

# The return of the dragon: China's growth experience<sup>9</sup>

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Australia, China and the US are New Zealand's top three export destinations. New Zealanders know a lot about Australia and the US, but what about China? China's economic development experience since 1978 has been one of the great economic success stories of the twentieth century. The aim of this article is to present some aspects of China's growth experience over the last few decades.



## BACKGROUND

The Chinese imperial system collapsed in the Revolution of 1911, and the Republic of China was declared in 1912. The original Republic was replaced by the Communist People's Republic in 1949,<sup>10</sup> and in the 1950s Chinese politics and culture were heavily influenced by the Soviet Union. Until the reforms of Deng Xiaoping, which began in 1978, China had a centrally planned economy, characterised by low levels of income and widespread poverty. But since 1978 China has seen high economic growth rates.<sup>11</sup>

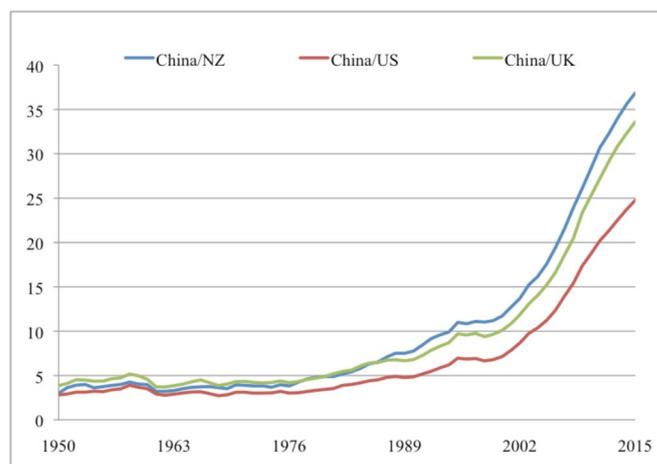
With more than 1.3 billion inhabitants, China is the world's most populous country, and is currently the second-largest economy in terms of GDP (after the US). Adjusting GDP for international price differences, China is now the world's largest economy.

## THE CHINESE MIRACLE

The Chinese economy grew at an annual average rate of 2.6% during 1950-1977, but then at a rate of 7.4% during 1978-2015, the highest of any country in the world and five percentage points higher than the US economy.

Figure 1 illustrates the speed at which China is catching up with the western world. The figure shows per capita GDP in China (adjusted for international price differences) as a percentage of per capita GDP in the US, the UK and New Zealand. In 1950, per capita GDP in China was less than 3% of the US level. This ratio stayed the same until 1978, when the gap started to close, and the figure now stands at 25%.

Figure 1. Price-adjusted GDP per capita in China as a percentage of GDP per capita in selected OECD countries



Source: The Conference Board Total Economy Database, May 2015, [conference-board.org/data/economydatabase](http://conference-board.org/data/economydatabase).

## WHAT ARE THE SOURCES OF GROWTH IN CHINA?

Growth accounting, a technique for explaining the factors that determine growth, is one way to answer such a question. It assumes that the total level of output in a country ( $Y$ ), depends on the total amount of capital ( $K$ ), the total amount of labour ( $L$ ), and overall economic productivity; this productivity level is commonly known as "total factor productivity" ( $TFP$ ).  $Y$  is related to  $K$ ,  $L$  and  $TFP$  in this way:

$$Y = TFP \times K^{\alpha} \times (L \times h)^{1-\alpha}$$

In this equation,  $h$  is a measure of worker quality ("human capital") and  $\alpha$  is a measure of the relative importance of capital and labour in production.  $TFP$  reflects the level of technology and other factors which influence output for a given level of  $K$  and  $L$ . From this equation we can derive another equation for the rate of growth of  $Y$  (output):<sup>12</sup>

$$\begin{aligned} \text{growth rate of } Y &= \text{growth rate of } L \\ &+ \frac{\alpha}{1-\alpha} \times \text{growth rate of } \frac{K}{Y} \\ &+ \text{growth rate of } h \\ &+ \frac{1}{1-\alpha} \times \text{growth rate of } TFP \end{aligned}$$

Measuring  $Y$  as inflation-adjusted GDP and assuming  $\alpha = 0.5$ , Zhu (2012) presents such a decomposition of China's growth. Table 1 shows some of Zhu's results where  $N$  is the population. One of the main messages in the table is that China's rapid growth over the last three decades has been driven by productivity growth.

<sup>9</sup> Some parts of this article are based on Üngör (2014). For readers who wish to follow this topic in more detail, see the Fall 2012 issue of the *Journal of Economic Perspectives* and the edited volume by Brandt and Rawski (2008).

<sup>10</sup> "China" today generally refers to the People's Republic of China.

<sup>11</sup> Cheremukhin et al. (2015) provide a systematic analysis of both the pre-1978 reform and post-1978 reform periods. There are also some recent studies that discuss whether the pace of the Chinese expansion is bound to slow down; see for example Jiang and Yi (2015).

<sup>12</sup> See for example [flash.lakeheadu.ca/~mshannon/Crafts\\_Solow\\_growth\\_accounting\\_2008.pdf](http://flash.lakeheadu.ca/~mshannon/Crafts_Solow_growth_accounting_2008.pdf) for more details on how to derive an equation for the growth rate of  $Y$  from an equation for its level.

Table 1: Decomposing China's growth: 1952-2007 (annual averages in %)

	Growth rate of Y/N	Growth rate of L/N	Growth rate of K/Y	Growth rate of h	Growth rate of TFP
1952-1978	2.97	0.11	3.45	1.55	-1.07
1978-2007	8.12	0.57	0.04	1.18	3.16

Source: Zhu (2012)

## PRE-1978 VERSUS POST-1978

When the People's Republic of China was founded in 1949, more than 80% of the population were employed in agriculture. China chose a growth strategy based on the expansion of heavy industry. Rosenberg (1994) argues that the preoccupation of the Chinese government with heavy industry was hostile to technological innovation, resulting in poor TFP. Brandt and Rawski (2008) suggest that non-economic policy objectives, weak institutions and poor incentives were the underlying causes of productivity stagnation.

In contrast, the reforms after 1978 were partly aimed at rural economic development. These reforms included a move away from collective agriculture, promoting decision-making at the level of the individual farm by transferring land-use rights from collectives to individual households. Combined with price reforms designed to improve incentives for agricultural workers, this was successful in raising agricultural productivity (Naughton 1995, Chapter 4).

Market reforms were extended to urban areas and state-owned enterprises in 1984. These reforms included a gradual reduction of centralised control over price and production decisions, and the freedom of townships and villages to establish industrial enterprises outside of the central plan (Jian et al., 1996).

The transformation of the Chinese economy has been accompanied by a huge increase in international trade. China has become an increasingly important part of the global trading system, especially over the last two decades. China accounted for 12.3% of world merchandise exports in 2014, compared with less than 1% in 1980. China is now the largest merchandise exporter in the world.<sup>13</sup>

## UNFINISHED BUSINESS

Despite more than three decades of economic reforms, China still faces the challenge of reducing input market distortions. China is still far from a highly functioning, well-regulated market economy. Issues surrounding democracy, governance, transparency, internet censorship, environmental degradation and income distribution are challenges for Chinese policy-makers. These issues are all current topics of research on China.

One reflection of these challenges is the fact that China still performs relatively poorly in terms of corruption, as shown in Table 2. The table shows the world ranking of 175 countries according to reports on the perceived levels of public sector corruption by the organisation *Transparency International*. Denmark comes out on top in 2014, whereas North Korea and Somalia share last place. China ranks 100th.

Table 2: Corruption perception index rankings

Country	2014 Rank	Country	2014 Rank
Denmark	1	India	85
New Zealand	2	China	100
Finland	3	Russia	136
Sweden	4	Sudan	173
Norway, Switzerland	5	North Korea, Somalia	174

Source: [transparency.org/cpi2014/results](http://transparency.org/cpi2014/results)

<sup>13</sup> Data are from the WTO Statistics at [stat.wto.org](http://stat.wto.org).

<sup>14</sup> See [beehive.govt.nz/release/new-zealand-formally-joins-asian-infrastructure-investment-bank](http://beehive.govt.nz/release/new-zealand-formally-joins-asian-infrastructure-investment-bank).

## OPPORTUNITIES

The Chinese experience provides important lessons for other countries. Moreover, China's new role as an economic power poses opportunities for New Zealand. A very recent example of such an experience is the Chinese-led Asian Infrastructure Investment Bank (AIIB), established in October 2014 with the aim of providing finance to infrastructure investments in the Asia-Pacific region. Several European and Asian countries have declared their intention to become members of the Bank, and the AIIB is expected to begin operations in 2016. According to NZ finance minister Bill English, "New Zealand was the first developed western nation to join negotiations to set up the AIIB, and our membership will enhance our already strong economic, trade and investment links with the Asian region."<sup>14</sup>

## GROPING FOR STONES TO CROSS THE RIVER

What have we learned from the Chinese experience? The reforms in China have been gradual. The Chinese expression for this process is "groping for stones to cross the river," a metaphor that implies that each step depends on the previous step (Naughton, 1995; 2007).

The past four decades have witnessed rapid economic growth and a fascinating transformation of China's economy. However, China is not perfect, and there is still much to do to reinforce the efficiency and transparency of its public institutions, to improve its democracy and enhance personal freedoms.

## QUESTIONS TO CONSIDER

1. How can New Zealand benefit from the economic development in China?
2. What are the policies that may have led to the changes in aggregate growth and productivity in the post-1978 period? Can they be replicated by other developing countries?
3. What challenges does China face in terms of sustainable economic development?

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