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Charting China's Economic Growth

Sidney Powell
The University of Adelaide

In the 21st century, China has emerged as an economic powerhouse, and currently the second largest economy in the world behind the United States (BBC News, 2011). Thirty years ago, the current level of economic prosperity the nation enjoys was no more than a dream; most of the population lived in poverty (Zhang, 1996). In the wake of China's rapid and sustained economic growth, many researchers identified improvements in in productivity and capital accumulation as the two main economic drivers (Hu & Khan, 1997). Gains in these two areas followed the government's ambitious program of reforms undertaken in 1978. These reforms sparked a chain reaction that stimulated industrial and agricultural production and attracted large quantities of foreign direct investment (FDI) to the country. A primary achievement of the reforms was the reallocation of resources from the public to the private sector. The remarkable transformation is evident in the sustained GDP growth rate of 9.7% between 1979-2006 (Hassan, 2011).

In the pre-reform era, inefficient central planning hampered economic performance. The agricultural sector was collectivized and economic production was dictated by quotas rather than supply and demand (Morrison, 2012, p. 2). Most industrial production was controlled by state owned enterprises (SOE), in 1979 they produced 78% of all industrial output (Zhang, 1996). International trade was a small part of the economic activity, only accounting for 11% in 1978, as the government's economic policies emphasised 'self-sufficiency' (Zhang, 1996).

The government began a series of extensive reforms in 1978, commencing the economic transformation of China. The changes re-oriented the country from central planning towards a decentralized, market-based economy. In 1978, communal farming was replaced by the Family Production Responsibility System (Zheng, Bigsten, & Hu, 2009, p. 4). This allowed households to farm autonomously and sell surplus crops at market prices. The introduction of the profit incentive to agricultural production led to a 17.6% jump in rural incomes in 1979; the growth rate remained above 10% until 1985 (Woo, 1997, p. 11). Income from agriculture was reinvested in Township Village Enterprises (TVE) (Zheng, Bigsten, & Hu, 2009, p. 6). These were market-oriented service and manufacturing businesses located in towns and villages; hence the name. The proportion of gross industrial output manufactured by TVEs more than tripled in the fourteen years following 1979 due to levels of technical

efficiency superior to those of SOEs (Zhang, 1996). TVEs absorbed the labour surplus created by the agricultural reforms, leading to a migration to urban areas as urban employment jumped from 105 million to 260 million between 1980 and 2003 (Beale, Potton, Townsend, & Webb, 2006, p. 46). The migrating workers had a higher marginal product in manufacturing companies, leading to output jumps comparative to the increases in labour input (The Economist, 2009).

Along with the reforms to agriculture, barriers to international trade were removed to encourage foreign investment. Special economic zones were designated in several regions as efficient FDI conduits (Chen & Feng, 2000, p. 13). China's large population made it an attractive destination for investment because it offered low-cost labour and a large potential market (Morrison, 2012, p. 1). Its comparative advantage in labour-intensive industries facilitated greater allocative efficiency as foreign and domestic resources flowed to the manufacturing sectors of the economy (Woo, 1997, p. 15). Joint ventures between foreign companies and Chinese partners were important for several reasons; the provided new technologies and capital equipment, managerial skills and technical know-how, and access to international distribution networks (Woo, 1997, p. 15). Exposure to foreign competition also forced Chinese companies to become more efficient and adaptable. These benefits provided a huge boost to China's productivity and gross product.

China had always had a high rate of internal savings, even in the pre-reform years. This is measured by the aggregate nominal savings by the public and private sectors as a percentage of the nominal GDP. In 1979 the savings level was 32% and later rose to the staggering figure of 53.9% in 2010 (Morrison, 2012, p. 5). In comparison, the US figure for the year 2010 was 9.3% (Morrison, 2012, p. 5). The savings rate had its roots in cultural heritage favouring frugality and pragmatism in spending (Zheng, Bigsten, & Hu, 2009, p. 12). The high rate of savings played an important role in dampening inflation pressures within the economy. The large flow of funds to banks in the form of household savings delayed the need for the central bank to print money. Additionally, as cash was the main form of savings in the 1980's, its demand remained strong, keeping the real value of money stable and preventing price rises (Woo, 1997, p. 16). The large level of domestic savings kept the Chinese interest rates

low, encouraging high levels of investment spending on capital stock (Zheng, Bigsten, & Hu, 2009, p. 10).

Undoubtedly, China's GDP growth since 1979 was driven by productivity gains and capital accumulation. A 1994 report by the IMF attributed 58% of China's GDP growth from 1979-1994 to increases in capital inputs (Hassan, 2011). China's large pool of domestic savings was used to acquire capital, in the form of plants and equipment, which was combined with labour to produce output. The bulk of China's investment spending has went towards building infrastructure such as roads, dams and power plants; the rest purchased equipment and machinery (Zheng, Bigsten, & Hu, 2009, p. 13). Specific examples included the allocation of land for development at zero cost and the channeling of investment to SOEs through low-interest loans and government subsidies (Zheng, Bigsten, & Hu, 2009, p. 10). In China's case, the domestic savings were augmented by FDI streams, providing a further boost to capital stock levels. Increases in the capital inputs or labour inputs had a corresponding positive effect on gross national production. Between 1979-1994, China's capital stocks averaged 7% growth annually (Hu & Khan, 1997). The sustained increase in capital stock was a lynchpin of Chinese economic strategy, helping to fuel the annual GDP growth rate of 9.7% from 1979 to 2006 (Hassan, 2011).

Improvements in productivity are the other piece of the puzzle regarding economic growth. The fact that China's GDP levels grew faster than its capital stocks suggests that contribution of improved productivity. Productivity governs the level of capital and labour inputs necessary for a given level of output (The Economist, 2009). China experienced a substantial gain in productivity after 1979, indicating that the nation's industries became more efficient at utilizing available resources. The commonly used gauge of productivity is Total Factor Productivity (TFP), defined as the percentage increase in output that is not accounted for by changes in the volume of inputs of capital and labour (Morrison, 2012, p. 6). The IMF report previously mentioned estimated that 42% of the GDP growth between 1979-1994 was due to gains in productivity (Hassan, 2011). Additionally, the TFP growth averaged 4% annually for almost two decades, beginning in 1990 (The Economist, 2009). This growth rate is more than double that of the East Asian 'Tiger economies' Thailand and South Korea (The Economist, 2009). There were several key internal and external sources for the

improvements. The agricultural reforms of 1978 had greatly enhanced labour mobility, allowing labour resources to be allocated where they had the highest marginal product. International trade had imported improved technology and managerial techniques, as well as narrowed the technological gap between China and Western nations. Education reforms, including increased funding and the prioritization of academic achievement over political activism added to the labour force efficiency. Banking reforms had replaced the pre-reform source of project funding, the government budget, with interest-bearing bank loans, introducing more accountability to private sector project management. The combination of these factors led to tangible increases in the TFP of the Chinese economy and augmented the effects of the capital accumulation already discussed.

The future holds strong prospects for continued Chinese economic growth and prosperity. Whilst being the second-largest economy in the world, its standard of living, as measured by GDP per capita (PPP adjusted), still lags behind OECD countries; ranked 121 in the world by the CIA (Central Intelligence Agency, 2012). The gap between this statistic and real GDP suggests that there is continued room for economic growth as China's living standards catch up with other OECD nations. The principle of diminishing returns holds that the rate of economic growth eventually slows in response to continued increases in capital and labour inputs. At the outset of the economic reforms, China's level of technology, human capital and capital stocks were far below those of OECD nations, so small incremental improvements in these factors had large corresponding effects on gross output and productivity (Zheng, Bigsten, & Hu, 2009, p. 6). As China catches up to the West technologically and in education levels the gains occur at a declining rate. Applying this to China, theoretically the GDP growth levels will slow to a more sustainable level in the long run, closer to that of the Unites States (Morrison, 2012, p. 6).

There are other, secondary concerns that may pose a challenge to continued growth. As a result of the One Child Policy, the population is ageing, meaning the labour force will shrink in the future, with negative implications for GDP growth (Branigan, 2012). China's industrialization came at the expense of massive environmental degradation, raising potential future liabilities such as healthcare costs related to air pollution, declining in response to spoiled landscapes, and depletion of natural

resources needed for growth. Additionally, SOEs also remain a burden on the economy; they deliver low returns (a median annual return of 1.5% in 2003) and possess high levels of unserviced debt (Zheng, Bigsten, & Hu, 2009, p. 14). One final problem worth considering is the corruption lack of transparency in government activity; this has misallocation of funds and bribery, both of which hamper economic efficiency (Morrison, 2012).

In recent years, bilateral relations with China have had a decisively positive influence on the Australian economy. It is currently both Australia's largest export market, as well as our largest source of imports (Dewar, 2011, p. 5). China is one of the largest energy consumers in the world, in the next five years, its coal consumption needs are projected to increase by six times Australia's entire energy consumption (Young, 2011, p. 1). These growing energy needs have occurred on the back of large-scale urbanisation and industrialisation in the world's most populous nation. Trade with China was worth $105 billion to the Australian economy in 2010-11, this is based on their enormous purchases of iron ore, coal and natural gas (Young, 2011, p. 2). From 2009-2010, the Australia's iron ore and coal exports, to China alone, totaling $30 billion, amounted to more than triple Australia's entire exports to the US. Their demand for Australian commodity exports helped the Commonwealth avoid the worst effects of the Global Financial Crisis in 2008/9 (Young, 2011, p. 2). Due to the current mining boom, China has invested heavily in the Australian resources sector, injecting $12 billion in 2009-10 (Dewar, 2011, p. 5). The effects of the mining boom have trickled to other areas of the Australian economy, with retailers, engineers, lawyers, banks and many other sectors benefitting (Young, 2011, p. 2). Though Australian investors have every reason to remain bullish on China and maintain exposure to continued Chinese economic growth, investors should remain robust to the possible future cooling of China's economy.

China's meteoric economic improvement owes its inception to the government reforms of 1978. The flow on effects from these policy changes sparked a paradigm shift in the fundamental workings of the economy towards direction by market forces. Allocative efficiency within the economy was immensely improved, and when this was combined with the multifaceted benefits of foreign investment, the results were

sustained and large-scale increases in productivity and levels of capital. These valuable economic performance indicators have continued to grow over the last thirty years, to the delight of Australian investors and businessmen. Whilst it is accepted economic principle that Chinese growth levels approaching double digits cannot continue indefinitely, there is still room for improvement yet.

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