



# Will investment behavior constrain China's growth?

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## Abstract

Despite two decades of reform, China's investment mechanism retains major features of the old plan system. At the macro level, we see seasonal fluctuations, low returns, excess capacity, and construction backlogs. At the micro level, distorted factor prices and excessive official involvement contribute to poor results. The author concludes that the investment system represents a major obstacle to China's future growth and offers specific measures to track the progress of reform.

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## 1. Introduction

“We need to formulate and implement plans for the reform of the investment and fund-raising systems as quickly as possible.”<sup>1</sup> This forthright statement, implying that more than two decades of reform have scarcely begun to address major issues in these areas, comes from Premier Zhu Rongji's March 2002 Government Work Report. This passage points to the investment mechanism as a possible constraint on China's future growth.

The frailty of China's financial system is widely recognized. Partially reformed banks continue to generate large flows of bad debt. Despite energetic reform efforts, lending

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<sup>1</sup> See <http://www.china.org.cn/english/archiveen/27702.htm>.

remains subject to considerable political influence. Share markets suffer from official manipulation, insider dealing, and fraudulent reporting. Access to domestic capital markets is largely reserved for listed arms of state companies that often channel funds to parent firms via opaque transactions (e.g. Zhang, 2001, pp. 44–46). Organized financial markets, including bank lending, largely exclude private businesses.

This brief essay focuses on China's investment system—how funds, once mobilized, are allocated and utilized. Our survey indicates that Premier Zhu's emphasis on the need to “formulate and implement” reform plans is well founded. Weak investment decision-making emerges as a major constraint, perhaps the leading constraint on the capacity of China's economy to replicate the high growth attained during the initial reform decades.<sup>2</sup>

## 2. China's investment system: macroeconomic perspectives

China's achievements in raising living standards, creating new industries, increasing productivity, and mastering new technologies demonstrate the potential for vast gain without flawless institutions or efficient allocation. This means that claims of serious institutional weakness, including the present discussion, must look beyond the existence of structural deficiencies or inefficient allocation and demonstrate that observed shortcomings produce severe consequences. Since capital formation is a major component of aggregate expenditure, major defects in investment decision-making should produce readily visible consequences. This is indeed the case.

### 2.1. Seasonal fluctuations

China's economy displays a regular pattern of large seasonal fluctuations, illustrated in Table 1. Seasonal fluctuations are far larger in China than in neighboring East Asian economies. Chinese GDP typically plunges by more than 25% in the first quarter and leaps by about 20% in the final 3 months of each year. This pattern of behavior, familiar to students of planned economies, is not present in market systems: figures dating back to 1875, for example, show quarterly GDP fluctuations for the American economy bounded by  $\pm 9\%$ .

In contemporary China, as in pre-reform plan systems, seasonal output swings arise primarily<sup>3</sup> from monumental fluctuations in investment spending (Table 1), which continues to follow plan-era patterns. During its annual March session, China's legislature, the National

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<sup>2</sup> Readers should be aware of this author's claim that, beginning in 1998 (but not in prior years), official Chinese figures overstate actual real growth rates by a large but declining margin (see Rawski, 2001a, 2001b, *in press*). The following discussion makes no assumption about the outcome of the resulting controversy.

<sup>3</sup> But not entirely. Field researchers found that “Starting in 1999, Liuzhou City is introducing measures that are intended to stop year end storming” (Wang et al., 1999).

Table 1  
International comparison of seasonal macroeconomic fluctuations

	China	Taiwan	Hong Kong	Korea
<i>Nominal GDP: percent change from previous quarter</i>				
1999-I	– 33.2		– 10.6	– 10.6
1999-II	16.2	– 2.3	5.3	7.7
<b>1999-III</b>	<b>5.2</b>	<b>5.8</b>	<b>4.4</b>	<b>5.2</b>
1999-IV	23.1	3.6	3.6	12.8
2000-I	– 28.0	4.0	– 6.7	– 11.5
2000-II	17.3	– 3.4	1.4	4.5
2000-III	6.2	5.1	5.7	3.2
2000-IV	20.5	– 3.5	1.8	8.6
2001-I	– 27.1	– 0.9	– 8.0	– 10.5
2001-II	15.8	– 9.5	0.9	5.7
2001-III	5.4	0.6	4.2	0.8
2001-IV	18.5	2.7	1.7	8.7
2002-I	– 26.9	0.6	– 9.0	– 7.7
<i>Nominal fixed capital formation: percent change from previous quarter</i>				
2000-I	– 55.5	– 24.6	2.0	– 9.7
2000-II	137.2	15.8	– 0.1	14.8
2000-III	11.9	4.1	9.4	– 3.9
2000-IV	81.6	11.1	– 1.7	2.7
2001-I	– 76.2	– 31.8	– 2.9	– 13.3
2001-II	148.7	12.1	– 5.7	12.2
<b>2001-III</b>	<b>9.8</b>	<b>– 15.6</b>	<b>10.2</b>	<b>– 0.8</b>
2001-IV	70.3	15.3	– 8.7	8.8
2002-I	– 72.6	– 22.4	– 13.3	– 12.8

**Boldface type** identifies quarters in which China does NOT show the largest quarter-to-quarter change (absolute value, percentage terms).

Sources:

China: *Monthly Indicators* (2001) no. 1, pp. 14, 36; no. 2 (2002), p. 36 and No. 7 (2002), p. 10. The data for capital formation cover completed investment in fixed assets. The figure for 1999-IV is from *China Economic Quarterly* 4.3 (2000), p. 7.

Taiwan: [www.geoinvestor.com/countries/taiwan/main.htm](http://www.geoinvestor.com/countries/taiwan/main.htm) and [www.stat.gov.tw/bs5/enghtm/engquarter.htm](http://www.stat.gov.tw/bs5/enghtm/engquarter.htm) (22 August 2002). The investment series is gross fixed capital formation.

Hong Kong: [www.info.gov.hk/censtatd/eng/hkstat/fas/nat\\_account/gdp/gdp2\\_index.html](http://www.info.gov.hk/censtatd/eng/hkstat/fas/nat_account/gdp/gdp2_index.html) (31 August 2002). The investment series is gross domestic fixed capital formation.

Korea: [www.nso.gov.kr](http://www.nso.gov.kr) (31 August 2002).

People's Congress, approves annual plans for investment and credit. During the following month, the government determines the implementation of these decisions. Detailed information begins to reach micro-level units in May.<sup>4</sup>

<sup>4</sup> On one occasion during the mid-1990s, leaders of a major national-level research organization were informed of their actual budget for the current calendar year on about May 10. During the same year, a foundation administrator reported that annual budgets for poverty-relief projects in southwest China arrived in June (interviews).

Under this timetable, loan commitments and project spending languish during the first two quarters, producing a seasonal cycle of investment spending that shows no change from pre-reform decades. A researcher formerly attached to the Ministry of Construction recalls a slogan of the plan era: “10–20–30–40”—meaning 10% of annual investment in the first quarter, 20% in the second quarter, etc. This profile persists: published data on monthly investment outlays show no evidence of regime change.<sup>5</sup>

Every economy has its seasonal rhythm. In China, the Spring Festival holiday and the impact of cold weather on farming and construction in northern provinces ensure some degree of slowdown in the first quarter. Comparison with other East Asian economies (Table 1) shows that neither the Spring Festival (a major holiday in Taiwan and Hong Kong) nor the impact of cold weather on construction (also present in Korea) necessarily exerts a major drag on economic activity during the first quarter. The declining weight of agriculture and the southward march of China’s economic center of gravity act to reduce the seasonal impact of cold weather. Although the extreme seasonality for China’s economy visible in Table 1 arises in part from peculiarities of the Chinese reporting system,<sup>6</sup> the pattern of massive seasonal fluctuations appears genuine (if somewhat exaggerated). Official plans associated with investment appear to represent the main source of China’s unusually large seasonal cycles.

## 2.2. *Low investment returns*

Chinese officials and business leaders often complain of “capital shortage.” If capital is indeed scarce, high returns should accrue to the lucky recipients of investment funds. In reality, many observers have noted a pattern of low and declining returns to investment, implying a general absence of wise project selection. Liu Guoguang (2000, p. 6) is one of many authors who notes a “long history of bad investment decisions leading to blind and duplicate construction.”

## 2.3. *Widespread excess capacity*

Low returns arise because investments create capacity for which there is no corresponding demand. China’s 1995 industrial census revealed large pockets of idle capacity across many branches of industry. Capacity utilization appears to have declined further since 1995. In recent years, press accounts routinely chronicle widespread oversupply of agricultural and industrial products.

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<sup>5</sup> Completed investment in fixed assets for the first quarter of 2002 was exactly one-third of the comparable figure for the final quarter of 2001 (*Monthly Indicators* (2002) no. 7, p. 32). The ratio of investment spending in December to outlays in the previous February (there are no separate figures for January), was 3.1 in 1971, 5.9 in 1981 and 2001, and 10.6 in 1991 (*Investment Yearbook* (1997); *Monthly Indicators* (2001) no. 8, p. 32 and no. 9 (2001), p. 32).

<sup>6</sup> Chinese colleagues inform me that project managers and local officials sometimes delay reporting investment outlays until year-end to save time and effort.

Table 2  
Construction and sales of commercial buildings (million square meters)

	Cumulative totals of floor space			Cumulative completions/sales as percentage of work in process	
	In process	Completed	Sold	Completed	Sold
1998	486	154	107	31.7	22.0
1999	705	352	241	49.9	34.2
2000	987	582	411	59.0	41.6
2001	1354	855	619	63.1	45.7
Jun-2002	1460	913	682	62.5	46.7

Data begin in 1998; figures shown here omit any previous backlog of unfinished projects.

Work in process is the sum of previously completed floor space and work currently in process.

Calculations assume that no projects are abandoned.

Source: *Monthly Indicators* (2001) no. 1, p. 38; no. 11 (2001), p. 34; no. 7 (2002), p. 38.

#### 2.4. Construction backlog

Information on the construction of commercial buildings (Table 2) provides another perspective on investment behavior. The figures indicate long construction lags, followed by further delays in selling completed buildings. At the end of 1998, work in progress amounted to 486 million square meters. As of June 2002, the cumulative (from 1998) total of floor space completed and sold was 682 million square meters, or 140% of this figure. Assuming completion and sale of all projects underway in 1998, these figures imply that only 7.7% of work begun since the beginning of 1999 was completed and sold by June 2002.<sup>7</sup> Shells of abandoned structures have become a regular feature of China's urban landscape. If such projects drop out of the running total of work in progress, the extent of delay and waste may exceed what is visible in Table 2.

#### 2.5. Unrepayable debt

Idle factories and semifinished buildings earn no income and therefore deliver no returns to investors or creditors. Failed investment projects surely represent a major source of business losses and bad debt. Rather than debating the heavily massaged figures for nonperforming loans announced by China's major banks, researchers could focus on the *shouxiliu*, the ratio of loan interest paid to interest owed, as a relatively unambiguous measure of problem loans. Chinese sources place this ratio at 84% for 1994, "less than 60%" for 1996 and 1998, and "less than 50%" for 1999, indicating that problem loans occupied the majority of bank

<sup>7</sup> Since residential structures are the largest component of commercial building, there is no technical requirement for multiyear delays in the construction process.

lending portfolios prior to transfer of bad debts to newly created asset management companies.<sup>8</sup>

### 2.6. Slow employment growth

Massive investment has not prevented a slowdown in employment growth and simultaneous increase in urban joblessness. Cumulative investment outlays during 1996–2000 amounted to RMB 300,000 per job created, if net employment growth is measured by the increase in officially measured urban employment. This high figure is more than double the 2000 average for net fixed assets per industrial worker, reported at RMB 126,256.<sup>9</sup> These crude measures ignore many important considerations,<sup>10</sup> but suffice to indicate the limited employment impact of investment spending.

### 2.7. Summary

This overview confirms that China's investment system imposes significant costs and risks on the economy. What of the microeconomic underpinnings of these unwelcome phenomena?

## 3. China's investment system—microeconomic perspectives

Aside from the mistakes that occur under any investment regime, what microeconomic factors contribute to a systematic tendency toward poor investment choices in China? Several issues arise.

### 3.1. Distorted factor prices

Reform has raised the importance of financial gain as a motive for action throughout Chinese society. We therefore expect relative costs and prices to exert increasing influence over investment decisions. Although liberalization has improved the correspondence between prices and scarcity in many areas—for example, by raising the relative price of energy and

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<sup>8</sup> Figures for 1994, 1998, and 1999 are from Qiu, Li, and Cai (2000, p., 20); for 1996, see Su (2000, p. 283). If  $s$  represents the *shouxiliu*, then  $(1 - s)$  provides a plausible estimate of the share of problem loans. The measure  $(1 - s)$  will understate the share of bad loans if banks advance new funds to allow defaulting borrowers to “repay” interest obligations. This measure could also understate the share of problem loans if some borrowers fulfill contractual interest payments but fail repay principal amounts.

<sup>9</sup> Figures for urban employment are from CNBS (2001, p. 107) and CNBS (2002, p. 38). Investment data are from CNBS (2001, p. 61). Figures for net assets per worker in industry are from CNBS (2001, pp. 402, 411).

<sup>10</sup> The employment figures used here omit jobs in the informal and rural sectors, and quite possibly overlook a considerable fraction of private-sector employment. These figures also contain large and growing gaps between the sum of components (state sector, collective sector, etc.) and total urban employment, which standard sources attribute to the inclusion of survey results (e.g. CNBS, 2001, p. 107).

raw materials—important distortions remain, most notably in the relative cost of capital and labor. In principle, employers have enjoyed wide latitude in wage setting since the early 1990s. In reality, wage regulation is widespread. Government offices issue detailed wage guidelines and limit the form and substance of executive compensation.<sup>11</sup> The past several years have witnessed a steep run-up of urban wages despite slack labor demand. During 1998–2001, average money wages for state-sector employees jumped by 65.7% even though employment dropped by 34 million or 31%. This odd coincidence stems from two causes.<sup>12</sup> Raising pay levels for civil servants and other state-sector workers forms one segment of official efforts to enlarge aggregate demand. Across-the-board pay increases also represent an effort to circumvent formal and informal restraints on salary differentials that obstruct the efforts of public-sector employers to retain key personnel.<sup>13</sup>

The same short-term macro-policy goals that encourage wage hikes have spurred repeated reductions in interest rates. In addition to the low nominal price attached to loans obtained from banks or via the market for corporate bonds, lax enforcement of repayment obligations further reduces the true cost of capital.

The resulting high wage–rental ratio steers would-be investors toward product lines and technologies that substitute capital for labor, the exact opposite of what any sensible analyst would recommend. China’s growing involvement in global networks of trade and manufacture militates against this tendency. Nonetheless, distorted factor prices channel large volumes of investment in directions that absorb capital but employ only small numbers of workers, to the obvious detriment of overall economic performance.

### 3.2. Excessive official involvement

Examination of sources of investment finance shows that funding channels under full (public-sector budgets) or partial (bank lending) official control occupy only a small share of the total. The inference that most investment decisions rest on considerations of profitability and other market-related concerns, although plausible, appears to be erroneous.

Government officials exercise strong influence over investment decisions at all levels. The system of official examination and approval (*pizhun*) of investments and other economic

<sup>11</sup> Professor Zhang Weiying of Peking University displayed the Beijing municipal government’s wage guidelines for state, collective, and foreign (!) firms at a May 2000 conference. Liu (2002, p. 36), apparently referring to Shenzhen, refers to “labor market guidance prices issued by government supervisory departments.” Chinese firms appear to require (and sometimes fail to receive) official permission to institute reforms such as basing wages on individual merit (rather than seniority) and issuing stock options to executives.

<sup>12</sup> In addition, some authors explain recent wage as an effort to erase the effects of a “low wage policy” implemented prior to reform. In reality, the pre-reform economy operated under policies that artificially limited urban labor supply by restricting entry of rural workers. As a result, urban wages were high, not low, in comparison to levels that would have prevailed in the absence of restrictions on mobility. Recent downward pressure on urban wages for unskilled and semiskilled positions resulting from greater interregional labor mobility demonstrates that historic urban wage structures cannot plausibly be described as a “low wage” regime.

<sup>13</sup> Thus, “in Chinese banks... the ‘big rice pot’ is still often seen in the salary and housing distribution, making it difficult to offer effective incentive to the staff” (Mi, Li, & Huang, 2001, p. 93).

initiatives, although under attack, remains deeply embedded in China's political economy. Chinese writers are unsparing in their critique of investment behavior:

Many basic components of a 'pure' market economy are still in their incipient stage in China, although market-oriented reform started two decades ago. Government-guided investment mechanisms, a State-controlled banking system and dominant State-owned enterprises... still run in a framework molded primarily on the previous planned economy. (Li, 1999)

In a passage explaining why "the time is not ripe for large-scale foreign investment in the West," another author notes dryly that "foreign investment takes profit as the objective," offering a clear, though unstated, contrast with Chinese decision-making (Li, 2000, p. 19).

This implication seems particularly apt when officials help shape investment decisions. Project managers seeking official approval insist that "a mega coal-to-oil project... should not be judged from one single standard—whether it is economical or not. It should be judged in the context of the overall national energy strategy" (Energy, 2002). When government funds rail projects, costs and prices are determined "without calculation of such principal or repayment," which has the effect of "making it impossible to absorb private capital." More generally, government capital input "first considers the principle of equity, also considers the development of national space, national defense, unity among ethnic groups, poverty alleviation and other political factors, and only then considers profitability" (Zhou, 2002).

China is not the only nation in which government considers such factors before committing national development funds. However, in China, official involvement in investment decisions extends far beyond infrastructure. Impressed by the achievements (especially prior to the 1990s) of hands-on industrial policy in neighboring Asian economies, Chinese officials at all levels are eager to steer investment into "winning" products and industries. Indeed, Chinese government agencies often go beyond this and attempt to create winning firms through direct official intervention.

Thus, "China's plan is to create up to 100 colossal SOEs [state enterprises] and enterprise groups in the next three to five years in key economic sectors that would be capable of competing in the world market" (Zhao, 2000). In the automotive sector, consolidation must "be accelerated to create several big groups with strong product development capability" (Gong, 2001).

This tilt toward gigantism and neglect of opportunities for business integration (might global subcontracting outperform efforts to create "big groups with strong product development capability"?) reverberates down the administrative ladder. The Vice-Mayor of Hangzhou, overlooking his own province's recent history, opines that "good industry necessarily depends on large-scale enterprises" and announces that his "city expects to develop several large-scale enterprises over the next five years with annual sales of from 1.5 billion... to 6 billion yuan... They will be the lead industry in the city" (Wang, 2002). Other localities have similar plans.

Under such circumstances, the impact of official priorities extends far beyond the span of government budgets. A survey of failed investment projects found that

the majority of state enterprise projects are motivated by whether or not they can obtain government support in the form of regional industrial policy, special treatment regarding



taxes and loans, or support from the administrative superiors, and there is little attention to optimum results for the firm, and little attention to detailed market research or analysis of demand. (Huang, Shu, & Shen, 1999, p. 11)

Recent action by the Ministry of Finance establishing a national-level Enterprise Office (*qiyesi*) as well as cognate entities at the provincial and municipal level seeks to reinforce official influence over appointment of enterprise leaders, selection of business strategies, choice of technology, and investment decisions, presumably at the expense of commercial considerations.<sup>14</sup> Recent expansion of political study in the industrial sector points in the same direction, as does the continuing influence of Party decision-makers over personnel decisions in the financial industry.<sup>15</sup>

### 3.3. *Bad management*

Excessive official involvement is not the only ingredient in poor investment choices. Chinese researchers offer harsh evaluations of managerial decision-making. One study found that “the majority of enterprise leaders had practically no time to attend to strategic matters in detail,” that firms often “failed to carry out technical analysis before importing key items of technology,” that companies often end up “making investment decisions while ignoring rival enterprises,” and that important choices were sometimes based upon fads, the whims of individual leaders, or poorly implemented project evaluations (Huang et al., 1999).

### 3.4. *Poor corporate governance*

Despite strenuous reform efforts, poor governance of enterprise forms inherited from the plan era is a continuing weak spot in China’s economy. The nature of these difficulties is widely understood. Mounting evidence of governance deficits in new enterprise forms, especially the corporate structures that represent the future of China’s enterprise system, points to new difficulties that may not fade away with the progress of reform. Average profitability of listed enterprises has fallen steeply in recent years. Initial estimates reveal steep declines in output per unit of fixed assets and in total factor productivity for shareholding enterprises during 1993–1996 (Jefferson, Rawski, Wang, & Zheng, 2000). Crude extension of the analysis (not shown) shows a further decline in output per unit of fixed assets coupled with stagnation of total factor

<sup>14</sup> During the course of a May 2001 interview, representatives of the Ministry’s Enterprise Division (*qiyesi*) assured the author that their plans and operations were fully consistent with China’s market economy objectives. Published descriptions of this body’s work and objectives include Geng (2000), Ministry of Finance (2001, 2002), and Wang (2001).

<sup>15</sup> What do party schools and party meetings teach? The head of the Central Financial Work Commission has criticized bankers for “worrying about business without any regard for party policies” (Gilley & Murphey, 2001). This suggests that party influence limits the capacity of banks and other financial institutions to fulfill the ostensible goals of Chinese financial policy: adhering to prudent lending criteria, denying funds to firms and projects with poor prospects for repayment, and pressing for full recovery of outstanding debts.

productivity during 1996–1999. There is little sign of the superior performance that new systems of enterprise governance are intended to deliver.

Qualitative evidence is not encouraging. Chinese writers excoriate the governance structures of enterprises under old and new forms of ownership: ownership rights in shareholding companies are “chaotic” (Kang & Wang, 2002). “Listed companies are largely subject to government interference and... the rights and interests of small shareholders are exposed to infringement” (Zhang, 2001, p. 44). Enterprises, although nominally independent, “are actually still under the control of local governments or competent departments, therefore, it is very difficult to separate government administration from enterprise management” (Chen, 2001, p. 51). Even the official *People’s Daily* lampoons the new corporate system with a punning front-page headline about “Dimwit Enterprise Directors” (*qiye dongshi budongshi*; see Directors, 2001).

#### 4. Conclusion

The evidence surveyed here shows that China’s investment mechanism is riddled with shortcomings that exert strong negative effects on important indicators of economic performance. Substantial portions of the nation’s vast investment outlays quite literally produce no beneficial results: no output, no sales, no jobs, no profits. Many of China’s economic ills—including slow employment growth, high levels of formal and implicit government debt, vast excess production capacity, slow but persistent deflation, mountains of unrepayable loans, and insolvent banks, are strongly and directly tied to defects in the investment system.

The present author sees the investment system as the Achilles heel of China’s economy. On this view, Premier Zhu’s call for a concerted effort to design and implement suitable reforms deserves the closest attention.

The reform of China’s investment system offers an unusual exception to the customary difficulty of tracking institutional change. Our review points to three useful metrics for judging changes in China’s investment mechanism: reduction in seasonal fluctuations of aggregate output and investment; reduction in the proportion of incomplete and unsold commercial buildings; and a rising *shouxiliü*, indicating a declining proportion of unpaid interest on bank loans. These seemingly obscure indicators deserve careful attention from observers interested in monitoring the evolution of China’s investment mechanism, which this review pinpoints as a key determinant of China’s growth prospects.

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