

Transitions in China's Economic Growth: Realities and Challenges

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Introduction

It is an irrefutable fact that the Chinese economy has grown rapidly for nearly 30 years, in particular in the 10th Five- Year Plan terms (2001-2005). At the same time, China's economic development is challenged severely by declining efficiency, imbalance between investment and consumption, resource and environmental constraints, and increasing differentiation in incomes.

The need for a consistent transformation of the economic growth pattern was realized in the 1990s. In the 9th Five-Year Plan (1996-2000), the goal of transition of the economic growth mode from extensive to intensive was initially shaped. Furthermore, economic structure adjustment and upgrading had been regarded as the theme of development during the 10th Five-Year Plan period (2001-2005). In 2002, the Chinese Communist Party (CCP)'s 16th National Congress advocated that: "China would pursue a new path to industrialization featuring high technology, good economic returns, low resource-consumption, low environment pollution and the full display of advantage in human resources."¹ In reality, however, it seems that so far these goals have been fulfilled only in part.

This situation is challenging us with several major questions: Is China's current economic growth mode sustainable? Why is it so difficult for China to bring about the transformation in reality? What are the challenges that confront China's economic growth in the near future? This paper tries to answer these questions and is structured as follows: section 1 describes the basic characteristics of China's current economic growth. Section 2 discusses the constraint conditions for transitions in economic growth at the present time. Section 3 analyzes the major challenges facing China for replacement of the growth model.

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¹ Jiang Zemin's Report an 16th Party Congress, <http://www.china.org.cn>, (accessed Mar. 20, 2007)

Realities in Chinese Economic Growth, 2000-2005

Since 2000, China's economy has been continuing to keep a high growth rate, and its economic strength has been improved. However, the current economic growth, which is mainly fuelled by pouring resources-capital, human and natural- into the economy, is facing serious challenges in the long run.

1. Declining efficiency. China's economy grew at an annual rate of 10 percent during the past 6 years, but we should not be optimistic about the economic efficiency indicators. The growth rate of labor productivity is stagnating, and the average annual growth rate is 1.1% in the period of 2001-2005, which is almost as same as that from 1991 to 1995 (1.2%) and that from 1996 to 2000 (1.1%); investment is becoming less efficient, as the investment benefits coefficient, which shows the unit of investment to generate an additional unit of output, was Y62.9 per Y100 in 1995, Y29.0 per Y100 in 2000, and Y25.3 per Y100 in 2005², with an obviously downward trend. The total factor productivity (TFP) growth, a critical contributor to economic expansion, is falling. According to Angang Hu's calculation, the average annual TFP growth rate was 2.28 percent, and it accounted for 27.8 percent of the growth of the economy from 1995 to 2001, but in 2003, TFP growth rate became 1.1 percent and was responsible for 12.2 percent of growth³. Similarly, Wanshun Qin's research showed that the TFP growth averaged 1.14 percent, and it accounted for 12 percent of the GDP growth from 2001 to 2005, which is relatively lower than 1.92 percent and 20 percent from 1978 to 2005, respectively⁴.

2. The imbalance between investment and consumption. In recent years, increasing investment and exports have been the main drivers of China's GDP growth, while consumption expanded at a much slower pace than investment or net exports. As shown in table 1, investment surpassed 40 percent of GDP since 2003-almost the highest such ratio in the world. Net exports have also increased from 2.5 percent of GDP in 2000 to 5.5 percent of GDP in 2005. At the same time, however, consumption share of GDP fell sharply from 61.1 percent in 2000 to 51.9 percent in 2005.

² China Statistical Abstract 2006, China Economic Yearbook 2006, and author's calculations.

³ Research Group from Science Academy of China and Tsinghua University, "the basic evaluation on China's economic situation in period of the 10th Five-Year Plan", *Reference Materials for Economic Research*, vol. 8, 2006.

⁴ Qin Wanshun, Qian Shichun, "Accelerate changes of economic growth mode, and focus on improving productivity", <http://www.China.com.cn>, (accessed Mar. 30, 2007).

As a result, this structure of economic growth has created numerous problems, both domestically and internationally. Within China, high rates of investment are creating excess capacity and declining productivity in a number of important industries, such as steel,

Table 1 Investment, consumption and net exports as share of GDP, 2000-2005

Year	2000	2001	2002	2003	2004	2005
Investment Share of GDP (%)	36.4	38.0	39.2	42.3	43.2	42.6
Consumption Share of GDP (%)	61.1	59.8	58.2	55.5	54.3	51.9
Net Exports Share of GDP (%)	2.5	2.2	2.6	2.2	2.5	5.5

Source: Author's Calculation based on China's economy Yearbook, 2006.

automobile, aluminum and coke. Overinvestment has also led to surging demand for energy and increasing environmental pollution. Externally, China's booming trade surplus is aggravating relations with its trade partners.

3. Natural resources and environmental gaps. Economic growth has put mounting pressure on natural resources and the environment, which raises substantial challenges for sustainable economic growth. The efficiency of use of several kinds of important resources, especially energy, has declined since 2000. The 10th Five-Year Plan has calculated the specific target

Table 2 China's Energy Consumption Growth

Year	1981-1985	1986-1990	1991-1995	1996-2000	2001-2005
GDP Growth (%)	10.80	7.90	12.0	8.30	9.5
Energy Consumption Growth (%)	4.10	4.30	4.80	-0.01	10.06
Energy Elasticity of GDP growth	0.38	0.54	0.40	0	1.05
Coal Consumption Growth (%)	4.94	4.40	4.38	-0.04	10.93
Coal Elasticity of GDP growth	0.46	0.56	0.37	0	1.15
Energy Consumption Per Y10,000 GDP(tons of SCE, at constant prices of 2000)	3.05 (in 1985)	2.69 (in 1990)	2.00 (in 1995)	1.40 (in 2000)	1.43 (in 2005)

Source : Research Group from Science Academic of China and Tsinghua University , "the basic evaluation on China's economic situation in period of the 10th Five-Year Plan", Reference Materials for Economic Research, vol. 8, 2006. China Statistics Yearbook, various years, and author's calculation.

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including a 20% cut in the amount of energy consumed per unit of GDP - The result of the execution of the plan, unfortunately, are totally different. Energy consumption rose at 10% annually; energy elasticity of GDP growth has significantly increased from 0.40 between 1991 and 1995, zero between 1996 and 2000, to 1.05 between 2001 and 2005; the amount of energy consumed per Y10,000 of GDP rose from 1.40 in 2000 to 1.43 in 2005 (See table 2).

The related consequence, of course, is environmental pollution. As shown in table 3, the central government has made it compulsory to cut the emission of key pollutants by 10 percent in the 10th Five-Year Program period. In the early 2000s, the emission of some pollutants actually declined briefly. But since 2003, the trend has been turned over. SO₂ and smoke and dust emissions have risen. Even more, almost all the key pollutants emissions have increased since 2004. Throughout the 10th Five-Year Plan period, the amount of all the rest of pollutants

Table 3 Key Pollutants Emissions during the 10th Five-Year Plan

Year	Target	2000	2001	2002	2003	2004	2005	The Change in 2005 Than in 2000 (%)
SO ₂ Emissions (10,000 tons)	10% reduction	1995.1	1947.8	1926.6	2158.5	2254.9	2549.0	27.8
COD (10,000 tons)		1445.0	1404.8	1366.9	1333.9	1339.2	1413.0	-2.2
Smoke and Dust Emission (10,000 tons)		1165.4	1069.8	1012.7	1048.5	1095.0	1182.0	1.4
Solid Waste Emissions (10,000 tons)		3186.0	2894	2635	1941	1762	1620	-49.2

Source: *China Statistics Yearbook, 2002*; *China Statistics Summary, 2006*.

emissions, were far away from the target which was set for the 10th Five-Year Plan, except that solid waste emissions had been cut by 49.2%, which is above the government's target.

4. Income inequality. Income distribution- between rural and urban areas, and east and west- was worsening. Experiencing tremendous economic growth, the Chinese face the ratio of greater income inequality. The income difference between cities and the countryside expanded from

2.97:1 in 2000 to 3.22:1 in 2005 and reaching 3.28:1 in 2006⁵. According to the Gini coefficient, an indicator of income inequality, 0.45 is the critical level of income unfairness. Some researchers have found that it has reached 0.45-0.48 in China. The radical conflicts triggered by social injustice are more likely to stop the social and economic sustainable development.

The Constraints on Transitions in Growth

It is obvious that the changing economic development mode has become a more urgent mission than ever before. At the same time, however, this is a long-term process that will involve major structural and institutional changes. Currently, what is becoming clear is that China's economic growth transition is facing the following constraints:

1. Rising demand for industrial goods under industrialization and urbanization. China has entered into the stage of accelerating development of industrialization and urbanization. With upgrading of consumption structure and expanding of urban construction, the demand for industrial goods, especially heavy industrial goods, is rising dramatically. These trends have been obvious during the past 6 years. Especially since late 2002, the Chinese economy has been experiencing a new wave of expansion, accompanied by an impressive growth in demand for housing, automobiles, and infrastructure construction. As such, the demand for intermediate goods, including steel, building materials and chemicals, has risen sharply, and then pushed the massive demand for energy. As a result, heavy industry was gaining an enlarged share in industrial output, from 50.8% in 1999 to 66.5% in 2004. The proportion of light and heavy industry has changed from 47.5:52.5 during the period 1996-2000 to 35.7:64.3 during the period 2001-2005⁶.

Moreover, driven by local and industrial interests, heavy industries with outdated technology, higher energy consumption, and higher pollution have undergone rapid expansion. For instance, steel output grew from 129 million tons in 2000 to 350 million tons in 2005, over half of the output produced by small furnaces and small converters; iron ore production grew from 220 million tons in 2000 to 370 million tons in 2005, half of it produced by outdated mining

⁵ China Economic Yearbook 2006, National Economic and Social Development Statistical Bulletin 2006, and author's calculation.

⁶ China Statistical Yearbook of Industrial Economy 2005, author's calculation.

equipment; coal production reached 2.19 billion tons by 2005, one third produced by small, inefficient mines⁷.

2. Science & Technology (S&T) and educational shortfalls. China has made tremendous progress in S&T and education in the last three decades, but such progress has lagged far behind its economic growth, and has a large gap compared with the most advanced developed countries in the world. Lacking incentive and capability for independent innovation, China's enterprises have to depend on foreign technology and key components, using labor and natural resources, to make a small profit while allowing foreign partners to earn the lion's share. Also, China's present education system is deeply affected by the elite examination system, where the only assessment criterion is the level of scores and students are not trained to think independently. This is a serious problem which contributes to why China lacks high-talented S&T personnel.

As a result, in the process of globalization, China is currently in the lower position of the global industrial division chain; most industries featuring labor and resource intensive, high energy consumption and environmental pollution have been shifting to China; China is becoming the "manufacture base of the world," while exporting more and more resources directly or indirectly, and paying a heavy price in environmental terms.

3. The institutional hindrances. Non-perfection of the economic system poses fundamental barriers for transitions in growth, including the following:

(1) Local level "Go it Alone" issues. Under the decentralization, local governments have more rights in budget, investment, international trade and land. In order to expand local tax revenue, and in pursuit of "political achievements", which is largely evaluated by GDP growth rate, local governments have played an active role in economic activities. They are likely to maximize economic growth at the expense of greater equality of distribution, the countryside and the environment. Many Chinese scholars, such as Jinglian Wu, a top Chinese economist, have made many deep researches about the relationship between government functions and the economic growth mode.⁸ But most significantly, it seems difficult to change this situation,

⁷ Weizhong Fang, "How is the Problems of Economic Construction Going to Happen? <http://www.finance-cu.com>, (accessed Dec. 2006). The data of 2005 has been revised according to China Statistical Abstract 2006.

⁸ Jinglian Wu, the Choice of China's Economic Growth Model, Shanghai Yuandong Press, 2006.

because “each aspect of the existing model represents the group interests of political and economic elites, who certainly are biting back and will be fighting last-ditch battles against attempts to modify the mode.”⁹

The real-world experience during the period of the 10th Five-Year Plan has also demonstrated that the pattern, in which local governments play a leading role in economic growth, has severely disrupted the country's macro-control, and then slowed the pace of replacement of the economic growth mode. For instance, since 2001, to deal with the problems of overgrowth of the high pollution, high energy consumption industries, the central government has adopted a series of administrative measures, such as “the notice of strengthening management of state-owned asset” (2001), “the notice to stop blind investments in steel, electrolytic aluminum, and cement industries” (2002), and “the notice on the liquidation of fixed assets investment projects” (2004). These measures, however, have not yet been implemented smoothly, because there were serious resistances from some provincial authorities.

(2) Social infrastructure gaps. Due to inadequate governmental function in public service and social administration provision, social infrastructure gaps were widening. With respect to social regulation, the whole standard and legal systems about quality, safety, energy consumption, and pollutant emission have not yet been established, and the enforcement of the existing law is often poor. Moreover, many defects exist with the resource and environmental protection policy. Take the natural resources tax as an example; the tax is levied on the amount of extraction more than that of possession, leading to serious waste of resources. In addition, the provision of public service in terms of education, medical service and basic social insurance does not meet the demands of residents to share the results of economic development.

(3) Imperfect market system and government control of factor pricing. Currently in China, commodity markets have been established, while a slow progress of development of factor markets and natural resource product markets has affected the entirety of the market system. In terms of labor markets, the division between urban and rural household registration systems made rural labor, lacking social insurance, the source of low-cost labor supply; in capital markets, under interest rate regulation, capital price is relatively low; the land market is not standardized,

⁹ Yakov Berger, “10th Five-Year Plan Gives Legitimacy to China's New Economic Growth Model,” Far Eastern Affairs, Jul-Sep 2006.

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because rural land is owned by collectives nominally, while local governments control land actually, and they prefer to offer low or zero land use prices to attract prospective investors. In natural resource product markets, more price controls still exist. For example, the price of water, electricity, gas, and heat is determined by the government, and the production price of natural gas and oil is directed by the government, which is valued lower compared to their real cost and scarcity in order to promote the downstream industries. Besides, the price level of coal, coke and natural gas is lower than that in international markets, stimulating the exports.

Lower government-controlled factor prices result in serious problems. Heavy use of cheap labor, natural resources, land, and capital may lead to exaggerating investment return and stimulating investment; furthermore, huge amount of investment returns have been taken by investors rather than sticking to other factor ownership. This, in turn, has strengthened the imbalance of investment and consumption, and worsened income distribution.

(4) State-owned enterprise (SOE) and private-owned enterprise (POE) views of “social responsibility”. China faces considerable obstacles in promoting corporate social responsibility (CSR), and irresponsible corporate behavior such as labor violations, ignoring environmental regulations and tax evasion, are widespread. In State-owned sectors, which previously operated along entirely socialist lines, social responsibility has gone out of fashion as corporations have focused on the need to become more businesslike. In the private sector, CSR is a new concept for most entrepreneurs, who make profit maximization their only goal without considering the externalities of their behavior. In a word, lacking an environment for CSR and related regulations, the Chinese firms currently remain indifferent towards their social responsibility. Furthermore, huge market demand and increasing intensive competition among firms and among local governments in recent years has worsened the situation.

Challenges: 2006-2010

China will experience rapid economic growth as well as more and more serious environmental issues in the coming decade. As shown in the 11th Five-Year Plan, Chinese leadership is finding it urgent to step back from its previous mode of economic growth. However, China must face up to the following challenges.

1. Consumption and investment driven. A rebalancing of the economy away from investment and net exports towards consumption is highly desirable and the government is committed to adopt policies. In terms of reducing investment, short-term measures are likely to focus on steps to cool down investment in sectors with excess capacity by increasing interest rates and investment taxes. Also, in 2007 the government will reintroduce dividends from SOEs, which will reduce the source of investment. In terms of promoting consumption, policies can be based on increasing the disposable income of residents by raising wages, cutting personal income taxes, and raising public transfers to rural households to boost rural consumption. Meanwhile, the government needs to adjust its outlay structure, that is, reduce its investment expenditure and increase its non-investment expenditure, notably those on health, education, welfare, and pensions. This should reduce the incentive for citizens to save and increase their willingness to spend. However, all the schemes currently on trial are relatively small-scale, and the transition to more consumption-driven growth seems a slow start.¹⁰

2. The role of technological innovation. Independent technological innovation is critical for China to transition towards a new mode of economic growth. S&T development will promote industrial structure adjustment to go up the international ladder. It will also be the key to a host of natural resource and environmental issues ranging from energy efficiency, clean coal, and conservation of water resources. Above all, home-grown technological innovation will improve the Chinese firms' competitive advantage in global markets.

China's 11th Five-Year Plan has formally set the goal of building China into an "innovation State." However, the road to the target is long and bumpy, because the Chinese "innovation system" faces enormous challenges, such as inadequate input, ineffective management of scientific research resource and excessive reliance on imported technology. Thus, China should make every possible effort to nurture its own innovative ability.

3. Building a "Public Service-oriented" Government. To promote balanced social and economic development, the government is trying to transform itself from an agent of economic development to a public service provider. Based on China's current situation, there are several paths towards a "Public Service-oriented" government including the following: (1) the party and

¹⁰ Nicholas R. Lardy, "China: Toward a Consumption-Driven Growth Path", <http://www.iie.com/publications/>, (accessed May 20, 2007)

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government affairs have to be separated, and so do the government and business. Enterprises should deal with their own affairs which are beyond the power of the government. Distortion of prices of production factors will also be avoided when market plays the leading role in resource allocation. (2) The traditional administrative decision-making system with highly concentrated power should be translated into one with a high degree of democracy and public participation. Adopting notification systems, public hearings, and consultation systems would help to translate more public opinion into both political and economic processes. (3) The GDP-oriented performance evaluation system for local government officials should be changed. The performance of provincial leaders should be measured by a more comprehensive appraisal system, which include more indices such as the index of environmental protection, resource saving and S&T development. Meanwhile, the central government should play a more active role in curbing local protectionism and foster a unified market in the country. (4) The government needs to give priority to providing social goods such as social security, medical services and mandatory education. More specifically, China's actual situation requires that government do a good job in social regulation. For example, a more perfect standard system about efficiency of using natural resources and environmental protection should be established and implemented, so as to enhance enterprises, in particular heavy industry enterprises, to adapt advanced technology and put backward production capability out of business. (5) More economic-incentive approaches should be induced in social administration. For example, environmental taxes and marketable pollution permits could be used to encourage firms to reduce discharges and save natural resources.

Conclusion

In the process of changing China's economic growth mode, we have made lots of effort and also encounter many problems. It is far easier to understand the necessity of changing the mode of growth than it is to implement the strategy, because several constraints exist in the current stage. Among these constraints are overgrowth of heavy industry, S&T and education shortfalls, and fundamentally, the defect of the current economic system. However, no problem can be solved without more effort. Toward a new growth path, China has no choice but to face up to these challenges: to rebalance between investment and consumption; to strengthen technological innovation, and to build a "Public Service-oriented" government.

The CCP will hold its 17th party congress in late 2007. Two related themes that are likely to become increasingly important over the next five years are “science development” and “harmonious society.” Also, the 11th Five-Year Plan (2006-2010) emphasized sustainable GDP growth and the quality, not quantity, of economic output. This means that China will make a concerted effort to follow a new-type development road, which will enable our country to emerge as an advanced industrial economy that depends on education and technology for its future growth.