

THE CHINESE ECONOMY: A NEW TRANSITION

Edited by
Masahiko Aoki and Jinglian Wu

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The Chinese Economy

This is IEA conference volume no. 150-IV

The Chinese Economy

A New Transition

Edited by

Masahiko Aoki

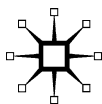
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Foreword

The International Economic Association (IEA), the association of national economic associations/societies, held its 16th Triennial World Congress in Beijing, China, from July 4–8, 2011. This four-volume IEA publication, IEA Conference Volume No. 150–I–IV, comprises 55 papers selected from those presented at the Congress and, in many cases, revised afterwards incorporating discussions that took place at the event.

The Congress was organized in the aftermath of the financial crisis, the prolonged economic consequences of which continued to cast shadows over the global economic landscape. At the same time significant changes in economic structure, mechanisms and institutions were taking place globally – albeit in uncertain directions. It was thus a particularly appropriate time for economists from around the world to gather together in order to present their ongoing analyses about the evolving economic situations and to offer their prescriptions for the future orientation of economic policies. Further, the shared sense of uncertainty about the transformation of the world economy seems to impel economists to reflect on and debate the fundamental premises and focus of their discipline, and to seek advancements in methodology, conceptual terms and so on so that economics can once again become relevant, insightful and constructive.

Dynamic China provided a felicitous meeting place for economists from across the world to engage in this academic enterprise, and more than 1,000 papers were submitted in response to the Call for Papers by the Program Committee. From these submissions the academic program committee selected some 400 papers for presentation. In addition, the Committee organized five Lectures, four Plenary Panels and 22 invited sessions on various subject matters, inviting about 90 leading scholars to participate in them. The contributions to this IEA conference series are comprised mostly of invited papers, selected and organized into four volumes according to the following themes.

Volume I, Institutions and Comparative Economic Development (IEA Conference Volume No. 150–I), edited by Masahiko Aoki, Timur Kuran and Gérard Roland, contains 16 chapters. In the process of the rapid globalization of economies over the course of the past few decades, the landscape of the world economy as divided into developed, developing and underdeveloped terrains is being reshaped. Some of the economies that had stagnated for a number of years are now emerging as fast-growing economies; by contrast, developed economies are now facing unprecedented challenges to sustain growth

under the rapidly evolving environmental, demographic and global market conditions. Will these changes lead to a new convergence of economic structure and performance across economies? Or will the differences in structure and institutional framework remain in spite of global market integration, entailing differentiated developmental performances? A plausible prediction about these issues would require, among other things, a deep understanding of the nature of the long-term developmental processes of economies from both a comparative and a historical perspective. Accordingly, the chapters in this volume consider themes such as: Why did divergences in development performance occur in the past across different regions: the West, Asia, the Islamic world, sub-Saharan Africa and so on? What role did institutional, political and cultural factors play in these divergences? Will differences in these factors persist, or will they become malleable in response to emergent global conditions? Whichever is the case, what will be the consequences for development? Why and how is the issue of food security still a matter of concern for some parts of the world economy? This volume presents a host of original contributions to these and related topics of development economics with historical, comparative and institutional underpinnings.

Volume II, Complexity and Institutions: Markets, Norms and Corporations (IEA Conference Volume No. 150–II), edited by Masahiko Aoki, Ken Binmore, Simon Deakin and Herbert Gintis contains 11 chapters. The totality of economic exchanges among agents in the society is complex, leading economists to grapple with questions such as: How do the agents in society deal with the complex reality in order to pursue their own materialistic and other possible preferences? How could economists construct a good theoretical explanation of complex reality and predict its future performance? According to one view, institutions may be identified with salient features of stable states of play of the societal game that are publicly represented in such forms as norms, laws, markets, organizations, political and corporate governance structures and so on. As such, institutions can provide an order to economic and other types of social exchange, helping agents to cope with the complexity of the real world. However, how can such an order, or an equilibrium state of play, be chosen from among the many possible, and in turn recognized and observed by agents? What are the relationships between such social orders and individual rationality? How do institutional forms, as mentioned above, mediate between the two and how do they evolve? Does the complexity of real life refute the traditional economists' premise of rationality? The contributions in this volume adopt a variety of perspectives to consider these and other related questions.

Volume III, The Global Macro Economy and Finance (IEA Conference Volume No. 150–III), edited by Franklin Allen, Masahiko Aoki, Jean-Paul Fitoussi,

Nobuhiro Kiyotaki, Roger Gordon and Joseph E. Stiglitz, comprises 16 chapters. The financial crisis and the resulting persistent shortfall between the level of production in the USA, Europe and Japan and potential output indicates that macroeconomic mechanisms, theory and policy are not well tuned to, or in step with, rapidly changing global economic environments. Important advances in microeconomics over the past three decades have shown that whenever information is imperfect and asymmetric and markets are incomplete – that is, always – markets are not even constrained Pareto-efficient. These advances have created a presumption that markets are inefficient, but, unfortunately, these insights have not been built into most of the standard macroeconomic models. This may help explain their poor performance, in terms of predicting major downturns, and in providing coherent interpretations of the downturns and their persistence. Similarly, they have offered little of practical use in terms of providing advice about how to respond to crises such as the current global one, how to foster a robust recovery, and how to prevent a recurrence of such events. The chapters in this volume confront issues such as: Can the traditional measurement of GDP be a good measure for gauging and promoting social progress and global welfare? What was wrong with the financial mechanism that had been thought of as promoting economic development prior to the crisis? Is there a way to reconnect the financial and real sectors in a more stable and sustainable way? Alternatively, is it right to presume that the current economic crisis is essentially a financial crisis? Is there not a more fundamental structural problem in the real sector that caused the economic crisis on a global scale? If so, what is it? What kinds of prudent financial regulations, financial institution reforms, macroeconomic performance measures, and taxation on global activities are desirable for ever-interconnected but nevertheless diverse national economies to be stabilized and develop together?

Volume IV, The Chinese Economy: A New Transition (IEA Conference Volume No. 150–IV), edited by Masahiko Aoki and Jinglian Wu, contains 12 chapters. The rise of industrialized China and her resurgence as an economic powerhouse is a transformative event in the history of the world economy. However, there now appears to be an emergent consensus that the Chinese economy is facing a turning point, that is to say, another transition after the thirty years of successful transition from the command economy to the market economy. The nature of this new transition may be understood to some extent within a recent conceptual and analytical framework that unifies development economics and demography in a long-term perspective. After a rather long transition out of the Malthusian state (1911–the late 1940s) and then the phase of government-mediated initial industrialization (the early 1950s–the late 1970s), the era of high growth ensued, driven by favorable demographic factors such as the demographic dividend (an increase in the ratio of working-age population in the total population) and the massive domestic migration of labor

from the rural agricultural sector to the industrial sector. However, this phase of development is now about to end. Simply put, improvements in the quality of human resources rather than mere expansion of their quantity, as well as an increase in consumption relative to investment in physical capital, needs to become a major driving force of further development. This transition to the phase of human capital-based, market-oriented development is the key for China to sustain per capita income growth, albeit at a slower rate than in the past three decades, and to avoid a stall referred to as the 'middle-income trap' in the policy arena of development economics. As argued by authors of almost all the chapters included in this volume, this transition would call for a further deepening of the market mechanism driven by private incentives, governed by the rule of law and complemented by sustainable public policy. More specifically, the chapters ask and attempt to answer questions such as: How has modern economic science helped guide the Reform and Open Policy of China in the past and what suggestions can it offer for China's future direction? How does the Chinese (state) market economy operate in the areas of labor markets, social welfare systems, banking and corporate governance, foreign exchange and capital account controls, environmental control, and also in the area of relations between central and local governments? What kinds of future policy agenda and institutional reforms may be needed in these areas to make the transition to the new phase of development smooth and effective?

As noted, the papers compiled in this IEA World Conference series are selected not only for their academic merit but also on the basis of the selected themes. It is therefore regrettable that many excellent papers presented and discussed at the Congress have not been included in this series, especially those in the fields of experimental economics (both field and laboratory), international trade and foreign exchange, income and wealth inequality, environment and energy, econometric methods (especially those dealing with unobserved heterogeneity), country-specific empirical studies and so on. The whole program of the Congress may be accessed by visiting the Congress website: www.iea-congress-2011.org/Homepage.html.

The Program Committee responsible for the design and implementation of the program was comprised of leading economists from all over the world and from broad fields of economics. Their wisdom, academic expertise and leadership, organizing competence and generous sharing of time made the World Congress an enormously successful academic event. As the Chairman of the Program Committee *ex officio*, I would like to express sincere gratitude to them by listing their names below in alphabetical order with their institutional affiliations at the time of the Congress (those with an asterisk have also made additional contributions to the compilation of these IEA conference Volumes).

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- Bardhan, Pranab, India (University of California, Berkeley)
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The meeting of the Congress was held in the excellent academic and historical atmosphere of Qinghua University which was simultaneously celebrating its centenary. The collegial academic discussions that took place in this ambience certainly marked one of highlights of the 50-year history of the IEA. The Association would like to express sincere gratitude to the university, headed by then-President Gu Binglin, for providing an amiable environment, excellent facilities, efficient administrative help and warm hospitality. The IEA also owes a great debt of gratitude to those who organized the Congress on site: Executive Vice President Xie Weihe of Tsinghua University, Chairman of the Local Organizing Committee, Professor Bai Chong-En of Tsinghua University, its Secretary General, and all the other members of the Local Organizing Committee:

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In addition, the hard work of the administrative staff and student assistants at Tsinghua University coordinated by Mr Yu Jiang, ensured that the logistic operations of the Congress ran in an impeccably smooth manner, something for which the executive committee of the IEA would like to express great thanks.

The Congress was financially supported by CITIC Group, the China Investment Corporation, the China Construction Bank and the China International Capital Corporation. The IEA would like to express deep gratitude to these donors for their generous support.

And finally, we are deeply indebted to Nick Brock and Rick Bouwman for their careful editing of the entire manuscripts, and to all the staff at Palgrave Macmillan for their great help in shepherding the volumes from the contracting through the production process.

July 27, 2012

Masahiko Aoki

General Editor, IEA Conference Volume No. 150: I–IV
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Introduction

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The rise of industrialized China and her resurgence as an economic powerhouse is a transformative event in the history of the world economy. However, there now appears to be an emergent consensus that the Chinese economy is facing a turning point, that is to say, another transition after the thirty years of successful transition to the market economy from the command economy. The nature of this new transition may be understood within a new conceptual and analytical framework that unifies development economics and demography in a long-term perspective (for example, Hansen and Prescott 2002; Galor 2011; Aoki 2012). After a rather long transition out of the Malthusian state (1911–the late 1940s) and then the phase of government-mediated initial industrialization (the early 1950s–the late 1970s), the era of high growth ensued, driven by favorable demographic factors such as demographic dividend (Bloom and Williamson 1998) and massive domestic migration of labor from the rural agricultural sector to the industrial sector.

But this phase of development is now about to end. Simply put, improvements in the quality of human resources rather than an expansion of their quantity needs to become a major driving force of further development. This transition to the phase of human capital-based development is the key for China to sustain per capita income growth, albeit slower than in the past three decades, to avoid a stall referred to as the ‘middle-income trap’ in the policy arena of development economics. As is well recognized, this transition is soon to be compounded with another transition, that is, to the phase of ‘post-demographic transition’ characterized by population aging and low fertility levels, both of which will result in an increase in the dependency ratio of the population. These demographic changes are endogenous consequences of the rapid development of the Chinese economy over the past six decades. This may mean that the changes also embody the seeds of resources for meeting the challenge that they pose as well. But it is widely recognized that to make the best use of them, economic policy, mechanisms and institutions may need to be adapted accordingly.

It appears therefore to be an appropriate time for economists to reflect on the nature of the remarkable past performance of the Chinese economy, to diagnose its present state and to identify the challenges it faces for sustaining economic development, as well as to discuss policy choices and possible institutional designs to meet the challenges in a forward-looking manner. This volume presents a set of contributions to this research agenda that is unparalleled in terms of its breadth of subjects and the depth of its analysis. The authors are top economists from China and the rest of the world who are renowned authorities in their respective areas of expertise. It covers topics such as: How has modern economic science helped guide the Reform and Open Policy of China in the past and what suggestions can it offer for China's future direction? How does the Chinese (state) market economy operate in the areas of foreign exchange and capital control, labor markets, social welfare systems, banking and corporate governance, as well as in relations between central and local governments? Can China avoid the 'middle-income trap' under emergent demographic and environmental constraints? In considering these developments, what kinds of policy agenda and institutional reforms may be needed in those and other areas? How crucial will be the role played by possible political-economy reform? As argued by authors of many chapters, a new transition would call for a further deepening of the market mechanism driven by private incentives, governed by the rule of law and complemented by sustainable public policy pursuing stability and equality.

In what remains of this introductory chapter we will consider the outline of the book.

Perspectives of the Chinese economy

Chapter 1, 'Economics and China's Economic Rise', was delivered by Wu Jinglian as the first Fitoussi Lecture of the International Economic Association at its 16th World Congress. Wu Jinglian is widely regarded as the most respected senior economist in China today. Over the past three decades he has played leading roles in policy research and forums, the teaching and training of younger generations of economists, and academic exchanges with foreign scholars. In this lecture he vividly narrates the process through which the field of economics was revived in China at the beginning of the 1980s following thirty years of neglect, and how this helped lay the theoretical foundation for China's market reform. He spells out how Chinese scholars, rearmed with modern economics and in alliance with their international colleagues, have clarified the goals of China's market reform and outlined the ways in which these goals can be achieved. He submits that the market economy system, after its early model had been established, became the driving force of China's subsequent high-speed growth. This lecture can be regarded as a monumental witness to

the role of modern economics in societal development in a specific context of historical significance. However, analyzing China's current economic system, he also observes that the reform is far from complete. The hybrid of market economy and command economy is a transitional system that can either advance to a more matured market economy based on the rule of law, or move backwards to state capitalism, and even to crony capitalism. He warns that if the country does not take significant strides in reform to block the latter path and to set China back on the path toward market orientation, the rule of law and democracy, China will become locked out of the former path, which could result in social turbulence.

Chapter 2, 'China's Investment and GDP Growth Boom: When and How Will It End?', is by the leading western authority on the Chinese economy and development economics, Dwight Perkins. He notes that China has enjoyed near double-digit GDP growth rate for a longer period (more than three decades) than any other nation to date. He argues, however, that the country's high growth rate will not continue indefinitely into the future. In fact, there are good reasons to believe that China's GDP growth rate will slow down within the coming decade – and perhaps even within the next few years. At the beginning of his contribution Perkins observes that all countries that have achieved high-income status have slowed down in most cases long before they have caught up with the per capita income of the highest-income economies – the phenomenon known as the 'middle-income trap'. The majority of countries have slowed down when their purchasing power parity GDP per capita was in the range of \$10,000–\$16,000. In China's case, on the supply side, maintaining the 2000–2010 GDP growth rate will require the country to accelerate the rate of growth of total factor productivity (TFP) to levels not previously achieved and he considers that does not seem likely. On the demand side, China has an unusually low level of household consumption as a share of GDP and an unusually high level of investment. This level of investment is sustained by a massive housing and public infrastructure program that has achieved much but will slow down as the needs in these public investment areas are fulfilled.

The author of Chapter 3, 'Six Institutional Reforms Needed in China', is Lou Jiwei. As noted in Chapter 1 by Wu, Lou played an important role in envisioning the reform program in his youth in the 1980s and then in designing and implementing China's fiscal and taxation reform in the late 1990s as the country's Deputy Minister of Finance. As the Chairman, his contribution to this book identifies the need for further reforms in six areas: the social-security system, individual income tax, the household registration (*hukou*) system, fiscal responsibility between the central and local governments to address the issues of equity and social justice, and reform in the areas of capital account management and monetary policy. In particular, he stresses that the pursuit of steady and orderly capital account convertibility

over the next five years would provide an impetus to China's financial sector reforms for the market determinations of the interest rate and exchange rate. Lou argues that the balance sheet composition of China's central bank is currently burdened with massive foreign reserve holdings, which pose disproportionate risks to China's domestic financial market and monetary policies in the wake of capital account convertibility.

Chapter 4, 'When Demographic Dividend Disappears: Growth Sustainability of China,' is by Fang Cai and Wen Zhao. The first author is known for coining the phrase 'aging before becoming affluent' to describe the nature of China's emergent transition. In this paper they present an econometric result showing that physical investment contributed about three-quarters of China's GDP growth during the period 1982–2010. However, an increasing physical investment is bound to be subjected to the law of diminishing returns to scale, unless it is accompanied by an increase in labor input. China's miraculous economic growth in its period of more than thirty years of reform has benefited from the demographic dividend – namely, the extra growth sources resulted from its fast demographic transition due to the high fertility rate and the lowering of the infant mortality rate in the 1950s and 1960s. However, as the working-age population reaches its peak in about 2013, the Chinese economy is running out of such a dividend and needs urgently to seek new sources of growth. This paper thus urges a shift of policy orientation toward encouraging TFP growth and making greater investment in human capital.

Labor market, social insurance and demographic change

This section includes four papers that focus on human aspects of economic development in China: labor markets dynamics, demographic dynamics, and social security and welfare systems. All of them have significant relevance to China's new, compounded transition to the phase of development based on increased investment in human capital under the conditions of population aging and the shrinkage of the working-age composition of the population.

Chapter 5, 'Adjusting to Really Big Changes: The Labor Market in China, 1989–2009', by Wei Chi, Richard Freeman and Hongbin Li is an econometric study of the workings of the urban labor market in the high-growth period of the last two decades. China's emerging labor market was buffeted by changes in demand and supply and institutional changes in this period. Using the *Chinese Urban Household Survey* data from 1989 to 2009, they show that the market responded with substantial changes in the structure of wages and in employment and types of jobs, which mirrors the adjustments found in labor markets in advanced economies. However, the one area where the Chinese labor market appears to diverge from the ones in advanced countries is the

rapid convergence in earnings and occupational positions of cohorts who entered the job market under more or less favorable conditions. In this respect, China's labor market seems more flexible than those in other countries. The authors point out that three related factors may explain this pattern: (1) the rapid growth of China's economy; (2) the high rate of employee turnover; and (3) the relative immaturity of internal labor markets in China.

In the next chapter, 'China: Population Aging and Economic Growth', Judith Banister, David Bloom and Larry Rosenberg explore the likely impacts of population aging on China's prospective economic growth. Documenting the major population-aging transformation that has begun and will escalate in China, these authors assess whether or not the coming of a much less beneficial demographic situation than hitherto will put a strong brake on China's future economic progress. For this purpose, they analyze recent data on China's human capital, the social safety net, health finance, employment trends and other key developments, highlighting China's handicaps as well as its advantages with regard to coping with population aging. The paper recommends that China can adjust to population aging in future decades by gradually raising urban retirement ages, continuing to upgrade workforce education and skill levels, combining family support for the elderly with the expansion of the pension system to rural areas and towns, redirecting some of the high savings rate toward secure instruments to fund future retirements, and modulating its one-child policy. They point out that as the population ages, China need not have serious labor shortages, because the country has the potential to make much better use of its current and potential labor force in response to the demand for labor. They point out that China can more productively employ those who are today unemployed, underemployed, doing marginal unproductive tasks, or discouraged from seeking work. In short, China has reasonably good prospects for managing its aging population in future decades by investing and accumulating in human capital.

Chapter 7, 'Health, Education, and China's Demographic Transition Since 1950' by Karen Eggleston, focuses on China's human capital accumulation in a historic and comparative perspective. She argues that China's achievements in population health and education, and their interaction with demographic transition since the 1950s, have played an important and under-appreciated role in China's rapid development. Moreover, with the driving force of China's economy transitioning toward human-capital-based endogenous growth in the 21st century, investments in human capital may become even more crucial for China's future development. The first section of the paper describes recent research on the determinants of China's unprecedented increase in life expectancy in the Mao era, as well as the foundation of China's demographic, epidemiological and human capital transitions over the past half-century. The second section discusses human capital development during the reform

era, including research on the returns to education in China, the educational gradient in health, and the social challenges presented by widening disparities in human capital. Specifically, she reports that the returns on achieving one extra year of schooling in the period from the 1980s to 2006 is estimated at between 8 and 13 per cent: comparable to those found in many middle- and high-income countries. But China's average of 8.2 years of schooling in 2010 is less than what had been achieved in the USA by 1950. She also argues that under the new transition, the reorientation of the healthcare system from the control of infectious disease and the treatment of acute conditions toward population health (management of chronic disease and healthy growth of youngsters, especially in rural areas) may be desired.

In Chapter 8, 'Social Insurance and Household Consumption in China', Chong-En Bai and Binzhen Wu report on their empirical analysis of impacts of the newly introduced social insurance system. They focus on two important components of this system: health insurance and social security. With regard to the health insurance system, they exploit a quasi-natural experiment arising from the recent introduction of a health insurance program in rural China to examine how insurance coverage affects household consumption. Results show that, on average, the health insurance coverage increases non-healthcare-related consumption by more than 5 per cent. Thus, it provides an empirical support to the widely held view that China's consumption rate has been low because of the underdevelopment of social safety net. In respect of social security, they highlight how the high payroll tax rate influences household consumption. Using the 2002–2006 *Urban Household Survey* data on nine provinces, they find that when the payroll tax rate increases by one percentage point, household consumption declines by about 3.2 per cent. This quantitative result may provide an important background information for the current policy debate in China about how social insurance is to be funded.

Banking and corporate governance

Prior to the financial crisis that started in the summer of 2007, the 'Washington Consensus' view was that banks and other financial institutions should be privately owned. There was considerable evidence that publicly owned banks were inefficient and subject to political pressures. Since the start of the crisis, China's state-owned but publicly listed banks have provided evidence that public ownership can have significant advantages, however. At the height of the crisis all three of the world's largest banks, measured by market capitalization, were Chinese. The banks did not suffer from financial stability problems and this helped China's economy to come through the crisis well. Chapter 9, 'The Initial Public Offering of the Industrial and Commercial Bank of China (ICBC)', by Franklin Allen, Darien Huang, Jun 'QJ' Qian and Mengxin Zhao,

focuses on the initial public offering (IPO) of the largest bank in China, the Industrial and Commercial Bank of China (ICBC). The IPO of ICBC was the largest bank IPO in history up to that time. It provides a good example of how a state-owned bank in an emerging market can go through the privatization process and transition from a totally government-owned bank to a partially government-owned bank. This process has been an initial success for China's government in their efforts to further open up their financial markets, develop their bank sector to meet international standards, and move financial institutions to function in a market-oriented manner. It provides a good example of how the advantages of public and private ownership of financial institutions can be combined. It may be noted that similar views on the value of (partial) public ownership of banks in the developing stage of an economy are advanced in chapters by Svetlana Andrianova, Panicos Demetriades and Anja Shortland (2012) in volume 150-II of this 2011 IEA Conference Series and by Justin Lin and Lixin Colin Xu (2012) in volume 150-III.

Economic costs and benefits of environmental control

China's rapid economic growth has caused a parallel degradation of the environment and its control is considered to constitute another significant constraint for the economic development of China for years to come. The environmental degradation is of great concern not only to Chinese people but also to the world as a whole. Thus, a more recent policy concern is the international pressure for controlling carbon emissions. In response, China has adopted stringent environmental targets under the 11th Five-Year Plan (FYP) covering the period 2006–10. Chapter 10, 'An Integrated Assessment of the Economic Costs and Environmental Benefits of Pollution and Carbon Control', by Jing Cao, Mun Ho and Dale Jorgenson examines the costs and benefits of these policies. The complex links between economic activity, energy use, emissions, air quality and human health require an integrated approach to this problem. These authors describe the process and results of their collaborations with researchers in several fields of environmental sciences that tie together a multi-sector economic model, a detailed emissions inventory, an advanced atmospheric model (GEOS-CHEM) and health assessment tools (BenMAP model). They find that the SO₂ and energy conservation policies introduced under the 11th FYP achieved their primary objective of reducing SO₂ emissions, thus avoiding very substantial damage to public health and a sizable net benefit to GDP. They also provide a quantitative prediction that the introduction of a modest carbon tax would incur a cost to GDP, especially in the initial years; but that, if the revenue is recycled back by reducing existing tax rates, the negative impact on GDP would be very small and its health benefits would exceed the reduction in GDP.

Political institutional foundation: past and future

This section turns to a political institutional foundation for the Chinese economy, focusing on the relationships between the central government, on one hand, and provincial and local governments, on the other.

Chapter 11, 'Political Competition at a Multilayer Hierarchy: Evidence from China', by Cong Liu, Xing Li, Xi Weng and Li-An Zhou, investigates the economic growth targets set by the central government and local governments at different levels. Using a large dataset on five-year and annual government development plans, these authors document two interesting stylized facts. First, official economic growth targets tend to be magnified as planning is decomposed downward along the hierarchical levels. Second, for each layer of administration, the realized economic growth rates are usually higher than the economic growth targets. They provide an explanation for this based on a model of simultaneous political tournaments at different layers of government.

Finally, in Chapter 12, 'Institutional Foundations of China's Structural Problems', Chenggan Xu forcefully argues that the same political institutions that have spurred Chinese growth in the past thirty years may create serious economic structural problems in the near future. In making this argument, he characterizes the nature of Chinese political institution as Regionally Decentralized Authoritarianism (RDA) which is highly centralized in political and personnel control but highly decentralized in administrative and economic affairs. This institution provides institutional foundations for regional competition and regional experiments, as was described in the previous chapter. However, he argues that this enormously powerful mechanism can be constructive as well as destructive. Most of the severe economic structural problems and socio-economic problems that China faces are outcomes of the 'race-to-the-bottom' regional competition, in which regional governments compete ferociously in seeking more rents, grabbing more land by suppressing citizens' rights, and so on. He warns that any policy remedy to mitigate these problems will meet the intrinsic conflict of interests of governments at all levels in the regime.

The unique and complex combinations of centralization and decentralization between the central government on one hand and local and provincial governments on the other, described by the authors in this part of the volume, may have deep historical and cultural roots (for example, Aoki 2012; Rosenthal and Wong 2012; Ma 2012 in volume 150-III of this IEA series), which some describe as 'localism à la China' (for example, Herrmann-Pillath 2012). They are in turn at the roots of various contemporary economic and social problems: the real estate bubble, the regional disparity in social insurance schemes, and the social divide associated with the official household

registration system that sharply segregates urban and rural residents. There also arise serious conflicts of interests in taxation and public expenditures among various levels of governments. Solutions to these problems will therefore need to be mutually complementary in order for them to be effective and conducive to the new transition (for example, Aoki 2012; Lou, chapter 3 in this volume). The search for such solutions would certainly require further intensive researches and policy discussions, for which this volume is hoped to provide ample suggestions.

References

- Aoki, M. (2012) 'Five Phases of Economic Development and Institutional Evolution in China, Japan and Korea', chapter 1 in M. Aoki, T. Kuran and G. Roland (eds), *Institutions and Comparative Economic Development*, IEA Conference Volume 150-I (Basingstoke: Palgrave Macmillan).
- Andrianova, S., P. Demetriades and A. Shortland (2012) 'Government Banks and Growth: Theory and Evidence', chapter 11 in M. Aoki, K. Binmore, H. Gintis and S. Deakin (eds), *Complexity, Norms and Organizations*, IEA Conference Volume 150-II (Basingstoke: Palgrave Macmillan).
- Bloom, D. and J.G. Williamson (1998) 'Demographic Transitions and Economic Miracles in Emerging Asia', *World Bank Economic Review*, vol. 12, pp. 419–455.
- Galor, O. (2011) *Unified Growth Theory* (Princeton, NJ: Princeton University Press).
- Hansen, G.D. and E. Prescott (2002) 'Malthus to Solow', *American Economic Review*, vol. 92, no. 4, 1205–1217.
- Herrmann-Pillath, C. (2012) 'Making Sense of Institutional Change in China: The Cultural Dimension of Economic Development and Modernization', chapter 12 in M. Aoki, T. Kuran and G. Roland (eds), *Institutions and Comparative Economic Development*, IEA Conference Volume 150-I (Basingstoke: Palgrave Macmillan).
- Lin, J. and L.C. Xu (2012) 'Financial Structure and Economic Development: Recent New Progresses', chapter 13 in F. Allen, M. Aoki, R. Gordon, N. Kiyotaki and J.E. Stiglitz (eds), *The Global Macro Economy and Finance*, IEA Conference Volume 150-III (Basingstoke: Palgrave Macmillan).
- Ma, D. (2012) 'Political Institution and Long Run Economic Trajectory: Some Lessons from Two Millennia of Chinese Civilization', chapter 4 in M. Aoki, T. Kuran and G. Roland (eds), *Institutions and Comparative Economic Development*, IEA Conference Volume 150-I (Basingstoke: Palgrave Macmillan).
- Rosenthal, J.-L. and Wong, R.B. (2012) 'Before and Beyond Divergence: A New Look at the Economic History of China and Europe', chapter 3 in M. Aoki, T. Kuran and G. Roland (eds), *Institutions and Comparative Economic Development*, IEA Conference Volume 150-I (Basingstoke: Palgrave Macmillan).