Sustainability of China's Economic Growth

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Since the beginning of economic reform in 1978, China has experienced rapid economic growth. The GDP growth rate, according to official statistics, increased from an average of 6.1 per cent in the pre-reform period (1953–78) to 9.7 per cent during the reform period (1979–98).

Although there has been disagreement about the reliability of official statistics, rapid economic growth during the reform period is broadly accepted as a fact.

In recent years China's growth rate has been significantly lower. The official growth rate was 7.8 per cent in 1998, and the predicted growth rate for 1999 is 7.4 per cent. There has been continued deflation since 1997. Export growth became negative in early 1999, and turned positive in September 1999. A positive but low growth in exports can be expected for 1999. The trade balance remains in surplus, at US $19 billion in September 1999, but import growth has been much higher than export growth. Foreign reserves are high, reaching US $150 billion in September 1999. While foreign direct investment remains high, it has hardly increased over the previous year. The nominal growth rate of investment in fixed assets used to be 15–20 per cent, but more recently, it was only 8–10 per cent.

This paper attempts to answer the following questions:

- To what extent has China's economic growth accelerated in the reform period?
- Is rapid economic growth a short-run phenomenon that has been driven by high input growth, or is it a sustainable trend?[1]
- to what extent the rapid growth can be sustained in the coming decades of the new century?

1. How high was the growth rate?

Some research has suggested an upward bias in the official statistics for China's economic growth rate during the pre-reform and reform period. A World Bank study (1997) suggests an average 8.2 per cent growth rate for the period from 1978 to 1995 rather than the official growth rate of 9.9 per cent. Maddison (1998) suggests a 7.5 per cent growth rate during the same period.

Our recent study (Wang and Meng 1999) uses different methodologies[2] to examine the growth rate of industrial output and GDP. We suggest that the economic growth rate

[1] See Solow 1956, Lucas 1988 and Romer 1986 for growth theories; the World Bank 1993 and Krugman 1994 on East Asia's and China's economic growth.

[2] Including (a) comparison studies between changes in power supply, transport volume and quantity of 130 major industrial products, and growth of industrial output value, and (b) production function analysis for the period 1952–98.

in the pre-reform period (1953–78) should be adjusted from 6.1 per cent to 4.3 per cent. The growth rate in the earlier reform period (1979–90) should be adjusted from 9.0 per cent to 8.5 per cent. More statistical biases are found in the later period of economic reform (1991–98), for which the growth rate should be adjusted from 10.8 per cent to 8.6 per cent. The growth rate over the entire 20 years, from 1978 to 1998, should be 8.5 per cent instead of the officially recorded rate of 9.7 per cent.

2. Input-driving growth or efficiency changes?

Questions have been asked about whether the source of China's economic growth was driven by faster input growth or by changes in efficiency and productivity.

My study found that over the past 20-year reform period capital stock growth contributed 3.8 percentage points to the economic growth rate, and accelerated economic growth contributed 1.3 percentage points. However, only 0.3 of a percentage point can be attributed to increases in savings, another 0.3 of a percentage point resulted from foreign direct investment and foreign debt (excluding their effect on technical improvement and the spillover effect). The remaining 0.7 of a percentage point came from increased investment efficiency.

This is shown in Table 1. In the pre-reform period of 1961–77, the rate of investment in fixed assets to GDP is far below the saving rate, and the rate of capital formation to GDP is far below the investment rate. The former fact indicates that a large part of savings became increases in inventory, instead of being invested in fixed assets. Large inventory is a well-known phenomenon in centrally planed economies, as a lot of goods are produced without market demand (Kornai 1980). The latter fact indicates that a large proportion of investment funds was wasted in investment projects without forming capital stock. This implies low efficiency in investment or a high percentage of failed investment projects. As the result of both these factors, capital formation in the pre-reform period only accounted for 12 per cent of GDP, although the saving rate was as high as 30 per cent.

In the reform period, the saving rate increased from 30 to 37 per cent, but increases in the investment rate and the rate of capital formation are even larger, indicating that savings were used more efficiently in investment. To compare the results in the two periods, every hundred yuan of savings only formed 42 yuan capital stock in the pre-reform period, but 59 yuan in the reform period.

The above findings indicate that, as a result of marketisation, a large part of input growth in the reform period came from increasing efficiency in investment other than an increase in savings.

Table 1: Rates of saving, investment, and capital formation (%)

	1961–77	1978–98
Saving rate (GDP=100)	30.0	37.4
Investment rate (GDP=100)	18.5	26.8
Rate of capital formation (GDP=100)	12.6	22.2

Efficiency of capital formation (saving=100)	42.1	59.4

Note: investment rate is defined as the ratio of investment in fixed assets to GDP.
Source: SSB, various years.

In addition, human capital growth, measured by changes in the education level of labour force, was found to be significantly slower in the reform period than it was during the pre-reform period. This reduced its contribution to economic growth by 1.3 percentage points. This negative effect just offset the positive effect of faster capital growth. The growth rate of the labour force in the pre-reform and the reform periods is basically the same. Therefore, economic growth driven by aggregated input growth is basically the same in the reform and pre-reform periods. The acceleration of economic growth can be almost completely explained by increasing efficiency and productivity.

3. What sustained rapid economic growth over the past 20 years?

Although productivity changes are found to be the major source of faster economic growth, it was found not to be a result of technological improvement, in the main. The main engine of accelerated economic growth was improvement in factor allocation among sectors, which was led by market-oriented institutional changes.

The most important aspect of factor reallocation over the past 20 years resulted from rural industrialisation, which enabled about 100 million rural labourers to be transferred from the labour-redundant traditional agricultural sector to the rural industrial sector. Rural–urban migration, reallocation of labour and transfer of capital and human capital from the state to the non-state sectors also contributed significantly. A preliminary estimation suggests a contribution of 1.5–2 percentage points to economic growth can be attributed to factor reallocation.

Improvement in firms' efficiency induced by the changing incentive system, technological improvement led by technical innovation, introduction of foreign technologies and the spillover effect of FDI and foreign trade, together contributed another 2 percentage points to economic growth.

4. The remaining potential for rapid economic growth

The dramatic growth of the rural industrial sector, the township and village enterprise sector, has diminished from over 20 per cent annually in the 1980s and early 1990s to a relatively normal rate around 10 per cent in the past a few years. The growth rate of the rest of the non-state sector, the urban private enterprise sector, including foreign-owned enterprises, remained high but significantly lower than during the earlier reform period. Their gross industrial output growth rate was 18 per cent in 1998 but 30 per cent in 1997.

The evidence shows that there is remaining capacity for improvement in factor allocation and potential for growth of the non-state sector, but they are facing the constraints of market demand, supply of technologies and human capital, and institutional problems.

The following policy changes are found to be the key issues in sustaining a relatively high economic growth in the coming decades:

a. Urban development has been ignored for a long time, and the rate of urbanisation has been far lower than other countries The urbanisation rate is only 30 per cent in China while it stands at aroung 40–50 per cent in countries with a similar level of income per capita. Accelerating urbanisation will be an important source of economic growth in the coming 10–20 years.
b. The current allocation of financial resources is inefficient, since a major part of bank funds (about 55 per cent) goes to the state enterprise sector, although the SOE sector only produces a minor proportion of GDP (about 35 per cent). Financial reform is essential to improve firm finances, particularly in private enterprises.
c. Further economic and political reform to create a better environment for fair market competition is necessary. This includes reforming the government revenue system and restructuring the roles of provincial, municipal, and local governments.
d. There needs to be a major improvement in the legal system to provide better protection for businesses and for technical innovation.

5. A forecast of economic growth

In consideration of the above factors and policy issues, Table 2 provides a breakdown of the economic growth rate over the past 20 years and a forecast for the coming two decades. It shows a possible 4.9 per cent growth rate driven by input growth during the coming two decades (2000–2020). However, with further improvement in factor allocation and changes in the institutional environment creating a more efficient market mechanism, technical progress and productivity changes may result in a growth rate of 7 per cent.

Table 2: Growth accounting and forecast

	Pre-reform 1953–78		Reform 1979–98		Future 1999–2020	
	Factor growth	Contribution to growth	Factor growth	Contribution to growth	Factor growth	Contribution to growth
Capital	6.2	2.5	9.5	3.8	7.5	3.0
Savings				(+0.3)		(-0.3)
Efficiency Of K formation				(+0.7)		(-0.2)
FDI				(+0.3)		(-0.3)
Labour	2.6	1.0	2.9	1.1	0.7	0.3
Human capital	12.8	2.6	6.1	1.2	8.0	1.6
Sum of factor contribution		6.1		6.1		4.9
Factor reallocation				1.6		1.4
TFP from FDI				0.6		0.3
TFP other				1.4		
				(0.2)		(0.4)
Sum of TFP		0		3.6		
				(2.4)		(2.1)
GDP growth		6.1		9.7		

	(4.3)		(8.5)		(7.0)

Note: numbers in parentheses with '+' or '-' indicate changes from the previous period. Numbers in parentheses without plus or minus symbols indicate alternative calculations of growth rate that differ from the official statistics.
Sources: calculated form SSB 1998, 1999.

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