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China as Consumer

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About the Author

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China as Consumer

This article seeks to examine two key issues that will be major drivers of consumption in China over the coming five years: urbanization and environmental amelioration. Whether the issues identified will be the largest factors over this time frame remains unclear, but each of these two areas warrants considerable attention as a very significant contributor to the future of consumer demand in China.

Urbanization

China is currently experiencing an unprecedented rate of urbanization. Indeed, it is difficult to overstate the scale, scope, and momentum of this phenomenon, which has significant implications for China's future demand. The political leadership, moreover, wants to accelerate this process in order to meet a variety of goals, most importantly to increase China's GDP and reduce the adverse man/land ratio in the countryside. It is currently projected that over the coming 15 years, the number of new rural-to-urban migrants could equate more than two-thirds of the entire population of the United States.

The forces behind this rural-to-urban migration will not disappear in the near future:

- The migration is not significantly decreasing the number of people living in the rural areas in absolute terms, but rather drawing off the rural population's natural increase.
- The results of the migration include not only the physical expansion of cities and the flow of capable rural inhabitants to the cities, but also the reduction of the amount of China's fertile, arable land and diminution of the available human capital in the countryside.
- To cope with the migration, the barriers to entry and advancement in the urban areas are gradually being reduced or removed, facilitating this one-sided population shift.

The contours of the anticipated urbanization are also significant. Major efforts will be made to facilitate the development of three huge urban megalopolises: the Bohai in the Beijing-Tianjin-Tangshan area, the lower Yangtze region anchored by Shanghai, and the Pearl River Delta region anchored by Guangzhou and Shenzhen.

Each megalopolis will require new levels of inter-urban integration and municipal specialization that will potentially have tremendous consequences for various types of infrastructure development. The three areas collectively should account for 65 percent of China's national GDP by 2020 (up from 38 percent in 2004). This provides some measure of

the dimensions of the anticipated growth.[1] Overall GDP is anticipated to roughly quadruple in constant dollar terms during this period.

The implications of these factors for demand in China merit attention. Urban infrastructure development will remain a pressing need. Energy, transportation, housing, schools, health care facilities, waste treatment, etc. must continue to expand to keep up with a rapidly growing urban population that will increase by well over ten million migrants per year. Furthermore, urbanites generally consume more resources per capita than rural inhabitants. For example, China's urban dwellers on average use 2.5 times the energy that their rural counterparts consume. The result will be a heightened energy demand.

The present forces shaping China's urban physical development will only amplify these trends. China's urban expansion is inefficient and duplicative. While China's central government encourages specialization and integration, China's political economy prompts territorial officials to look inward. Cities seek to be complete, self-sufficient entities, with their own tertiary education, manufacturing, science and technology, upper level health facilities, etc. Each town and city along the Yangtze from Shanghai to Nanjing, for instance, has its own port facilities. Nearly every major Chinese city has built or is seeking to build its own airport. Although the central government hopes to move toward the type of clustered specialization and integration described with the three megalopolises, there are few signs that the current direction of urban development will produce measurable improvements in resource allocation anytime soon.

Another consequence of present urbanization patterns is the absorption of some of China's most productive farmland on the outskirts of expanding cities. The expansion of urban centers is not only depriving rural areas of land, but also productive, innovative minds. Surveys done in China indicate that the average rural migrants are not the poorest peasants that lack access to land. Rather, they are the best educated, more prosperous rural dwellers who have the imagination, skills, and resources to get started in the cities.

Finally, due to the expansion of urban centers and their attractiveness to many very capable rural workers, urbanization could considerably diminish China's agricultural output while simultaneously accelerating the expansion of an already rapidly growing urban population that demands improvements in the quality and quantity of food. Urbanization could therefore function as a substantial determinant of China's future demand for agricultural imports.

Environmental Amelioration

As China's urban centers develop and expand, China's environmental problems are growing. First, more than half of China's cities are chronically short of water.[2] The country's water

[1] This concept of three megalopolises (termed "clusters" in the Chinese literature) is adumbrated in detail in *Zhongguo chengshi fazhan baogao, 2002-2003* (China's Urban Development Report: 中国城市发展报告2002-2003).

table under the North China plain has dropped by more than three feet per year, every year since about 1960.[3] In addition, only about 60 percent of the water used in cities receives any treatment at all before being returned to the water system.[4] Second, the air quality is poor, with average levels of suspended particulate matter in the air that are several times higher than the maximum levels the WHO deems compatible with good human health.[5] Third, a shortage of natural resources plagues the population. Acid rain afflicts a large part of the arable land base. Overall endowments of arable land, forests, grasslands, energy (other than coal), and most minerals are well below half of their global per capita averages.[6] Until recently, China's economy was small enough to be able to grow even with these severe resource constraints, and its political system preempted demands from below to address public health and other consequences of its economic path to date. All of this is now changing significantly.

Things have reached the point where serious change in China's development model is imperative. Hu Jintao and Wen Jiabao, among others, clearly recognize this fundamental reality. The 16th Party Congress called for "scientific development" (their term for "sustainable development"), and the proposed eleventh Five Year Plan (FYP) includes major projects and funding to address environmental problems. The eleventh FYP provides a total of 1.3 trillion RMB for nine major environmental projects, two of which are on energy.

Oil imports in 2004 reached 40 percent of current demand, and a consensus forecast posits this will climb to 70 percent of demand by 2020. The eleventh FYP therefore mandates that in 2010 China's total energy intensity will be 20 percent below that of 2005 and proposes ten major projects for energy conservation. Coal will continue to provide the major source of energy for China (nearly 70 percent in 2004, likely still over 60 percent in 2020), but water is so scarce near the country's major North China coal basin that most coal is shipped and burned unwashed. In addition, moving coal takes up more than 40 percent of China's rail network, which in turn is only able to meet less than 50 percent of current demand for rail-based freight shipment. China is, therefore, adopting a 1.5 trillion RMB 13-year plan for the development of renewable energy.

China can address its complex environmental issues in a wide variety of ways. Clearly, no single approach will produce an overall fix – a mix of initiatives is necessary. These should include a variety of measures to encourage conservation and efficiency. In the water sector, such conservation measures as more realistic pricing, metering to gauge actual consumption, repairs to leaking water pipes, and adoption of water-saving irrigation techniques would all improve capacity. Greater efficiency can be achieved by measures such as vast expansion and more effective use of water treatment facilities, technology improvements to reduce

[2] The figure is roughly 340 water-short cities out of a total of about 650 cities nationally.
[3] In the Beijing-Tianjin area the water table now drops by nearly ten feet per year.
[4] Only about 7 percent of China's water is potable, and well over 20 percent cannot be used for either industrial or agricultural purposes – it is too degraded to be improved to the point where it can be used at all.
[5] Contributing to a current death rate for chronic respiratory diseases among adults that is over four times the comparable U.S. rate.
[6] The global per capita averages are depressed already by the inclusion of China in figuring those averages.

water consumption in production processes, and sectoral shifts in the economy to focus on development of sectors in North China that are less water-intensive.

China already plans to invest in all of the above types of efforts, focusing on conservation, enhanced efficiency, and on sustainable production through increased use of alternative energy supplies, among other methods. But the nature of China's political economy indicates that for a reasonable period of time to come:

- Large investment projects will be implemented far more rigorously than will very important, small investment initiatives (such as repairing pipes, installing meters, enforcing regulations, etc.).
- Many of the investment projects will be built but not used fully. Currently, for example, many localities do not operate their water treatment facilities except when inspectors are in the area, due to unwillingness to use local funds for this purpose.
- Local officials will continue to give top priority to rapid growth of local GDP, especially in the manufacturing sector.

The implications of the above overview are stark in their broad outlines, even if unclear in their particulars. They include the following:

- Massive infrastructure projects will be undertaken to address various types of environmental insults and constraints. Many of these will be very expensive, such as the South-to-North water transfer project, and will require tremendous inputs of basic materials (cement, etc.). They are necessary in order for China to put off the day when environmental constraints significantly reduce the overall GDP growth rate.
- China is at substantial risk of major environmental catastrophes. The recent water pollution crisis in Harbin may be a precursor of far more serious developments to come that could force the relocation of large populations. Should such catastrophes occur, they will significantly increase necessary expenditures for related building and relief efforts.
- Health care costs will rise substantially. This in part will be due to the ageing of the country's population, but also to the fact that China's air is going to become a lot more polluted despite significant investments to address pollution problems. Working under relatively benign assumptions,[7] by 2030 carbon loading in the atmosphere should reach roughly 300 percent of current levels. The potential health consequences of such a development are severe.

The above list could easily be expanded. China is currently skirting on the edge of major problems in many dimensions of its environmental situation. Its political system is tremendously adept at quickly building large projects, but fares poorly on transparency, enforcement of laws and regulations, and creating incentives to promote environmental stewardship.

[7] That technological change in terms of improving efficiency in the energy sector will continue to occur at a significant rate and that China will meet its current goals for diversifying away from coal.

Three summary points on the environment merit attention:

1. Although environmental problems are already very severe, they are not necessarily growth constraining over the coming five years.
2. China recognizes that it must now greatly increase its annual investment in projects aimed at ameliorating environmental problems and constraints, the demand for which will inexorably grow over the coming years.
3. By about 2015, environmental constraints in China are likely to become seriously constraining to growth, potentially affecting the demand curve from then on.

Conclusion

The purpose of this paper is to point out a very fundamental reality. Regardless of GDP growth projections for China, or the ups and downs of a business cycle, the fundamental underlying processes of urbanization and ameliorating environmental deterioration will inevitably create huge and persistent demand over the next five to ten years. The rate of investment in infrastructure projects will not abate. Chinese consumption of the materials and services that go into such projects will remain very high. China will have no choice but to look internationally for many of the necessary resources to satisfy these demands.