0 Introduction: The Chinese Economy

Judged by growth and development, China is the best performing economy in the world. In size and global impact, it is second only to the United States. It is obvious that the Chinese economy is important.

For most people, it is also true that the Chinese economy is interesting and frequently puzzling. How has China achieved this extraordinary success? Resource constraints and massive population mean that China is not an obvious candidate for prosperity in the sense that the US or other "lucky countries" are. There are striking paradoxes and contradictions: how has China managed to grow so strongly with weak rule of law and weak protections for intellectual and other kinds of property? Is it worrisome that such rapid economic growth has brought such severe environmental degradation? Can we even believe the numbers and explanations that come from the Chinese government without transparency and independent verification?

Moreover, the sheer speed of change poses additional difficulties. In retrospect, it seems as if China stepped into economic modernity with a single motion, as if this great economic transformation were simply ***willed***, and then directly enacted.

The objective of this book is to make China's ascent more comprehensible, but also to keep it interesting. We can do this only if we can convey both the sources of strength and the challenges and vulnerabilities that have confronted China, those that have been overcome along with those that still face China today.

A very short list of China's strengths would certainly include the following:

1. Extraordinary human resources: China's population was already relatively healthy and literature at the end of the 1970s. Moreover, China's people have a strong entrepreneurial drive and a powerful desire to increase knowledge.

2. A government with the capacity to learn, that carried out an incremental and adaptive program of economic reform. This creativity was especially evident in the 1980s and 1990s, as China broke away from the command economy and created the fundamental institutions necessary for a robust market economy to thrive.

3. Enormous "catch-up" potential. Economists recognize that there are advantages of backwardness: the bigger the gap with the technology frontier, the more rapid potential growth is during the initial catch-up period. However, this potential can only be realized if there are sufficient enabling conditions. China was fortunate in that it was surrounded by economies that were already highly integrated into the global economy; because the enormous size of its economic potential and human resources attracted interest and investment; and because China

caught a wave of technological advance, most obviously in the spread of telecommunications and Internet technology.

These broad features meant that China in many respects was well positioned for economic development. But many apparently well-positioned countries have stumbled in the development process, and some have stumbled repeatedly. China has been able to maintain a rapid pace of transformation. For this to happen, China had to undergo a process of structural transformation, a technological revolution, the conversion from one demographic regime to another, and systemic reform that became systemic transformation. These concrete processes are the subject of this book.

0.1 Growth and Development Level

The Chinese economy displays both unmatched dynamism and unrivaled complexity. Since the beginning of the reform era in 1978, China has grown faster, longer than any economy in human history. China sustained an average annual growth rate of 10% from 1978 through 2010, according to official statistics. Moreover, as every schoolchild knows, China is the most populous country in the world: its population reached 1.37 billion in 2014, despite a declining birthrate. Rapid growth and huge population have long implied that China would eventually emerge into the front ranks of world economies, and this promise has now become reality. China's gross domestic product (GDP) reached US$10.4 trillion in 2015, valued at the prevailing exchange rate. China is the world's second largest GDP after the US ($17.4 trillion). Adjusting for purchasing power differences, China is already the world's largest GDP, evaluated by the World Bank at $18 trillion (while the US continues to be $17.4 trillion). Moreover, since 2013, China has also been the world's largest trading nation. The Chinese economy naturally attracts superlatives.

When converted to a per capita basis, the picture changes dramatically: From a global perspective, China is suddenly surprisingly average. 2014 per capita GDP, adjusted for differences in purchasing power, shows China is, at $13,200 close to, but still below, the world average of $15,000.[1] China's rate of urbanization, after a couple decades of catch-up growth, exactly equaled the global average of 53% in 2013. Only in human resources does China out-perform, as exemplified by life expectancy at birth in China of 74.8, significantly above the global average of 70.3, and close to developed country levels (76.9). Overall, China is a middle-income country, rather representative of the world. No longer poor, China is still a long distance from being a rich country.

This position in the global economy could be problematic. In simple terms, the upper middle income neighborhood in which China now finds itself is rather crowded. Many big

[1] If we stick to market exchange rates, per capita GDP was $7,595, compared to the world average $10,800. These comparisons all use WDI for comparisons, and Chinese official data for China.

emerging markets compete for advantage at this income level (from $7,000 to $15,000). However, very few economies manage to graduate from upper middle income status to high income status (above $30,000). Indeed, between 1960 and 2010, only a dozen economies graduated from middle to high income status. These were in two groups: East Asian "miracle economies" like Korea and Taiwan, and European peripheral economies (Ireland, Spain and, yes, Greece). The range between upper middle and high income status seems to be especially hard to traverse, and is rather thinly populated. This difficulty has led to discussion of a "middle income trap." The essential idea of the "middle income trap" is that while it is reasonably straightforward for an economy to develop the skills to industrialize, urbanize and move out of poverty, it is more difficult to find a path to high income status. Reaching high income status requires stronger technical capabilities, better institutions, and more innovation.

For China, the danger of the middle income trap seems real indeed. In part, this is because China's development strategy, as discussed in this volume, was ideally suited to the *previous* stage of economic development. No economy ever went through the initial stages of development more rapidly, more effectively, or with as much single-minded determination, as China did. With the highest sustained investment rate ever experienced, China built out infrastructure and factories, urbanized rapidly, and developed an export powerhouse. Effective as those policies have been, they do not seem well suited for the next phase of development. The mobilization of resources, so essential to the first stage of development, may be less effective when the need is rather to optimize the allocation of resources and find new and innovative sectors which can serve as new drivers of growth.[2]

One thing that is certain is that China will never again grow at the rates it experienced between 1978 and 2010. China experienced a "growth miracle" during those 32 years. That growth miracle was similar to that experienced by other East Asian economies, such as Japan and Korea, but bigger and longer. One thing that we have unambiguously learned from those forerunner experiences is that growth miracles end. They end when the structural and demographic conditions conducive to miracle growth are exhausted, and when economies move close enough to the global frontier that they can no longer succeed through imitative catch-up growth. The end of the "growth miracle" phase demands major institutional and policy adaptations. Even so, it is frequently marked by short-term economic disruptions that seem unnecessarily abrupt and severe, and sometimes also by long-term slowdowns that seem unnecessarily drawn-out. China's big economic challenges today are all part of this larger question: Can China adapt policy and institutions to the requirements of slower growth so that it can sidestep crisis and disruption, and smoothly enter another decade of moderately rapid growth?

[2] Chinese policy-makers have recognized this for a decade, anticipating the need for a shift in economic model, a rebalancing of the economy, and the shift to a knowledge-intensive growth path. However, it is not yet clear whether or not that policy shift has thus far been substantially undertaken.

0.2 THE DUAL TRANSITION

The first edition of this book was written a decade ago, in 2005. In the ten years since, the Chinese economy has grown in size and complexity, and changed in important ways. The basic analytic approach used in the first edition is still valid, but it can no longer be applied in the same fairly simple and straightforward manner that was used there. The first edition put it thus, on the second page:

> First, China is still completing its transition away from bureaucratic socialism and toward a market economy. Second, China is in the middle of the industrialization process, the protracted transformation from a rural to an urban society. China is in the midst of "economic development," the process that transforms every aspect of an economy, society, and culture. These two transitions are both far from complete…

As the introduction to the 2010 Chinese edition stated, "This book presents a fundamentally optimistic view of the Chinese economy based on the process of structural change that China is passing through, supported by a basically successful program of economic reform." Optimism was in order because (a) both of these fundamental transformations were supportive of rapid economic growth; (b) both had unfolded strongly over the preceding years; and (c) neither was by any means completed. Thus, the 2005 first edition projected the future in the following way (p. 140): "We should expect China's rapid growth to continue for another decade and then begin to moderate as labor force growth slows and rural-to-urban shifts wind down" (p. 140). As of 2015, we can see that this corresponds closely to what subsequently happened.

0.2.1 Growth Delivered: The contribution of structural change

The prediction of a decade of rapid growth was realized: In 2005, looking backward, GDP had grown at 9.2% per year for a decade. In the subsequent nine years, from 2005 to 2014, growth actually accelerated to an annual rate of 9.8%. To be sure, the details of the 2005-2015 decade contained many surprising events, and economic growth was not always smooth. At first, growth accelerated sharply: for three years (2005-2007), growth averaged a staggering 12.7% annually, certainly above the economy's long-run potential growth rate. Immediately thereafter, in the face of the global financial crisis, growth at first dropped sharply, but was then restored and maintained at a high level by the adoption of a massive government stimulus program. Over the next four years (2008-2011), growth was kept at an average 9.7% rate. For these seven years, then, growth was significantly faster than most observers had anticipated, during both the pre-crisis and the crisis periods. The acceleration of growth was accompanied by an acceleration of the process of structural change. Explosive growth brought 100 million new migrants from the countryside to China's cities, and an extraordinary investment effort provided factories for them to work in, as well as shelter and transportation. This frantic growth pace also pushed China more rapidly toward the conclusion of its period of maximum structural change: From 2012, growth began to slow, although it was certainly still robust in comparative terms: from 2012 through 2014, GDP growth averaged 7.6%, and 2015 growth will be slower. Thus, while the decade of high-speed growth was realized, the growth process was more front-loaded than could have been anticipated.

0.2.2 Growth Delivered: The contribution of system reform

It is quite clear that successful system reform in the late 1990s created the basis for a new wave of productivity growth that propelled the economy into a new high growth phase. In every sector, the consolidation of market reforms, the expansion of private business, and the increased quality of regulatory and macroeconomic institutions enabled the rapid growth of production. Reform and restructuring of state enterprises greatly reduced the drag on the economy that had been exerted by the bloated state sector of the 1980s and 1990s. Most obviously, membership in the World Trade Organization (WTO) led during 2004-2005 to an improvement and harmonization of trade rules that allowed China to integrate much more fully with the global economy. The result was a surge of export-led growth in China, and a virtuous cycle of growth in the global economy that led to a phase of unprecedented global growth from 2003 through 2007. System reform and structural transformation enabled a decade of explosive growth.

0.2.3 Dual Transitions in a New Era

If a simple framework of structural transformation and system reform adequately described the Chinese economy for two decades before and after 2005, why is it unable to serve the same function for contemporary China? The answer must be that while these two processes are just as fundamental as ever, neither process can today be counted on to deliver growth. Understanding the processes is just as important as ever, perhaps even more important, but the interpretation of each is less straightforward, and the two no longer work together in such an obviously consistent and mutually reinforcing fashion. The period of the most rapid structural change is now over, essentially because the process was completed at an unusually rapid pace. The process of system reform, on the other hand, is far from over: here the problem is rather that the commitment of policy-makers to the reform process flagged, and today it is uncertain to what extent reform momentum can be regained. These two are the two main topics of the current volume, and to them I now turn.

0.3 STRUCTURAL TRANSFORMATION: THE END OF THE 'MIRACLE GROWTH' ERA

While many economies have gone through the development process, a select few have compressed the key structural transformations into a roughly thirty year period of extraordinarily rapid growth. This "growth miracle" occurred in Japan from 1950 to 1973; in Korea, Taiwan and Singapore from 1970 through 1997; and in China from the 1980s to 2011. During a growth miracle, an economy sustains GDP growth rates above 8% per year for more than two decades. All previous growth miracles have shared four key characteristics: rapid labor force growth as population dynamics change and economies enjoy a "demographic dividend"; rapid structural change as workers leave agriculture and move to higher productivity urban industry and services; high investment rates that provide the infrastructure and industrial facilities needed to carry out this structural change; and an "open" economic policy that allows exporters to take advantage of almost unlimited global market demand while gradually adopting advanced global technologies. It is obvious that China displays all these characteristics, and it maintained a 10% growth rate for an especially long time, thirty-three years (1978-2011).

A decade ago, the developmental process had already pulled China out of low income status, and was in the midst of transforming China into an industrialized and urbanized middle income country. It was apparent at the time that the "miracle growth" phase would continue for a while, but not forever. In particular, it was clear that growth of the working age population would begin to drop quickly after 2010, and turn negative after 2015. These demographic facts were fully anticipated, and have turned out exactly as expected. However, slowing labor force growth would have been consistent with a very gradual deceleration in the Chinese economy, and this is what most observers, including myself, expected. Instead, the Chinese economy accelerated right up to the eve of these demographic changes. As a result, faster-than-expected growth through 2010 was followed by a somewhat-more-drastic-than-expected deceleration after 2011, as growth dropped quickly by 2.5 percentage points from about 10% to about 7.5%.

This raises the question of what China's growth rate will be going forward. The honest answer is that nobody knows for sure. It is certain that China's miracle growth phase is over: the Chinese economy will never again grow at 10% per year. Plausible estimates of China's growth over the 2015 to 2025 decade range from a high of 8% per year to as low as 3%. Discussion of China's structural change and growth prospects will be a major focus of Chapters 6 and 7 of this book.

0.3.1 Transition to a "New Normal" Growth Phase

What happens when an economy like China's makes a transition to a new phase of economic growth? On one hand, economic theory leads us to expect a gradual deceleration of growth as the growth of factor inputs (labor and capital) decelerates and as productivity growth stabilizes or declines (as China comes closer to the global technology frontier). On the other hand, there are good reasons to doubt that growth deceleration will be as gradual or as orderly as basic growth accounting might lead us to expect.

In the first place, instead of decelerating as labor force growth slowed, China grew faster than expected right up to the eve of the demographic transition, which kicked in in earnest in 2012, as expected. This unexpectedly rapid growth was not costless. During the period after 2005, the distinctive unbalanced features of the Chinese development path became much more extreme. China developed an enormous trade surplus during 2006-2007; and then pushed its investment rate to historically unprecedented highs after 2008-2009. Both these outcomes were associated with government policies that chose rapid growth over other economic objectives, including stability and sustainability. In the 2006-7 case, macroeconomic and exchange rate policies targeted maximum export expansion; after 2009, macroeconomic, financial and industrial policy decisions all contributed to super-high investment levels and rapid growth. These policy choices, targeted at short-run objectives, had long-run impacts on the Chinese economic system and development trajectory. The result is that the Chinese economy became more unbalanced and investment-driven than it had ever been. An unanswered question for the future is thus: will China have to pay a price for pushing investment and growth to unprecedented levels—perhaps through financial instability—or can it build on past growth, resolve institutional issues, and push on to a new level of development.

A look at the historical experience of previous growth miracles should also alert us to the risk that growth transitions may lead to considerable disruption in the short run. Orderly economic deceleration is the exception, rather than the rule. Japan grew at 10.4% per year for 23 years between 1950 and 1973, but after 1973 growth dropped sharply and Japan never sustained growth above 6% again. Less than twenty years later, Japan entered a profound economic crisis that dropped its growth rate again to close to zero for another two decades. Korea grew robustly into the 1990s and tried to keep growth high even as labor costs rose and structural transformation slowed: the eruption of the Asian Financial Crisis in 1997 brought Korean growth temporarily to a halt and forced deep and painful restructuring. Can China avoid the experience of these forerunners?

To navigate a smooth transition to a new phase of growth, the Chinese economy must display great adaptability that depends to a certain extent on effective policy-making. As growth of the capital-intensive manufacturing sector declines, investment must find a new level consistent with macro-economic stability. At the same time, past investment will inevitably over-shoot, with the result that significant excess capacity emerges in key industrial sectors. These past investments will have been financed in various ways, and some substantial part of the investments will go bed: policy-makers need to restructure existing bad debts and reform financial institutions to make them appropriate to a new type of economy. Finally, and perhaps most important, new growth drivers have to emerge in service and knowledge-intensive sectors. None of these prerequisites for smooth transition can be taken for granted.

0.3.2 Characteristics of the New Normal Growth Phase

What needs to be stressed is that this transition is completely worth it. Although growth is less rapid after the growth miracle ends, this is by no means a bad thing. In the first place, living standards are already much higher, and the aggregate economy is much larger, so lower percentage growth rates correspond to absolute increases in output and well-being that are just as large as before, and indeed, may be larger. If China is able to sustain growth of, say 5% per year, in an economy that has already reached middle income levels, this will be an extraordinary and positive achievement. Maintaining growth at somewhere near this level will be an important achievement, since many economists argue that there is a “middle income trap,” that means that most economies are unable to sustain such medium-high growth rates after they reach middle income levels. This is discussed further below, but for now we just make the simple statement: China is extraordinarily well positioned to avoid the “middle income trap” and maintain medium-high speed growth. It has extraordinary human resources, an enormous domestic market, and an extraordinarily high level of investment that, if adapted to new circumstances and needs, can contribute to a successful graduation to high income status (Feng and Yao 2014). However, it remains to be seen. Indeed, the success or failure of the next step of structural transformation may depend on the outcome of the other transition process, which is discussed next.

0.4 SYSTEM REFORM: AN INCREASINGLY CONTESTED TRANSFORMATION

The first, the systemic transition from a planned economy to a market economy, as of 2005 had recently passed through the milestone of the Zhu Rongji years. It had succeeded in passing through a crucial turning point. Indeed, there was some sense that having made the system transition, China now faced primarily developmental challenges as it approached middle income status.

Almost ten years later, the picture looks very different. In the first place, the systemic transition slowed down. My expectation, along with many others, had been that the successes of the Zhu Rongji transformation and of WTO membership would consolidate economic reform. The actual outcome was more complex. “Consolidation” can be interpreted in both a static and dynamic sense: in a static sense, the economic system that emerged out of the Zhu Rongji era was certainly consolidated and strengthened. However, that consolidation occurred at the cost of a serious slowdown of market-oriented economic reform. A new kind of economic system emerged: one that relied predominantly on the market, that was most market-oriented in the downstream and foreign trade sectors, but one that retained a robust, relatively centralized state sector, in both industry and high level services, including finance, and a powerful government that intervened extensively in micro-economic processes throughout the economy. Moreover, the system was in many respects further strengthened by the creation of a set of complementary social services institutions—neglected in the previous reform phase—that provide basic medical insurance, improved education, and basic social security.

Thus, in terms of market transition, it is less convincing today to see China primarily as moving toward a basically understood mixed-market economic system (with whatever degree of uncertainty about pace and modalities of change). In retrospect it is clear that the first edition was written during a particular “window of opportunity,” when the economic reform achievements were already in place and it was easy to extrapolate their (positive) impact on the economy. While the end state of reform was unknown, the *direction* of change was certainly obvious. Instead, today, it seems more appropriate to see the Chinese system as having taken on a relatively stable form, a distinctively Chinese economic system based on the market, but with extensive direct government intervention and substantial discretionary control in the hand of government and Party bureaucrats. If, however, we had thought of a *dynamic* consolidation of the economic reform process, that is, a strengthening of the momentum of systemic change, an increased ability to overcome obstacles to reform because of a broader recognition of the long-term gains from reform, this did not occur. The pace and momentum of market-oriented reform clearly slowed after about 2005 (indeed, as soon as the reforms already in the pipeline from the Zhu Rongji administration were completed). Some argue that reforms stopped altogether, or that there was regression. In any case, China has now more or less officially adopted this view, since the Third Plenum of the 18th Communist Party Central Committee in November 2013 called for a revitalization of reform and warned of the dangers of slipping backwards. While this marks a welcome recommitment to reform, it is not easy to restore momentum to a process interrupted for a decade; it will take time to see where the new round of reforms leads.

0.5 MILESTONES, TURNING POINTS, AND THE "NEW NORMAL"

Therefore, it no longer makes sense to say that China is in the midst of two rapid, powerful, but essentially well-known, transitions. Neither of these transitions is as dynamic as it once was, and neither is ongoing, neither is in mid-stream (as it were). On the system side, China has settled into a "Chinese system," for better or for worse. While the current reform effort may push China off dead center, and China's economic system will certainly continue to evolve for various reasons, the essentials of a Chinese system today are rather clear. On the developmental side, China has accentuated its unusual development features and (in the short run) come further, faster than expected. The processes that have brought China to where it is today—while far from exhausted—cannot be counted on to drive the same kind of growth in the future. One stage of development transition, in other words, has been mostly completed, and the prospects for the next stage are inevitably less clear.

Given these important shifts, the statement in the 2005 edition that China, economically, is "becoming a normal country" no longer seems true as an overall, comprehensive statement. Writing in 2005, it seemed appropriate to argue that "this convergence to 'normal' institutions and patterns of development in most respects makes China easier to understand." (p. 10). That is no longer the case in all areas of the economy. In many respects, China has become a typical upper-middle income "emerging" market, but in other respects, Chinese institutions and policies have either settled into a distinctive Chinese pattern, or else has accentuated characteristics that previously seemed to be converging to global norms. For example, China's high investment rate was already unusual ten years ago: today it is even more different from global averages than ever.

These revisions of our understanding of China naturally interact with new developments, as China continues to grow and develop rapidly, develop new capabilities, and establish new patterns. Indeed, it is striking how many fundamental, long-run features of the economy have changed and even reversed in the past ten years. For example, some of the unambiguous turning points that have occurred in the last decade include:

1. The labor force that was growing rapidly has now stopped growing and begun to shrink (Chapter 7 and 8).
2. Exports as a share of GDP, after increasing for three decades, have declined steadily and substantially since 2006 (Chapter 16).
3. The economic center of gravity, after shifting steadily toward the coastal regions for decades, is now slowly beginning to shift back inland (Chapter 1).
4. From being one of the world's largest host countries for foreign direct investment (FDI), China has suddenly become a large source of outward FDI, making China like a developed country with balanced inward and outward FDI flows (Chapter 17).

These are important development milestones that have already occurred. China is already at a turning point; indeed, at multiple turning points. Yet in each case, their importance lies primarily in what they say about China's development in the future. The ultimate result of these changing trends is that the increasingly stable Chinese system is under increasing pressure to prove that it is well adapted to the next stage of growth. The necessary transitions are now multiple: demographic, technological, macroeconomic, and institutional. Can China rebalance its economy? Can China avoid the middle income trap? Can China make the leap to an innovative society and economy? These are all questions that confront economic policy-makers with new challenges and new risks.

0.6 USING THIS BOOK

The chapters of this book are organized in a bottom-up fashion. The first third of the book covers endowments, legacies, economic systems, and general issues of economic structure, labor, and living standards. The second third covers specific sectors, beginning with agriculture and progressing through industry and technology, and foreign trade and investment. The final third considers financial, macroeconomic and environmental issues. The book is designed to be a platform, covering much of the essential information about the Chinese economy and thereby serving as a starting point for further in-depth study of any specific topic.

The chapters in the book make frequent cross-references but are intended to stand alone as well. Thus classes should be able to assemble the chapters in different sequences, to accord with preferred approaches to the material. If the chapters are covered in order, the result is a strong China focus, with the opening chapters on China's geography and history first. This "program" is appropriate to a course specifically on China's economy or as part of a course on East Asian economies. An alternative "program" to cover the material would be to begin with Chapters 3 and 4 (the socialist economy and transition economy), then skip to Chapters 12 and 13 (township and village enterprises, and ownership and corporate governance in industry). This program gives a stronger emphasis on market transition and would be appropriate to a comparative class on economic systems. Those wishing to emphasize China's opening and integration into the world economy may wish to start with Chapters 16 and 17 (international trade and foreign investment). Of course, many other programs or approaches to the material are possible. The book presents many charts and graphs. The raw data for these graphics is available on the web site, http://new_website, along with supplementary materials and updated data.

Readings

Feng, Yingjie and Yang Yao (2014). "The Middle-Income Trap and China's Growth Prospects." In Song, Ligang, Ross Garnaut, and Cai Fang, eds., *Deepening reform for China's long-term growth and development*. Canberra: Australian National University Press. Pp. 133-158. Access at http://press.anu.edu.au/titles/china-update-series/deepening-reform-for-chinas-long-term-growth-and-development/pdf-download/