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Market Comment

CLARMOND

China's Arrested Development

In the 11th century the Chinese Sung dynasty experienced its own Industrial Revolution, seven hundred years before its western counterparts. However, it also went through its own experiments with paper money and credit. Are there lessons for a 21st century China?

A THOUSAND YEARS AGO, KAIFENG was the vibrant, imperial metropolis of the Northern Sung dynasty located at the end of the 1,000 mile Grand Canal that linked inland China to the coast. This waterway offered a cheap, accessible transport link for the Empire's 200m people; a trade route for their goods of rice, tea, ceramics, textiles, books, metal utensils, and weapons, manufactured by the empire's iron ore foundries, all fed by energy dense coal rather than traditional wood. This merchandise was exported to Hindu, Muslim, and Buddhist realms on ships guided by the Sung-made mariners' compasses. China rushed into their Industrial Revolution seven centuries before Britain. This unheralded prosperity was sewn together by the magical thread of imaginative and abundant money.

Money, money, money...

Trade expansion and product innovation required one critical element, money, and lots of it. Bronze coins were the unit of account and means of exchange in the Empire. It was vital to increase bronze coin production and over a 40 year period (1050-1090) output rose from one to five billion coins per annum (roughly 9,000 tonnes of copper).

Additionally, a money hierarchy was established using iron coins, silver ingots and, for the first time in history, fiduciary bank notes. These notes, called 'convenient money', were in the form of commercial certificates, bills of exchange, and promissory notes. The notes were

initially backed by a 25% copper content and were utilised for tax payments and internal settlements. However, the paper money circulated in the economy with the coinage mostly ending up in the hands of the State or foreign traders.

To facilitate trade the Empire issued paper notes, worth 5 billion coins, they ran budget deficits, and spent much of this new credit on defence and barbarian tribute. This colossal monetisation of the economy relied on ever rising amounts of paper money to keep the economy growing; this did not last, soon the paper had no copper backing, trade slowed, and tribute payments bled the Sung Treasury dry.

In 1127 the barbarians sacked Kaifeng. It was the end of the industrial experiment, as the coal fields of Kaifeng were lost to the barbarians. But the idea of credit driven growth lived on in the psyche of successive Chinese rulers.

Lessons learned

Today, China is once again at the centre of world trade, with its economy gorging on the traditional reservoirs of its coal and credit. Coal provides China with 78% of its electricity and 64% of its total energy use. China's economic miracle is built on this mountain of coal, (50% of world output). But it faces an uphill struggle to transition from coal to oil, or natural gas, or alternative fuels. No energy source can replace local coal for decades, as both oil and natural gas require



Reformer to Reformer

barbarian tribute (read US\$). China languishes in 'arrested development.'

Credit, though, has kept the economic engine primed. Total credit in China (government, household, financials and corporations) has increased from 120% of GDP in 2008 to 260% by 2015. This is an increase of \$14 trillion and is nearly equal to a new US economy. China's credit growth at 12% p.a. is effectively doubling every six years - a staggering monetisation of the economy.

Sung revisited

Chinese leaders are running a known experiment: managing a constrained energy system with oodles of credit. China needs an energy transition to keep moving forward and it is applying a massive dose of credit to maintain momentum. The monies continue to be spent on infrastructure, defence, and barbarian tribute (US\$'s for oil and gas), but any slowdown in trade, given China's capital account is closed, slows the growth rate of internal credit, which, in turn stifles the economy. The Sung Empire's over-reliance on credit was their undoing, let us hope another 1,000 years do not pass before this lesson is learned by a new set of Chinese mandarins. ■