Many observers tend to regard the rise of unoccupied modern "ghost towns," funded through risk-laden local-government financing vehicles (LGFVs), as symptoms of China's coming collapse. But this view underestimates the inevitability – indeed, the necessity – of such challenges on the path to development.

In 2012, the venture capitalist William Janeway argued that economic development is a three-player game involving the state, private entrepreneurial innovation, and financial capitalism, with inevitable cyclical overshoots that create the conditions for the next wave of invention and output growth. The United States had ghost towns and local bank busts once it began investing in railways, mining, and industrialization in the mid-nineteenth century. But it experienced no systemic crisis that spilled over its borders.

Without large-scale infrastructure investment, especially in transport, the productivity gains that enabled America's emergence as an industrial power would have been impossible. Though the process included significant creative destruction, rapid economic growth offset losses resulting from excess capacity.

Similarly, when viewed through the long lens of history, China's ghost towns will prove to be potholes on the path to development. China's massive infrastructure investment, funded largely through LGFVs, will most likely be remembered for its critical contribution to the country's economic modernization.

Of course, the translation of infrastructure investment into economic progress is not guaranteed. The new infrastructure – together with on-the-job training that enables Chinese workers to manage it effectively – must boost the country's productive capacity sufficiently to offset

the value destruction from obsolete fixed assets and underemployment.

In this sense, China's prospects are promising. As it stands, the total value of infrastructure investment in China amounts to only about 240% of GDP, less than half of Japan's 551% – and with a much younger population. China's capital stock remains below \$10,000 per capita; that figure is above \$90,000 in the US and more than \$200,000 in Japan (at 2011 prices).

Moreover, roughly 1% of China's population – about 12 million people – is migrating to cities each year. Unrelenting demand for modern, innovative infrastructure that supports citizens' livelihoods, improves energy efficiency, and minimizes pollution cannot simply be ignored – especially given urbanization's central role in driving economic modernization and productivity gains.

Though LGFVs carry some intrinsic risks, stemming from relatively low levels of transparency and government supervision, they have been integral to China's industrialization process so far. Indeed, they emerged in the early 1990s to enable Shanghai and Guangdong to upgrade their infrastructure in preparation for their industrialization drive.

Both cities suffered from weak technical and institutional capacity and little foreign exchange or domestic credit. By working with the World Bank and the China Development Bank (CDB), Shanghai and Guangdong created an innovative institutional structure to facilitate the coordination of stakeholders to deliver specific infrastructure projects, employing the legal and accounting tools of modern corporations. In other words, the LGFV is, at its core, a vehicle for local modernization.

This institutional innovation enabled the reconstruction of hundreds of Chinese cities, connected by airports, highways, high-speed rail, and advanced telecommunication systems. Supported by these structures and linkages, one-third of Chinese cities have attained *per capita* GDP of more than \$10,000.

Moreover, the original LGFVs were not subject to maturity mismatches, because they were funded through long-term CDB loans, with local governments using the fees and taxes they accrued from the completed infrastructure to cover operating costs and service their debt. In this way, LGFVs also helped to create the network linking local markets to global value chains.

But, as is often the case, success led to excess. Massive government stimulus in the wake of the global financial crisis spurred local governments to take loans from Chinese banks to realize dream infrastructure projects, with remote cities attempting to imitate urban showcases like Shanghai or Shenzhen.

In a sense, this was a positive development. After all, leveling the infrastructure gap enlarges the range of options from which people and companies can choose when deciding where to live or establish factories and offices.

But the infrastructure boom was underpinned by the belief that local governments would always have access to easy credit, cheap land, and rising demand. When the market tightened in 2011, many projects' prospects diminished, spurring LGFVs to seek credit in the shadow banking sector, which has caused their borrowing costs to rise and introduced new market-based challenges to the reform process.

Nonetheless, because China is a net lender to the world, LGFV debt has no global systemic implications. While China's outstanding local-government debt totaled \$4.7 trillion at the end of 2011, its land and fixed assets are worth some CN¥90 trillion, meaning that even if asset values were written down by half, local governments would remain solvent.

This leaves only the issue of debt servicing. To resolve it, the government has announced fiscal reforms to split revenues between central and local governments and enable local governments to issue long-term municipal bonds. China's ghost towns and local-government debts are not harbingers of doom. They are bumps on the road to a developed economy, in which excesses will have to be resolved by the state or the market. In fact, overcoming these challenges will make for a more resilient economy in the long run.