



# China's Land Reform

A new horizon for rural and urban development

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# Preface

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On October 12, China enacted a landmark rural land-use reform policy that is likely to mark a critical turning point in China's economic and social development. For the first time, farmers will be granted official land-use right certificates and the right to lease their contracted farmland to other parties without having to secure approval from the village collectives.

The policy raises several issues: How will this measure impact rural-urban migration patterns, arable land loss, and food resources? How much additional funding will be required to extend social benefits to both rural and urban residents? And where will this funding come from?

To provide insights into these and other relevant issues, my Shanghai-based colleagues at the McKinsey Global Institute, Janamitra Devan, Senior Fellow, and Stefano Negri, Fellow, recently led a study that assesses the impact of the new policy. They were assisted by Rachel Zhao and Cleo Sham, consultants in our Beijing and Hong Kong offices, respectively, and Yuan Yichan and Mei Song, analysts in McKinsey's China Knowledge Center in Shanghai.

We hope that this paper sheds some light on a policy that we believe could have substantial ramifications for the future course of China's rural and urban economic and social development.

**Jonathan Woetzel**

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## INTRODUCTION

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In March 2008, the McKinsey Global Institute (MGI) released the key findings from a year-long study of China's urbanization. We projected that China's urban population would reach nearly 1 billion by 2025, and of that number, about 240 million would be new migrants from China's rural regions. As a consequence of this enormous influx of migrant workers, we estimated that the government would have to spend an additional 1.5 trillion renminbi per year in urban centers on public services such as healthcare and education.

On October 12, 2008, in an effort to accelerate economic development in China's rural areas, the government enacted a landmark rural land-use reform policy that, for the first time, grants farmers official land-use rights certificates and the right to lease their contracted farmland to other parties without approval from the village collectives. Previously, land was collectively owned, and farmers only held usage rights to the plots they cultivated for the limited period of 30 years. Under the new policy, land-use rights could extend to 70 years or more.

To develop a better understanding of the impact of this policy, we recently launched an effort to quantify its potential impact on migrant flows, on the funding requirements needed to provide social benefits to them, as well as on the overall economy. Details concerning the pace and geographic location of the reform's roll-out, and whether or not the government will impose quotas on the issuance of land ownership certificates, are still unknown at this time. However, given the information that is available to us, we believe that this policy will increase the pace of urbanization to a level above and beyond what we had previously forecasted. As a result of the new land reform package, urbanization could dramatically accelerate with well over **70 percent of China's total population living in cities by 2020**—up from the previously projected urbanization rate of 60 percent. Instead of hosting about 200 million new rural migrants, China's cities could have to absorb **over 500 million rural migrants by 2020**—in our view, an unsustainable number even assuming that urban GDP growth trends hold.

If the implementation of this reform is managed well, however, it could have a significant positive economic impact on the countryside, as well as on China's economy as a whole. The policy could help the Chinese government achieve its two main objectives of rural reform: revitalizing the rural economy and

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guaranteeing food self-sufficiency for the nation. A higher rate of urbanization will also contribute to faster overall GDP growth in China. With formal legal titles to their land and the right to consolidate their plots, farmers will be more likely to make long-term investments in their land in order to maximize food production and boost their incomes. Farmers who decide to lease out their land could receive a steady cash income that could enable them to move to the city and join the urban workforce. Those who decide to remain on their land will have the opportunity to boost their income by increasing productivity and crop yields.

The overall success and sustainability of the land-use reform will depend on the ability of China's cities to create sufficient jobs and institute adequate social safety nets to accommodate the expected influx of migrants. While the reform is likely to bring positive economic benefits to the countryside, China's cities will have to contend with a greater influx of migrants who will be leaving the land to seek better fortunes. Based on our projections, if the migrant inflow exceeds 320 million, China's cities will not be able to generate enough jobs to absorb these migrants.

As part of the reform package, the government has said it will extend social benefits to rural inhabitants as well as migrant workers. Fulfilling this promise represents a substantial challenge, however, especially as some city governments are finding it difficult to meet the needs of its present residents. Indeed, even in a managed migration scenario (i.e., 320 million by 2025), China would have to spend an estimated **2 trillion renminbi per year** by 2025—500 billion renminbi more than previously forecasted—in order to provide social benefits to all rural inhabitants and migrant workers. The expected source of this funding, however, remains an open issue.

The objective of this short paper is to provide a high-level perspective on the overall impact of this reform on China. We interviewed a number of economists, academics, and government officials, and studied the current status of “land-use reform pilot areas” in China, such as Chengdu in Sichuan province. We investigated the policy’s wide-ranging impact on China’s economy, including in particular how it will affect the supply of arable land, food, and natural resources.

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The three key findings of this report are highlighted as follows:

- **Larger farms will lead to higher yields and greater rural prosperity.** As a result of this policy, China's rural areas are expected to undergo a major transformation: the average farm size (hitherto proportionally small) could more than double in the next two decades. Larger, consolidated farms will allow increased mechanization, and encourage farmers to shift to higher-value crops. Higher productivity will boost rural incomes and contribute to China's ability to achieve food self-sufficiency.
- **The additional surge of rural migrants could increase pressure on China's cities.** With more rural residents free to pursue a living away from the land, more migrants will flow into cities. Based on the rate of land transfer in reform pilot areas across China in the past several years, and the speed at which the previous reform of the rural collective system was implemented, the land transfer rate could reach more than 60 percent in the next 10 years, with more than 500 million farmers deciding to lease their plots and move to the cities. Such numbers would exert enormous pressure on the delicate balance between labor supply and demand in the urban areas. Indeed, MGI estimates that if more than 45 percent of farmers transfer their plots of land between now and 2025, the additional supply of migrant labor that this would create is likely to exceed the limit of what China's cities could safely absorb. If land transfers occur at a faster rate than urban jobs are created, the central government may need to impose quotas on land transfers to control the pace and magnitude of migration.
- **Reform could increase the cost of providing social benefits.** The recent reform package also includes the ambitious objective of extending social benefits coverage to the entire rural population and to all migrants living in cities. This will be an expensive undertaking. Even with the increased tax revenues generated by higher rural GDP, the central government will need to transfer more funds to rural governments to guarantee those benefits. However, the amount spent on rural coverage will pale in comparison to the funds needed to provide social benefits for the expected wave of migrants moving into urban areas. We estimate that an additional 2 trillion renminbi will be required to extend social benefits to these new migrants, current migrants, and rural workers by 2025. How the central government will fund this amount remains an open question.

## COMMONLY ASKED QUESTIONS ABOUT THE NEW POLICY

### **How does this measure represent a change from the current policy?**

Although some aspects of the policy remain unclear (e.g., length of contracts, ownership of land-use right), two major changes are clear:

- *Land-use rights:* The reform measure officially grants farmers land-use rights for longer periods than the previous 30 years, and also grants them “land certificates,” with which they can transfer or lease the land for others to cultivate. Before this reform, there was less incentive for farmers to transfer or lease land, since the shorter span of land-use entitlement made the terms less favorable for long-term transfer, and land transfers required approval from village collectives.
- *Rural investment:* The reform policy explicitly promises more funding for social benefits in rural China, such as education, healthcare, social security, housing, and infrastructure. However, the government has not indicated exactly how much more money it will allocate.

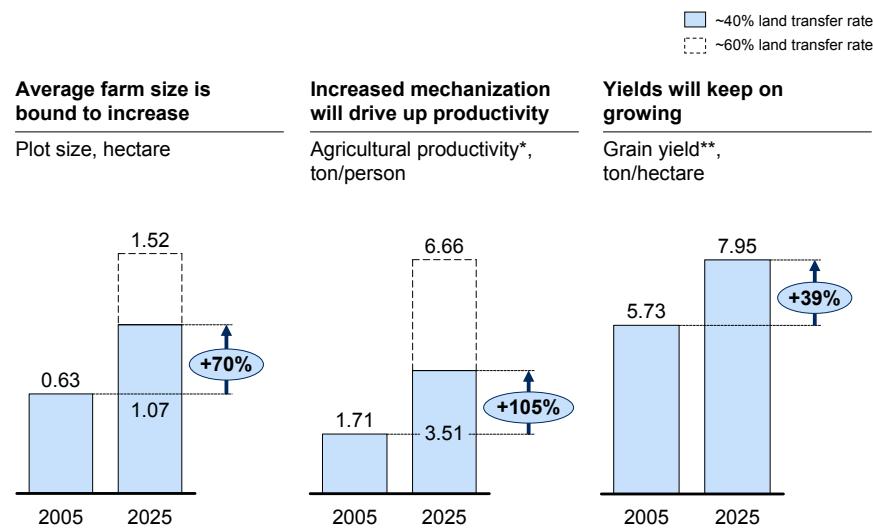
**Does the reform cover all land in rural areas?** No. China’s rural land is categorized into four types: (1) arable land; (2) household land for residences; (3) reserve land for village use (e.g., for schools); and (4) land for infrastructure. This reform only allows farmers to transfer their usage rights for arable land.

**Can farmers sell the land or use it as collateral?** No. Farmers do not own the land—it remains the property of the collective organization. Farmers can only transfer or lease the right to use the land. Land-use rights cannot be mortgaged.

**Will this reform increase urban sprawl?** No. Even if the land-use rights are transferred to another party, land that is designated for agricultural use must stay as such, and cannot be converted for real estate development.

**Is this reform a “quick-fix” response to the current GDP slowdown?** No. As with other major reforms, the central government took years to discuss and prepare this package. This is not a knee-jerk response to the current slowdown, nor is this reform a quick fix, since it will take years before it is widely implemented across China.

## THE NEW REFORM WILL GENERATE HIGHER PRODUCTIVITY AND YIELDS



\* Includes farmers and their dependents, not solely the agricultural workforce

\*\* Ton/ hectare per year, including rice, wheat, corn, sorghum, millet, bean, potato

Source: McKinsey Global Institute analysis

Although China may be one of the world's largest countries in terms of land mass, its arable land ratio is among the world's lowest: only 10 percent of its land is suitable for cultivation (compared to arable land ratios of 20 percent and 50 percent in the US and India, respectively).

As a consequence of China's rapid urbanization, available arable land has also shrunk considerably in the past few years. In order to sustain the pace of development, local governments have enjoyed considerable latitude and incentives to acquire land cheaply, and re-sell it at significantly higher prices. Indeed, much of China's rapid urbanization and economic growth have been fueled by the profits from such land sales. As more rural areas are developed into industrial and urban zones, however, China will have to grapple with the consequences of aggressive land acquisition for the sake of urban expansion, which has become a source of social tension. With more than 1.4 billion mouths to feed but increasingly less land on which to grow food for its people, the Chinese government has decreed that it must keep 120 million hectares of land for food production in order to remain self-sufficient.

The central government has clearly attempted to address these issues head-on with this land-use reform policy. If current trends continue, China could lose an additional 15 percent of its arable land by 2025. However, this reform will slow the acquisition of arable land, since official “land certificates” granted to farmers will make it more difficult for city governments to appropriate their land. While the implementation of this reform will help to stem the loss of arable land, however, substantial land resources will still be required for the infrastructure projects the government is planning as part of its recently announced 4 trillion renminbi economic stimulus package.

As a result, we believe that by 2025, the amount of arable land will likely drop below the government’s 120 million-hectare threshold for food self-sufficiency. However, this reform will help to offset reductions in food production that may result from the loss of arable land through higher productivity from the consolidation of plots and the mechanization of agricultural production.

**Larger average farm size:** Farms in China have traditionally been collectively owned and meted out in small parcels to several different families in a given region. As a result, the average size of China’s farm plots is relatively small, at 0.63 hectares—far below that of much smaller Asian countries such as the Philippines and Thailand. This new land-use reform will likely encourage the consolidation of farms into bigger plots. Depending on how aggressively the government implements this reform, the land transfer rate could be between 40 and 60 percent by 2025<sup>1</sup>, resulting in average plot sizes that are between 70 and 140 percent larger than current ones.

**Enhanced productivity:** Data from Taiwan and Korea confirm a positive correlation between plot size and productivity: larger plot sizes require fewer workers per hectare, and thus produce more output per worker. Due to larger average farm sizes and greater mechanization, agricultural productivity in China could expand by between one to three times that of today’s levels by 2025.

**Increased yields:** Some experts in China believe that the potential increase in grain output per hectare will be marginal, since China’s small-scale farms already boast relatively high yields. In 2005, China’s total cereal yield was

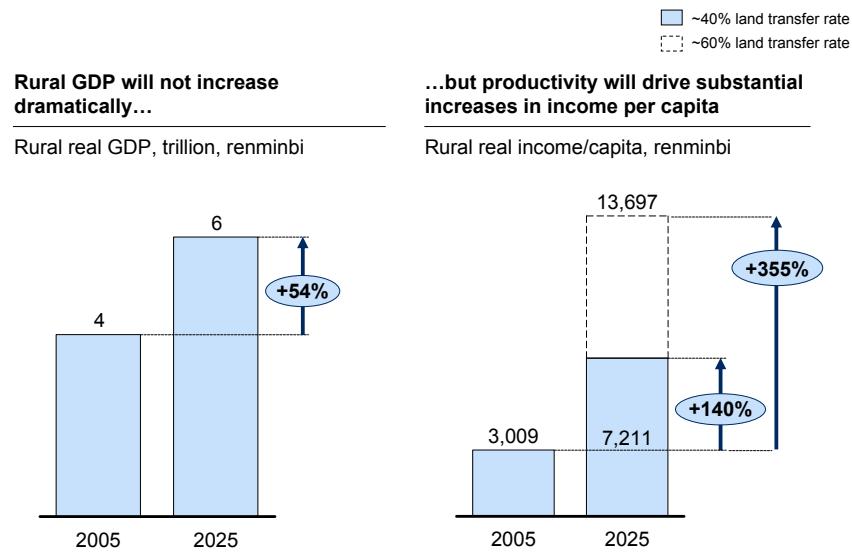
<sup>1</sup> We assumed that average transfer rates could range from as high as 60 percent, such as in the pilot village of Xiaogang in Anhui province, to as low as 40 percent, such as in the Wenjiang area of Chengdu city.

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5.23 tons per hectare—a modest amount, but comparable to other developing countries. However, increased plot sizes would provide farmers with incentives to invest in machinery and irrigation, and encourage them to shift to higher-value crops such as vegetables, maize, and fruit. For several years preceding the enactment of this reform, several villages in China have tested the effects of such investments. Villages in Anhui province and in the areas surrounding the city of Chengdu in Sichuan province saw an immediate jump in cereal yields of 15 to 20 percent due to increased investment in machinery and irrigation, as well as a shift to higher-value crops such as maize.

As a result of larger farms, we estimate that China's cereal yields will rise by almost 40 percent by 2025. As technology further improves yields, we believe that China can assure enough food production for its population. Increased plot sizes would also make controls on food quality and security more cost efficient.

## THE RURAL POPULATION AND ECONOMY WILL BE BETTER OFF

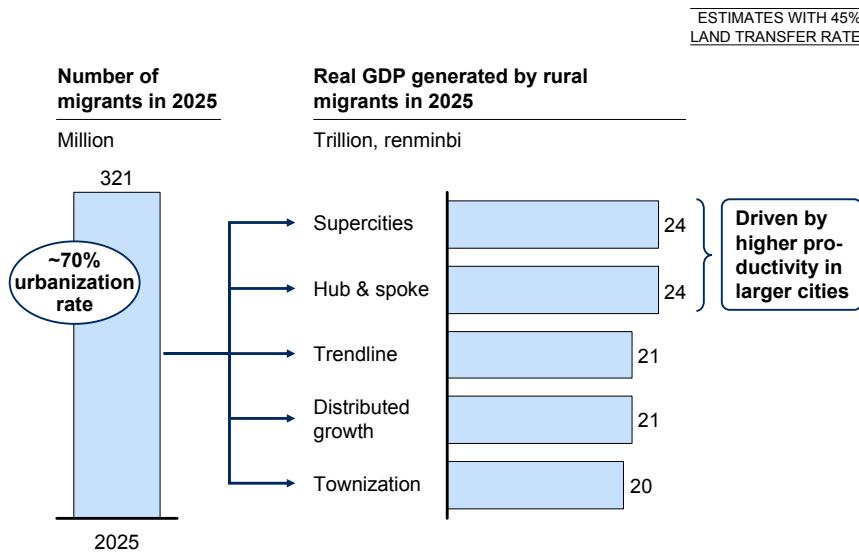


Source: McKinsey Global Institute analysis

Increases in yields will drive up rural GDP by 54 percent by 2025—a substantial jump, but not as large as the expected five-fold increase in urban GDP over the same period. However, thanks to the potential threefold increase in productivity, per capita rural income will rise significantly to between 7,000 and 13,700 renminbi<sup>2</sup> by 2025. The government appears to be well within reach of its target of doubling rural per capita incomes by 2020.

<sup>2</sup> Using the historical standard of rural income to GDP ratio of about 50 percent.

## THE SHAPE OF URBANIZATION MAKES A DIFFERENCE

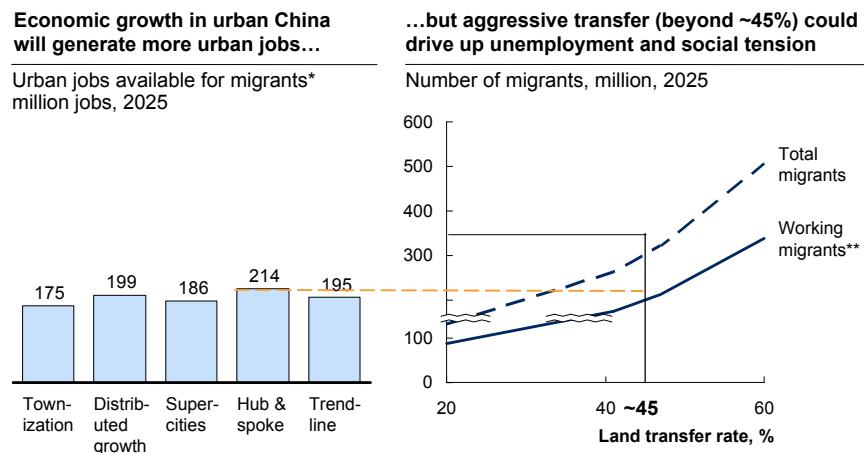


By 2025, rural migrants will continue to contribute a significant one-third share of urban GDP growth. Exactly how much migrants will contribute to real GDP by 2025 will be determined by the shape that urbanization takes across China. As we found in our previous research, overall GDP under concentrated urbanization scenarios (supercities, hub & spoke models) would be 20 percent higher than under dispersed urbanization scenarios (distributed growth, townization models)<sup>3</sup>. If migrants gravitate towards small- and mid-sized cities under dispersed growth scenarios, they would generate a real GDP of about 20 trillion renminbi by 2025. But if they move towards bigger, denser cities, migrants would generate an estimated 24 trillion renminbi in real GDP<sup>4</sup>. The difference is primarily attributable to the large-scale productivity gains that concentrated urbanization encourages.

3 *Preparing for China's Urban Billion*, McKinsey Global Institute, March 2008 ([www.mckinsey.com/mgi](http://www.mckinsey.com/mgi)).

4 Assuming an average land transfer rate of 45 percent, based on the projected range of 40 and 60 percent. A higher land transfer rate would imply more migrants, and vice-versa.

## THE COMING WAVE OF MIGRANTS WILL POSE A SERIOUS CHALLENGE



\* Estimated through a static analysis, without considering job opportunities from additional GDP created by additional migrants from the recent land reform

\*\* The actual dependency ratio could heavily influence the final number of migrants: a 0.5 dependency ratio is used here based on assumptions that in the future more dependents will tend to relocate together into the cities as the family leases the land, although some scholars argue that the lease of arable land alone will not be enough to sustain an entire family's relocation to an urban area

Source: *Preparing for China's Urban Billion*, McKinsey Global Institute, March 2008; McKinsey Global Institute analysis; ([www.mckinsey.com/mgi](http://www.mckinsey.com/mgi))

Despite the expected boom in urban GDP, the number of jobs available in China's cities over the next two decades may not be commensurate with the number of migrants seeking them. Assuming that urban GDP grows at an average rate of 8.5 percent per year over the next 20 years, between 170 million to 210 million new jobs will be created in Chinese cities by 2025.

Such growth should guarantee enough employment opportunities for up to 320 million migrants by 2025. Based on the rate of land transfer in reform pilot areas in the past few years, and the speed at which the earlier rural collective reform was implemented, the number of people who could decide to lease their plots under the most recent reform could well exceed 320 million, pushing the number of migrants to more than 500 million by 2020. Therefore, if land transfers were to take place too quickly in the first few years of the reform, or if more than 45 percent of farmers transfer their plots of land between now and 2025, the additional supply of migrant labor that this would create could exceed what China's cities can safely absorb. China's cities could face a severe shortage of jobs for an army of unemployed migrants<sup>5</sup>,

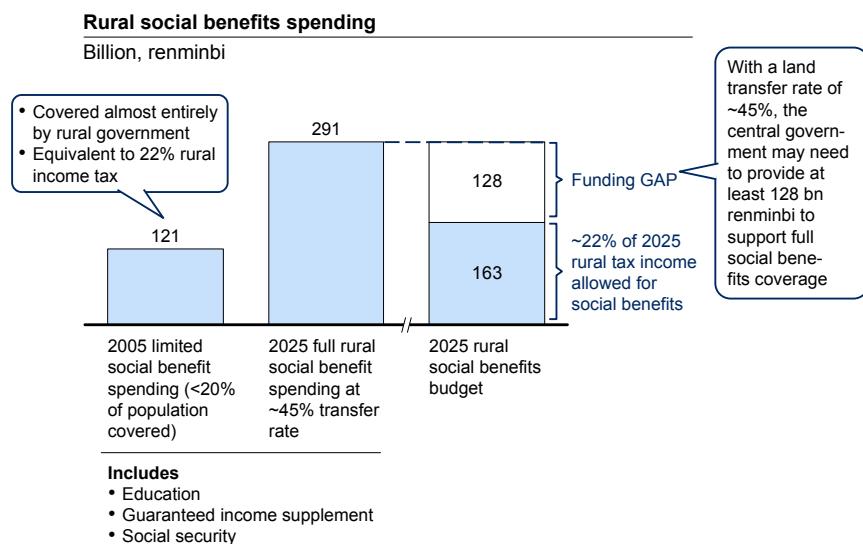
<sup>5</sup> Assuming productivity in Chinese cities will continue to grow at current rates.

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putting substantial downward pressure on wages, boosting unemployment, and exacerbating social tensions.

Of course, a similar scenario could also arise as a result of slower urban economic growth and slower job creation. From the government's perspective, the success of the rural reform policy will ultimately be determined by two factors: how cities manage their economic growth, and how rapidly land-use rights will be transferred in the rural areas. The central government may need to impose maximum quotas on land-use transfers in different provinces to control the pace and magnitude of migration.

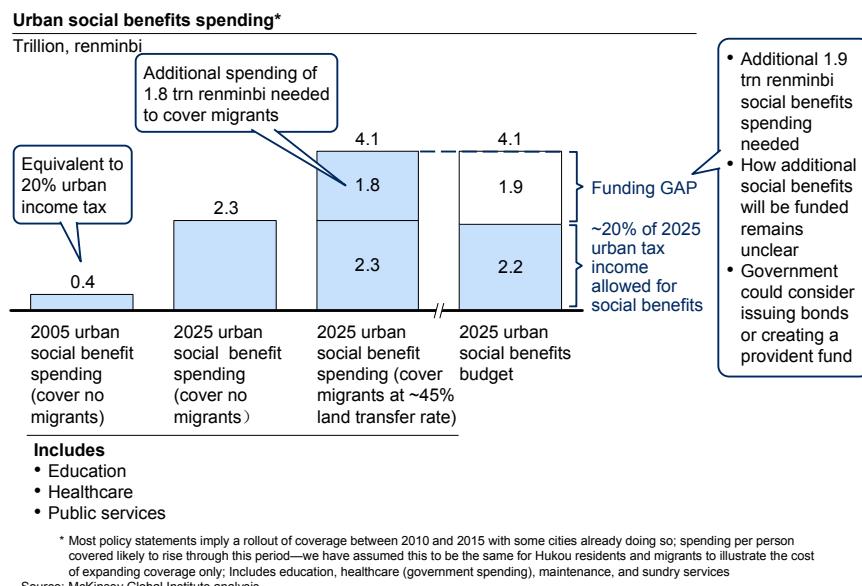
## ADDITIONAL FUNDS WILL BE NEEDED TO EXTEND SOCIAL BENEFITS TO THE RURAL POPULATION



In a bold and widely praised move, the central government has declared that universal social benefits will be an integral part of the rural reform package as well as its recently announced economic stimulus package. These benefits include education, social security, healthcare, and other public services. Currently, less than a fifth of China's rural population is covered by social benefits. Scholars agree that reform will bring more social benefits to rural residents and migrants, but the government has yet to disclose exactly how much funding it will provide to meet this goal.

With more tax revenues flowing from farmers engaged in higher-value agricultural production, and fewer rural residents to look after, we believe that the government can partly achieve its ambitious goal of extending social benefits to the rural population. But higher tax revenues from rural areas will not be enough to provide coverage for all rural residents. Assuming rural governments allocate the same proportion of their budgets for social benefits in 2025 as they do today, we find that there will be a potential gap of 128 billion renminbi between needed monies and available funds. Presumably, the central government will need to transfer those funds to rural governments if they are to meet their goal of extending social benefits to the entire rural population.

## FUNDING SOCIAL BENEFITS FOR MIGRANTS IS A KEY CHALLENGE FOR URBAN CHINA



Although China's robust migrant labor pool will help drive urban GDP growth, the expected exodus to the cities of hundreds of millions of migrants over the next two decades will amplify the complexities of urban management. City governments are already under significant financial pressure to provide the social benefits promised in the 11th Five Year Plan. With 320 million migrants expected to enter China's cities over the next 20 years, we estimate that by 2025, an additional 1.8 trillion renminbi per year will be needed to extend social benefits to them.

Overall, the extension of social benefits for all residents in both rural and urban areas will account for about 2 trillion renminbi in additional government outlays per year by 2025 (about 3 percent of projected GDP by then), on top of the expenditures necessary for *hukou* residents. Even under the most productive concentrated urban growth scenarios, any gains in GDP will not generate enough incremental tax income to cover this additional expense. As we suggested in our previous research, adopting "urban productivity" initiatives could yield savings on public spending of up to 1.5 trillion renminbi per year by 2025. However, the government will still need to explore other financing methods, such as bond issuance, or the creation of a specific provident fund, to meet its goal of universal social benefits coverage.





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