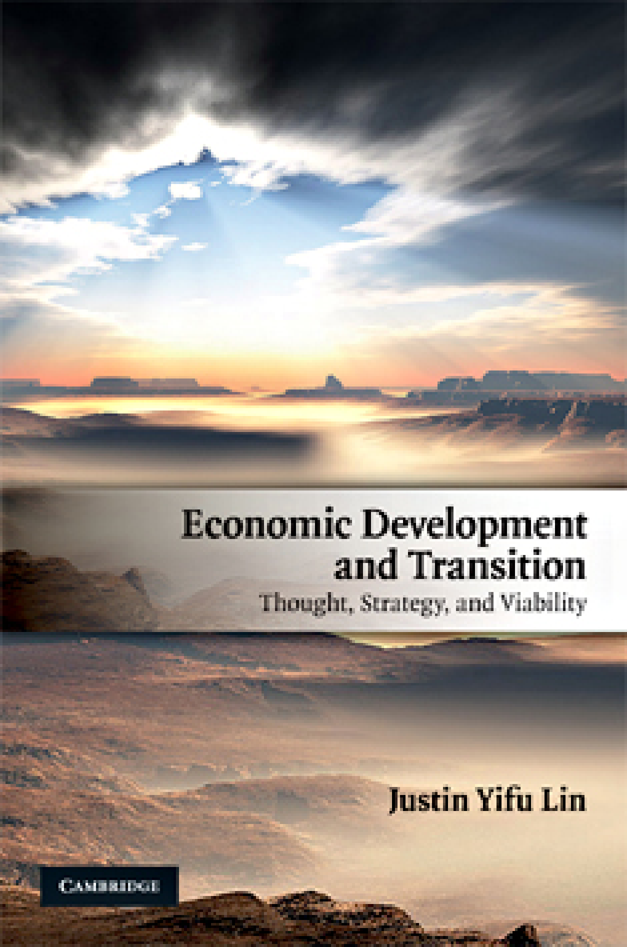

# Economic Development and Transition

## Thought, Strategy, and Viability

Justin Yifu Lin

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## ECONOMIC DEVELOPMENT AND TRANSITION

In *Economic Development and Transition*, renowned development economist Justin Yifu Lin argues that economic performance in developing countries depends largely on government strategy. If the government plays a facilitating role, enabling firms to exploit the economy's comparative advantages, its economy will develop successfully. Governments in most developing countries attempt to promote industries that go against their comparative advantages, however, by creating various kinds of distortion to protect non-viable firms in priority industries. Failing to recognise the original intention of many distortions, most governments in transition economies attempt to eliminate those distortions without addressing firms' viability problem, causing economic performance to deteriorate in their transition process. Governments in successful transition economies adopt a pragmatic dual-track approach that encourages firms to enter sectors that were suppressed previously and gives necessary supports to firms in priority industries before their viability issue is addressed.

Justin Yifu Lin is Senior Vice President and Chief Economist of the World Bank. He obtained his PhD in economics from the University of Chicago in 1986 and returned to China in 1987, the first PhD in social sciences to return from abroad following the start of China's economic reform programme in 1979. He was the founding director of the China Center for Economic Research (CCER) at Peking University from 1994 to 2008 and is the author of sixteen books, including *The China Miracle* (1996) and *State-owned Enterprise Reform in China* (2001).

*Advance praise*

'Justin Lin's study combines economic theory, institutional knowledge, quantitative data, and an appreciation for the importance of starting conditions in determining the success of a different plan for economic development. His most unique contribution is the emphasis on how different starting points dictate very different optimal policies, which explains why shock therapy policies have been less than great successes in formerly communist countries like Russia, whereas China's more gradualist elimination of state enterprises has been working very well. Lin's point of view is controversial, but highly stimulating. I strongly recommend this book as an insightful study that interprets an impressive amount of actual evidence of attempts at economic development through the powerful lens of economic analysis.'

Gary Becker, Nobel Laureate, University of Chicago

'Development and transition pose extremely difficult challenges. In these masterly Lectures, Justin Lin, now the World Bank's Chief Economist, brings to these complex subjects a profound understanding of the problems they raise and also unusual insights from his first-hand experience with China's spectacular performance. The Lectures are a tour de force.'

Jagdish Bhagwati, University Professor, Columbia University

'No economist has a deeper understanding of the policies that have given rise to the Chinese economic miracle than Justin Yifu Lin. He has influenced not only the thinking of government and business leaders in China, but also of economic analysts in the United States and Western Europe. This is essential reading for anyone who wants to understand the likely course of the global economy over the next generation.'

Robert Fogel, Nobel Laureate, University of Chicago

'Justin Lin, who has been at the centre of the policy debates in China since the 1980s, has provided a masterly account of the economic rationale of the Chinese path of transition from the plan to the market. His book is essential reading for understanding the Chinese economic miracle.'

Deepak Lal, James Coleman Professor of International Development Studies,
University of California, Los Angeles

'Justin Lin's Marshall Lectures provide an unrivalled opportunity both to understand the spectacular rise of Asian economies over the past several decades and to cast a jaundiced eye on standard explanations of development by economists. Western training in economics combined with an insider's exposure to China's development has given him both a sceptical view of standard western development economics and an intimate insider's view of the details of the pragmatic approach that has characterized Asian and particularly Chinese spectacular development.'

Douglass C. North, Nobel Laureate, Washington University in St. Louis

'This is an important book in many ways. Two strike me as central. Professor Lin is a scholar of great insight who has experienced and participated in the policy debate in China, the largest and fastest growing economy thus far. His intimate insight into policy formulation in a transitional economy informs his rigorous theoretical analysis and brings the development part of growth and development back to center stage. Second, the analysis of the consequences of aligning or misaligning the evolving endowments of an economy with its evolving growth strategy is insightful and surely right. It has its roots in trade theory and comparative advantage. But turning that into a body of dynamic analysis of growth strategy and policy is a major achievement.'

Michael Spence, Nobel Laureate, Stanford University

'This is a brilliant and revolutionary book explaining why some developing countries have succeeded and others failed. Lin argues that it is ideas, even more than interests, that matter. Those countries that failed attempted to modernize through a strategy of modernization focusing on heavy industry – that he characterizes as *defying* their comparative advantage. By contrast, governments in the successful countries (mostly in East Asia) facilitated the development of industries and the adoption of technology in a developing country *following* their comparative advantage determined by their endowment structure at every phase of development. Successful governments did intervene in their economy – the Washington consensus was wrong. But they did so in the right way. The World Bank is lucky to have as its Chief Economist someone willing and able to look at development with fresh eyes, free from the dogmas of the past.'

Joseph Stiglitz, Nobel Laureate, Columbia University

# Economic Development and Transition

## THOUGHT, STRATEGY, AND VIABILITY

**Justin Yifu Lin**

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# Preface

Many improvements have been achieved in understanding the nature and causes of a nation's wealth in the past two and a quarter centuries since the publication of Adam Smith's *The Wealth of Nations* in 1776. It seems that many more improvements need to be implemented, however, before economists can truly be confident in providing advice to developing countries about their development and transition to a modern economy. The development policies adopted after the Second World War by a few east Asian economies were inappropriate in the context of the prevailing theories at that time. Those developing countries that followed prevailing development theories in formulating their policies failed to narrow the gap between themselves and the industrial countries. Similarly, China's transition to a market economy, begun thirty years ago, was thought doubtful in the light of prevailing theories. The path taken has led to sustained growth, however, while countries that followed standard approaches in their transitions encountered various difficulties.

This contrast in economic development and transition is intriguing to economists. I have had the privilege of experiencing in person the dramatic changes in China and carrying out in situ research of China's development and transition over the past twenty years. I have gradually come to realise that an economy's factor endowments, which are given at any time but can be changed through time, are an important starting point for the enquiry of economic development in a country. The factor endowments in an economy determine the economy's total budgets and relative factor prices – the two most important economic parameters at any given time. Moreover, given the preferences and available technologies in an economy, the structure of its factor endowments determines endogenously its optimal industrial structure. Any attempt to deviate from the optimal industrial structure will make favoured firms non-viable in an open, competitive market. Government subsidies/protection to these firms have to be maintained all the time, and their survival in a competitive world is not assured. Prior to the 1970s the prevailing social thinking ignored the endogeneity of industrial structure, and governments in developing countries were advised to adopt a strategy that promoted the development of advanced industry that went beyond the optimal structures, resulting in various institutional distortions and poor economic performance. New trends in social thought became dominant after the 1970s, however, as a result of the failure of previous models. The new social thinking advised developing countries to eliminate their distortions in a 'big-bang' manner so as to transit quickly to a well-functioning market economy. What the new social thought failed to recognise, however, was that the various distortions were endogenous to the need to protect subsidise non-viable firms in the old government strategy. Without addressing the issue of firms' viability first, the transition in many economies following the new social thinking was characterised by economic performance deteriorating from a 'second best' situation to an 'nth best' situation.

As the gap between the industrial structure of a developing country and that of an industrial economy reflects the gap in their endowment structures, it is necessary for a developing country to fill gaps in its endowment structure before it upgrades to a developed country's industrial structure by accelerating its accumulation of capital. Capital comes from the saving of economic surplus. If a developing country follows its comparative advantages, determined by its factor endowments, in choosing its industries, its economy will be as competitive as possible and it will be able to create the biggest possible economic surplus, have rapid capital accumulation and endowment structure upgrading and achieve economic convergence with developed economies. It is necessary for relative prices to reflect the relative scarcities of factors in the endowment structure so that firms operating in the economy choose industries and technology according to the economy's comparative advantages. Relative factor prices of this type can be obtained only in a well-functioning market system. Markets in most countries in their early stage of development are underdeveloped. It is therefore imperative for the government in a developing country to play an active role in building up market institutions in order to facilitate economic development. For a country that engages in the transition to a market economy from an economy with distortions arising from earlier mistakes in development strategy, it is desirable, as demonstrated by China, to adopt a pragmatic approach that liberalises the economy while giving the necessary support to nonviable firms before the issue of their viability is addressed.

The Marshall Lectures at the University of Cambridge on 31 October and 1 November 2007 provided me with the opportunity to summarise my research findings from the past twenty years. In addition to the text used when lecturing, I also included as an appendix a mathematic model to show that most distortions observed in the socialist countries and other developing countries are endogenous to their governments' strategy of accelerating the development of capital-intensive, advanced industries when their endowment structures are characterised by a relative scarcity of capital.

I would like to take the opportunity of the publication of these lectures to acknowledge the help that I have obtained from research collaborations with many friends and students over the past twenty years. Dr Cai Fang and Dr Zhou Li, my collaborators for various publications

in the early 1990s, helped me understand the intricacy of China's economic system before the transition. My students Mingxing Liu, Pengfei Zhang, Peilin Liu, Zhiyun Li, Xifang Sun, Shudogn Hu, Yongjun Li, Feiyue Li, Zhaoyang Xu and Binkai Chen helped me at various stages to formalise my arguments and test empirically various propositions used in the lectures. The criticism and discussions of my observations with Professors Ho-Mou Wu, Demin Huo and Qiang Qong and other participants at the weekly development workshop at CCER deepened and improved my arguments. Many friends have also been kind enough to read earlier drafts of the lectures and to offer invaluable criticisms and suggestions. I gratefully acknowledge such help from Daron Acemoglu, George Akerlof, Pranab Bardhan, Gary Becker, Arne Bigsten, John Bonin, Pieter Bottelier, Hongbin Cai, Ha-Joon Chang, Kuo-Ping Chang, Ping Chen, Leonard Cheng, Partha Dasgupta, Alain de Janvry, Peter Drysdale, Manoranjan Dutta, Sebastian Edwards, Belton Fleisher, Robert Fogel, Bruno S. Frey, Richard Friberg, Benjamin M. Friedman, Ross Garnaut, Kai Guo, Sergei Guriev, Rong Hai, Yujiro Hayami, James Heckman, Bert Hofman, Haizhou Huang, Yasheng Huang, Athar Hussain, Grzegorz Kolodko, Deepak Lal, Frederic Langer, Keun Lee, Kyung Tae Lee, Wei Li, Deqiang Liu, Christer Ljungwall, Francis T. Lui, Albert Ma, Angus Maddison, Will Martin, Ronald I. McKinnon, Barry Naughton, Douglass North, Jeffery B. Nugent, Keijiro Otsuka, Elliott Parker, Dwight Perkins, Boris Pleskovic, Louis Putterman, Yi Qian, Mary-Françoise Renard, Chris Reynolds, John Riley, James Robinson, Gerard Roland, Christof Ruhl, Örjan Sjöberg, Ligang Song, Lina Song, Michael Spence, T. N. Srinivasan, Guofu Tan, Duncan Thomas, Yingyi Tsai, Guanghua Wan, Cheng Wang, Ning Wang, Yong Wang, Yi Wen, Xi Weng, John Whalley, Anita Yao, Shujie Yao, Shunli Yao, Shahid Yusuf and Hao Zhou. Maree Tait and Jan Borrie provided invaluable editorial improvements of the manuscript.

**Justin Yifu Lin**

Beijing, May 2008

ONE

# Development, transition and divergence

> The consequences for human welfare involved in questions like these are simply staggering: once one starts to think about them, it is hard to think about anything else.
>
> Robert E. Lucas, Jr (1988)

When I was a student at the University of Chicago in the early 1980s I had the opportunity of observing Professor Robert Lucas prepare his 1985 Marshall Lectures. It is a great honour for me to follow Professor Lucas's steps to give the distinguished lectures twenty-two years later. I returned to China in 1987 after graduating from the University of Chicago and doing one year of postdoctoral research at Yale University's Growth Center. As the first person to return to China from abroad with a PhD degree in economics after the economic reform programme started in 1979, I have had the privilege of experiencing in person the miraculous changes in China's social and economic life and carrying out in situ research into China's development and transition over the past twenty years. Therefore, I would like to use this occasion to share with you my observations of developing countries' economic development and transition, based primarily on my experiences in China.

It is a well-known fact that, before the modern era, most countries were effectively in the development stage of a relatively backward agricultural economy – disturbed from time to time by war and natural calamities, and afflicted by the Malthusian trap. Except for the ruling classes, craftsmen and merchants – who represented a minority of the population – most people worked in agriculture. The allocation of resources in such agrarian economies was close to optimal through generations of practice; therefore, the gains from improvement in the allocation of resources were small (Schultz, 1964). Further economic development was feasible only with some exogenous technological shocks to the system. The accidental discovery of better technology during the daily work of peasants and craftsmen is one example of such a shock.[1] Another is the Great Geographic Discovery of America in the fifteenth century, which brought back gold and silver to Europe as well as new crops – such as maize and potatoes – with better adaptability to various soil and climatic conditions. In this pre-modern era economic development was manifested mainly in the form of population increase and the aggregate size of the economy. There was extensive growth, but per capita income did not change much (Clark, 2007; Kuznets, 1966; Perkins, 1969). The income gap between areas that today would be considered developed and those that would be considered developing was relatively small from today's viewpoint – estimated to be at most 50 per cent (Bairoch, 1993; Maddison, 2006). Some of today's developing countries – such as China and part of India – were believed to be richer than Europe at that time (Cipolla, 1980; Pomeranz, 2000; Smith, 1776 [1976]). Until the late eighteenth century the overall performance of markets – in terms of

[1] The adoption of certain technologies – for example, the replacement of the three-field cropping system with the more intensive two-field system in Europe – might be endogenous to the increase in population pressure, as argued by Boserup (1965). The invention of new technologies at that time came about mostly through accidental discoveries by peasants and artisans rather, however, than through purposeful research efforts (Needham, 1969).

integration – in China and western Europe was comparable (Shiue and Keller, 2007).

After the Industrial Revolution began in England in the mid-eighteenth century, experiments conducted in laboratories became the major source of technological invention and innovation (Landes, 1998; Lin, 1995; Needham, 1969; Rosenberg and Birdzell, 1986). This was especially true for those macro-inventions that consisted of radical new ideas and involved large, discrete, novel changes, as defined by Mokyr (1990). For developed countries at the technological frontier, such a transformation of the method of technological invention enabled them to accelerate technological advances through investment in research and development, and technological invention and innovation became endogenous (Lucas, 1988; Romer, 1986). With increasing investment in research and development, technology change accelerated, industrial structures upgraded continuously and productivity increased. As a result, developed countries began to take off and the divergence between the North and the South appeared (Bairoch, 1993; Baumol, 1994; Braudel, 1984; Clark, 2007; Clark and Feenstra, 2001; Jones, 1981; Kuznets, 1966; Maddison, 2006; Rostow, 1960).

Figure 1.1 shows the per capita income in various regions of the world from 1–2001 AD, based on the estimation of Maddison (2006: 642). It shows that, from an insignificant difference at the beginning of the eighteenth century, per capita income in the developed countries of western Europe and its offshoots had increased to more than twenty times that of the developing countries by the end of the twentieth century. As Lucas (1988) reflected in his 1985 Marshall Lectures, '[S]uch diversity across countries in measured per capita income levels is literally too great to be believed.'

It is natural for governments and people in poor countries to aspire to achieve the success of rich countries in Europe and North America. Except for a few newly industrialised economies (NIEs) in east Asia – as shown in figure 1.2 – most developing countries have

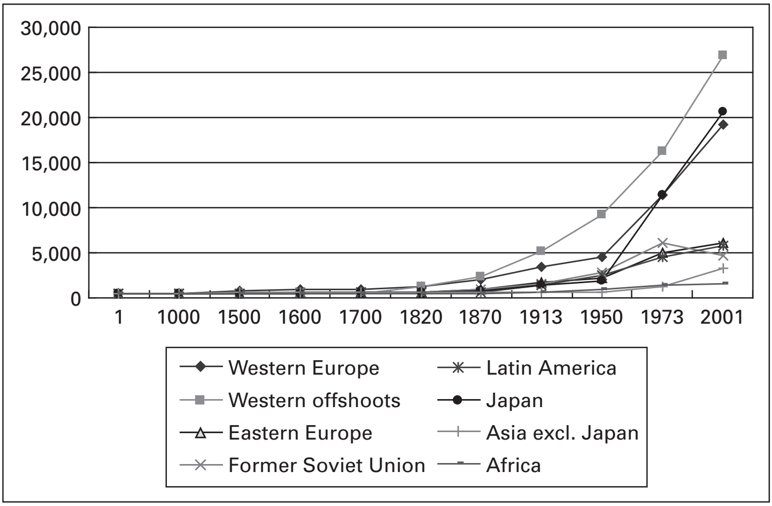


**Figure 1.1** Per capita GDP of various regions, 1–2001 AD
*Note:* Gross domestic product (GDP) is calculated with 1990 international Geary–Khamis dollars. The Geary–Khamis dollar – also known as the international dollar – is a sophisticated aggregation method of calculating purchasing power parity (PPP), which facilitates the comparison of countries with one another. The statistical definition can be found at http://unstats.un.org/unsd/methods/icp/ipc7_htm.htm.
*Source:* Maddison (2006: 642).

failed to achieve their economic development goals since the Second World War. In fact, many have encountered frequent crises, despite the efforts of their governments and assistance from international development agencies such as the World Bank and the United Nations Development Programme.

In most developing countries, after the Second World War, governments adopted various policy measures to promote industrialisation (Chenery, 1958, 1960, 1961; Krueger, 1992; Lal, 1983). At that time most economists were expecting to see rapid growth in the resource-rich countries of Africa and Latin America, but the real success stories appeared in east Asia, where the endowment of natural resources was extremely poor. Japan was the first success, followed by South Korea, Taiwan, Hong Kong and Singapore – the four

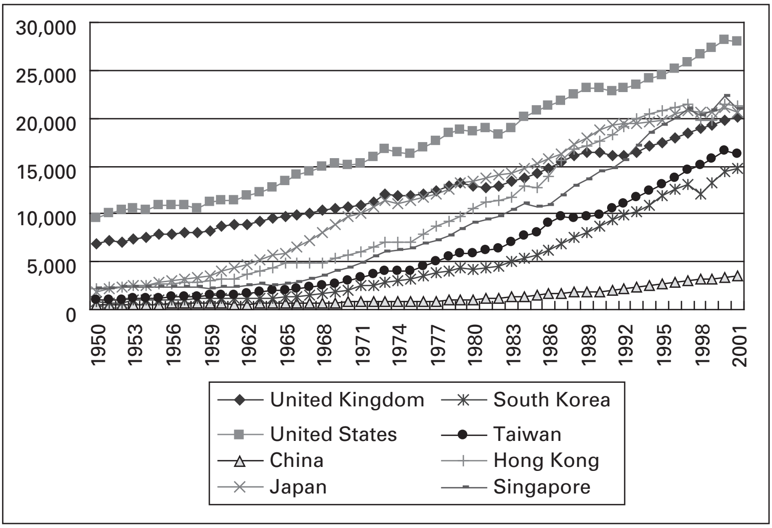


**Figure 1.2** Per capita GDP of the United States, the United Kingdom and the east Asian NIEs, 1950–2001
*Note:* GDP is calculated with 1990 international Geary–Khamis dollars.
*Source:* Maddison (2006).

east Asian NIEs – and, recently, by Malaysia, Thailand and Indonesia. In these economies, in the early 1950s, their per capita GDP of less than 2,000 international Geary–Khamis dollars – as measured by the 1990 purchasing power parity – was the same as China and less than that in eastern Europe and Latin America at that time. The economies of the four east Asian NIEs maintained an annual growth rate of some 10 per cent for two to three decades from the 1960s. Such growth completely changed the poor and backward state of their economies. Figure 1.2 shows that – as measured by PPP – income levels in Japan in the 1970s and in Singapore and Hong Kong in the 1990s surpassed that of the United Kingdom. More importantly, wealth distribution in these economies became more equitable during their economic growth (Fei, Ranis and Kuo, 1979). To some extent, these east Asian economies have realised their long-pursued goal of catching up developed countries and building equitable societies – a dream championed by many