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Author
McMillan, John

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China's Nonconformist Reforms

John McMillan

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CONTENTS

Introduction....3
China's Reform Path....5
Market Incentives in China....7
China and Reform Practice....8
Conclusion....9
References....10

CHINA'S NONCONFORMIST REFORMS

by John McMillan

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How has China achieved its spectacular economic growth under reform, despite having no commercial law, no financial market, prices that are only partially freed, and no privatization? I argue that the fundamental reasons for China's success are not unique to China. China succeeded because it unleashed the forces of competition. China shows the power of incentives; but it also shows that, in a transition economy, workable incentives can take surprisingly nonstandard forms. Novel institutional forms evolved to solve the unprecedented problems of transition. Entry of new firms, albeit with an unusual ownership structure, produced a competitive non-state industrial sector. New state-imposed incentives induced the state-owned firms to improve their efficiency. The discipline on managers that comes from product-market competition helped compensate for the missing financial-market discipline. Reputation incentives substituted for formal legal enforcement of contracts.

Introduction

What are the indispensable components of economic reform? Underlying the reform policies enacted in Eastern Europe and the former Soviet Union is the view that a successful reform must quickly:

free up prices;
create a financial market;
privatize state-owned firms; and
introduce laws of commerce.

This article draws on work done jointly with Barry Naughton and was written while I was visiting the Graduate School of Business, Stanford University, and the Institut d'Economie Industrielle, Université des Sciences Sociales de Toulouse. I thank the members of those institutions for their generous hospitality, the University of California Pacific Rim Research Program for support, and Charles Gitomer, Edward Lazear, Barry Naughton, and Susan Shirk for comments.

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According to many of the Western advisors to reformist governments, these are among the prerequisites for successful market activity.[1]

China has disregarded this prescription. China's financial system is in a mess. Finance remains dominated by state banks, whose lending patterns make little economic sense. There is no financial market and no corporate control in the sense in which those terms are understood in the West. China has done almost no privatization. State-owned firms remain state-controlled, and many continue to be propped up by subsidies. China did reform prices, but did it so stealthily that many commentators failed to notice. China lacks the basic laws relevant to a market economy, and there is little prospect of the courts being able or willing to enforce any laws of contract.

According to our accumulated understanding of property rights, with no commercial law, no financial market, prices only partially freed, and no privatization, China should be stagnating. Unfortunately for conventional wisdom, it isn't.

China under reform has achieved spectacular economic growth and sustained it over a long period. China's 1993–1994 growth rate, at 13 percent, was the highest in the world. Per capita growth between 1980 and 1993 averaged almost 8 percent. Growth has brought improved living standards. Housing space per person, for example, more than doubled between 1978 and 1990, as did consumption of meat; and ownership of consumer durables rose three- to four-fold. No major increase in inequality has accompanied this growth, so the improvements in living standards have been widely shared among the Chinese people. At the same time there has been a deep restructuring of the economy, away from the idiocies of central planning. Export volumes rose almost 13 percent per year between 1980 and 1993. A massive shift in employment has occurred: non-state industrial firms now employ 100 million workers, about the same as the number who work in state-owned firms;[2]

The economic success is overshadowed by China's deplorable lack of progress in human rights and political freedoms. China is only slightly less authoritarian than it was before the economic reforms, and the people's hopes for liberalization have been cruelly dashed. Freedom of expression, of assembly, and of religion are all curtailed. Political prisoners, held in brutal conditions, probably number in the tens of thousands. Corruption is rampant, with no solution in sight. Even given these weighty caveats, however, raising the living standards of a billion poor people to two-and-one-half times what they were before the reforms is a notable achievement.

In achieving rapid growth while making deep economic reforms, China's transition has been markedly different from that of the countries of Eastern Europe and the former Soviet Union, where reform, at least in its initial stages, has been accompanied by plummeting living standards. Can we learn anything from China about reform in general? Some argue that China is so different from the other reforming countries that there are no lessons to be drawn (Sachs and Woo 1994). I argue, on the contrary, that the fundamental reasons for China's success are not unique to China. The lessons are quite elementary. China succeeded because it unleashed the forces of competition. China shows the power of incentives; but it also shows that, in a transition economy, workable incentives can take surprisingly nonstandard forms.[3]

Bottom-up changes have driven China's reforms. Many of the crucial decisions were made at ground level, not in Beijing. Novel institu-

[1] Macroeconomic stabilization is generally regarded as a key component of reform; some see it as the chief or even the sole component. I shall focus, however, on the microeconomic issues of property rights and incentives. Macroeconomic stability is obviously necessary for successful reform; but the many developing countries that have undergone stabilization programs without achieving economic growth show it is not enough by itself. What was wrong with the communist economies under planning was not so much macroeconomic instability as the absence of appropriate incentives for productive effort.

[2] Vietnam has also achieved impressive growth, by following a similar reform path to China, though moving more quickly on financial-market development and price reform (see McMillan 1994).

[3] Although China's incentives are not consistent with some versions of property-rights theory, they are analyzable in terms of the modern theory of incentives; that is, agency theory. Agency theory underlies the discussion to follow, and is used to analyze China's reforms by Groves, Hong, McMillan, and Naughton (1994a,b) and Qian and Xu (1993), and to analyze some general issues of transition by Bolton and Roland (1992), Gates, Milgrom, and Roberts (1994), McAfee and McMillan (1994), Stiglitz (1991), and Tirole (1992).

tional forms have evolved to solve some of the unprecedented problems of transition. The new economy has arisen as much from the initiatives of the Chinese people, who have built new firms and created new ways of doing business, as from changes imposed by the government.

The economy is still far from being efficient: the imperfections in the financial system undoubtedly mean that some of the growth is based on misallocated investment. The government must eventually regularize China's financial and legal systems if an efficient market economy is to develop. (It should have begun doing so in the late 1980s.) But what China's success shows is that a transition economy does not have to set everything right all at once. It can get by, temporarily, with band-aid solutions: devices that may not exist in Western practice or in economics textbooks.

In any of the planned economies, the starting point for the transition is misaligned prices, unproductive firms, and unfilled market niches. Such an inefficient economy offers large scope for improvement. Introducing a few incentives and some competition into a highly distorted economy can have dramatic effects, as China illustrates. It is hard to predict, however, just which incentives will work in the peculiar circumstances of the transition economy. It follows that it is necessary to take an experimental approach, and be willing to live for a while with unconventional institutions, if they work. These band-aid solutions may well not be discovered in a finance ministry, let alone in the World Bank or a Western university. They are more likely to be discovered by people whose livelihoods are on the line.

China's Reform Path

The key ingredients of China's reforms were:

- the break-up of agricultural communes into (essentially) private farms;
- massive entry by new non-state industrial firms;
- new incentives for state-owned enterprises; and
- the introduction of a dual-price system.

Agricultural reform achieved quick success. In the communes, the link between individual effort and reward had been tenuous. The reforms enacted from 1979 through the early 1980s gave each peasant family a long-term lease of a plot of land. The household must deliver a certain quota to the government each year, and it may sell to the government or on free markets anything produced beyond the quota. A household's income therefore depends directly on that household's efforts, and this has resulted in big increases in the production of food. Agricultural output increased by 67 percent between 1978 and 1985. In part this was caused by an increase in inputs. But mainly it was due to the strengthened incentives: productivity increased by nearly 50 percent, compared with no increase in productivity over the previous two and a half decades (McMillan, Whalley, and Zhu 1989; Lin 1992).

Entry of new firms has been perhaps the most striking feature of China's transition. Although in the first few years of reform they were little noticed, the non-state industrial firms grew remarkably quickly (their output grew by 25 percent each year in 1985–1991, according to Whiting 1994), and twelve years into the reforms were producing half of industrial output. This entrepreneurial activity occurred despite the impediments of little law of contract, weak property rights, and underdeveloped capital markets. Scope for highly profitable entry existed because of the many market niches left unfilled by the state firms under the old planning system, and because of the misaligned prices that planning had imposed.

The new non-state firms have a novel organizational structure. Most are not private firms. To anyone schooled in Western—or, for that matter, Japanese—concepts of corporate control, these firms look strange. Mostly located in rural areas, they are run by village governments (and so are called township and village enterprises, or TVEs). Their ownership is vague, and there are no clear rights to residual returns. They have few of the usual instruments of corporate control: no stockholder controls, and no threat of takeover (although there is some bank oversight). On a priori grounds, these firms simply should not work. But they not only function, but function efficiently (Byrd and Lin 1990). The village-owned firms have been the main source of China's dynamism under reform.

Discussion of how the Eastern European countries should manage their transitions often implicitly equates the new private sector with privatized former state firms. The speed with which China's non-state sector grew suggests, on the contrary, that the most promising source of a private sector is not privatization but entry.

China's state-owned industry, while shrinking relative to the rest of the economy because of

the rapid growth of the non-state sector, has itself achieved respectable productivity gains. This has been the result of liberalization measures that fall far short of privatization. Initially highly inefficient, these firms have increased their output under the reforms by over 7 percent annually. Most of this output increase is due to improved productivity, which has risen at an annual rate of over 4 percent.;[4]

The productivity increase was a response to a range of incentives offered to the state firms (Groves et al. 1994a,b; Jefferson and Rawski 1994). The government allowed firms to retain some of their profits, according to a contractually specified formula. In some cases a firm now has to deliver a fixed amount of profit, and can keep any extra profit, so the firm has full marginal incentives. The retained profits are used to fund worker bonuses, benefits such as housing and health care, and investment in new plant and equipment. Managers are now given monetary rewards explicitly based on their firm's performance. Managers obtained autonomy: the right to decide what to produce, how much to produce, and how to produce it was shifted from the state to the enterprise. Managers were permitted to pay workers bonuses and to hire some workers on fixed-term contracts. New methods of appointing managers were introduced. One extreme method, implemented occasionally, was to put managerial jobs up for auction, with bids being promises of future profits to be delivered, these promises being backed up by a bond posted by the manager. There was considerable managerial turnover (in a sample of state-owned firms, 90 percent changed their top manager during 1980–89), and as a result better managers were appointed than the Communist Party officials who used to run these firms.[5] In addition to, and reinforcing, these incentives directly imposed by the state, the reforms faced the state-owned firms with greatly increased product-market competition, as discussed below, providing a further impetus to improving productivity.

[4] State-firm productivity growth has been estimated, using various different data sets but obtaining similar productivity-growth estimates, by Chen et al. (1988), Dollar (1990), Gordon and Li (1989), and Groves et al. (1994a,c). One study, by Woo et al. (1993) claims productivity growth to be small, but this is hard to reconcile with the large increases in the state firms' output that have occurred.

[5] In Russia's privatized firms, by contrast, little man a-gerial turnover appears to be occurring, as Belyanova and Rozinsky (1994) show.

Some state-owned firms are a perpetual drain on the state budget through the subsidies they receive (although, contrary to what is often asserted, the chronic loss-makers are a minority among state-owned firms; there is a larger number of state-owned firms that deliver more funds to the state, in remitted profits and taxes, than they receive in subsidies, as Morris and Liu 1993, show). The state- owned firms are still a long way from being efficient capitalist firms. Because of their strengthened incentives and improved organization, however, they are much less inefficient than they used to be, and have contributed to China's overall growth under reform.

The Chinese government introduced price reform in an unconventional way. Before the reforms, state-owned enterprises were required to sell all their output to the state at state-fixed prices. Under the reforms, these firms were allowed to produce extra output, beyond the plan amounts, and to sell that extra output on free markets. The fraction of state-firm output sold on markets progressively rose so that, by 1989, on average 38 percent of a state-owned firm's outputs were directly sold on markets, and for some state firms market sales were 100 percent of output. Similarly, an increasingly large fraction of state firms' inputs were purchased on free markets, rather than being allocated by the state: in 1989, on average 56 percent of a state-owned firm's inputs were procured through market purchases, and for some state firms, 100 percent of inputs were market-procured. There was a dual-price system, with the market price usually being substantially above the official price.

From the viewpoint of economic incentives the key point about the dual-price system is that, at the margin, decisions are made in the face of market prices. The fact that the price received from the state is less than the price received from the market merely means that the firm is paying a lump-sum tax. For a firm's decisions on how much to produce, what inputs to use, and what kind of investment to undertake, the state-imposed output quota is irrelevant, as long as that quota is smaller than the total output. What matters for such decisions is the price that will be received for any extra output, which is the free-market price (Byrd 1987; McMillan and Naughton 1994a). Thus the dual-price system, although a gradual form of price reform, had an instantaneous impact, in inducing firms' decision-making to be market-oriented.

Dual pricing forced state-owned firms to compete, both with other state-owned firms and

with non-state firms. In order to sell on free markets, state-owned firms had to please their customers; they were forced to produce to a higher quality than when they had the government as guaranteed buyer.

The dual-price system was not ideal. It enabled illicit profits to be made by obtaining goods at the plan price and selling them at the market price. Buying low and selling high is a normal market activity; but the dual-price system enabled certain well-connected people to buy at artificially low prices. Anger at such corrupt practices was one of the sparks that ignited Tiananmen. Dual pricing is a temporary expedient to smooth the reform process, and it should have been replaced by full market pricing as soon as was feasible: that is, by the late 1980s, rather than, as actually happened, in the early 1990s.[6]

Market Incentives in China

China's economic growth has taken place in a legal vacuum. As Clarke (1994) notes, "legal institutions remain essentially unreformed and ill-suited to the institutions of a market economy," and "property rights and contract rights are not well defined and reliably enforced." Even if the Chinese government were to write laws, Clarke argues, it is unlikely that China's courts would be capable of enforcing them. "The observance of court judgments for many institutions remains essentially voluntary." It is a deep and unresolved question whether China's growth has occurred *despite* the absence of the usual legal institutions or—the more intriguing possibility—*because of* that absence. Deals are made, however. People routinely and successfully consummate transactions, often across large distances and involving delayed returns.

Property rights in reform-era China arise from social custom. People honor agreements not because the law requires it but because they value their reputations (as analyzed by Tirole, 1993, for example). Reputation and connections–the famous *guanxi*—serve as a substitute for formal laws. They are an imperfect substitute, however, as self-enforcing contracts have some limitations. Deals can be made only by people who know each other's reputation, either directly or through a third party. The economic circumstances may in some cases turn out to be such that it pays one of the parties to renege on a deal, and, anticipating this, the other party may refuse to agree to the deal. A fear of arbitrary expropriation by the government inhibits people from undertaking certain investments.[7] For these reasons, many potentially gainful transactions cannot be made when laws are absent. China will eventually have to develop laws of contract and a court system able to enforce them if its economic success is to continue. But China's growth shows that reputation incentives can be a surprisingly effective basis for market activity.[8]

What makes China's firms productive, despite their unconventional organization? The taxonomy of sources of firm efficiency due to Holmström and Tirole (1989)—capital-market discipline, labor-market discipline, internal discipline, and product-market discipline—can usefully be applied to China.

China's state and non-state firms are largely insider-controlled, and few of the usual capital-market disciplines operate on them. There are some substitute controls, though they are relatively weak. In the case of the non-state firms, the smallness of the village (a few thousand people) means that the villagers can to some extent keep track of decisions being made in their own firm. Banks, which are state-owned, provide some monitoring of village-owned firms. How much the bank is willing to lend a firm depends on the rating the bank gives it, which in turn depends on the firm's sales and profits. Political and social criteria and government interference also affect the bank's lending decisions, however, muting any disciplinary effect on the firm of the bank's rating practices. The absence of provisions for default on loans further undermines any discipline imposed by the banking system, and often the courts are unwilling to enforce loan contracts (Whiting 1994). In the case of state-owned firms, the industrial bureaus still maintain some active oversight, potentially substituting for capital- market controls (though this is not by itself an explanation for the state firms' improved performance, as historically such oversight notably failed to generate effi-

[6] For a more detailed description of China's reform path than the simplified account given above, see Naughton (1994).

[7] For some illuminating anecdotal accounts of how insecure property rights and inadequate contract enforcement in China make doing business difficult, see Lyons (1994).

[8] Russia similarly lacks formal contract-enforcement institutions. As in China, reputation-based incentives sometimes work to make contracts self-enforcing, as Greif and Kandel (1994) show, although in Russia the mafia is also used to enforce contracts.

ciency). There is a bankruptcy law, and firms are allowed or occasionally forced to go bankrupt.

Labor-market discipline puts some constraints on the decisions of managers in the state firms. The industrial bureaus demote managers whose firms are not performing up to potential and promotes those who do well (Groves et al. 1994b). In the non-state sector also, managers' careers to some extent reflect their job performance (Whiting 1994). Since China's managerial labor market is thin, however, this labor-market discipline is weak.

Some internal discipline exists in both state and non-state firms. State-firm managers' pay reflects their firms' profits and sales; and a manager's pay is more sensitive to performance than is typically seen in the West. Managers are in some cases required to post a bond, which can be forfeited if the firm underperforms (Groves et al. 1994b). State-firm workers receive bonuses, which have grown to average about one-fifth of total pay, and there is some indirect evidence that bonuses are awarded differentially according to the individual workers' efforts (Groves et al. 1994a). State firms hire an increasing number of workers on fixed-term contracts, but it is still very hard to fire most workers. In non-state firms, it is possible to fire workers from outside the village, but not local workers. The workers' pay is based on performance, by means of bonuses and piece-rate payments. Managers have contracts that make their pay depend not only on the firm's sales and profit, but also on social targets such as education and public order (Whiting 1994).

Product-market discipline operates on both state and non-state firms. Non- state firms operate in intensely competitive product markets. Entry into the industries in which they operate is easy, and any profits earned by one firm elicit a quick entry response by others (Byrd and Lin 1990). Village-owned firms sell much of their output outside their own province, and increasingly sell on foreign markets. In response to a survey, many managers reported difficulties in marketing their products, complaining of "too much production of similar products" (Whiting 1994). State firms also must compete. The introduction of the dual-price system forced them to compete both with other state firms and with non-state firms; and their profit-sharing contracts reward them for success in this competition (McMillan and Naughton 1992).

China's firms, then, operate under some forms of capital-market and labor-market discipline, which are, however, relatively ineffectual. They have some internal discipline, but this is limited by constraints on firing workers. The main discipline comes from the product market. Despite the virtual absence of mechanisms of corporate control, the strong competition to sell their products seems to be enough to have induced state firms to become much less inefficient than they used to be and non-state firms to operate reasonably efficiently. Competition and ownership are alternative sources of incentives for managers. In the peculiar circumstances of the transition economy, competition seems to be enough to induce firms to be productive, despite state ownership or the fuzzily-defined ownership of the village-owned firms. Competition matters more than ownership.

This conclusion is contrary to much of the thinking about economic reform. The big-bang prescription for reform rests on the view that nothing short of a change of ownership, brought about by privatization, can improve the performance of state-owned firms. The significant improvement in the productivity of China's state-owned firms, resulting from the imposition of profit sharing and other incentives, contradicts this. The non-state firms also subvert some presuppositions about the need for clearly defined ownership rights for firms to work well. If China had put Western advisors in charge of its reforms in 1978, it is inconceivable that those advisors would have designed firms with the organizational structure that the village-owned firms developed for themselves.

China and Reform Practice

The most obvious and important difference between China and many of the countries of the former Soviet Union and eastern Europe is in the form of government: China remains under communist control, whereas Russia and many of the eastern European countries are democratic. Does this political difference rule out the possibility of economic lessons from China? Did China need its authoritarian government in order to follow the economic path that it did? Or could it have as successfully managed its evolutionary reforms if it had a democratic government? It is impossible to prove that it could have (likewise, it is impossible to prove that it could not have). There are reasons to believe, however, that China's economics is, to some extent, separable from its politics, and that it could have followed a similar economic path if it had been democratic.

China's economic reform policies were those not of a strong but of a weak government.

The political impediments to economic reform in China were formidable, as Shirk (1993, 334) explains:

> "Authoritarian communist regimes may look like strong states, but they rarely have the capacity to impose painful policies over the heads of bureaucrats. . . .The political challenge of economic reform was to build a constituency for reform from among the groups who would potentially benefit from it, namely, provincial officials, light industry, and agriculture, and to reorient the preferences of the groups with vested interests in the command economy [particularly heavy industry]. This task required artful strategy on the part of the political entrepreneurs at the top of the CCP."

While many of the changes began at the top, not all did. The government's role often has been to permit change rather than to initiate it. Many of the reforms, in particular in agriculture, were initiated at ground level and only afterwards ratified by the central government; like Gilbert and Sullivan's Duke of Plaza Toro, the Chinese government led from behind. There has been no overall plan: China's leaders had no clear idea of where they wanted China to go. Having discarded Marxism and Maoism, the Communist Party has little legitimacy; any legitimacy it has comes solely from its success in delivering economic growth. The government had little ability to commit itself to continuing reform. The commitment to reform came not from any inherent strength of the government, but, as Fang (1994) argues, from the early and cumulative reform success.

Rather than destroying the old institutions and starting from scratch, China let its new economy grow around the old (Naughton 1994). China shows that introducing some competition and some elementary incentives into a highly distorted economy, while leaving the existing inefficient institutions in place, can generate huge improvements in efficiency.

A firm's success in the abnormal setting of the transition economy does not guarantee its continued success as the economy becomes more fully marketized. The improved performance of the state firms vindicates China's policy of not immediately privatizing them (which was, however, driven by political considerations, not economics, as Shirk (1993) documents). It does not provide a case for never privatizing them, however, or even for delaying privatization as much as has been done. Although competition and state-imposed incentives can, in the short run, improve state firms' performance.[9] In the long run privatization is the only way to ensure that firms are fully subject to market disciplines and to prevent politicians and bureaucrats from intervening in the firms' decisions in politically tempting but economically unproductive ways. It seems clear that China should have begun full-scale privatization, as well as the development of a capital market, by the late 1980s. Although little official privatization has been done as yet, managers of an increasing number of state-owned firms are obtaining ad hoc control, either through spontaneous privatization-the unofficial transfer of state assets to private hands (Nee and Su 1994) or through joint ventures with foreign firms (Qian and Stiglitz 1994), and as a result the firms' behavior is becoming still more market-oriented.

The village-owned firms, with their unconventional structure, have succeeded in the particular circumstances of the transition economy. They may in the future be crowded out by firms that have, by Western standards, more conventional organization. Some have already begun to change, converting themselves into a hybrid corporate form known as joint-stock cooperatives, with employees holding shares in the firm (Qian 1994). Even if the village-owned firms' value turns out to be only for the transition, it has been a very high value.

Conclusion

China is different from most of the other reforming countries. Agriculture is a much smaller fraction of the economy in the former Soviet-bloc countries than in China, so cannot give as big a boost to reform as it did in China. The prospects for improvements in state-firm performance may (or may not) be less in other countries than in China. The village-owned firms' organizational form reflects particular features of China, and so in other countries the new start-up firms will take different forms.

China does not provide a model for the other reforming countries to emulate, because of these differences and because many aspects of China's reforms could have been improved upon. China does, however, cast doubt on some of the thinking underlying Eastern Europe's reforms. China is a counterexample to the view that, without a

[9] In China's case, these short-run improvements have continued for a decade and a half.

financial market, laws of commerce, and privatization, markets cannot work. Through experimentation, devices can be developed that serve as substitutes for these institutions during the transition to a full market economy.

The lessons from China are in generalities, not specifics. Perhaps the main lesson is that markets can flourish in an unpromising environment. Markets are more robust than sometimes thought. Market incentives can come in unfamiliar forms. The lesson for economists is: do not take for granted anything we "know" about how economies work, for what we know about things like corporate control may well not be applicable to economies going through fundamental changes.

What the success of China's unconventional firms shows is that there are the limits to what reformers can foresee. The transition cannot be planned, because what will work cannot be anticipated. Reformers can design new institutions for the transition economy; and economic theory is useful in thinking through the issues of incentive-system design and in analyzing why certain incentives work.[10] But the reformers must be willing to accept novel solutions that do not conform to preconceived views. China's success reflects its reformers' openness to experimentation. No one could have predicted, at the outset of the reforms, the success under reform of either the state-owned firms or the village-owned firms. No one, therefore, could have prescribed China's reform path.

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