

June 2010

A Forward-Looking Commentary: China's Agricultural Development

Priya A. Roy

Indiana University at Bloomington, priyaroy37@gmail.com

Follow this and additional works at: <https://digitalcommons.kennesaw.edu/jgi>

Part of the [Agricultural and Resource Economics Commons](#), [Asian Studies Commons](#), and the [Organizational Behavior and Theory Commons](#)



This work is licensed under a [Creative Commons Attribution 4.0 License](#).

Recommended Citation

Roy, Priya A. (2010) "A Forward-Looking Commentary: China's Agricultural Development," *Journal of Global Initiatives: Policy, Pedagogy, Perspective*: Vol. 4 : No. 1 , Article 7.

Available at: <https://digitalcommons.kennesaw.edu/jgi/vol4/iss1/7>

This Article is brought to you for free and open access by DigitalCommons@Kennesaw State University. It has been accepted for inclusion in Journal of Global Initiatives: Policy, Pedagogy, Perspective by an authorized editor of DigitalCommons@Kennesaw State University. For more information, please contact digitalcommons@kennesaw.edu.

A Forward-Looking Commentary: China's Agricultural Development

Priya A. Roy

This paper describes China's agricultural development before the reform period from institutional, economic, and ideological perspectives; the reform period; the 11th 5-year plan; and the current situation. The paper gives two case examples of the Soviet Union and India. Finally, the paper ends with a discussion of what this means for China.

Introduction

China's rural residents, as 900 million of the nation's 1.3 billion population, represent a staggeringly significant part of the overall population (Xinhua, 2009). Even so, this part of the Chinese economy is often overlooked in favor of the up-and-coming urbanites whose manufacturing and service industries dominate China's GDP. With agriculture only comprising around 10% of China's 2007 GDP (World Bank, 2009), from an economic perspective, a focus on developing the manufacturing and service industries seems to make more sense. However, with still over one-half of the workforce in the agricultural industry, a balance must be struck between urban and agricultural development so as to sustain China's unprecedented growth while improving the position of its economic and societal base.

Before Reform: Three Perspectives

Institutional Perspective

Grievances over land policy played a significant role during the 1949 Revolution, and shortly after the Chinese Communist Party took power, farmers were given land ownership. However, by the mid-1950s, Chairman Mao Zedong introduced collective farming in the form of large

communes found in the Great Leap Forward. Unfortunately, these large communes led to famine in 1958-1961, so smaller collective farming units called “production teams” were put in place until the reforms of the 1980s (Rural Development Institute, 2009). However, collective ownership discouraged individual incentive since daily work was assigned and judged by the production team leader – i.e., farmers had no autonomous rights. Moreover, the top-down approach to production planning decreased production team incentive since they had no say in what and how to produce – i.e., production teams had no autonomous rights. Further still, the government-elected commune officials were under pressure to report higher-than-actual production yields, so the farmers lost even more of their production. Therefore, with farmers and production teams lacking autonomous rights and commune officials being pressured to report higher-than actual yields, the agricultural industry was becoming increasingly inefficient and unsustainable.

Economic Perspective

Though agricultural GDP had been steadily increasing, by 1977, agricultural production was in strong decline, and many rural households were in poverty. This is because, though China’s GDP grew an average of 5.93% annually from 1952 to 1977, personal consumption grew at just 2.2% annually due to the economy’s obligatory savings (Fan, 2001). To avoid social instability arising from poverty and food shortage, the government instated a system of rationing coupons. As China was moving into the secondary industry, it required a strong agricultural base; otherwise, there would be too little food and too much instability for manufacturing, and later the service industry, to develop.

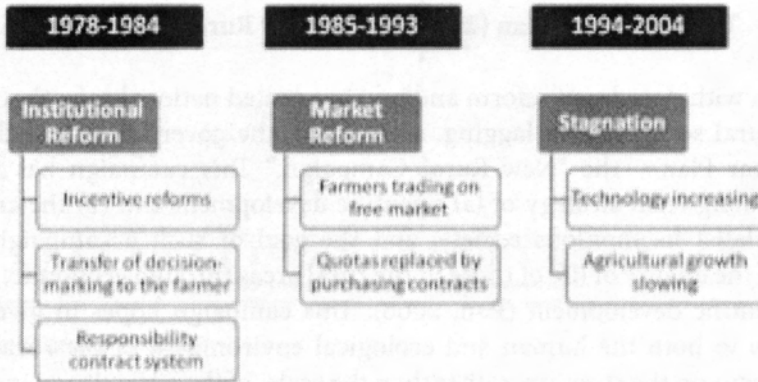
Ideological Perspective

The government felt it needed to distinguish and distance itself from capitalism, so ideology played a large role in the reforms. Socialism held collective ownership as a cornerstone of its thinking as a way to empower the working class, and economic planning was seen as a means of offering equality to the working class. To change either of these could be strongly criticized as capitalist-leaning, so such changes were made slowly, as seen in Deng Xiaoping’s acceptance of the responsibility contract system only after a trial period in the small village of Xiaogang in Anhui province.

Reform Period, 1978-2004

Economic reform in agriculture began in the late 1970s after the end of the Cultural Revolution and can be broken down into three stages – institutional, market, and stagnation (Xiangping Jia, 2007).

Fig. 1: Three stages of agricultural reform



Source: (Xiangping Jia, 2007)

In the first stage of agricultural economic reform (1978-1984), China focused on institutional reform. The most important of these institutional reforms was the transformation of household-based production into collective farming through the household responsibility system that made farmers the main decision-makers. No longer were production plans handed down from the top with set quotas. Now, the farmers could decide what, how much, and how to produce. In addition, the government dramatically raised agricultural prices that had been suppressed under central planning and introduced market mechanisms to replace state controls to reduce excessive production quotas and promote local free markets (Yang & Li, 2008).

In the second stage (1985-1993), China focused mainly on market reform as it moved from a centrally planned economy to a market system. In 1985, the government eliminated mandatory production and procurement and replaced quotas with purchasing contracts between the government and the farmers. With these new purchasing contracts, whatever farmers produced over their contractually obligated amount, they could sell on the free market. Moreover, for many farm products such as beef and poultry, purchasing contracts with the government were not necessary and could be produced and traded as pleased. By 1992, 82% of farm prices were determined by the market, and by

1993, 29 of 31 provinces officially eliminated the rationing of grain and other farm products (Yang & Li, 2008).

In the third stage (1994-2004), there was a period of stagnation in the agricultural industry, with prices taking a two-part increase from inflation and from the increased use of technology. However, the government continued its price reforms, and by 2005, 98% of agricultural goods were sold at market prices.

The 11th 5-Year Plan (2006-2011): “New Rural Campaign”

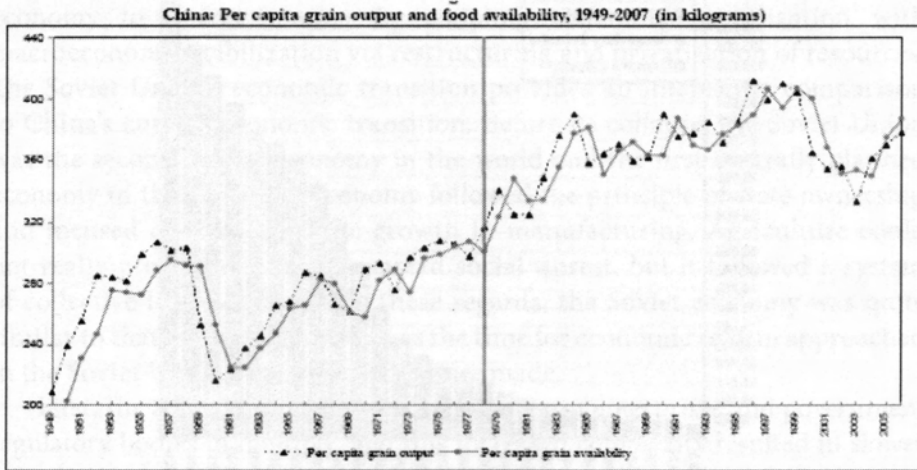
Even with decades of reform and unprecedented national growth, China’s agricultural sector is still lagging, so in 2006, the government launched its 11th 5-Year Plan – the “New Rural Campaign.” This campaign has a two-pronged long-term strategy of (a) scientific development and (b) the creation of a socialist harmonious society, and the goal of such a campaign is to increase the quality of life of those in the rural areas through economic, social, and scientific development (Pan, 2006). This campaign hopes to give more attention to both the human and ecological environment of the rural areas and to focus on the strength, rather than the scale, of the agricultural industry. In addition, this campaign aims to foster the relationship among the service, manufacturing, and agricultural industries and to use their interplay to bolster each individually.

The Current Situation

China’s overall nominal GDP has been rapidly increasing for the last 30 years, and the growth has not dipped below 5% and has even reached 35%. This phenomenal growth rate has led nominal GDP per capita to increase from not even 500 RMB to over 18,000 RMB from 1979 to 2007.

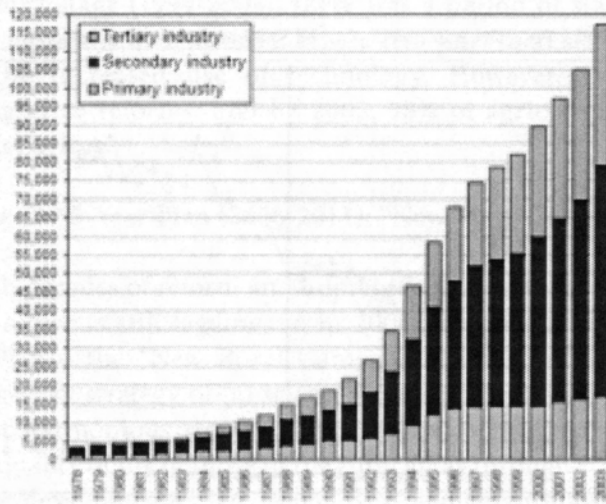
China’s focus is on developing its manufacturing industry, but to do so, it must be relatively self-sufficient. Part of this self-sufficiency is the ability to feed its people, one of the original goals of reform. As can be seen below, both China’s grain output and its food availability have improved by around 25% since the beginning of reform.

Fig. 2: Growth of agriculture in terms of per capita grain output and food availability



Source: (Yang & Li, 2008)

Manufacturing has been around 50% of China's GDP for the last 30 years, while agriculture and service are exchanging their positions. It makes sense in China's development for manufacturing to be so strong since manufacturing is the main attraction for foreign and other such investment. Moreover, as an economy develops, it generally moves from the primary industry of agriculture to the secondary industry of manufacturing before ultimately moving towards the tertiary industry of service (this is the Fisher-Clark theory of structural change). Though China has compressed the time of its economic development, it is still following this general pattern of movement. However, this move to the secondary and tertiary industries is still largely concentrated on the coastal edge, with only 32.4% of the coastal region versus 47.2% of the inland employed in the primary industry (Guo 2009).

Fig. 3: GDP by Industry in Millions of RMB

Source: National Bureau of Statistics, 2003

Clearly, such GDP growth has had very positive effects on the lives of many. Unfortunately, however, this growth has not been evenly distributed. Guangdong's 2004 nominal GDP of nearly 1600Bn RMB dwarfs the miniscule nominal GDPs of Tibet, Qinghai, and Ningxia, whose 2004 nominal GDP values are less than even 100Bn RMB. Further, the per-capita GDP ranges from less than 5000 RMB in Guizhou to more than 55,000 RMB in Shanghai (National Bureau of Statistics, 2005).

This inequality is not just at the provincial level – it also exists at the individual level. In 2007, China's urban residents earned 3.2 times what rural residents earned, and China's richest 10% owned 40% of all private assets (Roberts, 2006). The gap in income has been widening at an alarming rate since the end of the Cultural Revolution, when it was around 100 RMB. It reached almost 1000 RMB in 1990 and grew to nearly 6000 RMB by 2003 (Kwan, 2004). Even though the ratio of urban areas to rural areas increased to nearly 3.5 in 2003, there are still millions of people affected by this incredible income disparity.

Case Study 1: Soviet Union

A transition economy is one that is changing from a centrally planned economy to a free market by coupling economic liberalization with macroeconomic stabilization via restructuring and privatization of resources. The Soviet Union's economic transition provides an interesting comparison to China's current economic transition. Before its collapse, the Soviet Union was the second-largest economy in the world and the first centrally planned economy in the world. Its economy followed the principle of state ownership and focused on fast economic growth in manufacturing. Agriculture could not really prosper due to widespread social unrest, but it followed a system of collective landownership. In these regards, the Soviet economy was quite similar to that of China. However, as the time for economic reform approached in the Soviet Union, many mistakes were made.

First, the Soviet Union allowed the number of enterprises and government regulatory bodies to multiply, and this increased complexity resulted in slower communication, higher costs, and decreased efficiency. These three characteristics diminished the government's ability to respond quickly to change, especially because it had retained a top-down approach to governance and planning. The cost-, time-, and energy-inefficient approach to economic regulation and planning caused government spending to spike, economic planning to lose precision and effectiveness, and many enterprises to collapse. Thus, the Soviet government lost control of the economy and ultimately collapsed.

China should look carefully at the mistakes made by the Soviet government and ensure that it does not lose the ability to respond quickly, effectively, and efficiently to changing environments. As a transition economy, much is in flux, and the government should ensure it does not lose control of the economy during its unprecedented rate of growth.

Case Study 2: India

India provides an interesting comparison to China. Both are in the process of developing, but both are doing so in different ways. In terms of agriculture, India and China are the world's two largest producers of farm output, and over half of each workforce is in agriculture. In addition, both have undergone modernization processes.

Fig. 4: Comparison of China and India's Agricultural Situations

China	India
<ul style="list-style-type: none"> ▶ 1st farm output ▶ 10.6% of GDP ▶ 69% of workforce 	<ul style="list-style-type: none"> ▶ 2nd farm output ▶ 16.6% of GDP ▶ 60% of workforce
<ul style="list-style-type: none"> ▶ Agriculture as one of the Four Modernizations (1978) <ul style="list-style-type: none"> ▶ Responsibility contract system ▶ Irrigation projects ▶ Large state farms ▶ Mechanization and fertilizer use 	<ul style="list-style-type: none"> ▶ Green Revolution (1970s) <ul style="list-style-type: none"> ▶ Introduction of high-yielding seeds ▶ Increased use of fertilizers and irrigation

Though India's process to modernization has been a bit faster, its current agricultural situation is concerning. According to the World Bank's "India Country Overview 2008."

Slow agricultural growth is a concern for policymakers as some two-thirds of India's people depend on rural employment for a living. Current agricultural practices are neither economically nor environmentally sustainable and India's yields for many agricultural commodities are low. Poorly maintained irrigation systems and almost universal lack of good extension services are among the factors responsible. Farmers' access to markets is hampered by poor roads, rudimentary market infrastructure, and excessive regulation.

According to the World Bank, some of the factors leading to India's current situation include the following. First, India's large agricultural subsidies hamper investment that could enhance productivity, and overregulation has increased costs, prices, and uncertainty. Secondly, India lacks a strong infrastructure, and its water allocation is inefficient, unsustainable, and deteriorating. Thirdly, socioeconomic issues such as illiteracy have led to slow progress in implementing reforms. Fourthly, plots of land are very small and are increasingly fragmented due to family quarrels and such. Finally, India has been slow to adopt modern practices and technologies due to the ignorance, cost, and infeasibility that have resulted from overregulation, lack of infrastructure, poor education, and limited land (World Bank, 2009).

What Does This Mean for China?

Looking to the future, China should bolster three things: (1) infrastructure, (2) the adoption of new technologies at an appropriate pace, and (3) social securities.

1. China should bolster its infrastructure to avoid India's current problem where farmers cannot get their goods to market. Because China's infrastructure is also lacking, it needs to be bolstered at a faster rate. If the infrastructure cannot keep pace with the rural development, then the rural development will also stall, and once growth loses momentum, it is often difficult to regain it. To do so, China will have to increase its spending on the rural regions. Though the figure has moved up and down from 1980 to 2005, government spending on agriculture fell from just under 12% in 1980 to just over 8% in 2004 (Xiangping Jia, 2007). While a balance must be struck between funding the "new" industries and funding agriculture, with 69% of its workforce in agriculture, the government should bolster its agricultural spending, lest it fall into the same trap as India. Building a strong agricultural base of richer farmers with better infrastructure and higher availability to markets would help China to sustain its unprecedented growth over a longer horizon and to avoid India's pitfall.
2. China should also encourage a speedy yet reasonable adoption of new technologies. China should try to avoid India's problem of slow modernization but should remember Stage 3 of reformation, during which time it experienced stagnation in the agricultural industry because farmers could not afford to keep pace with the new technologies. In 2006, the Chinese government decided on a new agricultural technology program in which the government will (a) encourage local organizations to promote new technologies and (b) encourage the expansion of the agricultural technology service sector through infrastructure investment. This new program under Premier Wen Jiabao shows the government may be realizing the necessity of supporting the 900 million rural Chinese with greater technology and market availability in order to support its overall growth.
3. If China can bolster its social securities, it will not only advance its aims of creating a socialist harmonious society but also help decrease the income gap. With more social securities, rural farmers can spend their money more freely without worrying about a sudden and major expense driving them into poverty. The personal savings rate is 30-40% of disposable income, compared to 3-4% in the US. Arguably, Chinese citizens should borrow against future income (which should be high given the economic growth) and, therefore, decrease their savings. However,

because there exists no social safety net for them should a sudden and/or major expense arise, they fear to spend too much. By bolstering its social securities, China can increase domestic spending as a means to fuel economic growth. Rather than export-oriented growth, China could enjoy two-pronged growth from both foreign investment and domestic spending. Thus, China could achieve two goals – a more sustainable growth strategy and a more harmonious socialist society.

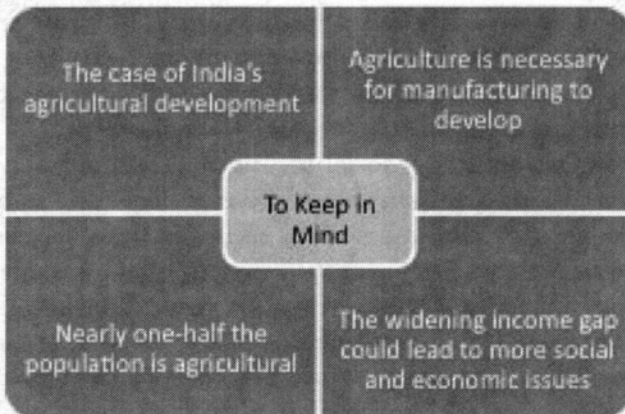
In addition to bolstering these three things, China should avoid (1) overregulation and (2) land fragmentation.

1. Overregulation increases time, cost, and energy inefficiency, and given China's government-heavy approach to many aspects of reform, it should be wary of overextending itself. India's subsidies and overregulation have been quite detrimental to its agricultural industry by increasing inefficiency and uncertainty, so China should keep this in mind as it charts its course to a free market.
2. As China modernizes its policies regarding the sale and purchase of rural land, it should avoid land fragmentation. As land plots grow smaller, so do their efficiencies, profits, and abilities to modernize. However, since the government still controls the sale and purchase of agricultural land, this should not be an issue for a while.

What China Should Keep in Mind

As China moves forward, it should keep the following in mind.

Fig. 5: What China should keep in mind as it moves forward



Since India's agricultural industry is so similar to that of China, China can take away a lot from India as an example of what works and what does not. Of course, there are many differences between the two nations in terms of political structure and such, but China is headed towards some of India's pitfalls (such as lack of infrastructure spending) but still has time to change course. The government appears to have realized that a change of course is necessary since it will be increasing rural spending by 120.6Bn RMB in 2009. Also, the government is increasing spending on agricultural restructuring in which local environments produce what it is best suited to those environments, improving the safety of water, and providing better seed varieties (Xinhua, 2009).

China also needs to maintain its high growth rate of urbanization. As modern practices and technologies are adopted, fewer people will be needed in the agricultural industry, so the cities will have to absorb more people in the manufacturing and service industries. However, agriculture is necessary for manufacturing to develop as well, so a balance of focus must be found between the urban and rural areas.

China needs to manage its income gap as quickly as possible and promote the stable development of agriculture. To facilitate sustained income growth, the government could (a) employ preferential policies, the safeguarding of land-use rights, and direct subsidies, (b) invest in infrastructure, technology, and pest and disease prevention, and (c) invest in financial and social services like healthcare, education, safe water supply, and public transportation (Gov.Cn).

Finally, China just needs to keep in mind that so much of its population is rural. Thus, spending should be increased to boost infrastructure and to improve quality of life. Since China has the twin priorities of economic growth and social stability, it must consider the impact of its urban-heavy policies and spending and perhaps reconsider its route to development.

References

- (n.d.). Retrieved May 02, 2009, from Gov.Cn: http://english.gov.cn/2007-12/24/content_852598.htm
- (n.d.). Retrieved April 30, 2009, from Rural Development Institute: http://www.rdiland.org/OURWORK/OurWork_China.html
- (2006, 9 11). Retrieved May 3, 2009, from Gov.Cn: http://www.gov.cn/english/2006-09/11/content_384880.htm
- (2009, 04 27). Retrieved May 05, 2009, from Exxun: http://www.exxun.com/afd_hy/China/ec_gdp_composition_sector.html
- Agriculture, U. S. (2007). *National Data Results*.
- Fan, S., Zhang, X., & Robinson, S. (2001). Structural change and economic growth in China. *Review of Development Economics*.
- Guo, K., & N'Diaye, P. (2009). Employment Effects of Growth Rebalancing in China. *IMF Working Paper*.
- Kwan, C. H. (2004, August 25). *China in Transition*. Retrieved May 9, 2009, from How to Solve

- the Three Agriculture-Related Problems - Labor Mobility Holds the Key: <http://www.rieti.go.jp/en/china/04082501.html>
- National Bureau of Statistics. (2003-2005). *China Statistical Yearbook*.
- Pan, L. (2006). *Ten features in China's 11th five-year plan*. Retrieved May 7, 2009, from GOV.cn: http://www.gov.cn/english/2006-03/08/content_246945.htm
- Roberts, D. (2006, February 16). *China's Widening Income Gap*. Retrieved May 5, 2009, from BusinessWeek: http://www.businessweek.com/globalbiz/content/feb2007/gb20070216_056285.htm
- World Bank. (2008). Retrieved May 05, 2009, from India Country Overview 2008: <http://www.worldbank.org.in/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/INDIAEXTN/0,,contentMDK:20195738~menuPK:295591~pagePK:141137~piPK:141127~theSitePK:295584,00.html>
- World Bank. (2009). Retrieved May 05, 2009, from India: Priorities for Agriculture and Rural Development: Though India's process to modernization has been a bit faster, its current agricultural situation is concerning. According to the World Bank's "India Country Overview 2008":
- World Bank. (2009). *Country Profile: China*.
- Xiangping Jia, A. F. (2007). *Thirty Years of Agricultural Transition in China (1977-2007) and the 'New Rural Campaign'*. Montpellier.
- Xinhua. (2009, May 03). *China View*. Retrieved May 09, 2009, from China pledges hefty investment to boost agriculture: http://news.xinhuanet.com/english/2009-03/05/content_10946914.htm
- Xinhua. (2009, May 11). *China.org*. Retrieved May 11, 2009, from Government should spend to modernize agriculture: http://www.china.org.cn/government/NPC_CPPCC_2009/2009-03/11/content_17426076.htm
- Yang, D. T., & Li, Y. (2008). *Agricultural Price Reforms in China: Experience from the Past Three Decades*. Agroalimentaria.