

## China's New Urban Cohort

### A Journey Up and Down the Kuznets Curve

By G. Tracy Mehan III

China, like the former Soviet Union, is plagued by environmental challenges experienced only by a country or society where the government technically and practically owns everything, fails to respect rights of private property, subsidizes industrial production, obliterates the distinction between regulated and regulator, and suppresses free and open elections and anything like a consistent rule of law, while harboring a brutalist view of natural resources and the environment. In such places government failure rivals market failure as the cause of many, if not most, environmental problems.

However, since its move toward economic, not political, liberalization of the economy in the 1980s, China has succeeded at least in producing wealth for its population. As described in Matthew E. Kahn and Siqi Zheng's impressive new book *Blue Skies over Beijing: Economic Growth and the Environment in China*, over the last 30 years, the nation's economy grew "at an amazing rate of 10 percent per year, and the share of people living below the poverty line fell from 84 percent to 13 percent.

"There are still hundreds of millions of poor households in rural China, but hundreds of millions have also escaped poverty," write Kahn and Zheng. "Over the last 30 years, the average life expectancy at birth has increased from 66 to 73 years."

Even with a draconian one-child policy, China's cities continue to grow massively and generate horrendous threats to human health, the environ-

ment, and the quality of life notwithstanding growing affluence for what these authors call the "new urban cohort." Upon these people Kahn and Zheng will depend for a happy ending to their story, as will be seen below.

Of course the book's title must be taken as aspirational rather than descriptive. In January 2013 particulate matter concentration in Beijing "reached levels of two, three, and even four times the public health emergency threshold of 250 micrograms per cubic meter — and up to 40 times what the World Health Organization considers a healthy level," report



**Blue Skies Over Beijing: Economic Growth and the Environment in China.** By Matthew E. Kahn and Siqi Zheng. Princeton University Press; 271 pages; \$32.95.

Kahn and Zheng. Also, 12 of the 20 most polluted cities in the world are in China.

China is also the world's largest emitter of greenhouse gases, with per capita GHG emissions growing by 186 percent between 1990 and 2010 versus the world's 16 percent. This represents 25 percent of the worldwide carbon dioxide pollution from fossil fuels.

57 percent of the groundwater in 198 cities was officially rated as "bad" or "extremely bad" in 2012 while more than 30 percent of China's major rivers

were found to be "polluted" or "seriously polluted." And who can forget the 16,000 dead pigs found in tributaries of Shanghai's river, the Hangpu, the source of its tapwater?

Pollution is widespread throughout China's farmland. Forty-four percent of rice samples contained poisonous levels of cadmium in Guangzhou, the capital city of Guangdong Province. According to Kahn and Zheng, "It is estimated that the country loses US\$3 billion per year to soil pollution, and that between 40 percent and 70 percent of China's soil is already contaminated with heavy metals and toxic fertilizers."

But Kahn and Zheng are optimists as well as realists and bring economists' eyes and sensibilities to the quest for environmental progress in China. Fundamentally, they are trying to provide empirical, granular evidence for the application of an economic theory heralding positive environmental change by and for 1.357 billion Chinese.

Many economists, seeing the environmental degradation and ultimate renewal of Western Europe, North America, Japan, and other countries, detect a link between economic growth and a demand for or a willingness to pay for environmental improvements, over the medium or long term, at least for some parameters. The policy scholar Steven F. Hayward offered a succinct description of the theory in a provocative essay entitled "The China Syndrome and the Environmental Kuznets Curve."

According to Hayward, the Kuznets Curve "holds that the relationship between economic growth and environmental quality is an inverted U-shape, according to which environmental conditions deteriorate during early stages of economic growth but begin to improve after a certain threshold of wealth is achieved. The original Kuznets Curve was named for Nobel laureate Simon Kuznets, who postulated in the 1950s that income inequality

first increases and then declines with economic growth. In 1991 economists Gene M. Grossman and Alan B. Krueger suggested the Kuznets Curve applied to the environment.”

Kahn and Zheng build on this hypothesis (they cite Grossman and Krueger in their notes) that suggests, again, an inverse-U association exists between per capita income and pollution: “Intuitively, this hypothesis posits that as poor cities grow wealthier, such economic growth causes environmental degradation, but that as middle-income cities grow wealthier, such economic growth contributes to environmental improvements.” They look carefully at the relationship between particulate matter air pollution and per capita income, estimating that Chinese cities whose per capita gross domestic product is greater than \$13,000 are past the turning point, so that economic growth is positively associated with improvements to the environment.

“Our city-level results suggest that 33 out of 85 cities in China (where 140 million people live) are already experiencing a lowering” of particulate matter. As incomes rise the authors expect that the number of urbanites enjoying better air quality will increase to 368 million after 2020. This is significant because of the estimated 300,000 to 500,000 premature deaths in China caused by particulate matter each year in 2003–13.

Regarding the Kuznets Curve, “This is not esoteric academic debate,” write Kahn and Zheng. The hypothesis assumes that economic growth is both a foe and a friend to the environment in that order. “The evidence we have reported in this book suggests that young Chinese people’s conception of the ‘good life’ is very similar to that of their U.S. and western European peers. Rising educational attainment and per capita income in China will stimulate an increased demand for a cleaner urban environment.”

They foresee major cities, especially

in coastal areas, continuing to “deindustrialize as improvements in transportation networks, high land prices, high wages, and increasing environmental regulation encourage dirty factories to relocate to secondary cities. This industrial migration could cause increased pollution levels in the cities where heavy manufacturing grows, but this pessimistic view implicitly assumes that the new factories opening up will be just as dirty as the old factories that are closing.”

Assuming the Kuznets Curve is a valid concept, how does a country or society translate economic growth into environmental improvements without democratic elections and the rule of law, as has been the case in most of the countries tripping along the curve over the last forty years? In some of the more interesting parts of the book, Kahn and Zheng describe the role of social media, microblogs, blogs, documentary films posted on line and, from time to time, riots and civil insurrection. They present case after case, along with the observation that the central Chinese government

seems to be tolerating more environmental activism as a means of pressuring local governments, mayors, and even state-owned enterprises to clean up their act.

Without using the term, the authors seem to argue that the current regime in China is as much concerned with its legitimacy as is any government. And no longer do they have an absolute monopoly on information as it relates to environmental spills, accidents, dead pigs, and clean air. The air monitoring station at the U.S. embassy in Beijing makes several star turns throughout the book. Evidently, the daily smog alerts are fed into the ether and picked up by cell phones, websites, and conversationalists throughout the city almost instantaneously.

There is also the question as to whether or not the Kuznets magic works for other environmental matters such as water quality, Panda habitat, massive dam building, fisheries, biodiversity, forestry, solid waste, and greenhouse gases (Hayward noted progress in some of these areas of resource management.). Nevertheless, the hypothesis seems to be plausible directionally.

Nothing is predestined in governmental policy, and the authors outline seven different kinds of evidence that, over time, might contradict their “core claim that many major cities will experience environmental improvement in the medium term,” such as the Chinese central government’s returning to a monomaniacal focus on local GDP growth or the Communist Party’s insisting on low energy prices or suppressing media coverage of environmental matters. It is disturbing to note that when citing their many interviews with Chinese citizens or local elected officials, the authors only use aliases or pseudonyms.

Matthew Kahn and Siqi Zheng provide a wealth of data, information, and analysis of the many aspects of the Chinese urban environment. They also provide a menu of market-based approaches which might help the Chinese on their journey up and down the Kuznets Curve. They offer a rich, nuanced, and sophisticated view of the current state of environmental play in China and a reasonable case for cautious optimism. American readers may recall our own history of environmental degradation when assessing the chances of success in China. See, for instance, Chapter 9 of Upton Sinclair’s *The Jungle* on the horrible state of Bubbly Creek, a tributary of the Chicago River circa 1906.

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