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How much does investment drive economic growth in China?

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Abstract

Investment-driven growth has long been regarded as a key development strategy in China. This paper investigates empirically the validity of this view. Post-1990 data analyses and macroeconometric model simulations show that market demand has become a regular force in driving investment since reforms, that non-demand-driven investment growth contributes to increasing capital–output ratio far more than output growth, that government investment exerts a pivotal role in amplifying investment cycles, albeit effective in promoting employment, and that delayed and rising consumption from current investment surge can help sustain the impact of growth even with constant-returns-to-scale in the long-run GDP.

JEL classification: E22; E62; R34; O23; P41

Keywords: Investment; Growth; Impulse response function; Cointegration; Granger non-causality

> 'By three methods we may learn wisdom: first, by reflection, which is the noblest; second, imitation, which is the easiest; and third by experience, which is the bitterest.'
>
> – Confucius

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[1] The views expressed are those of the authors and are not necessarily those of the ADB.

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Table 1
China's investment ratios, 1978–2004

Year	GFCF % to GDP	GCF % to GDP
1978	29.8	38.2
1979	28.3	36.2
1980	29.0	34.9
1981	25.6	32.3
1982	27.2	32.1
1983	28.1	33.0
1984	29.7	34.5
1985	30.0	38.5
1986	30.6	38.0
1987	31.8	36.7
1988	31.4	37.4
1989	26.4	37.0
1990	25.8	35.2
1991	27.9	35.3
1992	32.2	37.3
1993	37.6	43.5
1994	36.1	41.3
1995	34.7	40.8
1996	34.2	39.3
1997	33.6	38.0
1998	35.0	37.4
1999	35.7	37.1
2000	36.5	36.4
2001	37.3	38.0
2002	38.9	39.2
2003	42.1	42.4
2004	43.8	44.2
Average	32.6	37.6

Note: GCF denotes GFCF plus inventory or change in stocks. *Source*: China Statistical Yearbook, 2005.

1. Another East Asian 'Miracle'?

The spectacular growth of China over the last two decades apparently adds significant force to the East Asian 'Miracle'.[2] During the period 1990–2003, China's growth has been averaging 9.3% in terms of GDP per annum while the accompanying rate in gross fixed capital formation (GFCF) is 14% and the rate of the total investment in fixed assets (TIFA) is 15%.[3] Today, GFCF accounts for over 40% of nominal GDP, as compared to less than 30% in the early 1980s, see Table 1. These records have definitely outperformed those of Japan and the US and many other Newly Industrialized Asian Economies (NIAEs), see Table 2. The GFCF growth also remains

[2] The East Asian 'Miracle' refers to the myth that the engine driving economic growth is essentially capital accumulation instead of total factor productivity growth, see e.g. Young (1995) and Senhadji (2000).

[3] The TIFA is more often used than the GFCF in China, as it is published monthly and more timely than GFCF. Both GFCF and TIFA are deflated by the price index of fixed assets from the China Statistical Yearbook 2004 for the period 1991–2003. The price index of raw materials and energy is used for 1990 as the price index of fixed assets is unavailable that year.