

Research Series on the Chinese Dream and China's Development Path

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Drawing on a large body of empirical studies done over the last two decades, this Series provides its readers with in-depth analyses of the past and present and forecasts for the future course of China's development. It contains the latest research results made by members of the Chinese Academy of Social Sciences. This series is an invaluable companion to every researcher who is trying to gain a deeper understanding of the development model, path and experience unique to China. Thanks to the adoption of Socialism with Chinese characteristics, and the implementation of comprehensive reform and opening-up, China has made tremendous achievements in areas such as political reform, economic development, and social construction, and is making great strides towards the realization of the Chinese dream of national rejuvenation. In addition to presenting a detailed account of many of these achievements, the authors also discuss what lessons other countries can learn from China's experience.

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Jingyuan Li • Tongjin Yang
Editors

China's Eco-city Construction



 Springer

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ISSN 2363-6866

ISSN 2363-6874 (electronic)

Research Series on the Chinese Dream and China's Development Path

ISBN 978-3-662-48152-3

ISBN 978-3-662-48153-0 (eBook)

DOI 10.1007/978-3-662-48153-0

Library of Congress Control Number: 2015947766

Springer Heidelberg New York Dordrecht London

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Printed on acid-free paper

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Series Preface

Since China's reform and opening began in 1978, the country has come a long way on the path of Socialism with Chinese characteristics, under the leadership of the Communist Party of China. Over 30 years of reform efforts and sustained spectacular economic growth have turned China into the world's second-largest economy and wrought many profound changes in the Chinese society. These historically significant developments have been garnering increasing attention from scholars, governments and the general public alike around the world since the 1990s, when the newest wave of China Studies began to gather steam. Some of the hottest topics have included the so-called China miracle, Chinese phenomenon, Chinese experience, Chinese path and the Chinese model. Homegrown researchers have soon followed suit. Already hugely productive, this vibrant field is putting out a large number of books each year, with Social Sciences Academic Press alone having published hundreds of titles on a wide range of subjects.

Because most of these books have been written and published in Chinese, however, readership has been limited outside China – even among many who study China – for whom English is still the lingua franca. This language barrier has been an impediment to efforts by academia, business communities and policymakers in other countries to form a thorough understanding of contemporary China, of what is distinct about China's past and present may mean not only for her future but also for the future of the world. The need to remove such an impediment is both real and urgent, and the *Research Series on the Chinese Dream and China's Development Path* is my answer to the call.

This series features some of the most notable achievements from the last 20 years by scholars in China in a variety of research topics related to reform and opening. They include both theoretical explorations and empirical studies and cover economy, society, politics, law, culture and ecology, the six areas in which reform and opening policies have had the deepest impact and farthest-reaching consequences for the country. Authors for the series have also tried to articulate their visions of the “Chinese Dream” and how the country can realize it in these fields and beyond.

All of the editors and authors for the *Research Series on the Chinese Dream and China's Development Path* are both longtime students of reform and opening and

recognized authorities in their respective academic fields. Their credentials and expertise lend credibility to these books, each having been subject to a rigorous peer review process for inclusion in the series. As part of the Reform and Development Program under the State Administration of Press, Publication, Radio, Film and Television of the People's Republic of China, the series is published by Springer, a Germany-based academic publisher of international repute, and distributed overseas. I am confident that it will help fill a lacuna in studies of China in the era of reform and opening.

Shouguang Xie

Series Acknowledgements

After a relatively short gestation period, the *Research Series on the Chinese Dream and China's Development Path* has started to bear fruits. We have, first and foremost, the book's authors and editors to thank for making this possible. And it was the hard work by many people at Social Sciences Academic Press and Springer, the two collaborating publishers, that made it a reality. We are deeply grateful to all of them.

Mr. Shouguang Xie, president of Social Sciences Academic Press (SSAP), is the mastermind behind the project. In addition to defining the key missions to be accomplished by it and setting down the basic parameters for the project's execution, as the work has unfolded, Mr. Xie has provided critical input pertaining to its every aspect and at every step of the way. Thanks to the deft coordination by Ms. Yanling Li, all the constantly moving parts of the project, especially those on the SSAP side, are securely held together, and as well synchronized as is feasible for a project of this scale. Ms. Jing Gao, unfailingly diligent and meticulous, makes sure every aspect of each Chinese manuscript meets the highest standards for both publishers, something of critical importance to all subsequent steps in the publishing process. That high-quality, if also at times stylistically as well as technically challenging, scholarly writing in Chinese has turned into decent, readable English that readers see on these pages largely thanks to Ms. Fan Liang, who oversees translator recruitment and translation quality control.

Ten other members of the SSAP staff have been intimately involved, primarily in the capacity of in-house editor, in the preparation of the Chinese manuscripts. It is time-consuming work that requires attention to details, and each of them has done this and is continuing to do this with superb skills. They are, in alphabetical order, Mr. Jihui Cai, Ms. Xiaojun Liu, Mr. Wenwu Ren, Ms. Xiaolin Shi, Ms. Yuehua Song, Mr. Genxing Tong, Ms. Dan Wu, Ms. Dongmei Yao, Ms. Wei Yun and Ms. Qiong Zhou. In addition, Shouguang Xie and Yanling Li have also taken part in this work.

Ms. Qiong Zhou is the SSAP in-house editor for the current volume.

Our appreciation is also owed to Ms. Yan Li, Mr. Ning Chai, Ms. Lei Wang and Ms. Yi Xu from Springer's Beijing Representative Office. Their strong support for

the SSAP team in various aspects of the project helped to make the latter's work that much easier than it would have otherwise been.

We thank Mr. Yong Zhou for translating this book and Mr. Leeor Schweitzer for his work as the polisher.

Last but certainly not least, it must be mentioned that funding for this project comes from the Ministry of Finance of the People's Republic of China. Our profound gratitude, if we can be forgiven for a bit of apophasis, goes without saying.

Social Sciences Academic Press
Springer

Preface

The city is one of humanity's greatest inventions. Human beings have achieved enormous socioeconomic progress in modern times by focusing on cities. Many human civilizations began and developed with an urban core. Two hundred years ago, urban residents accounted for less than 3 % of the world's total population, but by 1900 that number had gone up to 13 % and spiked up to 50 % by the beginning of the twenty-first century. By 2050 70 % of the world's total population is expected to live in cities. Cities' rapid development, starting from nothing, follows similar trends in human development, ideals, and other changes. Cities serve as a ladder for human advancement. The process of urbanization is encapsulated primarily by the continuous human migration into cities. Joseph Eugene Stiglitz, an American economist and recipient of the Nobel Memorial Prize in Economic Sciences, predicted that high-tech development in the United States and urbanization in China will be the two primary factors shaping the world in the twenty-first century. Strong economic growth in China that began with the reform and liberalization policies has greatly promoted urbanization. Urbanization in China rose to 53.7 % in 2013, up from 17.9 % in 1978, demonstrating an average annual increase greater than 1 %. China has long been the world leader in urbanization, both in regard to net annual increase of urban population and the total urban population. China saw its permanent urban population increase to 730 million in 2013, up from 170 million in 1978. It is expected that about one billion people will live in Chinese cities by the end of 2030. By that time there will be 221 Chinese cities with a population of over one million (currently there are only 35 cities that are so large all across Europe). Of the 221 cities, 23 will have a population of over 5 million, and 8 cities will have a population of over 10 million, according to forecasts from McKinsey & Company. During this period, 30 million Chinese, a group equivalent to Canada's population, will join the middle class each year. Important changes will occur in the global production market when the size of China's middle class overtakes that of the United States and China becomes the world's largest consumer market. China's rapid urbanization leads to a massive consumption of resources, rapid expansion of the secondary and tertiary sectors, and the corresponding issues with employment,

housing, transportation, and social security. It further forces lifestyle changes and carries huge environmental impacts.

China's socioeconomic development pattern has now entered a critical transformation period. Accordingly, urban development has also shifted and entered a new stage, a period of urbanization-oriented industrialization, opposite the approach used in the past. Transformation of the economic growth pattern and of the urbanization process stand as two approaches to a singular mission. China is now focused on economic restructuring, mainly the increase of domestic demand through urbanization, in order to accelerate these transformations. China's total population is greater than the population of all member countries of the Organisation for Economic Co-operation and Development (OECD) combined. An average annual increase of 1 % in China's urban population means that over 10 million people, greater than the total population of many European countries (only 15 of over 40 European countries had a population over 10 million in 2006), would migrate into cities from rural areas each year. Urbanization of the Chinese population is a strong, endogenous force upon which the socioeconomic development of China must rely. The transformation of both the economic growth pattern and of economic restructuring is dependent upon urbanization levels regardless of what those levels may be. Transformation and development planning has centered on urbanization so as to fuel comprehensive socioeconomic improvements in a China that has entered a new stage of urbanization.

China has made significant achievements in urban development since 1978. These include the rapid expansion of cities, strengthening urban economies, further optimization of industries, improvements to urban infrastructure and environment, continuous enhancements to urban services, improved urban construction and management techniques, and booming public services. These steps have aided China in working toward its goal of building harmonious cities. Chinese cities have progressed in differing ways since the beginning of China's reform and liberalization policies, although most have shifted from traditional city structures based on self-sufficient agricultural economies to modern city structures based on industrial market economies. Establishing a market economic system requires the introduction of capitalism, where resources are distributed on the basis of supply and demand calculations and attempts to increase one's economic advantage. This logic has radically changed an ancient China within several decades, one notable change being the emergence of many modern cities. Industrialization and the market economy have fueled China's urbanization but have also brought about enormous negative and sometimes unpredictable effects. As rural towns are dominated by factories, traditional houses built along small rivers and the many accompanying bridges, once a traditional landscape in southeastern China, have been replaced by high-rise buildings made of concrete. While enjoying certain elements of the urban lifestyles, people face increasingly severe urban problems heralded by the rapidly growing population such as tight housing supplies, difficulty getting a job, traffic congestion, environmental degradation, and frequent public safety incidents. Although memories of the Great Smog of London in December 1952 and of the photochemical

smog of Los Angeles in the 1970s may have faded, the heavy smog that occurred in the city of Beijing and the surrounding areas in the winter of 2013 remains fresh in the public's mind. This smog covered 1.3 million square kilometers, lasted 3 weeks, reached a particulate matter (PM) 2.5 concentration in excess of $500 \mu\text{g}/\text{m}^3$ in a number of cities, and affected over 800 million, an irregular magnitude on all counts that shocked the world and was referred to by an expert as "an incident worth recording in the world's history of pollution." This pollution incident has raised the public's attention to air quality to an unprecedented level. In a report on air pollution in cities worldwide, published by the World Health Organization in 2011, of the 1,083 cities in 91 countries, the 28 provincial capitals of China all ranked below 900. Smog in China results from multiple factors, top among which is the high energy consumption per unit of GDP (energy density). China's energy density is five times higher than Japan's, four times higher than Germany's, and three times higher than the United States'. China experienced a GDP growth of 9.2 % in 2011 and an energy consumption increase of 7 % during that same time, placing its total at 3.5 billion tons of standard coal equivalent, or 46 % of the world's total energy consumption. China's economy is expected to double by the end of 2020, but a similar doubling of its energy consumption is entirely unsustainable. The Chinese public has instead embraced the concept of socioeconomic development geared toward an ecological civilization. This evolving concept dispenses sharp criticism against the traditional GDP-centric model of modernization. Developed countries have begun a second phase of modernization scrutinizing traditional development that aimed at nothing but GDP growth. At the invitation of the United Nations Educational, Scientific, and Cultural Organization (UNESCO), the late French economist François Perroux published a book titled *A New Concept of Development* in 1983 to propose a people-centric, generalized, and local-based development concept that pays particular attention to the value of cultures. Indexes focused on green and people-centric data have now become basic measures for socioeconomic development that are generally accepted in the international community. As developed countries shifted toward information-based economies, traditional industries were moved to developing countries. As a state in the periphery of the global economy, China became an ideal destination for these industries since it was then only in the early stage of industrialization, only a short time after it rolled out its reform and liberalization policies. As a result, China became "the world's factory floor." While bringing China prosperity and advances, this shift has led to a series of negative effects, stemming from the overemphasis on development. Over time China has come to realize that urbanization centered around industry is unsustainable. China's urbanization trends have so far been deeply affected by GDP-centric policies, industrial emphasis, and capitalistic principles borne from a market economy. The foundation of the market economy in its purest form is a materialistic strategy that aims at nothing but GDP growth. "How can we adjust our society and culture to our industrialization?" This was how M. A. Sinaceur, a former UNESCO official, described the overemphasis of industrialization in the old development concept in his preface to the aforementioned book by François Perroux. The old development concept equates development with growth, equates growth with GDP increase, and

hence uses GDP growth rate as the primary measure for development. Such a development concept is built upon material logic in an extreme form, which will ultimately lead to consequences such as converting residential areas into industrial facilities or their components, such as sites for obtaining, storing, and disposing of raw materials; severe damage to the environment and the livability of our surroundings; and the eventual impossibility of the reproduction of material goods. Chapter 1 of this book will explain how the current global ecological crisis has much to do with the industrialization of civilization since the nineteenth century. It is impossible to abate the environmental crisis under the framework of an industrial civilization. A transition to an ecological civilization is necessary to emerge from the environmental crisis. China will undergo the largest-scale urbanization in human history within the next decade, so that its decisions on urban development will affect the entire world's urban future. What will desirable Chinese cities be like? How should China finish the urbanization process? These are some of the fundamental questions important to shaping urbanization, and this book seeks to answer and explore these questions. The Chinese government has made a firm commitment to the international community to transition toward an ecological civilization. This transition involves China's future modernization; the transformation of entire social systems; changes to living, employment, and consumption habits; and massive societal reorganization. The Chinese government's long-term effort in search of optimized development patterns has culminated in a set of values that largely overlap with those of an ecological civilization. China has been engaging in environmental protection ever since it sent a delegation to the first ever United Nations Conference on the Human Environment held in Stockholm, Sweden, in 1972. The State Council, which acts as China's cabinet, held the first national conference on environmental protection in 1973, at which time it announced a 32-character guideline for environmental protection. After Agenda 21 was passed at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, the Chinese government established sustainable development as a national strategy for modernization and published *China's Agenda 21: White paper on China's Population, Environment and Development in the 21st Century*. The World Summit on Sustainable Development was held in 2002, just before the Chinese government announced that it would work under the Outlook on Scientific Development protocol in order to accelerate historic changes in environmental protection efforts and develop new approaches for building a resource-efficient and environment-friendly society. The 2012 United Nations Conference on Sustainable Development known as Rio +20 offered the Chinese government the opportunity to make clear its position that "We must prioritize ecological progress and incorporate an ecological perspective in all aspects and processes surrounding economic, political, cultural, and social progress. We must work hard to build a beautiful country, and achieve lasting sustainable development in the Chinese nation." A review of environmental protection efforts in China shows that the primary advances were achieved through value changes and the greatest changes were born of development concepts. Environmental protection across China has changed in important ways, including both theories and practices, since the 11th Five-Year Plan period. The ecological civilization concept

already plays a leading role in guiding China's socioeconomic development. The Chinese government has announced that "We have to understand that to protect the environment is to preserve our productivity and to improve the environment is to develop our productivity. Such concepts should be deeply rooted." China has committed to consciously promote a green, sustainable, and low-carbon development pattern, and it will not sacrifice the environment for temporary economic growth. The Chinese government will prioritize resource conservation, environmental protection, natural restoration, and economic development achieved through environmental protection. China is the only country that has defined what is known domestically as "ecological red lines." The *National Ecological Red Line – the Technical Guide to Setting the Base Line for Ecological Functions (Trial)* was published in February 2013. This red line was adopted as national policy following the red line establishing 120 million hectares of farmland. The Chinese government has given top priority to setting ecological red lines in efforts toward the environmental protection administration reforms and in order to work toward systems oriented about an ecological civilization. At a study session with members of the Political Bureau of the Communist Party of China (CPC) Central Committee held in May 2013, Chinese President Jinping Xi stressed the implementation of the major function-oriented zone (MFOZ) strategy and pushed the responsible governmental departments to accelerate the process and to set ecological red lines in strict accordance with developmental priorities, emphases, restrictions, and prohibitions based on the zone-specific major functions that can then be properly adhered to. Xi also said that the ecological red line concept should be firmly established, with relevant punishments for those crossing the red line so as to ensure environmental protection. These statements underscore the Chinese government's resolution to develop toward an ecological civilization. The ecological civilization concept has already been incorporated throughout relevant systems, policies, laws, and local governments' urban development plans, as part of the socioeconomic development assessment system, and into corresponding accountability systems, and is currently being added in those places where it is not yet embedded.

Environment-friendly cities should be built such that natural and cultural ecosystems constitute a harmonious whole. Cultural elements unique to a given area form the soul of environment-friendly cities, therefore cultural inheritance should be highly respected. The Chinese government approved the National New Urbanization Plan (2014–2020) at a national conference on urbanization in December 2013. This plan cites two inseparable themes, ecology and humanity. A green civilization cannot be inhumane. The pitfalls of human nature serve as a backdrop to ecological disasters and urban problems. To build environment-friendly cities across China, how can we integrate ecological civilization concepts into all elements of urbanization? How can we find an approach to building environment-friendly cities that respects China's style? At the same urbanization conference where the National New Urbanization Plan was presented, a proposal was made that urban development should prioritize indigenous culture, develop fascinating sites with important cultural roots, and support local heritage. Both proposals address the primary issue regarding urbanization in China. Since urbanization is intertwined with culture,

building cities that captivate using the local culture represents the highest standard for urban development and the preferred method for building environment-friendly cities. There is a Chinese saying that proclaims: it takes a decade to nurture a seedling into a tree, but it takes even longer to make a man of oneself. Urban development must be people oriented and must base itself upon continuous improvements in the populations' cultural literacy. By focusing on protection of cultural resources and improvements in people's cultural literacy, Chinese cities can develop toward an ecological civilization and become environment friendly.

Beijing, China
June 28, 2014

Jingyuan Li

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Acknowledgments

The book was written by a number of authors with support from multiple organizations. We would like to express our heartfelt thanks to the Social Development Research Center of the Chinese Academy of Social Sciences (CASS), Lanzhou City University, and a researcher in urban areas and planning at East China Normal University for their assistance in this project. Ms. Qiong Zhou of the Social Sciences Academic Press (China) was ever interested in the progress of this project and provided specific guidance on how to write this book. Dr. Wenzhen Hu, Deputy Director of the CASS Social Development Research Center, also provided help for writing this book. Once again, our gratitude goes to all of them.

This book was coauthored by

Tongjin Yang, Weiping Sun, Juke Liu, Dingjun Wang, and Gang Zeng for Chap. 1

Weiping Sun, Juke Liu, and Dingjun Wang for Chap. 2

Guohua Chang for Chap. 3

Lingfeng Kang and Youji Zhao for Chap. 4

Yongli Zhang and Jiaxing Lu for Chap. 5

Guoquan Qian and Cuiyun Wang for Chap. 6

Taichun Wang and Tianpeng Gao for Chap. 7

Guoquan Qian and Yuxia Wang for Chap. 8