

AGRICULTURAL AND ECONOMIC DEVELOPMENT STRATEGIES AND THE TRANSFORMATION OF CHINA AND INDIA

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By any measure, China and—more recently—India are striking economic success stories. A few decades ago, both countries were clearly among the world's poorest countries; now they are among the world's fastest-growing economies and are responsible for nearly all the recent global progress in poverty reduction.

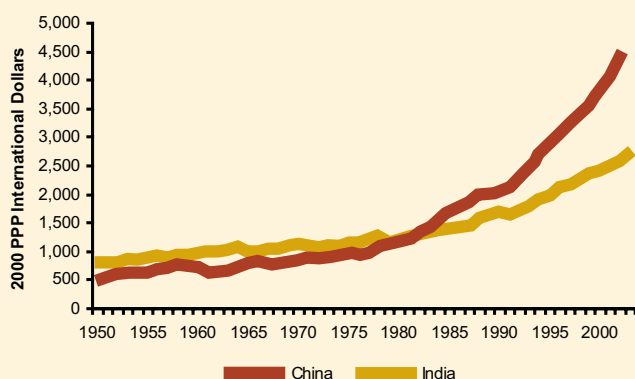
In 1978 per capita gross domestic product (GDP) in India was \$1,255—lower than the average for Sub-Saharan Africa, which stood at \$1,757.¹ Since then it has climbed steadily upward, reaching \$2,732 in 2003. Even more spectacularly, China's GDP per capita, which stood at \$1,071 in 1978, jumped to \$4,726 in 2003. China's GDP per capita growth rate is almost double that of India

(Figure 1). Moreover, the share of rural poor people fell from 33 percent in 1978 to 3 percent in 2001, according to official sources, or to around 11 percent, based on a poverty line of less than a dollar a day, according to World Bank estimates of 1998 (Figure 2). Despite ongoing controversies regarding measures of poverty in China, both benchmarks depict an extraordinary decline in the incidence of poverty. India also achieved a downward trend in poverty, although the outcomes were not as dazzling as in China. According to official estimates, rural poverty in India dropped from 50 percent in 1979/80 to 27 percent in 1999–2000, the latest year for which data are available. Together these two countries accounted for a substantial drop in global poverty levels, from 29.6 percent of the world's population in 1990 to 23.2 percent in 1999.²

¹ Figures for per capita GDP are in purchasing power parity terms with constant 2000 prices.

² Excluding China, world poverty actually increased in absolute terms, from 917 million to 945 million people.

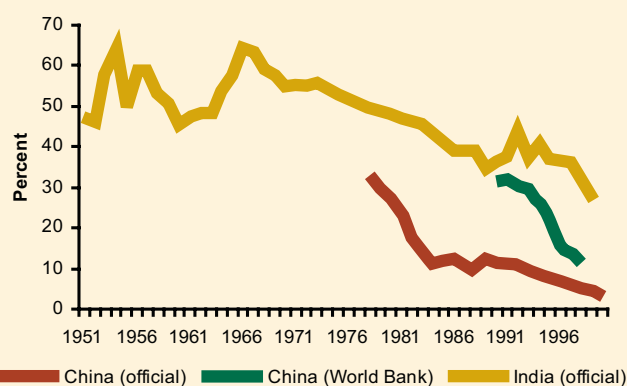
Figure 1 GDP per capita in China and India, 1950–2003



Sources: World Bank, *World Development Indicators 2005* (Washington, DC: World Bank, 2005), CD-ROM; and A. Maddison, *The World Economy: A Millennial Perspective* (Paris: Organization for Economic Cooperation and Development, 2002).

Note: The data for 2000–2003 are taken from the World Bank, while the data for 1950–99 are extrapolated using the trend of per capita GDP growth from Maddison. There have been conflicting reports on China and India's per capita GDP. Maddison reported that China and India's GDP per capita measured in 1990 PPP were \$439 and \$619 respectively in 1950, and \$3,259 and \$1,818 in 1999. But the World Bank reported a very different trend: as late as in 1978, China's GDP per capita was only \$674 measured in 2000 international prices, 56 percent of India's \$1,224. But in 2003 GDP per capita in China increased to \$4,726 and India's to \$2,732. Although we believe the World Bank has done a reasonably good job in estimating GDP in international prices in more recent years, it is not clear to us how the World Bank estimated it for earlier years. On the other hand, Maddison documented his estimates for all years from 1950 to 1999. But, his series ran only to 1999. Therefore, we have used World Bank estimates for 2000 to 2003, and then we used Maddison's trend to backcast the numbers before 2000.

Figure 2 Rural poverty rates in China and India



Sources: China, National Bureau of Statistics, *The Monitoring Report of Rural Poverty in China* (Beijing: China Statistics Press, 2002); www.indiastat.com, 2004.

Note: Poverty data for India are from large- and small-sample surveys by the National Sample Survey Organisation (NSSO). Large-sample surveys are generally conducted at five-year intervals. Since 1970, for example, they were conducted for the years 1973–74, 1977–78, 1983, 1987–88, 1993–94, and 1999–2000. The results from large-sample surveys are considered more robust and reliable than those from small-sample surveys.

Less well known than their recent blistering economic performance, however, is the role that agriculture has played in the transformation of these still heavily rural and agricultural countries. In China agricultural reforms were the starting point for economic liberalization—in other words, reforms began in the sector where the majority of poor lived, and they were largely the beneficiaries of reform—whereas in India reforms started with macroeconomic adjustment and trade and industrial policy, areas that did not benefit most of the poor. Although agricultural growth in India rose to more than 4 percent a year in the years immediately following the reforms (1992–96), it could not be sustained, and it slumped to about 2 percent a year during the period 1997–2003, severely affecting its contribution to economic growth and poverty reduction. The full potential of agriculture in India has yet to be unleashed. Now, in 2005, agriculture is once again high on the agenda of the Indian government, which wants to give a rural orientation to the entire reform and growth process. The reform experiences of China and India—similar in some ways and different in others—shed light on the enormous potential for investments and policies in support of pro-poor agricultural and rural growth to fight poverty and malnutrition in developing countries.

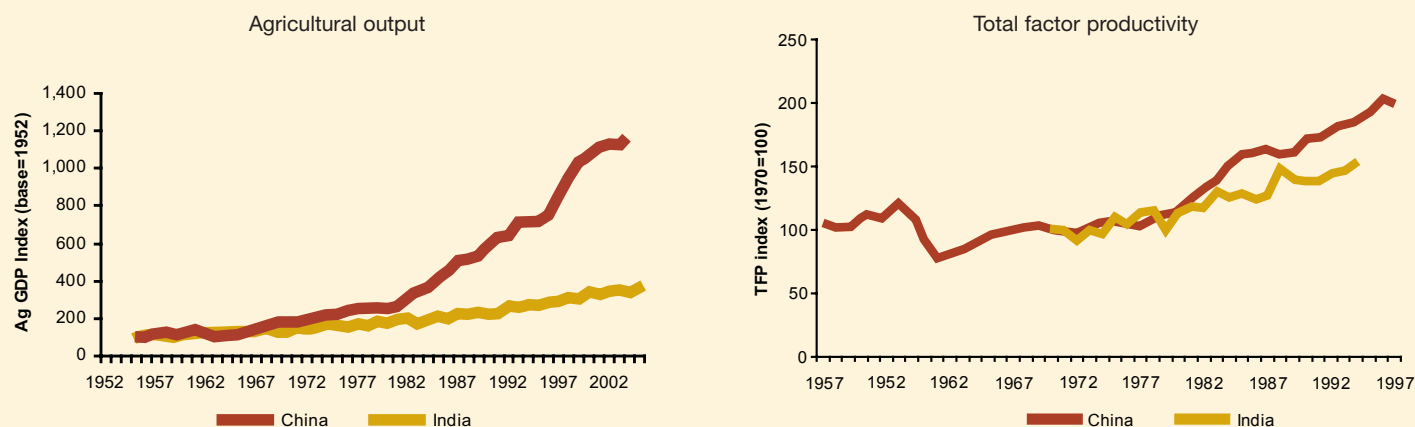
REFORMS IN CHINA AND INDIA

Reforms that directly strengthened agriculture were a major factor in China's economic growth and poverty

reduction. Between 1978 and 1989, China underwent two distinct phases of agricultural reform, which first decentralized agricultural production through the household responsibility system, giving farmers much more leeway to decide what and how much to grow, and then liberalized the systems for pricing and marketing agricultural goods. Reported agricultural production growth immediately shot up, from 2.6 percent a year during 1966–76 to 7.1 percent a year during 1978–84 (Figure 3). Furthermore, growth in agricultural productivity went from almost zero to 6.1 percent a year. Although production growth fell back to 2.7 percent a year during 1985–89 because of rising input prices, further reforms in the 1990s again raised production growth to 3.8 percent a year during 1990–97. As a result of the dramatic growth in agriculture, rural people found their incomes rising by 15 percent a year between 1978 and 1984.

But perhaps one of the most striking results of China's agricultural reforms was that they led to the creation of a whole new economic sector that became the most dynamic in China's economy: the rural nonfarm sector—the small-scale food-processing plants, machinery repair shops, and increasingly more modern and technology-intensive industries that cropped up to meet growing demand among increasingly well-off farmers and to employ the millions of people whose labor was no longer needed on farms. Indeed, the whole structure of China's economy shifted. Whereas agriculture provided more than

Figure 3 Agricultural output and productivity in China and India



Sources: Agricultural output: Authors' calculations based on China, National Bureau of Statistics, *The Monitoring Report of Rural Poverty in China* (Beijing: China Statistics Press, 2002); and www.indiastat.com, 2003; Total factor productivity: Shenggen Fan and Xiaobo Zhang, "Production and Productivity Growth in Chinese Agriculture: New National and Regional Measures," *Economic Development and Cultural Change* 50, no. 4 (July 2002), 819–838; and Shenggen Fan, Peter Hazell, and Sukhadeo Thorat, *Linkages between Government Spending, Growth, and Poverty in Rural India*, IFPRI Research Report 110 (Washington, DC: IFPRI, 1999).



half of the country's GDP in 1952, it fell to 14 percent in 2004. Over the same period, the rural nonfarm sector went from providing almost none of GDP to more than one-third. The growth of this sector not only played a large role in reducing rural poverty in China, but also put pressure to reform on the urban sector, which has been the main engine of growth since the 1990s.

The story of agriculture in India is somewhat different. During the 1960s and 1970s, the Green Revolution, in which Indian farmers adopted new high-yielding varieties of wheat and rice, led to dramatic leaps in agricultural production and raised farmers' incomes. As a result, rural poverty fell from 64 percent in 1967 to 56 percent in 1973 and to 50 percent in 1979/80. Production gains from Green Revolution technologies continued through the mid-1980s and then slowed sharply. In the 1970s India had adopted subsidies for agricultural inputs, such as fertilizers and electricity for pumping irrigation water, and these subsidies grew to help maintain agricultural production but started placing a strain on government budgets.

Beginning in 1991 India instituted a series of sweeping macroeconomic reforms. Although these initial reforms were not directed toward agriculture, they helped stimulate a rise in agricultural growth by generating greater demand for a wide range of agricultural

products and by leading to increased private investment in agriculture. From 1991/92 to 1996/97, agriculture grew at an annual rate of 4.1 percent and rural poverty fell only from 39.1 percent in 1987/88 to 37.3 percent in 1993, and further to 27.1 percent in 1999/2000. After the government opened the agricultural sector to international trade in the face of falling world prices of most agricultural products during the late 1990s, agricultural growth slowed again, averaging 2 percent between 1997/98 and 2003/04. Various studies have shown that whenever there is higher agricultural growth, there is greater poverty reduction in rural areas.

Now further steps are needed in India to again stimulate strong agricultural growth, including investments in roads, irrigation, and other infrastructure, improvements in education, and greater emphasis on growing high-value agricultural goods like fruits and vegetables instead of only cereals.

LESSONS FROM CHINA AND INDIA

What can we learn from the process of economic reform in these two countries? Does the sequencing of reforms matter? What lessons do the experiences of China and India offer for other developing countries and countries in economic transition? What could China and India learn from their own as well as each other's experiences?

To Reduce Poverty Faster, Begin with Agricultural Reforms

China's reforms led to acceleration in agricultural growth from 1978 to 2002 (4.6 percent per year, as opposed to 2.5 percent per year from 1966 to 1977). The most substantial decline occurred in the first phase of reform, from 1978 to 1984, when agricultural GDP jumped to 7.1 percent per year and the percentage of rural poor dropped from 33 to 11 percent of the population.

By launching market-oriented reforms in agriculture, China was able to ensure that economic gains were widespread and thus build consensus for the continuation of reforms. Besides, prosperity in agriculture favored the development of rural nonfarm activities, which, by providing additional sources of income beyond farming, were one of the main factors behind China's rapid poverty reduction after 1985. As the rural nonfarm enterprises became more competitive than the state-owned enterprises, the government expanded the scope of policy changes and put pressure on the urban economy to reform. Reforms of the state-owned enterprises in turn triggered macroeconomic reforms, opening up the economy further.

In India, on the other hand, even though overall economic growth was high, it is clear that slower growth in agriculture was the major reason behind the slower poverty reduction. Prompted by macroeconomic imbalances, India's reforms began with macroeconomic and nonagricultural policy changes. The reforms led to impressive rates of economic growth in the 1990s, but since reforms were largely focused on the nonagricultural sectors, they had limited impact on poverty reduction. Agricultural policy changes occurred only at later stages, and even then were only partial. Therefore, the evidence suggests that successful agriculture-led reforms reduce poverty faster.

Make Reforms Gradually and Carefully

At the outset of reforms in China, policymakers withdrew central planning and reduced the scope of government procurement while expanding the role of private trade and markets. Thus they first created the incentives and institutions required by the market economy; then, in the mid-1980s, they began to open up markets. Studies show that the incentive reforms—in the form of greater land use rights, decentralized agricultural production

management through the household responsibility system, and rises in procurement prices—from 1978 to 1984 had a greater impact on growth than did market liberalization reforms per se after 1984. Incentive reforms in China allowed markets to emerge gradually, so unlike other countries in transition, China did not experience a sudden collapse of central planning in the absence of market-based allocative mechanisms. Parallel with reforms in output markets, reforms in the pricing and marketing of inputs, including fertilizer, machinery, fuel, feed, seeds, and energy, have transformed a system of state-controlled quotas and prices into a largely market-driven system. Today the role of government is limited to quality control of input supplies. Subsidies for fertilizer and machinery imports and domestic manufacturing have also been eliminated. In the irrigation sector, the state is still responsible for large-scale investment, but farmers or local governments are responsible for local investments and maintenance of the lower end of the system.

This favorable sequence of reforms came about not so much through the planning of Chinese policymakers, but rather through their trial-and-error approach to reform. Instead of following a predetermined blueprint, they adopted new measures through experimentation—in the words of Deng Xiaoping, "crossing the river while feeling the rocks." Each new policy was field-tested and determined to be successful in selected pilot districts before the policy was applied nationwide and the next measure introduced. This gradual approach to reforms, beginning with the strengthening of market institutions and incentives and moving toward the opening up of markets, appears to lead to more substantial rates of growth and poverty reduction.

India's quite different experience also supports this assertion. India's reforms in the agriculture sector began with agricultural trade reforms, despite the fact that the incentive structure of Indian agriculture was highly distorted; the sector was, and still is, burdened with excessive regulations on private trading and most market activities. The liberalization of agricultural trade policies in the mid-1990s, coming before incentive and market reforms in the domestic arena, created a series of imbalances. Lowered protection against a backdrop of low international prices increased agricultural imports in the late 1990s and led to an unprecedented accumulation of foodgrain stocks at home.

Reform Incentives before Opening Markets

China's experience with marketing reforms can be valuable for other economies transitioning from a centrally planned to a market system. Policymakers embarking on the reform path should first increase incentives for production and build the institutions needed to operate efficiently in a market economy before rushing to open up markets.

In a situation of food oversupply and liberalization of agricultural trade, farm support policies geared toward self-sufficiency lose their original rationale. In India minimum support prices and input subsidies, initially intended to encourage the adoption of new technologies and fuel agricultural growth, increasingly turned from incentives into inefficient and costly income-support interventions. It is clear that once support measures have completed their function, they need to be abolished. Otherwise they lead over time to inefficiencies and the crystallization of vested interests, resulting in the slowing of growth and poverty reduction.

China could learn from the experience of India and seek to encourage agricultural growth in the future while at the same time avoiding the large inefficient subsidies provided to its agricultural sector. This issue is of increasing relevance given the recent introduction of the direct transfer program to farmers and the emphasis placed by many scholars and government officials on increasing government support to agriculture and rural areas.

Although agricultural marketing reforms in India were limited, state governments were

reluctant to implement them and thus their impact was reduced. In addition, a host of outdated domestic regulations under the Essential Commodities Act of 1955 continue to weaken the environment for agribusiness and private sector involvement in agricultural marketing, which could boost employment and efficiency. Against the backdrop of rising and diversifying food demand and liberalized agricultural trade, reform of these regulations is increasingly critical, as it has a direct impact on the capacity of the sector to adjust to the changing context.

Given that smallholder agriculture is predominant in both countries, farmers could be excessively penalized because they do not possess sufficient capital and information to manage the risks inherent in agricultural activities. While China and India are reconsidering current forms of agricultural and input subsidies, they should put in place well-targeted and innovative, cost-effective crop insurance policies to protect vulnerable farmers from drastic supply and price shocks.

One other important area is the strengthening of the network of support services for small farmers related to information, credit, and extension. India seems to be better off than China in these areas, particularly with regard to the institutional infrastructure of rural credit and marketing, although the reach of its services may not be perfect. The Indian experience shows that smallholder agriculture needs strong institutional support in these areas to grow and prosper.

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In terms of trade liberalization, both countries made progress in reducing protection levels, but the weighted average tariff in India, at 29 percent, is almost double China's 16 percent. India has been able to sustain its current growth rate with lower inflows of foreign direct investment and a weaker export orientation than China. If India is to attain the target of 8 percent growth in GDP, it may do well to follow through with reforms to foreign direct investment in view of their potential to transfer know-how, managerial skills, and new technologies. China can offer valuable lessons in this regard.

The inevitable restructuring and adjustments involved in opening up agricultural trade flows will produce both winners and losers. Domestic producers of crops for which the country lacks a comparative advantage (such as edible oils in India and wheat and maize in China) are likely to suffer increasingly from falling prices induced by an increase in imports. In addition, broad-based structural adjustments in the economy may depress rural incomes and increase opportunities in the manufacturing and service sectors, located primarily in urban areas. These intersectoral adjustments are likely to result in a reduction in the size of the primary sector, which will release additional unskilled labor into the labor markets. The rural population will gain if it is able to shift to more profitable off-farm occupations. Investment in rural education will be crucial in increasing farmers' ability to move out of farming. It will also be important to increase investments in rural R&D and infrastructure in order to enhance productivity.

Membership in the World Trade Organization (WTO) can provide useful external pressure to improve efficiency and implement reforms, particularly for tradable inputs

such as seeds, fertilizers, farm machinery, and pesticides, where markets are regarded as inefficient because of either government intervention or lack of infrastructure. The implementation of the various agreements under the WTO can facilitate the role of the government in providing services related to information, marketing facilities, technical assistance, and laws and regulations related to standards and quality control. Lastly, the WTO offers an opportunity for China and India to join hands and create a third bloc of countries besides the European Union and the United States in trade negotiations.

Improve Health, Education, Infrastructure, and Land Use at an Early Stage

The initial conditions of health, education, and land use also made a difference in the performance of reforms in China and India. In 1970 life expectancy was 49 years in India and 62 years in China; illiteracy affected nearly 70 percent of the Indian rural population compared with 49 percent in rural China. These differences may be accounted for by the fact that under the collective system in China, the government provided free basic health care and education to the rural population. After the start of reforms, both countries recorded a slowdown in the advancement of health and education. In India this was primarily due to the fiscal discipline imposed by the macroeconomic crisis, whereas in China market-oriented reforms introduced the logic of profit into the management of social services. This implied progressive privatization of supply agencies, a decline in government subsidies, and an increase in education and health costs, leading to an increase in school dropouts and in the health vulnerability of the population. In devising mechanisms to address the risks involved in the increased privatization of social services, China could perhaps learn from India's long experience with a vast array of government safety nets and welfare programs targeting the rural population.

China had also made more progress on rural infrastructure than India. Chinese government investment in power grew at 27 percent a year from 1953 to 1978, and rural electricity consumption grew at a rate of 27 percent a year from 1953 to 1980, then slowed to 10 percent a year from 1980 to 1990. In India rural infrastructure did not receive as much attention, particularly in the rural power sector, and thus rural electrification and the establishment of telecommunications connections proceeded more slowly in Indian



villages. This slow pace severely affected the growth of agroprocessing and cold storage in the rural nonfarm sector. It is no wonder, therefore, that the levels of processing in Indian agriculture remain abysmally low.

In China the egalitarian access to land ensured by the land distribution and tenure system performed a crucial welfare function, providing the bulk of the rural population with access to a basic means of subsistence and limiting the number of landless. In India, on the other hand, land reforms to make the agrarian structure more equitable after independence were not as successful and left a relatively large number of landless agricultural laborers exposed to the negative consequences of unemployment and underemployment. Replicating the Chinese agrarian system does not seem politically feasible in India at this stage of development, so marginal and landless farmers will require a strong social protection system involving well-targeted social security and employment policies. Effective social protection measures will also be required in China, where land distribution is likely to become more skewed following the adoption of the new agricultural lease law that enables farmers to transfer lease rights and thus allows for the possibility of a higher concentration of land.

FURTHER REFORMS ARE NEEDED IN BOTH COUNTRIES

While both countries have made remarkable progress in terms of growth and poverty reduction, much remains to be done given the sizeable share of the population still living in poverty. The two countries are confronted with

the formidable challenges of accelerating growth, improving efficiency, and ensuring that growth is equitable and sustainable.

Focus on Public Investments That Can Boost Agricultural Productivity Efficiently

Given the key role of agriculture in poverty reduction and growth in China, public investments that boost agricultural productivity appear warranted. Significant increases in public investments seem unlikely because of budget pressures, so China and India will need to invest existing resources more efficiently. Studies have found that investments in agricultural research, education, and rural roads hold the greatest potential to promote agricultural growth and poverty reduction in both countries.

Farmers will have little potential to increase the amount of land they cultivate, so agricultural research and technology development is needed to help them increase agricultural growth by boosting their yields. Agricultural R&D takes place in both the public and the private sectors, but managing public versus private agricultural R&D can be tricky. In a bid to increase research funding, China promoted the development of the public business sector through commercialization of technologies by public research institutes. This approach often led, however, to the duplication of research with state-owned traditional research institutes. Improved intellectual property rights (IPR) regimes have stimulated private research and patenting activity in both countries. However, weak implementation of IPR in both countries and the high costs of maintaining patents in China are obstacles to the entry of new private players.

Significant opportunities for public-private partnerships can arise in the areas of funding, improving efficiency, and extension. The private sector, however, tends to favor



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higher-value crops and concentrate in areas where agriculture is already advanced. Given the potential of agricultural research for poverty reduction in marginal regions, public research spending should focus on addressing the needs of poorer farmers in less-favored environments, such as India's semiarid tropics and rainfed areas and China's poor western regions.

Past government spending on irrigation, dominated by creation of large surface irrigation schemes, played an important role in promoting agricultural growth and poverty reduction, but today similar spending has smaller marginal returns, in terms of both growth and poverty reduction. It might be the case that investment in rainfed areas or traditionally lower-potential areas has higher returns today. Indeed, studies have shown that investments in rainfed areas of both countries have had high marginal returns for agricultural growth and poverty reduction. So major investments in harvesting rainwater through watersheds, through public-private partnerships, may help usher in a "multicolored revolution" (not just a "green" one) in agriculture. In both countries there is also vast scope for improving water use efficiency through institutional and management reforms of the existing water systems. India has had useful experiences with water user associations in some selected states, participatory watershed schemes, and community-based rain harvesting. But these successful experiments need to be scaled up to make a significant difference for agriculture growth and poverty reduction. In China providing irrigation system managers with incentives to improve user efficiency had a positive effect on crop yields, the groundwater table, and cereal production.

Providing the right incentives to farmers is crucial to promote water saving. Low water prices and profligate subsidies on power for operating tubewells encouraged wasteful use of water and depletion of groundwater resources. Ambiguous water use rights following decollectivization in China, and laws linking water rights to land ownership in India, also led to inefficiencies. For example, unfair water markets emerged over time, in which rich landholders who can afford modern water extraction technology profit by selling water to poorer cultivators. Increases in water use charges may not be feasible in the short to medium term, however, without changes in the institutional environment.

Another distinctive pattern among the two countries in the past two decades is the much higher savings rates in China (about 45 to 50 percent) than in India (about 25 to 30 percent). The high Chinese savings rates, which facilitated boosting investments, are a puzzle in international comparisons. They might have been stimulated by high expected returns, including from investments in education, a matter which warrants further research.

Promote Rural Diversification and Vertical Coordination

A major shift in farm production toward non-foodgrain products such as livestock, fish, and horticulture has been well under way in India and China since the 1980s. The experience of China shows that achievement of food self-sufficiency and the extraordinary growth in basic grain production experienced by the late 1970s was a necessary

precondition for diversification. The availability of food surpluses provided the government with enough leeway to feed the increasing population and relax controls over the foodgrain sector. Once food self-sufficiency was achieved, China gradually abandoned the policies biased in favor of rice and wheat, encouraging farmers to diversify production. In India, on the other hand, rising minimum support prices artificially boosted production of major cereals, discouraging diversification of production toward nongrain commodities. Moreover, policymakers must step up investment in research on and infrastructure for high-value products such as livestock and horticulture to boost yields and expand their cultivation and processing, given their export potential, positive impact on smallholders, and growing domestic demand.

Rising consumer demand for non-foodgrain products is a major force driving diversification. Without vertical coordination of production, processing, and marketing—that is, between “plow and plate”—the potential for growth inherent in the diversification process is likely to remain underexploited. Both countries must strengthen the innovative institutional arrangements that have emerged to promote the development of new products. India’s successful experience with contract farming in reducing risks, promoting the production and export of high-value foods, and increasing the income and employment of smallholders could be valuable for China. China’s experience with growth in retail food chains and supermarkets in recent years could benefit India, where restrictions on foreign investment and infrastructure bottlenecks are limiting development in these areas.

Another dimension of rural diversification is provided by the evolution of a vibrant rural nonfarm sector. China’s experience is instructive. The rapid growth of rural enterprises in China was a critical factor in the success of its reforms, especially in relation to poverty reduction. China’s township and village enterprises (TVEs) provided increasing job opportunities outside agriculture, thereby diversifying and expanding the sources of household income. TVEs benefited from the close connection with urban markets that had been established since the early stages of their development.

India’s nonfarm economy primarily produces for the rural population and markets and is dominated by tiny, family-operated units. These firms have low productivity because

of a poor technological base and policies aimed to protect rural employment by reserving certain activities for small-scale units. Limited growth of rural nonfarm job opportunities in India is also related to the lack of knowledge and skills on the part of the poorly educated rural labor force.

The role of nonfarm employment is expected to become increasingly significant in the context of smallholder agriculture as the average farm size gets smaller. Greater off-farm opportunities and migration to urban areas are required to increase average farm size as well as labor productivity and farmers’ income.

Use Well-Targeted Antipoverty Programs and Safety Nets to Help the Poorest

The role of safety nets in poverty alleviation came into focus during the 1990s as China and India recognized the need to address the negative effects of liberalization policies on income distribution. Poverty funds and programs have documented shortfalls and inefficiencies in terms of targeting and cost-effectiveness, but they have contributed significantly to limiting the severity and the extent of poverty. There are still more than 300 million rural poor in India and China, based on the international standard of one dollar a day (more than 100 million in China and more than 200 million in India).

Antipoverty programs can be more practical and agile instruments for tackling poverty in the short run than public investments or radical redistributive measures such as land reforms. Given the fiscal discipline imposed by macroeconomic stabilization reforms, however, it is crucial to address the shortcomings of antipoverty programs. The experience of India shows that using a variety of targeted programs directed to specific sections of the poor can help improve targeting compared with the broader income- or area-based approaches traditionally implemented in China.

Decentralized and participatory approaches are more effective at strengthening the impact of antipoverty programs than top-down strategies and involve a greater variety of agents (NGOs, civil society, and international aid) in the fight against poverty besides the government. In India the extensive participation of panchayats (forms of local government with heavy public participation) and civil society at various stages of formulating and

implementing antipoverty programs ensures that programs are tailored to local needs and can be carried out without extensive leakage.

Work to Make Governance Both Effective and Transparent

In both countries there was political will to carry out reforms, but in practice, outcomes have been shaped by the different patterns of governance. India is a "debating society" in which political differences are expressed freely, policymaking is exposed to pressure by various interest groups, and there are thus long debates before decisions are made. Subsequently, implementation is slowed by the lengthy bureaucratic procedures, set up to ensure checks and balances. This exercise, while compatible with the needs of a free and dynamic polity, considerably slows the pace of economic reforms. China, in contrast, is a "mobilizing society" in which decisions are made faster and state power is backed by mass mobilization. As a result, implementation of decisions is more effective, although the lack of extensive debate in China on major changes and reforms can also lead to disastrous courses of action, such as the "Great Leap Forward" in 1958, which resulted in massive famine, and the Cultural Revolution from 1966 to 1976. As the economic system opens up further and prosperity increases, it will become harder and harder to reconcile the centralized political setup with the more liberal economic system, and this is one of China's most important challenges today.

Although investments in rural infrastructure and other key public services are crucial, it is equally critical to develop suitable institutional arrangements for their delivery. In both countries the government is the major supplier of infrastructure services, but there are major failures and inefficiencies in provision owing to the lack of transparency and accountability. Strengthening the public institutions that provide public goods and services can lead to both fiscal sustainability (through significant cost reductions) and long-term growth (through improved quality of services provided). These goals can be achieved in different ways, including privatization, unbundling, decentralization, and contracting. Effective public institutions also require an adequate supply of trained and motivated personnel, as well as investments in training to help increase the supply.



Reforms have also been slowed at the implementation level by the regulatory environment and enforcement bureaucracy. In India, many inefficiencies remain in place, although reforms, including de-licensing, have been introduced to streamline the regulatory apparatus. During the reform years China relaxed regulations on mobility between rural and urban areas, which gave impetus to the development of the nonfarm sector and increased migration for economic purposes. In recent years the Chinese government has also started to relax the complex system of regulations affecting broad-based personal mobility.

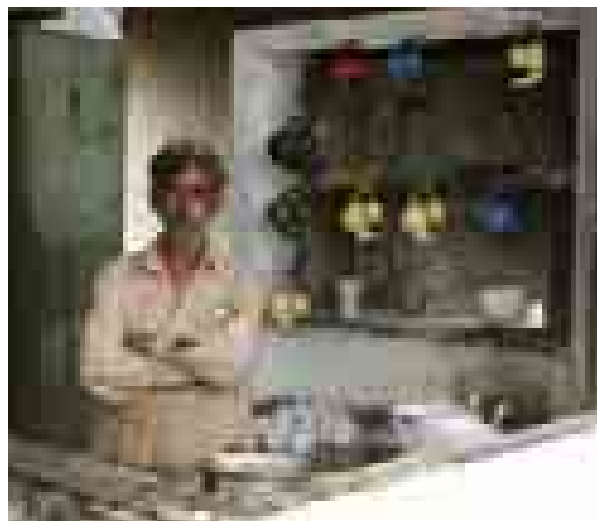
Finally, with regard to the political systems, effective implementation of reforms in China was facilitated by a high level of centralization of decisionmaking, which minimized dissent. In the context of a democratic system and highly pluralist society such as India, consent is more difficult to achieve, and it is much more difficult to set clear objectives or timeframes for transition (such as for phasing out subsidies, reducing tariffs, or increasing prices). This situation slows the pace of change in the short and medium run. Although democracy and participation have intrinsic value and are not just instruments of development, the role of democracy in enhancing or hampering economic change and poverty reduction remains a complex subject for development research. Comparisons of China and India on these broad political matters may produce a fascinating set of insights in the coming years.



CONCLUSION

A number of factors help to explain the difference in growth during the pre-reform era: initial conditions, the sequencing and pace of reforms, and the political system, institutions, and regulatory environment. Yet special mention must be made of the fact that China and India achieved remarkable development and growth even as aid as a percentage of GDP in the two countries remained low. This is in direct contrast to most other developing countries and regions, where aid is much higher but commensurate development and poverty reduction outcomes have not been realized. This fact bears an important lesson for developing and developed countries, multilateral agencies, and local NGOs and groups. It questions the very basis of current policy prescriptions that accompany aid packages, not only raising issues related to the efficiency and effectiveness of external aid but also, conversely, revealing the extraordinary and often underestimated capacity of national initiatives and policy actions to halt—and in fact turn—the tide of poverty.

Both countries now face tremendous challenges on the path to further prosperity. Continued growth is a must, owing to pressure from population growth and the need for employment. It is also a condition for a more stable society. Given the high expectations of their citizens, the lack of growth or even slower growth could lead to



unrest in both countries. The limited natural resource base can be a critical constraint to growth. The future economic growth of both countries increasingly depends on imports of energy, for which future prospects are uncertain. Both countries are also among those most severely affected by water shortages. Consequently, future growth must be based on higher efficiency and will require China and India to invest in science and new technologies to harness energy and water, optimize their economic structures for allocative efficiency, and reform their fiscal, financial, banking, and insurance systems. Both countries must also pursue more pro-poor growth, which is not only a development objective in itself, but also a precondition for future growth in the long term.

China and India can both gain tremendously by learning from each other, as both nations still face a long road ahead. The dragon has attained height and the elephant is starting to gather momentum, but both need to address their weaknesses and build on their strengths in order to achieve their national goals and fulfill the aspirations of their people. The lessons learned from the experiences of China and India are also of relevance to other developing countries and the fight against global hunger and poverty.

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