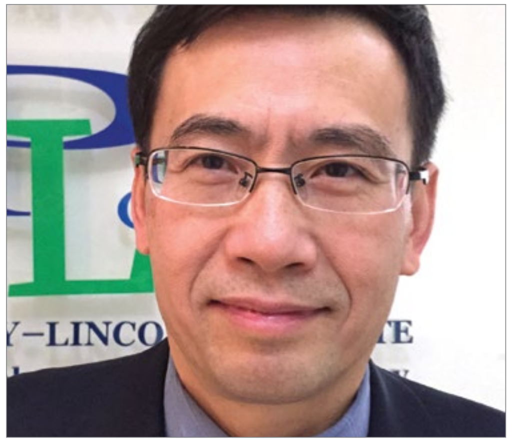

Since 2013, Zhi Liu has been a senior research fellow and director of the China Program at the Lincoln Institute of Land Policy, and director of the Peking University–Lincoln Institute Center for Urban Development and Land Policy (PLC). Prior, Zhi was lead infrastructure specialist at the World Bank, where he worked for 18 years, with operational experiences in a number of developing countries.

Zhi received a B.S. in economic geography from Dr. Sun Yat-Sen University (China), a M.S. in city and regional planning from Nanjing University (China), and a Ph.D. in urban planning from Harvard University.

Strengthening Municipal Fiscal Health in China

LAND LINES: The Lincoln Institute recently initiated a global research agenda on municipal fiscal health. This effort arises from the recognition that a number of cities in the United States and in many other countries including China suffer financial hardship. What is the nature of municipal fiscal distress in China?

ZHI LIU: It's very different from the financial troubles faced by cities in the United States. The two countries are at very different stages of urbanization. While the U.S. is highly urbanized, with more than 80 percent of citizens living in urban areas, according to the 2010 census, China is only halfway through the urbanization process. Today, 750 million Chinese citizens live in cities, accounting for 55 percent of the total population. By 2050, the urban population is expected to reach 1.1 billion, or 75 percent of the total population. Over the last two decades, with the exception of a few mining cities, almost all municipalities have seen rapid population growth and spatial expansion, generating a significant demand for public investment in urban infrastructure.

In China, the main sources of funding for urban infrastructure investment are revenues from land concessions and local borrowing from commercial banks, often using land as collateral. Urban land is owned by the state, and rural land is collectively owned by villages. The Land Administration Law stipulates that only the state has the power to convert rural land into urban use. This sets the stage for the municipal governments to take rural land for urban development through the land concession process. As it goes, municipal governments expropriate rural land, service it with infrastructure, and sell the land use rights to real estate developers. The compensation to farmers for the farmland taken is low, based on the land's agricultural production value instead of market value for urban use. When the demand for real estate development is high, the land concession fees are bid high, and the municipal governments stand to collect a huge amount of revenues. For the last 10 years, revenues from land concessions have accounted for more than one-third of total local fiscal revenues.

Moreover, municipal governments further expand their financing capacity by using land assets as collateral to secure commercial loans from commercial banks. Before a recent amendment, the Chinese Budget Law did not permit local governments to borrow. However, most municipal governments bypassed the law by creating their own local financing vehicles—known as urban development investment corporations (UDICs)—that borrowed commercial loans or issued corporate bonds for the governments. The size of outstanding local debts has grown rapidly over the last few years, reaching at least one-third of the GDP now.

The land-based financing mechanism has helped municipal governments in China raise a significant amount of funds for capital investment. However, the success has also created incentive for municipal governments to rely on land concessions and UDICs too heavily. Today, China's economy is growing more slowly than before, and the mechanism is running out of steam in many localities where conversion of rural land for urban use exceeds the real demand. Some cities have borrowed much more than they can repay, leaving them heavily indebted.

Many empirical studies, including some funded by the Lincoln Institute, find that China's land-based financing mechanism is one of the main causes of other urban issues that we face today. Skyrocketing housing prices, growing local debts, excessive land-taking, growing tension between the farmers and municipal governments over land-taking, and widening gaps of income and wealth distribution between urban and rural populations are among the major issues.

LL: The international mass media has been reporting on these issues. How will China address them?

ZL: There is a high level of consensus on the root causes of the problems. In November 2013, the central government announced a set of reforms, and a few are directly related to urbanization policy and municipal finance. For example, the scope of land expropriation will be narrowed to the confine of public purposes, and villages are allowed to develop their land for urban use under the premise that it conforms to planning. The reforms also call for acceleration of property tax legislation; reform of *hukou*, the household residential registration system, to help farmers become urban residents; and government efforts to make basic urban public services available to all permanent residents in cities, including all rural-to-urban migrants.

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LL: What are the implications of *hukou* reform on municipal finance?

ZL: The government is phasing out China's longstanding *hukou* system, and the implications for municipal finance will be significant. *Hukou* was designed to identify a citizen as a resident of a certain locality, but for several decades the government used the system to control rural-to-urban migration. A rural *hukou* holder could not become an urban *hukou* holder without the government's approval. Without urban *hukou*, a rural migrant worker is not eligible for public services provided by the urban governments.

Since the economic reform, the expanding urban economy has absorbed a large number of rural-to-urban migrant workers. Earlier, I mentioned China's urbanization rate of 55 percent and urban population of 750 million. These numbers include the 232 million rural migrants who stay in cities for more than half a year. If they were excluded from the calculation, the level of urbanization would be just 38 percent. Due to their rural *hukou* status, however, migrant workers don't have access to many services enjoyed by urban *hukou* holders, despite the fact that many have labored and lived in cities for years. Municipal governments determine the extent of many urban public services—such as public schools and affordable housing—according to the number of urban *hukou* holders inside the municipal jurisdiction. Phasing out *hukou* would significantly increase the fiscal burden to the municipal governments for public service provision. Some scholars in China estimate that the cost of providing full urban public services to each rural migrant would be at least RMB 100,000 (roughly $16,000 U.S.). The total outlays for all current rural migrants would be at least RMB 23 trillion (about $3.8 trillion U.S.).

LL: **China is introducing the residential property tax. What is the status of that initiative?**
ZL: The government is drafting the first national property tax law as part of the ongoing reform of public finance. China is one of only a handful of countries without a local property tax. The current taxation system relies heavily upon taxes on businesses and transactions, and very little upon taxes on household income and wealth. In a more urbanized China with a wealthier population who own residential properties, the property tax would be a more viable source of municipal revenues. Today, 89 percent of urban households own one or more residential units, and the value of those properties has much to do with urban public services. Property tax will allow cities to tax urban residential properties whose value would benefit from the improved public services made possible by property tax revenues. It should also fill part of the fiscal gap left by the expected reduction of revenues from land concessions. However, property tax will not be a major source of municipal revenues any time soon. It may take one or two more years for the National People's Congress to pass the new law. It would also take perhaps two to three years for cities to establish the property database and assessment and administration system.

LL: **It must be tough for cities to deal with declining revenues from land concessions without an immediate alternative—especially as they are coping with growing local debt, which has been widely reported. How will Chinese cities get out of this situation?**
ZL: The situation is indeed tough. China's economy is slowing down. The real estate sector is no longer as hot as it was in the last 10 years, resulting in lower demand for land and thus lower revenues from land concessions for municipal governments. Cities are now facing a fiscal gap. One possible way to fill the gap would be local government borrowing. However, as I mentioned earlier, many cities are indebted and have little capacity to borrow further. In fact, most cities in China do not have adequate capacity for debt management. The newly amended budget law permits provincial-level governments to issue bonds within the limit set by the State Council, but also closes the door on other forms of local government borrowing. Currently, the central government actively promotes infrastructure financing through public-private partnerships (PPP). While this is a good move, it won't be sufficient to fill the infrastructure financing gap, as PPP is suitable mainly for infrastructure projects with a strong revenue flow. There are many other urban infrastructure projects that generate little or no revenues. In the long term, I believe that China should actively establish a municipal government bond market to channel funds from institutional investors to municipal infrastructure investment and enable local governments to access commercial loans based on creditworthiness. To do so, municipal governments need to develop institutional capacity on several fronts, such as local debt management, capital improvement planning, multiyear financial planning, and municipal infrastructure asset management.

LL: **Is PLC's work relevant to the current reform?**
ZL: The PLC was jointly established by the Lincoln Institute and Peking University in 2007. By the time I arrived, in 2013, the center had developed its reputation as one of China's premier research and training institutions on urban development and land policy issues. The center supports a number of activities, including research, training, academic exchange, policy dialogue, research fellowship, demonstration projects, and publication. We focus on five core themes—property taxation and municipal finance, land policy, urban housing, urban development and planning, and urban environment and conservation. Over the last few years, our research projects have touched upon land-based finance, local debts, housing prices, infrastructure capital investment and finance, and other topics relevant to municipal fiscal health. We have also provided training to Chinese government agencies on the international experiences of property tax assessment and administration. I would say that our work is highly relevant to the current reform.

Implementation of the new comprehensive policy reforms is generating considerable demand for international knowledge and policy advice in the China Program's focus areas, especially property taxation and municipal finance. We plan to initiate a pilot demonstration project with one or two selected cities in China, to support the institutional capacity required for the development of long-term municipal fiscal health. Our team has started a study to develop a set of indicators to measure municipal fiscal health for Chinese cities. It is the right time for us to initiate this agenda in China. L

The Super Ditch
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Following Oamek's principle of collaboration, cities have been working together to acquire agricultural water supplies at low prices. City skepticism is heightened by inflationary concerns. If water cost is only going to increase, why not purchase supplies now, while prices are low, in order to keep utility rates down?

To address this matter, Nichols looked at different mechanisms for establishing price escalators that would protect buyers and sellers, including:

1. a market-based escalator, based upon other water conveyances;
2. an escalator based upon average municipal water impact fee increases over time;
3. an escalator based upon average municipal water rate increases over time; and
4. a cost-based escalator, as measured by the Consumer Price Index (CPI) and the Producer Price Index (PPI).

The pilot project with Fountain, Security, and Fowler guarantees pricing stability by adjusting the lease price every five years according to the percent change in the Colorado Municipal League's Index of Colorado Utility Costs.

At $500 an acre-foot, the current Super Ditch lease will earn the five participating farmers a quarter of a million dollars this year in addition to the revenues they will earn from crop production on non-fallowed lands. Some of these crops, such as forage, are low-value crops, and the water lease provides good income in lieu of growing them. Others, like melons and chiles, are high-value crops. Bartolo is excited about the retention of these agricultural revenues, which he thinks will create a ripple effect across the valley's many communities: "Two acre-feet of water grows an acre of chile—that's 1,000 bushels," he says, "which brings in $10,000 to $15,000 in revenue at the farm gate level."

Although municipal water prices are increasing, considering the shortages the West faces, they're still low by most counts. Cities have sought to keep prices low by acquiring as much water as they can, as early as they can, while keeping within the bounds of Colorado's anti-speculation doctrine.

By blurring the lines around the "types" of water that drive prices—both at the tap (utilities prices) and at the head gate (commodities prices)—the Super Ditch may launch a disruptive innovation that could alter the price of water in ways that better reflect Western realities. If farmers retain control of water and lease to cities, prices will adjust according to increasing demand in a field of diversified ownership. That's a new type of competition in the market, and that's not a bad thing. Urban growth won't have to correspond with rural decline. And a glass of water will still be the cheapest beverage to wash down a plate of locally grown chile rellenos. L

Scott Campbell is an award-winning conservation planner and consultant whose assembles diverse teams to solve complex environmental, social, and economic problems. Scott was the 2015 Lincoln Loeb Fellow at Harvard University's Graduate School of Design and a joint fellow at the Lincoln Institute of Land Policy. Prior to his fellowship, Scott directed one of the country's largest land trusts, the William J. Palmer Parks Foundation.