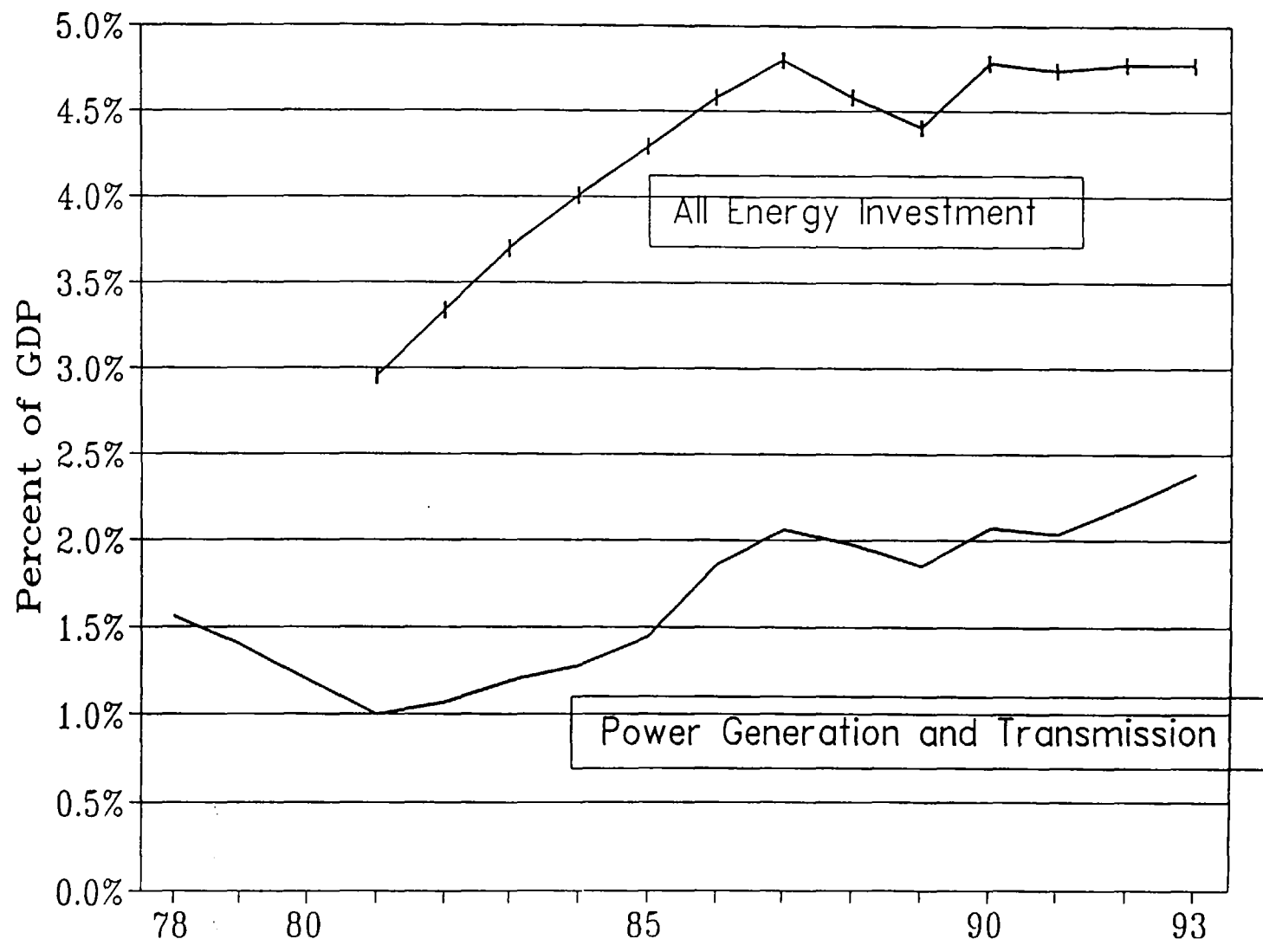


India Thailand China
Brazil Mexico China

Figure A 1.21
 % of Rural Population with Access to Sanitation

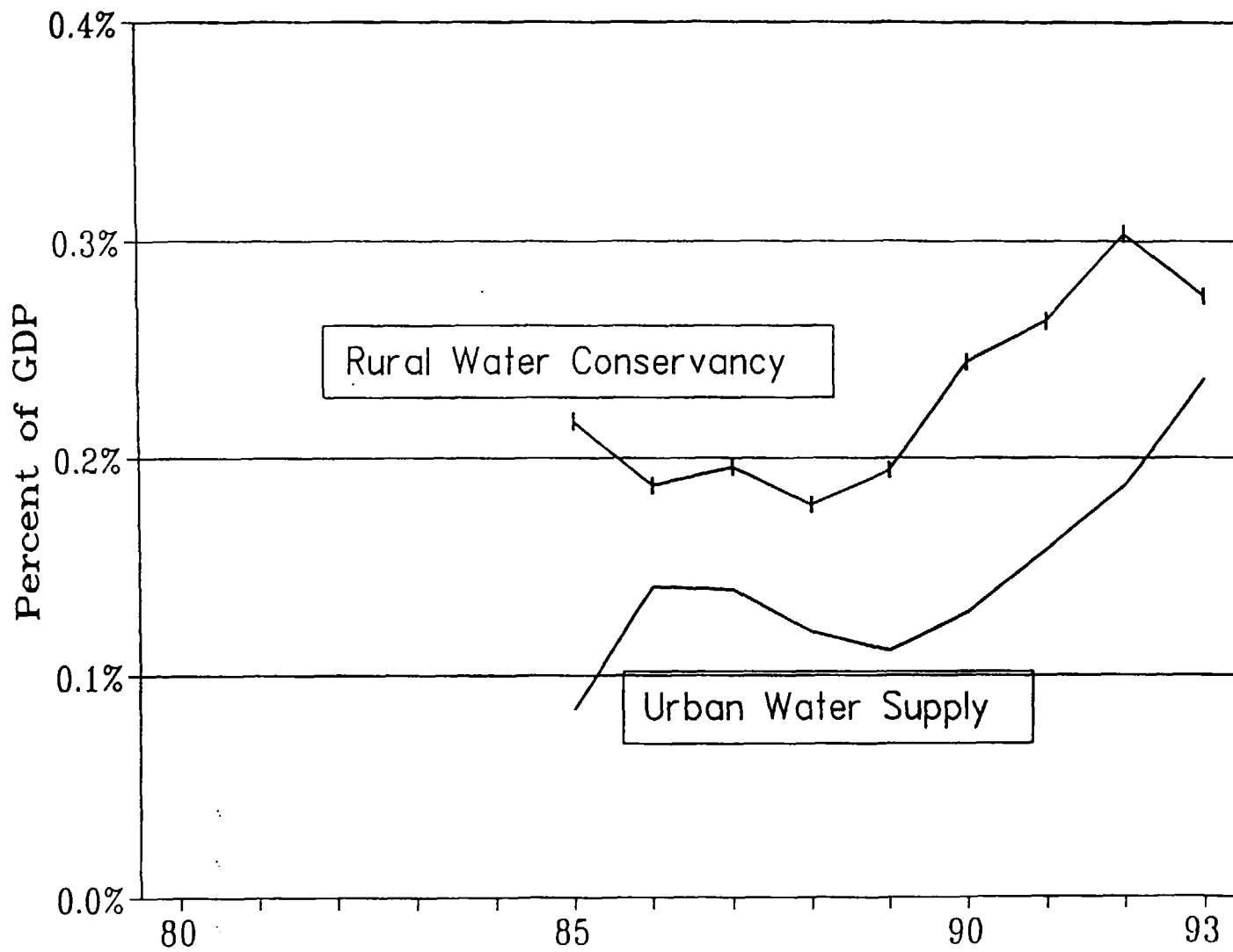


Energy Investment

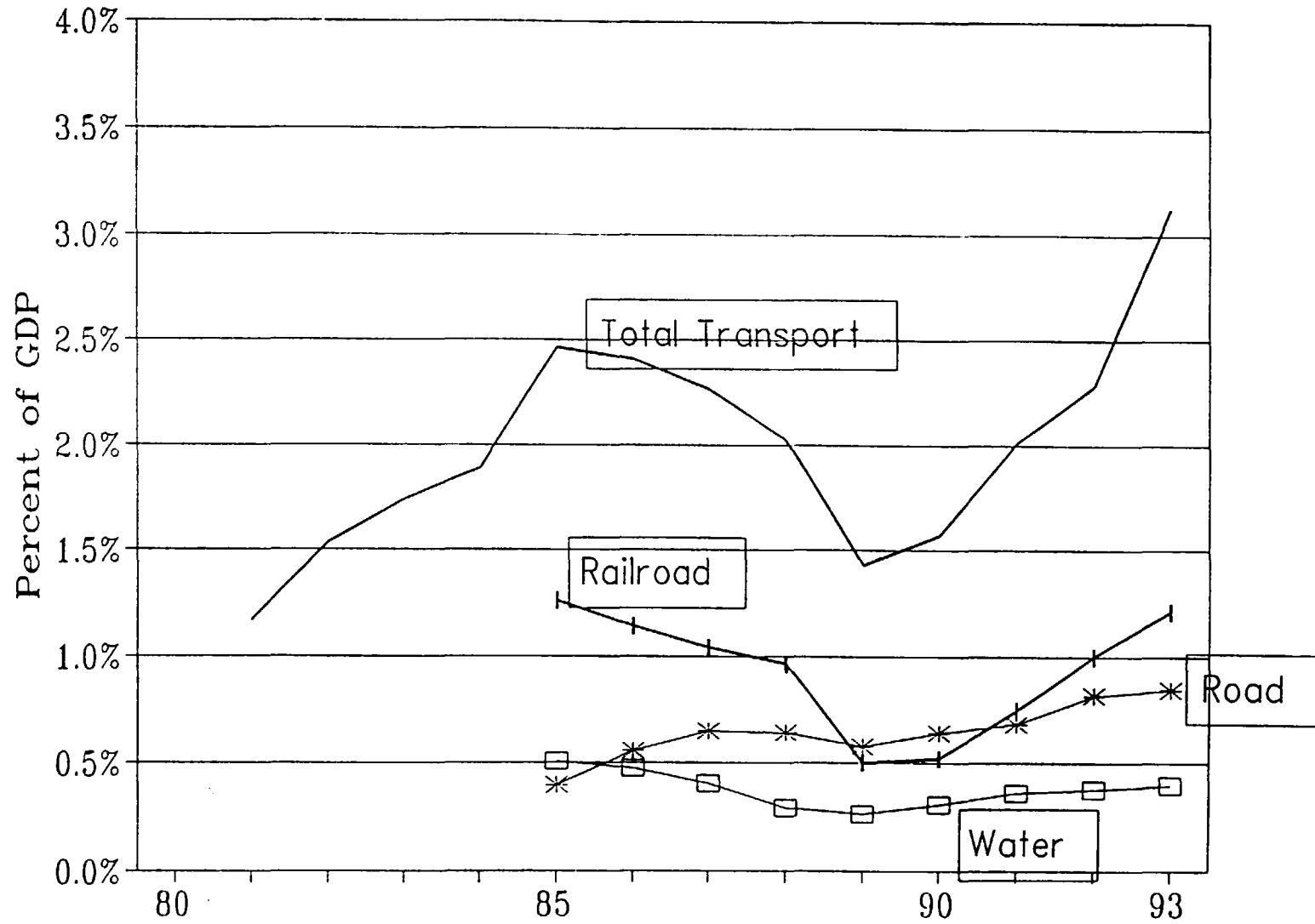


Water Investment

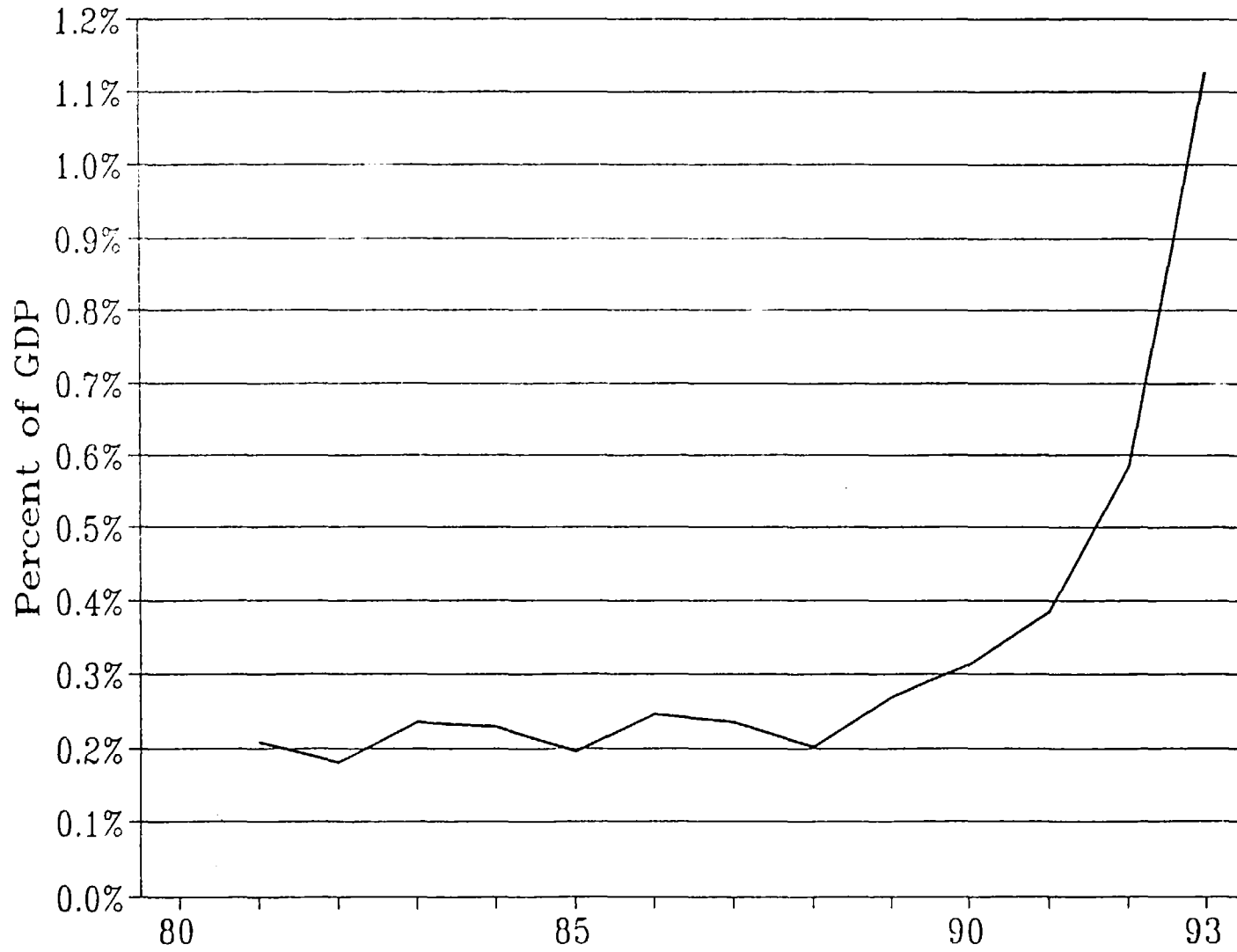
Figure A1.23



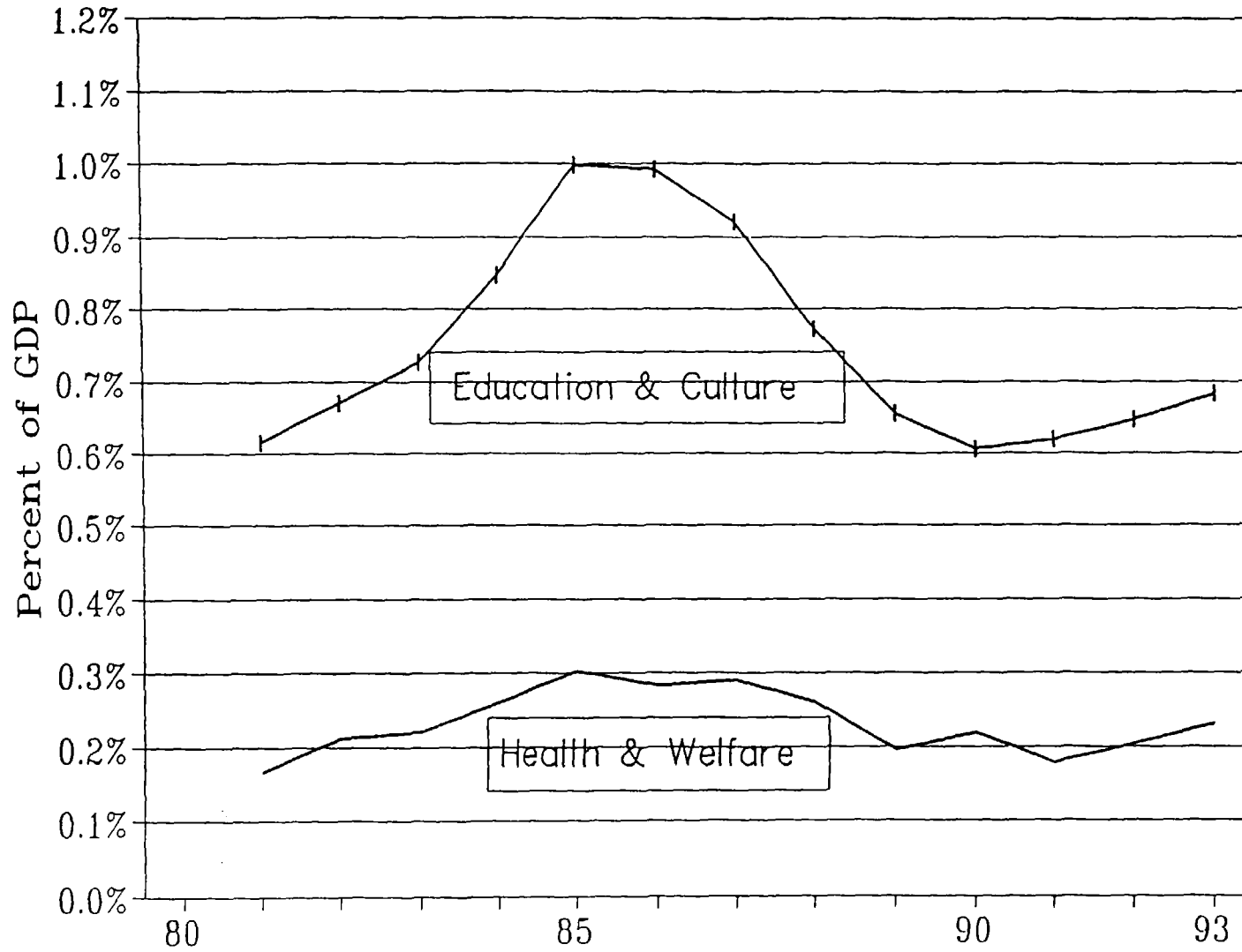
Transportation Investment



Telecommunications Investment



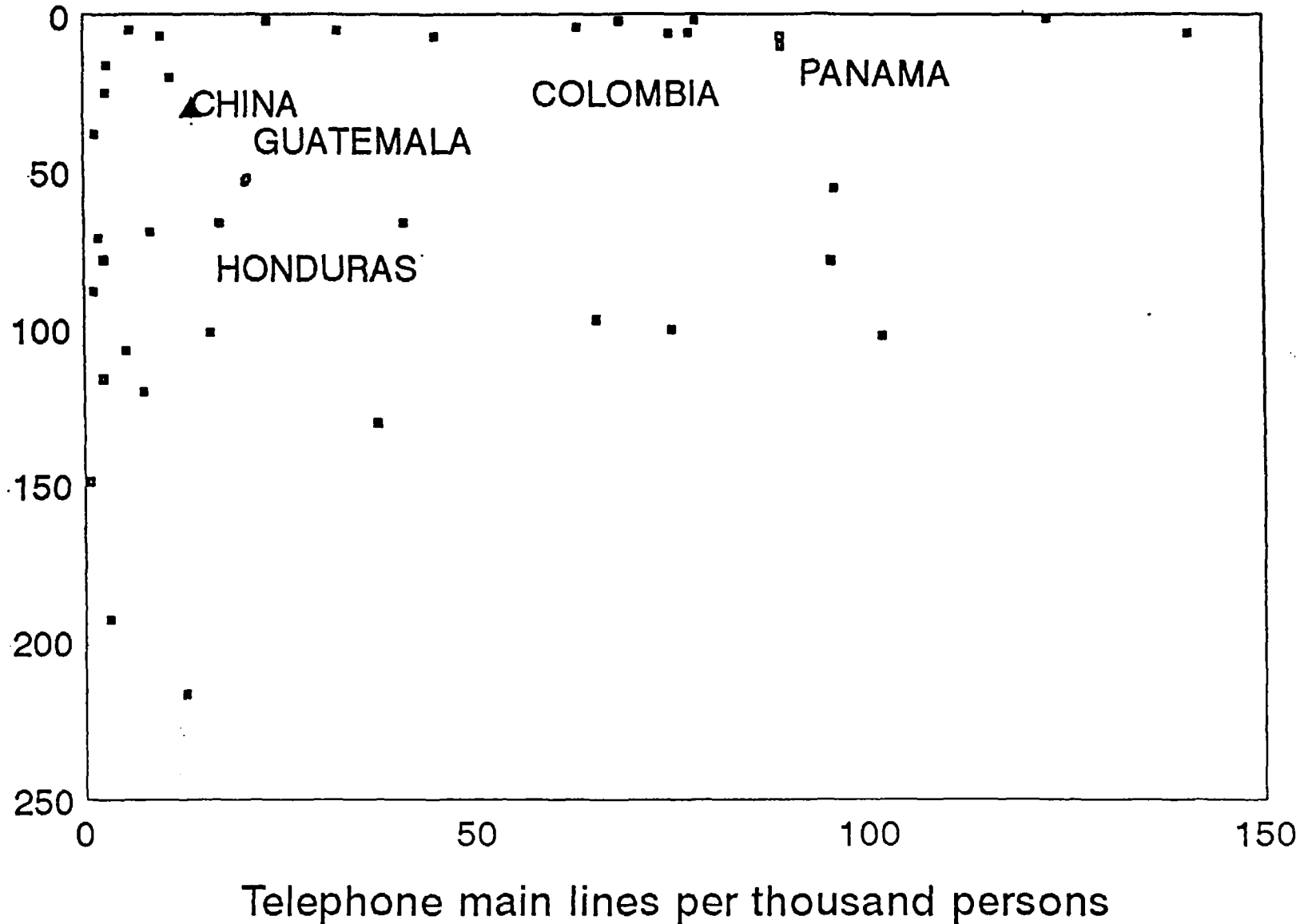
Social Sector Investment



TELECOMMUNICATIONS

Figure A2.1

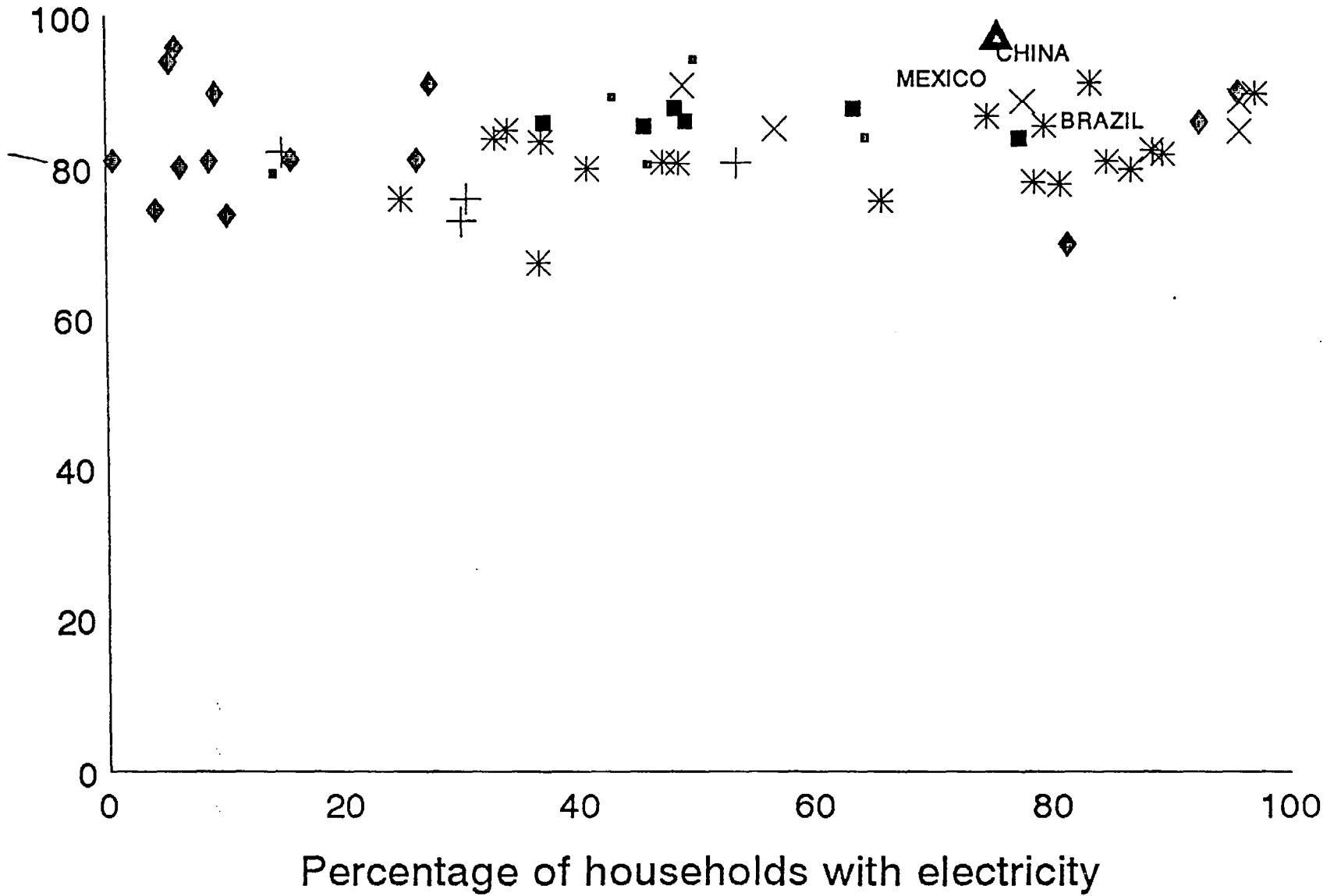
Faults per 100 main lines, 1990



POWER

Figure A2.2

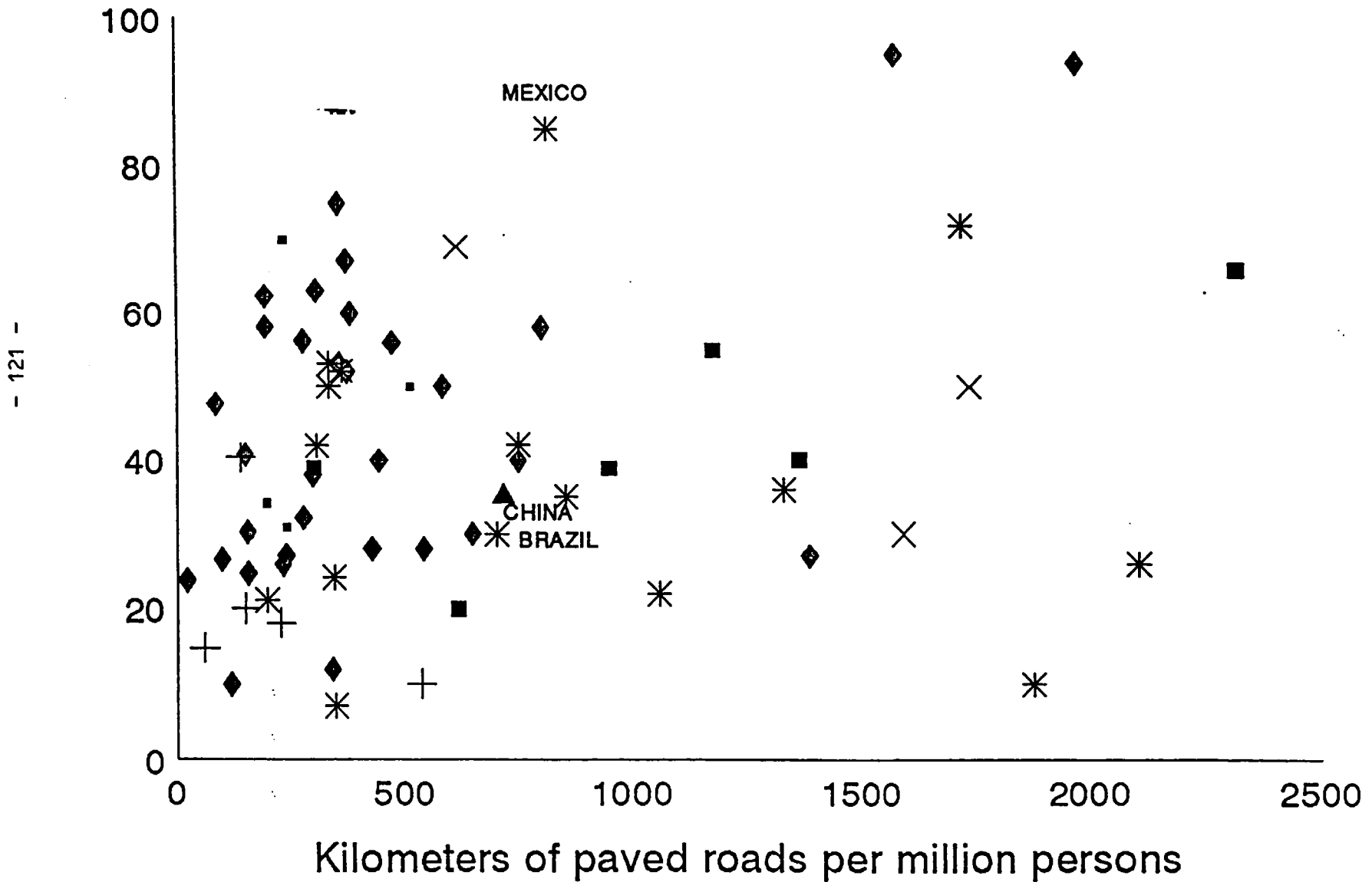
Percentage of power delivered, 1990



ROADS

Figure A2.3

Percentage of paved roads in good condition, 1988



WATER

Figure A2.4

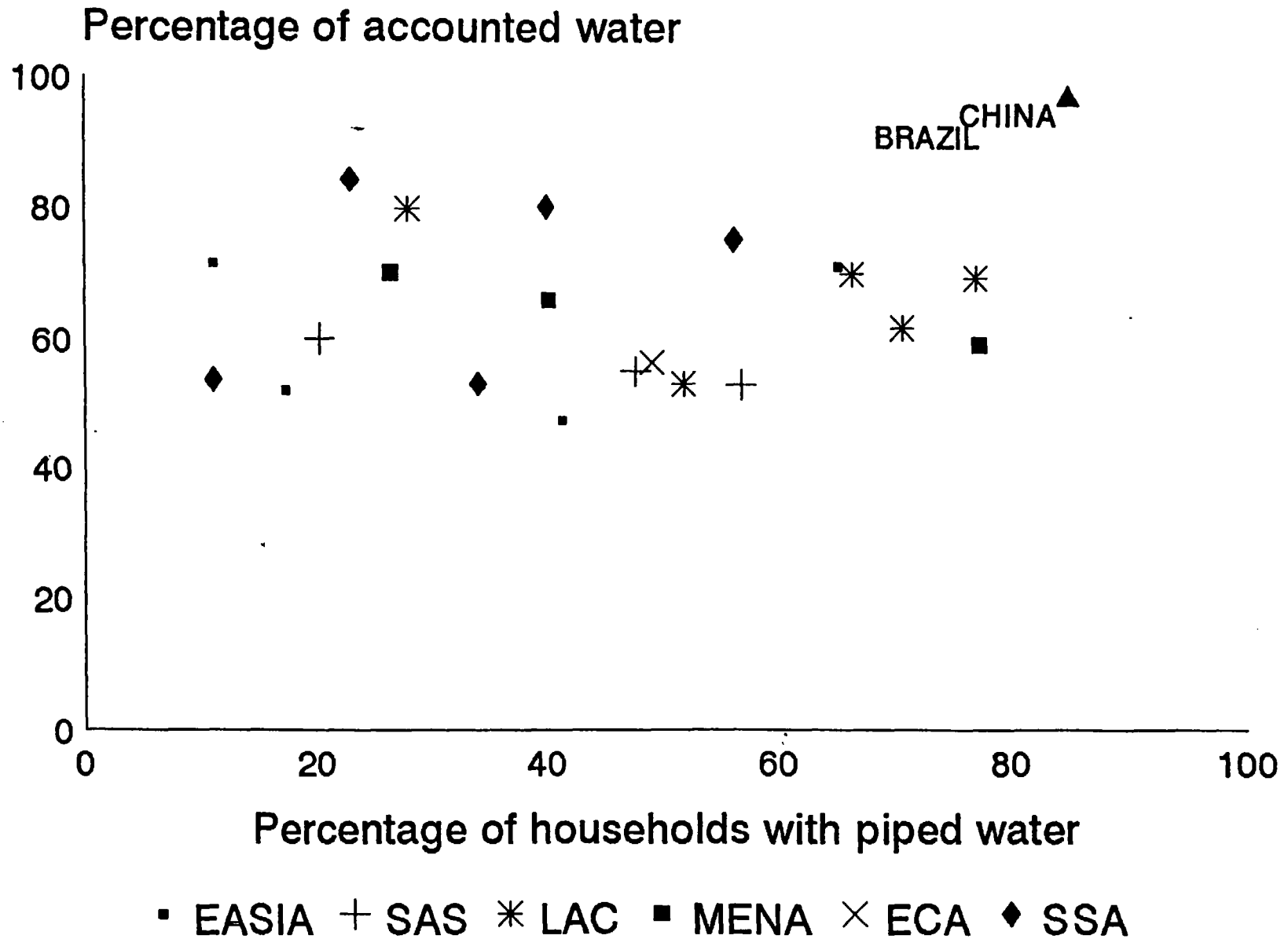
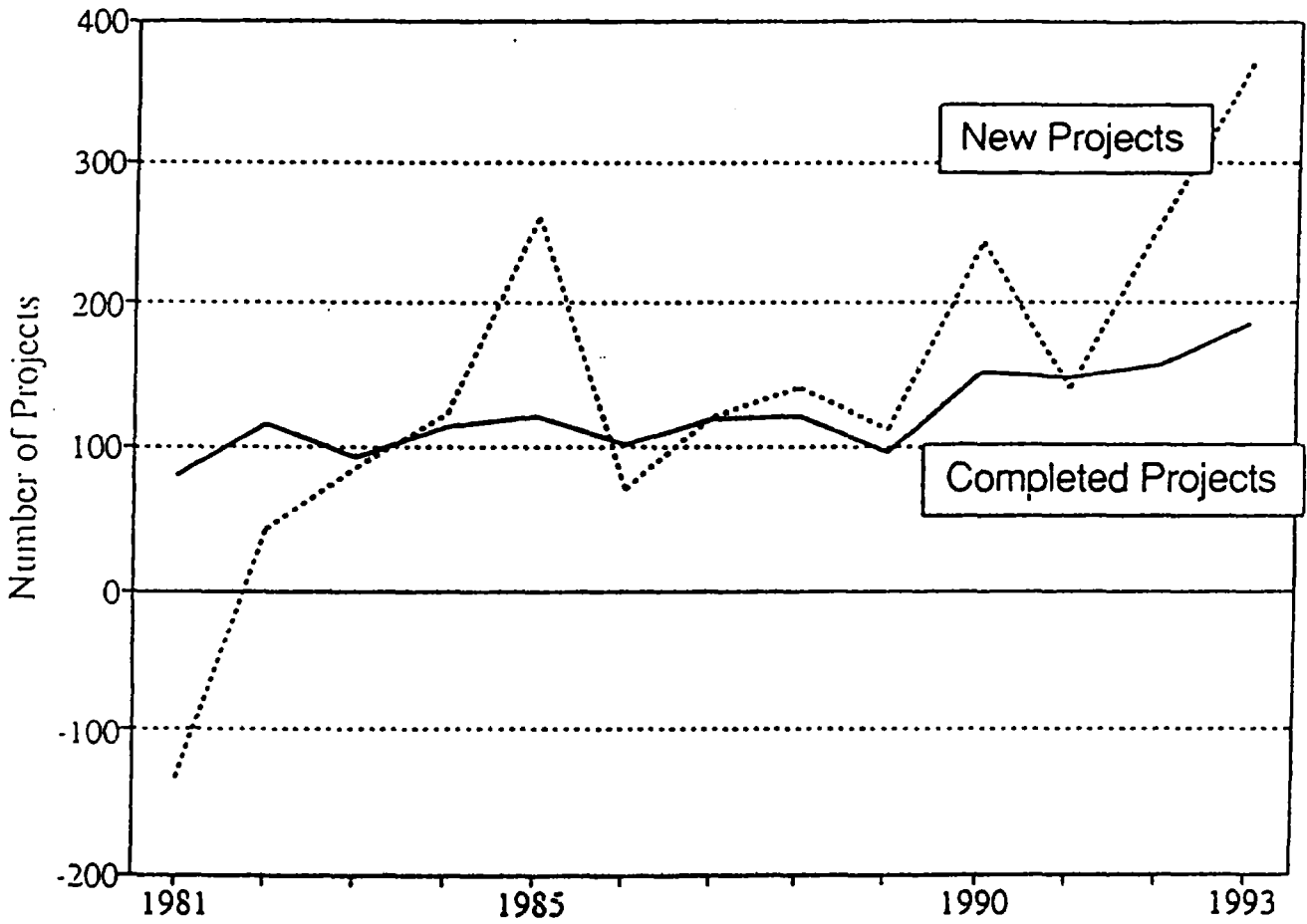


Figure A2.5

Large Investment Projects Completed and Begun



APPENDIX TABLES

Appendix Table 1.1: Total Fixed Asset Investment
(in million yuans)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
by ownership 1/										
SOU's 2/	84531	168044	197853	229800	276276	253548	291866	362813	527363	765797
Capital Construction	55553	107438	117613	134309	157431	155174	170382	211579	301266	461549
Technical Updating 3/	28978	44914	61922	75860	98055	78878	83020	102325	146109	219587
Other	0	15692	18318	19631	20790	19496	19907	23864	29380	36169
Collectives	17428	32746	39174	54699	71172	57000	52950	69782	135934	223134
Urban	4289	12823	14639	18128	25498	18564	16340	20384	36448	60015
Rural	13139	19923	24535	36571	45674	38436	36610	49398	99486	163119
Individuals	21081	53522	64938	79586	102208	103226	100117	118288	122199	147623
Urban	1228	5679	7456	10051	15685	14023	12470	14032	21647	33850
Rural	19853	47843	57482	69535	86523	89203	87647	104256	100552	113773
Other										109232
TOTAL	123040	254312	301965	364085	449656	413774	444933	550883	785496	1245786
by sector 1/										
Rural	12481	19523	13629	19120	23226	20628	24336	30535	29074	
Industry	54039	110111	138807	175378	220930	194520	212355	254473	371595	
Transport & Construction		68954	88900	104484	128085	125602	129065	158793	195685	
Culture, Education, Health	5812	13964	15823	17302	18317	19246	20597	23284	29195	
Other		41767	44803	47800	59098	53778	58578	83796	159947	
TOTAL	123040	254319	301962	364084	449656	413774	444931	550881	785496	1245786
by source of funds										
State budget	27926	40780	44063	47554	41001	34162	38765	37295	33420	46387
Domestic loans	17612	51027	63831	83594	92668	71636	87088	129219	215202	292581
Foreign investment	6051	9148	13216	17537	25899	27415	27826	31627	45714	90729
Self-raised funds	71451	153364	148851	174518	290087	235550	232949	287861	402463	621875
Other			32000	40883		45009	58301	64879	88699	194214
TOTAL	123040	254319	301961	364086	449655	413772	444929	550881	785498	1245786
Memorandum										
GDP (billion yuan)	519.3	855.8	969.6	1130.1	1406.8	1599.3	1856.4	2166.5	2665.6	3413.4

1/ For 1982 investment data for collectives has no urban/rural breakdown.

For 1993, no sectoral breakdown is available for investment by urban collectives or "other" investors.

Aggregations assume individual investments are construction except for productive rural investments classified as rural

2/ Includes 18.557, 25.045, 50.608 and 48.492 billion in 1990, 1991, 1992 and 1993 respectively for building purchases.

3/ Includes "other" investment in 1982.

4/ These are mainly investments by joint ventures which were previously included in SOU investment.

Appendix Table 1.2: Total Fixed Asset Investment
(in percent)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
by ownership 1/										
SOEs 2/	68.7	66.1	65.5	63.1	61.4	61.3	65.6	65.9	67.1	61.5
Capital Construction	45.2	42.2	38.9	36.9	35.0	37.5	38.3	38.4	38.4	37.0
Technical Updating 3/	23.6	17.7	20.5	20.8	21.8	19.1	18.7	18.6	18.6	17.6
Other	0.0	6.2	6.1	5.4	4.6	4.7	4.5	4.3	3.7	2.9
Collectives	14.2	12.9	13.0	15.0	15.8	13.8	11.9	12.7	17.3	17.9
Urban	3.5	5.0	4.8	5.0	5.7	4.5	3.7	3.7	4.6	4.8
Rural	10.7	7.8	8.1	10.0	10.2	9.3	8.2	9.0	12.7	13.1
Individuals	17.1	21.0	21.5	21.9	22.7	24.9	22.5	21.5	15.6	11.8
Urban	1.0	2.2	2.5	2.8	3.5	3.4	2.8	2.5	2.8	2.7
Rural	16.1	18.8	19.0	19.1	19.2	21.6	19.7	18.9	12.8	9.1
Other										8.8
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
by sector 1/										
Rural	10.1	7.7	4.5	5.3	5.2	5.0	5.5	5.5	3.7	0.0
Industry	43.9	43.3	46.0	48.2	49.1	47.0	47.7	46.2	47.3	0.0
Transport & Construction	0.0	27.1	29.4	28.7	28.5	30.4	29.0	28.8	24.9	0.0
Culture, Education, Health	4.7	5.5	5.2	4.8	4.1	4.7	4.6	4.2	3.7	0.0
Other	0.0	16.4	14.8	13.1	13.1	13.0	13.2	15.2	20.4	0.0
TOTAL	58.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
by source of funds										
State budget	22.7	16.0	14.6	13.1	9.1	8.3	8.7	6.8	4.3	3.7
Domestic loans	14.3	20.1	21.1	23.0	20.6	17.3	19.6	23.5	27.4	23.5
Foreign investment	4.9	3.6	4.4	4.8	5.8	6.6	6.3	5.7	5.8	7.3
Self-raised funds	58.1	60.3	49.3	47.9	64.5	56.9	52.4	52.3	51.2	49.9
Other	0.0	0.0	10.6	11.2	0.0	10.9	13.1	11.8	11.3	15.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Memorandum										
GDP (billion yuan)										

1/ For 1982 investment data for collectives has no urban/rural breakdown.

For 1993, no sectoral breakdown is available for investment by urban collectives or "other" investors.

Aggregations assume individual investments are construction except for productive rural investments classified as rural

2/ Includes 18.557, 25.045, 50.608 and 48.492 billion in 1990, 1991, 1992 and 1993 respectively for building purchases.

3/ Includes "other" investment in 1982.

4/ These are mainly investments by joint ventures which were previously included in SOU investment.

Appendix Table 1.3: Total Fixed Asset Investment
(as % of GDP)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
<i>by ownership 1/</i>										
SOEs 2/	16.3	19.6	20.4	20.3	19.6	15.9	15.7	16.7	19.8	22.4
Capital Construction	10.7	12.6	12.1	11.9	11.2	9.7	9.2	9.8	11.3	13.5
Technical Updating 3/	5.6	5.2	6.4	6.7	7.0	4.9	4.5	4.7	5.5	6.4
Other	0.0	1.8	1.9	1.7	1.5	1.2	1.1	1.1	1.1	1.1
Collectives	3.4	3.8	4.0	4.8	5.1	3.6	2.9	3.2	5.1	6.5
Urban	0.8	1.5	1.5	1.6	1.8	1.2	0.9	0.9	1.4	1.8
Rural	2.5	2.3	2.5	3.2	3.2	2.4	2.0	2.3	3.7	4.8
Individuals	4.1	6.3	6.7	7.0	7.3	6.5	5.4	5.5	4.6	4.3
Urban	0.2	0.7	0.8	0.9	1.1	0.9	0.7	0.6	0.8	1.0
Rural	3.8	5.6	5.9	6.2	6.2	5.6	4.7	4.8	3.8	3.3
Other										3.2
TOTAL	23.7	29.7	31.1	32.2	32.0	25.9	24.0	25.4	29.5	36.5
<i>by sector 1/</i>										
Rural	2.4	2.3	1.4	1.7	1.7	1.3	1.3	1.4	1.1	0.0
Industry	10.4	12.9	14.3	15.5	15.7	12.2	11.4	11.7	13.9	0.0
Transport & Construction	0.0	8.1	9.2	9.2	9.1	7.9	7.0	7.3	7.3	0.0
Culture, Education, Health	1.1	1.6	1.6	1.5	1.3	1.2	1.1	1.1	1.1	0.0
Other	0.0	4.9	4.6	4.2	4.2	3.4	3.2	3.9	6.0	0.0
TOTAL	23.7	29.7	31.1	32.2	32.0	25.9	24.0	25.4	29.5	36.5
<i>by source of funds</i>										
State budget	5.4	4.8	4.5	4.2	2.9	2.1	2.1	1.7	1.3	1.4
Domestic loans	3.4	6.0	6.6	7.4	6.6	4.5	4.7	6.0	8.1	8.6
Foreign investment	1.2	1.1	1.4	1.6	1.8	1.7	1.5	1.5	1.7	2.7
Self-raised funds	13.8	17.9	15.4	15.4	20.6	14.7	12.5	13.3	15.1	18.2
Other	0.0	0.0	3.3	3.6	0.0	2.8	3.1	3.0	3.3	5.7
TOTAL	23.7	29.7	31.1	32.2	32.0	25.9	24.0	25.4	29.5	36.5

Memorandum
GDP (billion yuan)

1/ For 1982 investment data for collectives has no urban/rural breakdown.

For 1993, no sectoral breakdown is available for investment by urban collectives or "other" investors.

Aggregations assume individual investments are construction except for productive rural investments classified as rural

2/ Includes 18.557, 25.045, 50.608 and 48.492 billion in 1990, 1991, 1992 and 1993 respectively for building purchases.

3/ Includes "other" investment in 1982.

4/ These are mainly investments by joint ventures which were previously included in SOU investment.

Appendix Table 2.1: Total SOU Fixed Asset Investment by Sector
(in million yuans)

Sector	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
Rural	4249	4460	4326	5491	6331	6216	8029	10139	13231	15820
Water conservancy	1774	1963	1842	2348	2652	3110	4320	5323	7402	8854
Industry	46743	91365	115982	140716	172652	159701	180988	211322	275947	357157
light	10769	19027	26861	31388	40918	32222	33965	41420	57770	57814
heavy	35120	72338	89121	109328	131734	127479	147023	169902	218176	299343
tap water		738	1385	1582	1771	1788	2287	3183	4558	7422
energy	14124	36641	44396	54301	64502	70564	84674	95675	116410	149767
electric power	5516	12621	18137	23554	27989	29572	36649	41019	53621	73815
Geological survey & prospecting	259	753	744	757	488	540	517	786	1081	10542
Construction	1506	3013	2751	2574	2803	2150	1810	2111	3745	7635
Transport, post, telecomm	8894	22654	25729	28266	31773	27174	34841	48508	70163	133449
transport	7964	20984	23349	25611	28522	22869	27818	40726	55651	98082
railways		10735	11073	11811	13608	8031	9295	15121	24384	37374
highways		3407	5431	7373	9099	9331	11403	13780	20037	18452
waterways		4331	4603	4595	4095	4263	5373	7324	9213	7227
airways		2136	1488	1495	1518	1078	1424	4235	2017	12014
other		375	754	337	202	166	323	266	0	15837
post & telecom	930	1670	2380	2655	2819	4305	5549	7782	14512	35367
Commerce	4949	6616	6571	8181	9528	7126	7126	11459	20258	30794
Real Estate services	5490	13975	14771	13491	18765	14843	11791	16688	27636	51970
Health	1093	2586	2750	3267	3671	3113	3844	3605	4977	7227
Education	3475	8516	9608	10397	10870	10465	10717	12501	15742	21382
Scientific Research	117	2347	2793	2920	2624	2433	2321	2542	3472	4602
Banking and Insurance	731	860	984	1611	2275	1766	1681	2091	3463	6532
Administration	5946	5795	5536	7493	8913	6452	6915	9702	15446	32266
Other 1/	1079	5111	5305	4635	5583	11569	21284	31357	72203	86421
Total	84531	168051	197850	229799	276276	253548	291864	362811	527364	765797
of which:										
infrastructure & social sectors	20752	49078	59451	69414	78294	75222	91184	114139	156463	252149
infrastructure	16184	37976	47093	55750	63753	61644	76623	98033	135744	223540
water	1774	2701	3227	3930	4423	4898	6607	8506	11960	16276
power	5516	12621	18137	23554	27989	29572	36649	41019	53621	73815
transport	7964	20984	23349	25611	28522	22869	27818	40726	55651	98082
telecom	930	1670	2380	2655	2819	4305	5549	7782	14512	35367
social sectors	4568	11102	12358	13664	14541	13578	14561	16106	20719	28609

1/ Includes 18.557, 25.045, 50.608 and 48.492 billion in 1990, 1991, 1992 and 1993 respectively for housing.

Calculated as a residual

Appendix Table 2.2: Total SOU Fixed Asset Investment by Sector
(in percent)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
Rural	5.0	2.7	2.2	2.4	2.3	2.5	2.8	2.8	2.5	2.1
Water conservancy	2.1	1.2	0.9	1.0	1.0	1.2	1.5	1.5	1.4	1.2
Industry	55.3	54.4	58.6	61.2	62.5	63.0	62.0	58.2	52.3	46.6
light	12.7	11.3	13.6	13.7	14.8	12.7	11.6	11.4	11.0	7.5
heavy	41.5	43.0	45.0	47.6	47.7	50.3	50.4	46.8	41.4	39.1
tap water	0.0	0.4	0.7	0.7	0.6	0.7	0.8	0.9	0.9	1.0
energy	16.7	21.8	22.4	23.6	23.3	27.8	29.0	26.4	22.1	19.6
electric power	6.5	7.5	9.2	10.2	10.1	11.7	12.6	11.3	10.2	9.6
Geological survey & prospecting	0.3	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	1.4
Construction	1.8	1.8	1.4	1.1	1.0	0.8	0.6	0.6	0.7	1.0
Transport, post, telecomm	10.5	13.5	13.0	12.3	11.5	10.7	11.9	13.4	13.3	17.4
transport	9.4	12.5	11.8	11.1	10.3	9.0	9.5	11.2	10.6	12.8
railways	0.0	6.4	5.6	5.1	4.9	3.2	3.2	4.2	4.6	4.9
highways	0.0	2.0	2.7	3.2	3.3	3.7	3.9	3.8	3.8	2.4
waterways	0.0	2.6	2.3	2.0	1.5	1.7	1.8	2.0	1.7	0.9
airways	0.0	1.3	0.8	0.7	0.5	0.4	0.5	1.2	0.4	1.6
other	0.0	0.2	0.4	0.1	0.1	0.1	0.1	0.1	0.0	2.1
post & telecom	1.1	1.0	1.2	1.2	1.0	1.7	1.9	2.1	2.8	4.6
Commerce	5.9	3.9	3.3	3.6	3.4	2.8	2.4	3.2	3.8	4.0
Real Estate services	6.5	8.3	7.5	5.9	6.8	5.9	4.0	4.6	5.2	6.8
Health	1.3	1.5	1.4	1.4	1.3	1.2	1.3	1.0	0.9	0.9
Education	4.1	5.1	4.9	4.5	3.9	4.1	3.7	3.4	3.0	2.8
Scientific Research	0.1	1.4	1.4	1.3	0.9	1.0	0.8	0.7	0.7	0.6
Banking and Insurance	0.9	0.5	0.5	0.7	0.8	0.7	0.6	0.6	0.7	0.9
Administration	7.0	3.4	2.8	3.3	3.2	2.5	2.4	2.7	2.9	4.2
Other 1/	1.3	3.0	2.7	2.0	2.0	4.6	7.3	8.6	13.7	11.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
of which:										
infrastructure & social sectors	24.5	29.2	30.0	30.2	28.3	29.7	31.2	31.5	29.7	32.9
infrastructure	19.1	22.6	23.8	24.3	23.1	24.3	26.3	27.0	25.7	29.2
water	2.1	1.6	1.6	1.7	1.6	1.9	2.3	2.3	2.3	2.1
power	6.5	7.5	9.2	10.2	10.1	11.7	12.6	11.3	10.2	9.6
transport	9.4	12.5	11.8	11.1	10.3	9.0	9.5	11.2	10.6	12.8
telecom	1.1	1.0	1.2	1.2	1.0	1.7	1.9	2.1	2.8	4.6
social sectors	5.4	6.6	6.2	5.9	5.3	5.4	5.0	4.4	3.9	3.7

1/ Includes 18.557, 25.045, 50.608 and 48.492 billion in 1990, 1991, 1992 and 1993 respectively for housing.

Calculated as a residual

**Appendix Table 2.3: Total SOU Fixed Asset Investment by Sector
(as % of GDP)**

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
Rural	0.8	0.5	0.4	0.5	0.5	0.4	0.4	0.5	0.5	0.5
Water conservancy	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
Industry	9.0	10.7	12.0	12.5	12.3	10.0	9.7	9.8	10.4	10.5
light	2.1	2.2	2.8	2.8	2.9	2.0	1.8	1.9	2.2	1.7
heavy	6.8	8.5	9.2	9.7	9.4	8.0	7.9	7.8	8.2	8.8
tap water	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
energy	2.7	4.3	4.6	4.8	4.6	4.4	4.6	4.4	4.4	4.4
electric power	1.1	1.5	1.9	2.1	2.0	1.8	2.0	1.9	2.0	2.2
Geological survey & prospecting	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.3
Construction	0.3	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2
Transport, post, telecomm	1.7	2.6	2.7	2.5	2.3	1.7	1.9	2.2	2.6	3.9
transport	1.5	2.5	2.4	2.3	2.0	1.4	1.5	1.9	2.1	2.9
railways	0.0	1.3	1.1	1.0	1.0	0.5	0.5	0.7	0.9	1.1
highways	0.0	0.4	0.6	0.7	0.6	0.6	0.6	0.6	0.8	0.5
waterways	0.0	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.2
airways	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.4
other	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5
post & telecom	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	1.0
Commerce	1.0	0.8	0.7	0.7	0.7	0.4	0.4	0.5	0.8	0.9
Real Estate services	1.1	1.6	1.5	1.2	1.3	0.9	0.6	0.8	1.0	1.5
Health	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2
Education	0.7	1.0	1.0	0.9	0.8	0.7	0.6	0.6	0.6	0.6
Scientific Research	0.0	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1
Banking and Insurance	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2
Administration	1.1	0.7	0.6	0.7	0.6	0.4	0.4	0.4	0.6	0.9
Other 1/	0.2	0.6	0.5	0.4	0.4	0.7	1.1	1.4	2.7	2.5
Total	16.3	19.6	20.4	20.3	19.6	15.9	15.7	16.7	19.8	22.4
of which:										
infrastructure & social sectors	4.0	5.7	6.1	6.1	5.6	4.7	4.9	5.3	5.9	7.4
infrastructure	3.1	4.4	4.9	4.9	4.5	3.9	4.1	4.5	5.1	6.5
water	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5
power	1.1	1.5	1.9	2.1	2.0	1.8	2.0	1.9	2.0	2.2
transport	1.5	2.5	2.4	2.3	2.0	1.4	1.5	1.9	2.1	2.9
telecom	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	1.0
social sectors	0.9	1.3	1.3	1.2	1.0	0.8	0.8	0.7	0.8	0.8

1/ Includes 18.557, 25.045, 50.608 and 48.492 billion in 1990, 1991, 1992 and 1993 respectively for housing.

Calculated as a residual

Appendix Table 3.1: Capital Construction Investment of SOEs by Sector
(in million yuans)

Sector	1982 1/	1985	1986	1987	1988	1989	1990	1991	1992	1993
Rural	3412	3591	3506	4211	4746	5065	6722	8500	11270	4622
water conservancy	1774	1802	1736	2118	2362	2953	4065	5016	6919	8155
Industry	26060	44649	53164	68279	81258	82248	95260	114721	145831	200445
light	4645	6344	8225	9912	12326	12309	12179	15230	21740	
heavy	21415	38305	44939	58367	68932	69939	83081	99491	124090	
tap water		558		1148	1225	1291	1667	2567	3700	5948
energy	10223	20530	26708	34006	41156	44638	55827	64614	80361	96931
power, steam, hot water	4623	10945		21088	24973	26785	33455	37775	48969	67513
Geological survey & prospecting	259	725	711	733	464	517	476	749	1035	9838
Construction	1067	2200	1853	1543	1526	1384	1041	1260	2325	11502
Transport, post, telecomm	5721	17095	18081	18973	21217	16651	20716	33062	44825	90124
transport	5231			17372	19058	14399	18047	29984	39310	76639
railways	2637			8690	10246	5413				31744
highways	887			3298	4203	4339				15812
waterways	1545			3880	3154	3573				6088
airways	145			1366	1300	948				9962
other	17			138	155	126				13033
post & telecom	490			1601	1771	2252	2669	3078	5515	13485
Commerce	3597	4697	4192	4776	5426	4514	4278	7334	14583	20345
Real Estate & social services	4222	11792	11004	9257	13386	11199	8169	12178	21041	44263
Health, sports, social welfare		2310	2485	2856	3184	2830	3528	3283	4556	6623
Education, Culture, Radio, TV 1/	5081	7812	9164	9699	10032	10033	10252	11939	15134	20445
Scientific Research		2083	2539	2644	2339	2198	2103	2313	3156	4865
Banking and Insurance		713	820	1318	1890	1559	1509	1880	3221	6667
Administration	2566.22	4963	5027	5999	7402	5833	6210	8775	14165	30144
Other	3567.78	4808	5067	4021	4561	11143	10118	5585	20124	11666
TOTAL	55553	107438	117613	134309	157431	155174	170382	211579	301266	461549
central government		48166	54321	66894	77817	74787	83639	96676	121519	183490
ministry-supported local		9358	8931	9272	9554	8984	8276	9368	12650	
local		49913	54359	58144	70060	71403	78466	105537	167096	278060
TOTAL 2/	54697	102184	112334	128603	146151	141629	159887	199377	285075	449001
medium and large	21989	39424	48282	61961	74685	72970	89631	105823	132243	194631
small	32708	62760	64052	66642	71466	68659	70256	93554	152832	254370

1/ For 1982, "education" also includes health and scientific research; "other" includes banking and insurance; "administration" calculated using 1985 ratio.

2/ Excludes investment in the purchase of locomotives, ships, airplanes and geological prospecting equipment

Appendix Table 3.2: SOU Capital Construction Investment by Sector
(in percent)

Sector	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
Rural	6.1	3.3	3.0	3.1	3.0	3.3	3.9	4.0	3.7	1.0
water conservancy	3.2	1.7	1.5	1.6	1.5	1.9	2.4	2.4	2.3	1.8
Industry	46.9	41.6	45.2	50.8	51.6	53.0	55.9	54.2	48.4	43.4
light	8.4	5.9	7.0	7.4	7.8	7.9	7.1	7.2	7.2	0.0
heavy	38.5	35.7	38.2	43.5	43.8	45.1	48.8	47.0	41.2	0.0
tap water	0.0	0.5	0.0	0.9	0.8	0.8	1.0	1.2	1.2	1.3
energy	18.4	19.1	22.7	25.3	26.1	28.8	32.8	30.5	26.7	21.0
power, steam, hot water										
Geological survey & prospecting	0.5	0.7	0.6	0.5	0.3	0.3	0.3	0.4	0.3	2.1
Construction	1.9	2.0	1.6	1.1	1.0	0.9	0.6	0.6	0.8	2.5
Transport, post, telecomm	10.3	15.9	15.4	14.1	13.5	10.7	12.2	15.6	14.9	19.5
transport	9.4	0.0	0.0	12.9	12.1	9.3	10.6	14.2	13.0	16.6
railways	4.7	0.0	0.0	6.5	6.5	3.5	0.0	0.0	0.0	6.9
highways	1.6	0.0	0.0	2.5	2.7	2.8	0.0	0.0	0.0	3.4
waterways	2.8	0.0	0.0	2.9	2.0	2.3	0.0	0.0	0.0	1.3
airways	0.3	0.0	0.0	1.0	0.8	0.6	0.0	0.0	0.0	2.2
other	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	2.8
post & telecom	0.9	0.0	0.0	1.2	1.1	1.5	1.6	1.5	1.8	2.9
Commerce	6.5	4.4	3.6	3.6	3.4	2.9	2.5	3.5	4.8	4.4
Real Estate & social services	7.6	11.0	9.4	6.9	8.5	7.2	4.8	5.8	7.0	9.6
Health, sports, social welfare	0.0	2.2	2.1	2.1	2.0	1.8	2.1	1.6	1.5	1.4
Education, Culture, Radio, TV 1/	9.1	7.3	7.8	7.2	6.4	6.5	6.0	5.6	5.0	4.4
Scientific Research	0.0	1.9	2.2	2.0	1.5	1.4	1.2	1.1	1.0	1.1
Banking and Insurance	0.0	0.7	0.7	1.0	1.2	1.0	0.9	0.9	1.1	1.4
Administration	4.6	4.6	4.3	4.5	4.7	3.8	3.6	4.1	4.7	6.5
Other	6.4	4.5	4.3	3.0	2.9	7.2	5.9	2.6	6.7	2.5
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
central gov		53.5	53.8	56.7	55.5	54.0	53.9	50.1	44.5	39.8
ministry-supported local										
local		46.5	46.2	43.3	44.5	46.0	46.1	49.9	55.5	60.2
TOTAL 2/	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
medium and large	40.2	38.6	43.0	48.2	51.1	51.5	56.1	53.1	46.4	43.3
small	59.8	61.4	57.0	51.8	48.9	48.5	43.9	46.9	53.6	56.7

1/ For 1982, "education" also includes health and scientific research; "other" includes banking and insurance; "administration" calculated using 1985 ratio.

2/ Excludes investment in the purchase of locomotives, ships, airplanes and geological prospecting equipment

Appendix Table 3.3: SOU Capital Construction Investment by Sector
(as % of GDP)

Sector	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
Rural	0.7	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.1
water conservancy	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2
Industry	5.0	5.2	5.5	6.0	5.8	5.1	5.1	5.3	5.5	5.9
light	0.9	0.7	0.8	0.9	0.9	0.8	0.7	0.7	0.8	0.0
heavy	4.1	4.5	4.6	5.2	4.9	4.4	4.5	4.6	4.7	0.0
tap water										
energy	2.0	2.4	2.8	3.0	2.9	2.8	3.0	3.0	3.0	2.8
power, steam, hot water										
Geological survey & prospecting	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.3
Construction	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3
Transport, post, telecomm	1.1	2.0	1.9	1.7	1.5	1.0	1.1	1.5	1.7	2.6
transport	1.0	0.0	0.0	1.5	1.4	0.9	1.0	1.4	1.5	2.2
railways	0.5	0.0	0.0	0.8	0.7	0.3	0.0	0.0	0.0	0.9
highways	0.2	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.0	0.5
waterways	0.3	0.0	0.0	0.3	0.2	0.2	0.0	0.0	0.0	0.2
airways	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.3
other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
post & telecom	0.1	0.0	0.0	0.1	0.1	0.1	1.6	1.5	1.8	2.9
Commerce	0.7	0.5	0.4	0.4	0.4	0.3	0.2	0.3	0.5	0.6
Real Estate & social services	0.8	1.4	1.1	0.8	1.0	0.7	0.4	0.6	0.8	1.3
Health, sports, social welfare	0.0	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Education, Culture, Radio, TV 1/	1.0	0.9	0.9	0.9	0.7	0.6	0.6	0.6	0.6	0.6
Scientific Research	0.0	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1
Banking and Insurance	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Administration	0.5	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.5	0.9
Other	0.7	0.6	0.5	0.4	0.3	0.7	0.5	0.3	0.8	0.3
TOTAL	10.7	12.6	12.1	11.9	11.2	9.7	9.2	9.8	11.3	13.5
central gov	0.0	6.7	6.5	6.7	6.2	5.2	5.0	4.9	5.0	5.4
ministry-supported local										
local	0.0	5.8	5.6	5.1	5.0	4.5	4.2	4.9	6.3	8.1
TOTAL 2/										
medium and large	4.2	4.6	5.0	5.5	5.3	4.6	4.8	4.9	5.0	5.7
small	6.3	7.3	6.6	5.9	5.1	4.3	3.8	4.3	5.7	7.5

1/ For 1982, "education" also includes health and scientific research; "other" includes banking and insurance; "administration" calculated using 1985 ratio.

2/ Excludes investment in the purchase of locomotives, ships, airplanes and geological prospecting equipment

Appendix Table 4.1: SOU Technical Updating and Transformation Investment by Sector
(in million yuans)

Sector	1982 1/	1985	1986	1987	1988	1989	1990	1991	1992	1993
Rural	876	607	755	963	1240	1151	1007	1633	1954	1783
Water conservancy		46	78	94	140	157	256	302	477	461
Industry	20683	35105	47916	58462	77497	62319	64749	78323	107667	153933
light	6389									
heavy	14294									
tap water				420	528	497	620	616	858	1474
energy	7197			7934	11337	11556	12072	13660	14856	19836
power, steam, hot water	931			2249	2878	2787	3194	3243	4652	7350
Geological survey & prospecting		28	33	24	24	23	41	37	46	704
Construction	479	697	829	892	1121	766	769	851	1420	3298
Transport, post, telecomm	3173	4042	5481	6429	7266	6437	8022	11225	19101	36147
transport				5402	5919	4383	5142	6521	10346	14265
railways				3001	3225	2618				5630
highways				1424	1733	905				2640
waterways				668	756	690				1139
airways				114	160	130				2052
other				195	45	40				2804
post & telecom				1028	1341	1065	2880	4704	8755	21882
Commerce	1351	1114	1708	2582	3337	2337	2320	2926	4988	6547
Real Estate services	1268	2046	3474	4065	4760	3644	3622	4364	6595	11248
Health		178	244	277	333	283	316	322	422	604
Education	484	291	407	420	457	431	465	562	608	937
Scientific Research	121	236	233	241	235	235	218	229	316	318
Banking and Insurance	143	97	153	194	266	207	172	211	242	373
Administration 2/	209	324	472	917	916	619	705	922	1281	2122
Other	191	149	217	394	603	426	614	720	1469	1573
Total	28978	44914	61922	75860	98055	78878	83020	102325	146109	219587

1/ Includes "other" investment. Also construction includes geological prospecting and education includes health.

2/ Calculation using 1985 ratio.

Appendix Table 4.1 (a): SOU Other Fixed Asset Investment 1/
(in million yuans)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
Oil field development		9333	9686	11062	10726	13500	13071	16688	20280	
Mining and forestry expansion		1089	1114	1614	1583	1269	1407	1441	1916	
Road and bridge construction		1134	1695	2603	2976	4452	4900	4531	6496	
Warehouse construction		303	523	316	254	275	529	1204	688	
Miscellaneous		3833	5300	4036	5251					
Total		15692	18318	19631	20790	19496	19907	23864	29380	36169

1/ Includes investment not covered by the first two categories of capital construction and technical transformation.

Financed through use of earmarked funds.

Appendix Table 4.2: SOU technical Updating and Transforming Investment by Sector
(in percent)

Sector	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
Rural	3.0	1.4	1.2	1.3	1.3	1.5	1.2	1.6	1.3	0.8
Water conservancy		0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.2
Industry	71.4	78.2	77.4	77.1	79.0	79.0	78.0	76.5	73.7	70.1
light	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
heavy	49.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
tap water	0.0	0.0	0.0	0.6	0.5	0.6	0.7	0.6	0.6	0.7
energy	24.8	0.0	0.0	10.5	11.6	14.7	14.5	13.3	10.2	9.0
power, steam, hot water	3.2	0.0	0.0	3.0	2.9	3.5	3.8	3.2	3.2	3.3
Geological survey & prospecting	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Construction	1.7	1.6	1.3	1.2	1.1	1.0	0.9	0.8	1.0	1.5
Transport, post, telecomm	10.9	9.0	8.9	8.5	7.4	8.2	9.7	11.0	13.1	16.5
transport	0.0	0.0	0.0	7.1	6.0	5.6	6.2	6.4	7.1	6.5
railways	0.0	0.0	0.0	4.0	3.3	3.3	0.0	0.0	0.0	2.6
highways	0.0	0.0	0.0	1.9	1.8	1.1	0.0	0.0	0.0	1.2
waterways	0.0	0.0	0.0	0.9	0.8	0.9	0.0	0.0	0.0	0.5
airways	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.0	0.9
other	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.0	1.3
post & telecom	0.0	0.0	0.0	1.4	1.4	1.4	3.5	4.6	6.0	10.0
Commerce	4.7	2.5	2.8	3.4	3.4	3.0	2.8	2.9	3.4	3.0
Real Estate services	4.4	4.6	5.6	5.4	4.9	4.6	4.4	4.3	4.5	5.1
Health	0.0	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.3
Education	1.7	0.6	0.7	0.6	0.5	0.5	0.6	0.5	0.4	0.4
Scientific Research	0.4	0.5	0.4	0.3	0.2	0.3	0.3	0.2	0.2	0.1
Banking and Insurance	0.5	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2
Administration 2/	0.7	0.7	0.8	1.2	0.9	0.8	0.8	0.9	0.9	1.0
Other	0.7	0.3	0.4	0.5	0.6	0.5	0.7	0.7	1.0	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Includes "other" investment. Also construction includes geological prospecting and education includes health.

2/ Calculation using 1985 ratio.

Appendix Table 5.1: Financing of SOU Capital Construction Investment
(in million yuans)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
State budget	27667	38118	41739	43852	38166	32333	36359	34845	30787	43176
Domestic loans		18792	20013	25546	28466	29300	37862	52707	83148	111755
Foreign investment		7352	10954	13901	21831	22145	22405	23996	33415	45615
Self-raised funds		33999	34465	38278	48875	49503	52992	74673	124292	199125
Other		9176	10440	12733	20092	21891	20762	25359	29624	60857
TOTAL	55553	107437	117611	134310	157430	155172	170380	211580	301266	460528

Financing SOU Technical Updating and Transformation Investment
(in million yuans)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
State budget	3295	1969	2058	3235	2702	1415	1756	1736	2011	3131
Domestic loans	6403	18675	24918	30623	37872	23321	26955	41122	60456	80071
Foreign investment	271	555	834	1746	2601	2673	3385	3649	5315	8497
Self-raised funds	19009	22608	31761	36637	50118	44069	45537	50862	72256	122757
Other		1107	2350	3617	4761	7400	5387	4953	6073	10660
TOTAL 1/	28978	44914	61921	75858	98054	78878	83020	102322	146111	225116

1/ Includes 2.93 billion of "other" investment for 1982.

Financing of Other SOU Investments
(in million yuans)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
State budget		213	52	128	124	122	102	274	138	530
Domestic loans		1246	65	267	291	245	557	805	898	2509
Foreign investment		949	1041	1188	562	923	426	1811	964	425
Self-raised funds and other		11328	9803	12871	12418	14955	17697	20129	26140	29923
Other		1964	7357	5177	7395	3251	1124	845	1240	2783
TOTAL		15700	18318	19631	20790	19496	19906	23864	29380	36170

Financing of Fixed Investments by SOEs 1/
(in million yuans)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
State budget	26543	40300	43849	47215	40520	33871	38542	37098	33244	45634
Domestic loans	13690	38713	44995	56436	66851	52866	68947	101807	160141	194836
Foreign investment	6013	8856	12829	16835	24766	25741	26600	30261	42116	46524
Self-raised funds	38285	67935	76029	87787	111875	108527	123011	156421	245758	367670
Other		12247	20147	21527	32264	32543	34763	37225	46106	111134
TOTAL	84531	168051	197849	229800	276276	253548	291863	362812	527365	765798

1/ Includes 18.557, 25.045, 50.608 and 48.492 billion in 1990, 1991, 1992 and 1993 respectively for housing.

Appendix Table 5.2: Financing of SOU Capital Construction Investment

(in percent)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
State budget	49.8	35.5	35.5	32.6	24.2	20.8	21.3	16.5	10.2	9.4
Domestic loans	0.0	17.5	17.0	19.0	18.1	18.9	22.2	24.9	27.6	24.3
Foreign investment	0.0	6.8	9.3	10.3	13.9	14.3	13.2	11.3	11.1	9.9
Self-raised funds	0.0	31.6	29.3	28.5	31.0	31.9	31.1	35.3	41.3	43.2
Other	0.0	8.5	8.9	9.5	12.8	14.1	12.2	12.0	9.8	13.2
TOTAL	49.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Financing SOU Technical Updating and Transformation Investment

(in percent)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
State budget	11.4	4.4	3.3	4.3	2.8	1.8	2.1	1.7	1.4	1.4
Domestic loans	22.1	41.6	40.2	40.4	38.6	29.6	32.5	40.2	41.4	35.6
Foreign investment	0.9	1.2	1.3	2.3	2.7	3.4	4.1	3.6	3.6	3.8
Self-raised funds	65.6	50.3	51.3	48.3	51.1	55.9	54.9	49.7	49.5	54.5
Other	0.0	2.5	3.8	4.8	4.9	9.4	6.5	4.8	4.2	4.7
TOTAL 1/	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Includes 2.93 billion of "other" investment for 1982.

Financing of Other SOU Investments

(in percent)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
State budget		1.4	0.3	0.7	0.6	0.6	0.5	1.1	0.5	1.5
Domestic loans		7.9	0.4	1.4	1.4	1.3	2.8	3.4	3.1	6.9
Foreign investment		6.0	5.7	6.1	2.7	4.7	2.1	7.6	3.3	1.2
Self-raised funds and other		72.2	53.5	65.6	59.7	76.7	88.9	84.3	89.0	82.7
Other		12.5	40.2	26.4	35.6	16.7	5.6	3.5	4.2	7.7
TOTAL		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Financing of Fixed Investments by SOEs 1/

(in percent)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
State budget	31.4	24.0	22.2	20.5	14.7	13.4	13.2	10.2	6.3	6.0
Domestic loans	16.2	23.0	22.7	24.6	24.2	20.9	23.6	28.1	30.4	25.4
Foreign investment	7.1	5.3	6.5	7.3	9.0	10.2	9.1	8.3	8.0	6.1
Self-raised funds	45.3	40.4	38.4	38.2	40.5	42.8	42.1	43.1	46.6	48.0
Other	0.0	7.3	10.2	9.4	11.7	12.8	11.9	10.3	8.7	14.5
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Includes 18.557, 25.045, 50.608 and 48.492 billion in 1990, 1991, 1992 and 1993 respectively for housing.

**Appendix Table 5.3: Financing of SOU Capital Construction Investment
(as % of GDP)**

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
State budget	5.3	4.5	4.3	3.9	2.7	2.0	2.0	1.6	1.2	1.3
Domestic loans		2.2	2.1	2.3	2.0	1.8	2.0	2.4	3.1	3.3
Foreign investment		0.9	1.1	1.2	1.6	1.4	1.2	1.1	1.3	1.3
Self-raised funds		4.0	3.6	3.4	3.5	3.1	2.9	3.4	4.7	5.8
Other		1.1	1.1	1.1	1.4	1.4	1.1	1.2	1.1	1.8
TOTAL	5.3	12.6	12.1	11.9	11.2	9.7	9.2	9.8	11.3	13.5

**Financing SOU Technical Updating and Transformation Investment
(as % of GDP)**

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
State budget	0.6	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1
Domestic loans	1.2	2.2	2.6	2.7	2.7	1.5	1.5	1.9	2.3	2.3
Foreign investment	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Self-raised funds	3.7	2.6	3.3	3.2	3.6	2.8	2.5	2.3	2.7	3.6
Other	0.0	0.1	0.2	0.3	0.3	0.5	0.3	0.2	0.2	0.3
TOTAL 1/	5.6	5.2	6.4	6.7	7.0	4.9	4.5	4.7	5.5	6.6

1/ Includes 2.93 billion of "other" investment for 1982.

**Financing of Other SOU Investments
(as % of GDP)**

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
State budget		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Domestic loans		0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Foreign investment		0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0
Self-raised funds and other		1.3	1.0	1.1	0.9	0.9	1.0	0.9	1.0	0.9
Other		0.2	0.8	0.5	0.5	0.2	0.1	0.0	0.0	0.1
TOTAL		1.8	1.9	1.7	1.5	1.2	1.1	1.1	1.1	1.1

**Financing of Fixed Investments by SOEs 1/
(as % of GDP)**

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
State budget	5.1	4.7	4.5	4.2	2.9	2.1	2.1	1.7	1.2	1.3
Domestic loans	2.6	4.5	4.6	5.0	4.8	3.3	3.7	4.7	6.0	5.7
Foreign investment	1.2	1.0	1.3	1.5	1.8	1.6	1.4	1.4	1.6	1.4
Self-raised funds	7.4	7.9	7.8	7.8	8.0	6.8	6.6	7.2	9.2	10.8
Other										
TOTAL	16.3	19.6	20.4	20.3	19.6	15.9	15.7	16.7	19.8	22.4

1/ Includes 18.557, 25.045, 50.608 and 48.492 billion in 1990, 1991, 1992 and 1993 respectively for housing.

Appendix Table 6.1: Fixed Asset Investment of Urban Collectives by Sector
(in million yuan)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
Sector										
Rural		160	122	159	204	243	145	184	255	154
Industry		8615	10208	12942	19451	13961	12269	14964	26366	28168
Geological survey & prospecting		1	1	1		12	1	1	2	45
Construction		265	310	301	361	174	188	273	606	934
Transport, post, telecomm		675	553	605	619	625	610	780	1650	1841
Commerce		1458	1598	2062	2617	1899	1694	2174	4386	6096
Real Estate services		938	1017	1099	943	623	381	474	859	2145
Health		103	92	119	159	135	154	211	315	463
Education		149	120	98	157	142	157	205	260	363
Scientific Research		8	10	10	22	11	28	22	75	89
Banking and Insurance		50	69	127	204	173	222	301	421	710
Administration		166	225	208	347	289	225	427	620	769
Other		235	314	397	414	277	266	368	633	697
TOTAL	4289	12823	14639	18128	25498	18564	16340	20384	36448	60015

Fixed Asset Investment of Rural Collectives by Sector
(in million yuan)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
Sector										
Rural		2073	1999	4252	4290	4381	6229	7204	8788	
Industry		10131	12617	21720	28827	20858	19098	28187	69282	
Transport & Construction		1655	1801	2370	2722	2041	1432	1841	4123	
Culture, Education, Health		2610	3253	3421	3460	5391	5725	6762	7901	
Other		3454	4865	4808	6375	5765	4126	5404	9392	
TOTAL	13139	19923	24535	36571	45674	38436	36610	49398	99486	163119

Fixed Asset Investment of Collectives by Sector
(in million yuan)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
Sector										
Rural	5232	2233	2121	4411	4494	4624	6374	7388	9043	
Industry	7296	18746	22825	34662	48278	34819	31367	43151	95648	
Transport & Construction		2595	2664	3276	3702	2840	2230	2894	6379	
Culture, Education	1244	2862	3465	3638	3776	5668	6036	7178	8476	
Other		6310	8099	8712	10922	9049	6943	9171	16388	
TOTAL	17428	32746	39174	54699	71172	57000	52950	69782	135934	223134

Appendix Table 6.3: Financing of Urban Collectives Investment
(in million yuans)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
State budget	265	480	214	339	481	291	223	197	168	333
Domestic loans	1402	5914	6542	8201	11159	6080	5742	8315	15619	18915
Foreign investment	38	292	387	702	1133	1674	1226	1366	3216	1632
Self-raised funds and other	2584	6137	6515	7761	10877	8708	7894	9147	15846	29734
Other			981	1126	1847	1810	1254	1357	1600	9400
TOTAL	4289	12823	14639	18129	25497	18563	16339	20382	36449	60014

Financing of Rural Collectives Investment
(in million yuans)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
State budget		0								
Domestic loans	2520	6400	8344	13908	14658	9145	8819	13781	34048	50261
Foreign investment		0								11150
Self-raised funds	10619	10258	12018	13645	18757	18635	17342	22837	38730	64528
Other		3265	4173	9018	12259	10656	10449	12780	26708	37180
TOTAL	13139	19923	24535	36571	45674	38436	36610	49398	99486	163119

Financing of Collectives Investment
(in million yuans)

	1982	1985	1986	1987	1988	1989	1990	1991	1992	1993
State budget	265	480	214	339	481	291	223	197	168	333
Domestic loans	3922	12314	14886	22109	25817	15225	14561	22096	49667	69176
Foreign investment	38	292	387	702	1133	1674	1226	1366	3216	12782
Self-raised funds	13203	19660	18533	21406	29634	27343	25236	31984	54576	94262
Other			5154	10144	14106	12466	11703	14137	28308	46580
TOTAL	17428	32746	39174	54700	71171	56999	52949	69780	135935	223133

Appendix Table 8.1: CHINA: Fixed Investment in State Owned Units in 1992
(Billion Yuan)

	Total	Level of Government		Sources of Financing					
		Center	Local	Budget	Loans	Extra-budget	Self-Raised	Foreign	Other
Total 1992	527.4	207.0	320.4	33.2	160.1	140.1	105.7	42.1	46.1
1 Agriculture, Forestry & Fishery	13.2	4.0	9.2	3.8	1.7	3.2	2.4	0.6	1.6
Forestry	1.0	0.4	0.6	0.4	0.1	0.3	0.2	0.0	0.1
Water Conservancy	7.1	1.9	5.2	2.8	0.5	1.4	1.1	0.4	1.0
Irrigation	6.5	1.7	4.8	2.6	0.5	1.3	1.0	0.3	0.9
Rural Water Supply	0.6	0.2	0.5	0.3	0.1	0.1	0.1	0.0	0.1
Other agriculture	5.1	1.7	3.4	0.6	1.1	1.5	1.1	0.2	0.6
2 Industry	276.0	114.6	161.4	13.4	108.0	62.8	47.4	29.8	14.7
Light	57.8	24.0	33.8	2.8	22.6	13.2	9.9	6.2	3.1
Heavy	218.2	90.6	127.6	10.6	85.4	49.7	37.5	23.5	11.6
Basic Industry	142.8	96.6	46.2	9.1	38.4	35.8	27.0	15.5	17.1
Coal, gas, petroleum	50.4	46.8	3.6	5.3	8.6	14.8	11.2	6.4	4.0
Electric Power	54.3	36.4	17.9	2.5	15.9	11.1	8.4	5.5	10.9
Iron, steel, non-ferrous metals	28.3	8.4	19.9	0.3	9.9	7.7	5.8	3.3	1.5
Forestry	1.0	0.5	0.5	0.4	0.1	0.2	0.2	0.0	0.2
Other basic industry	8.9	4.6	4.3	0.5	4.1	2.0	1.5	0.2	0.5
Pillar Industry	42.1	15.2	26.9	2.4	18.2	9.6	7.5	2.0	2.6
Petrochemicals	7.0	5.8	1.2	0.2	2.7	1.6	1.2	0.3	1.1
Automobiles	4.5	1.0	3.5	0.2	2.5	0.9	0.7	0.1	0.2
Machinery	15.1	3.4	11.8	0.5	8.2	3.1	2.3	0.5	0.5
Electronics	6.6	1.0	5.6	0.4	3.3	1.0	0.8	0.9	0.2
High-tech industries	1.3	0.6	0.7	0.1	0.7	0.2	0.2	0.0	0.2
Other pillar industries	7.5	3.4	4.1	1.0	0.8	2.8	2.3	0.1	0.4
Other industry	91.0	2.7	88.3	2.0	51.4	17.3	12.9	12.3	-4.9
3 Transport	56.0	22.8	33.2	4.1	12.7	17.9	13.5	4.3	3.5
Railways	14.6	6.0	8.7	1.1	3.3	4.7	3.5	1.1	0.9
Roads	20.3	8.3	12.1	1.5	4.5	6.5	4.9	1.6	1.3
Rural roads	1.8	0.8	1.1	0.1	0.4	0.6	0.4	0.1	0.1
Primary, secondary & high-speed roads	16.3	6.6	9.7	1.2	3.6	5.2	3.9	1.3	1.0
Urban roads	2.2	0.9	1.3	0.2	0.5	0.7	0.5	0.2	0.1
Ports and airports	3.6	1.5	2.2	0.3	0.8	1.2	0.9	0.3	0.2
Water transport	13.5	5.5	8.0	1.0	3.1	4.3	3.3	1.1	0.8
Other transport	3.9	1.6	2.3	0.3	0.9	1.3	1.0	0.3	0.2
4 Telecommunications	14.3	11.7	2.7	0.4	1.3	5.9	4.5	1.8	0.4
Postal service	0.6	0.5	0.1	0.0	0.1	0.2	0.2	0.1	0.0
Telephone	12.7	10.4	2.4	0.3	1.2	5.3	4.0	1.6	0.3
Other telecom	1.0	0.8	0.2	0.0	0.1	0.4	0.3	0.1	0.0
5 Urban water supply, sanitation & waste	4.5	0.0	4.5	0.2	1.1	1.4	1.0	0.6	0.2
6 Construction	3.8	1.7	2.1	0.5	0.4	1.5	1.1	0.1	0.2
7 Health care	3.8	0.4	3.4	0.5	0.2	1.6	1.2	0.1	0.2
Primary health care	0.3	0.0	0.3	0.0	0.0	0.1	0.1	0.0	0.0
Curative health care	3.5	0.4	3.1	0.5	0.2	1.5	1.1	0.1	0.2
8 Education, culture, & art, radio, TV	15.6	3.5	12.2	3.9	0.7	5.4	4.1	0.5	1.0
Basic education	1.1	0.2	0.8	0.3	0.1	0.4	0.3	0.0	0.1
Higher education	11.5	2.6	8.9	2.9	0.5	4.0	3.0	0.4	0.7
Vocational training	2.6	0.6	2.0	0.7	0.1	0.9	0.7	0.1	0.2
Other education	0.5	0.1	0.4	0.1	0.0	0.2	0.1	0.0	0.0
9 Scientific research	3.6	2.5	1.1	1.9	0.4	0.7	0.6	0.0	0.1
10 Banking and insurance	3.7	3.0	0.7	0.1	0.1	1.9	1.4	0.0	0.1
11 Administration	15.7	2.0	13.7	2.4	1.2	6.3	4.8	0.1	1.0
12 Real estate, residential service	59.4	16.0	43.4	0.6	17.6	20.9	15.7	2.0	2.6
13 Commerce, food, service etc.	21.3	1.4	19.9	0.7	7.1	6.7	5.0	0.6	1.3
14 Other investment	36.5	23.5	13.0	0.8	7.9	4.0	3.0	1.4	19.4

Source: SPC Investment Institute

Appendix Table 8.2: CHINA: Fixed Investment in State Owned Units in 1992
(in percent)

	Total	Level of Government			Sources of Financing				
		Center	Local	Budget	Loans	Extra-budget	Self-Raised	Foreign	Other
Total 1992	100.0	39.2	60.8	6.3	30.4	26.6	20.0	8.0	8.7
1 Agriculture, Forestry & Fishery	100.0	30.5	69.6	28.6	12.5	24.1	18.2	4.8	11.9
Forestry	100.0	41.3	58.7	33.7	5.8	29.8	22.1	3.8	4.8
Water Conservancy	100.0	26.3	73.7	39.6	7.0	20.0	15.1	5.1	13.4
Irrigation	100.0	26.3	73.7	39.6	7.0	20.0	15.0	5.0	13.3
Rural Water Supply	100.0	26.6	73.4	39.1	7.8	20.3	15.6	4.7	14.1
2 Industry	100.0	41.5	58.5	4.8	39.1	22.8	17.2	10.8	5.3
Light	100.0	41.5	58.5	4.8	39.1	22.8	17.2	10.8	5.3
Heavy	100.0	41.5	58.5	4.8	39.1	22.8	17.2	10.8	5.3
Basic Industry	100.0	67.6	32.4	6.3	26.9	25.1	18.9	10.8	11.9
Coal, gas, petroleum	100.0	92.9	7.2	10.5	17.1	29.4	22.2	12.8	8.0
Electric Power	100.0	67.0	33.0	4.7	29.3	20.4	15.4	10.2	20.1
Iron, steel, non-ferrous metals	100.0	29.6	70.4	1.2	35.1	27.2	20.5	11.6	5.2
Forestry	100.0	48.0	52.0	41.2	4.9	22.5	16.7	0.0	14.7
Other basic industry	100.0	52.0	48.0	5.5	45.9	23.0	17.4	2.7	5.4
Pillar Industry	100.0	36.1	63.9	5.6	43.1	22.9	17.8	4.6	6.1
Petrochemicals	100.0	82.9	16.9	2.8	37.8	22.5	16.9	4.8	15.1
Automobiles	100.0	22.5	77.8	3.5	54.0	20.5	15.4	3.1	3.5
Machinery	100.0	22.4	77.6	3.5	54.2	20.5	15.5	3.1	3.5
Electronics	100.0	15.0	84.8	5.9	50.5	15.6	11.8	13.0	3.2
High-tech industries	100.0	42.6	57.4	3.9	56.6	13.2	11.6	0.0	15.5
Other pillar industries	100.0	45.7	54.3	13.8	10.6	37.7	30.8	1.9	5.3
Other	100.0	3.0	97.0	2.1	56.5	19.0	14.1	13.6	-5.4
3 Transport	100.0	40.7	59.3	7.4	22.6	31.9	24.1	7.7	6.2
Railways	100.0	40.7	59.3	7.4	22.6	31.9	24.1	7.7	6.2
Roads	100.0	40.7	59.3	7.4	22.1	32.0	24.1	7.8	6.2
Rural roads	100.0	41.0	59.0	7.7	21.9	32.2	24.0	7.7	6.0
Primary, secondary & high-speed roa	100.0	40.7	59.3	7.4	22.1	32.0	24.1	7.7	6.2
Urban roads	100.0	40.6	59.4	7.6	21.9	32.1	24.1	7.6	6.3
Ports and airports	100.0	40.7	59.3	7.4	22.5	31.9	24.2	7.7	6.3
Water transport	100.0	40.7	59.3	7.4	22.6	31.9	24.1	7.8	6.2
Other transport	100.0	40.8	59.4	7.4	22.7	31.9	24.2	7.7	6.1
4 Telecommunications	100.0	81.5	18.5	2.7	9.4	41.4	31.2	12.6	2.7
Postal service	100.0	82.5	19.3	3.5	8.8	42.1	31.6	12.3	3.5
Telephone	100.0	81.5	18.5	2.7	9.3	41.4	31.3	12.6	2.7
Other telecom	100.0	82.0	18.0	3.0	9.0	42.0	31.0	13.0	3.0
5 Urban water supply, sanitation & waste	100.0	0.0	100.0	4.7	23.4	30.6	23.0	13.6	4.9
6 Construction	100.0	44.6	55.2	13.8	10.6	39.0	29.4	1.9	5.3
7 Health care	100.0	10.5	89.5	13.9	6.0	41.2	31.2	3.1	4.5
Primary health care	100.0	9.7	87.1	12.9	6.5	41.9	32.3	3.2	3.2
Curative health care	100.0	10.5	89.5	13.7	6.0	41.3	31.1	3.1	4.6
8 Education, culture, & art, radio, TV	100.0	22.2	77.8	25.2	4.5	34.7	26.2	3.3	6.1
Basic education	100.0	21.9	78.1	24.8	4.8	34.3	25.7	3.8	6.7
Higher education	100.0	22.2	77.8	25.2	4.5	34.7	26.2	3.3	6.2
Vocational training	100.0	22.1	77.9	25.2	4.7	34.9	26.4	3.5	6.2
Other education	100.0	22.6	77.4	24.5	3.8	35.8	26.4	3.8	5.7
9 Scientific research	100.0	68.7	31.3	53.2	10.0	18.6	15.2	1.1	1.7
10 Banking and insurance	100.0	80.4	19.6	1.3	3.2	51.1	38.4	0.3	3.2
11 Administration	100.0	12.6	87.4	15.3	7.4	40.1	30.3	0.6	6.3
12 Real estate, residential service	100.0	26.9	73.1	1.0	29.6	35.1	26.5	3.4	4.3
13 Commerce, food, service etc.	100.0	6.5	93.5	3.1	33.2	31.3	23.6	2.6	6.1
14 Other investment	100.0	64.5	35.5	2.1	21.6	11.0	8.3	3.9	53.1

Source: SPC Investment Institute

Appendix Table 8.3: CHINA: Fixed Investment in State Owned Units in 1992
in percent)

	Total	Level of Government		Sources of Financing						
		Center	Local	Budget	Loans	Extra-	Self-	Foreign	Other	
										100.0
Total 1992	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
1	Agriculture, Forestry & Fishery	2.5	1.9	2.9	11.4	1.0	2.3	2.3	1.5	3.4
	Forestry	0.2	0.2	0.2	1.1	0.0	0.2	0.2	0.1	0.1
	Water Conservancy	1.3	0.9	1.6	8.5	0.3	1.0	1.0	0.9	2.1
	Irrigation	1.2	0.8	1.5	7.7	0.3	0.9	0.9	0.8	1.9
	Rural Water Supply	0.1	0.1	0.1	0.8	0.0	0.1	0.1	0.1	0.2
	Other agriculture	1.0	0.8	1.1	1.9	0.7	1.0	1.1	0.6	1.3
2	Industry	52.3	55.3	50.4	40.2	67.4	44.8	44.8	70.7	31.9
	Light	11.0	11.6	10.5	8.4	14.1	9.4	9.4	14.8	6.7
	Heavy	41.4	43.8	39.8	31.8	53.3	35.4	35.4	55.9	25.2
	Basic Industry	27.1	46.7	14.4	27.3	24.0	25.6	25.6	36.7	37.0
	Coal, gas, petroleum	9.6	22.6	1.1	15.9	5.4	10.6	10.6	15.3	8.7
	Electric Power	10.3	17.6	5.6	7.6	9.9	7.9	7.9	13.1	23.7
	Iron, steel, non-ferrous metals	5.4	4.0	6.2	1.0	6.2	5.5	5.5	7.8	3.2
	Forestry	0.2	0.2	0.2	1.3	0.0	0.2	0.2	0.0	0.3
	Other basic industry	1.7	2.2	1.3	1.5	2.5	1.5	1.5	0.6	1.0
	Pillar Industry	8.0	7.4	8.4	7.1	11.3	6.9	7.1	4.6	5.5
	Petrochemicals	1.3	2.8	0.4	0.6	1.7	1.1	1.1	0.8	2.3
	Automobiles	0.9	0.5	1.1	0.5	1.5	0.7	0.7	0.3	0.3
	Machinery	2.9	1.6	3.7	1.6	5.1	2.2	2.2	1.1	1.1
	Electronics	1.3	0.5	1.7	1.2	2.1	0.7	0.7	2.0	0.5
	High-tech industries	0.2	0.3	0.2	0.2	0.5	0.1	0.1	0.0	0.4
	Other pillar industries	1.4	1.7	1.3	3.1	0.5	2.0	2.2	0.3	0.9
	Other	17.3	1.3	27.6	5.9	32.1	12.4	12.2	29.3	-10.6
3	Transport	10.6	11.0	10.4	12.5	7.9	12.8	12.8	10.3	7.6
	Railways	2.8	2.9	2.7	3.2	2.1	3.3	3.3	2.7	2.0
	Roads	3.9	4.0	3.8	4.5	2.8	4.6	4.6	3.8	2.8
	Rural roads	0.3	0.4	0.3	0.4	0.2	0.4	0.4	0.3	0.2
	Primary, secondary & high-speed roads	3.1	3.2	3.0	3.6	2.2	3.7	3.7	3.0	2.2
	Urban roads	0.4	0.4	0.4	0.5	0.3	0.5	0.5	0.4	0.3
	Ports and airports	0.7	0.7	0.7	0.8	0.5	0.8	0.8	0.7	0.5
	Water transport	2.6	2.7	2.5	3.0	1.9	3.1	3.1	2.5	1.8
	Other transport	0.7	0.8	0.7	0.9	0.6	0.9	0.9	0.7	0.5
4	Telecommunications	2.7	5.6	0.8	1.1	0.8	4.2	4.2	4.3	0.8
	Postal service	0.1	0.2	0.0	0.1	0.0	0.2	0.2	0.2	0.0
	Telephone	2.4	5.0	0.7	1.0	0.7	3.8	3.8	3.8	0.7
	Other telecom	0.2	0.4	0.1	0.1	0.1	0.3	0.3	0.3	0.1
5	Urban water supply, sanitation & waste	0.8	0.0	1.4	0.6	0.7	1.0	1.0	1.4	0.5
6	Construction	0.7	0.8	0.6	1.6	0.2	1.0	1.1	0.2	0.4
7	Health care	0.7	0.2	1.1	1.6	0.1	1.1	1.1	0.3	0.4
	Primary health care	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0
	Curative health care	0.7	0.2	1.0	1.4	0.1	1.0	1.0	0.3	0.3
8	Education, culture, & art, radio, TV	3.0	1.7	3.8	11.9	0.4	3.9	3.9	1.2	2.1
	Basic education	0.2	0.1	0.3	0.8	0.0	0.3	0.3	0.1	0.2
	Higher education	2.2	1.2	2.8	8.7	0.3	2.8	2.8	0.9	1.5
	Vocational training	0.5	0.3	0.6	2.0	0.1	0.6	0.6	0.2	0.3
	Other education	0.1	0.1	0.1	0.4	0.0	0.1	0.1	0.0	0.1
9	Scientific research	0.7	1.2	0.4	5.8	0.2	0.5	0.5	0.1	0.1
10	Banking and insurance	0.7	1.4	0.2	0.2	0.1	1.4	1.4	0.0	0.3
11	Administration	3.0	1.0	4.3	7.2	0.7	4.5	4.5	0.2	2.1
12	Real estate, residential service	11.3	7.7	13.5	1.9	11.0	14.9	14.9	4.8	5.6
13	Commerce, food, service etc.	4.0	0.7	6.2	2.0	4.4	4.8	4.8	1.3	2.8
14	Other investment	6.9	11.4	4.0	2.3	4.9	2.9	2.9	3.4	42.0

Source: SPC Investment Institute

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