

HOW DID DEVELOPMENT ACTUALLY HAPPEN?

Providence has not created the human race either entirely independent or perfectly slave. It traces, it is true, a fatal circle around each man that he cannot leave; but within its vast limits man is powerful and free; so too with peoples.

—Alexis de Tocqueville, *Democracy in America*

The greatest fever of all was aspiration, a belief in the sheer possibility to remake a life. Some who tried succeeded; many others did not. More remarkable was that they defied a history that told them never to try.

—Evan Osnos, *The Age of Ambition*

Imagine a pauper who turns to two finance gurus for advice. Not only is he broke, this pauper is poorly educated and lives in a rough neighborhood. The first guru urges, “Earn your first paycheck. Once you start making money, your circumstances will improve, and you will eventually escape poverty.” The second guru counsels differently: “Start by doing as my rich clients do: attend college, move to a safe town, and buy health insurance. You can only escape poverty by first creating the prerequisites for wealth.”

The two gurus mean well, but the advice of both experts clearly falls short. The first guru provides no clue as to how the pauper might earn his first paycheck, much less how to sustain a stable income. Conversely, the second guru ignores the realities of poverty. If the pauper could afford to, he would have obtained the prerequisites for a better life long ago. Attaining such prerequisites is not the solution to poverty; the difficulty of attaining them is itself the problem.

The parable of the pauper and two gurus reflects a fundamental problem of development in the real world. All wealthy capitalist economies feature institutions of good governance, such as protection of private property rights, professional bureaucracies, modern courts, formal accountability, and pluralistic participation, which all seem necessary for successful markets.¹ Yet attaining these preconditions also appears to depend on the level of economic wealth.

So how can poor and weak societies escape poverty traps? Which comes first in development—economic growth or good governance?

Answers have been sharply divided. Modernization theory holds that “growth → good governance.” The argument goes that as countries grow rich, a burgeoning middle class will demand greater accountability and protection of individual rights, leading eventually to capitalist democracies.² Similarly, others argue that countries succeed in modernizing public administrations and eradicating corruption only after they become sufficiently wealthy.³

Mirroring the first guru’s shortfall, however, modernization theory does not explain the origins of economic growth. According to the Harrod-Domar model in classical economics, growth comes from capital investments. But how do impoverished countries secure investments? Economist Jeffrey Sachs argues that such investments should come from developed nations in the form of massive foreign aid.⁴ He believes that once the Third World economy is jump-started, “all good things” will follow.⁵ Yet many studies find the link between foreign aid and prosperity tenuous.⁶ Some even contend that foreign aid has actually worsened corruption and brought more harm than good to the poor.⁷

A second widely embraced theory forcefully advances a reverse causal claim: “good governance → growth.” International agencies like the World Bank and IMF, joined by many Western policy makers and academics, maintain that it is necessary to “get governance right” before markets can grow.⁸ The logic is intuitive. All prosperous economies share a common set of strong, law-bound governmental institutions. Therefore, aspiring developers should first replicate the checklist of best practices found in wealthy democracies. Then, it is expected, growth will naturally blossom from good institutional soil.

Reminiscent of the second guru, however, this paradigm ignores the problem of how poor and weak states can meaningfully attain good governance. The term “meaningfully” deserves emphasis, for it is one thing to adopt the formality of best practices but another to actually implement them.⁹ For instance, at the behest of international agencies, some developing countries have built courts and have written laws in books, but they have frequently lacked professional judges to adjudicate disputes, and citizens have routinely distrusted and avoided the legal system even after new laws were promulgated.¹⁰ If achieving good governance were a mere technicality of copying best practices from the developed West, then late developers would have accomplished it long ago. In fact, as Pritchett and Woolcock, two leading voices on international development, lament, the imposition of good governance standards has been “a root cause of the deep problems encountered by developing countries.”¹¹

Going further, a third school points to history as the underlying cause of good governance or state capacity. This approach may be abbreviated as “history → good governance → growth.” Following a path-dependent logic, several scholars posit

colonialization as the root of present-day national inequalities.¹² In *Why Nations Fail*, Acemoglu and Robinson trace the stark divide between North and South America to their contrasting colonial legacies.¹³ According to them, English colonizers founded settlements of equal opportunity and limited government on North American soil, paving the way for future capitalist success, whereas Spanish conquerors imposed unequal and exploitive structures in Latin America, stunting prosperity over the long term.

Although this third school reminds us of the enduring effects of history, it does not point a way out of poverty traps.¹⁴ Rather, the authors of *Why Nations Fail* conclude that “different patterns of institutions today are deeply rooted in the past because once society gets organized in a particular way, this tends to persist.” And they add, “This persistence and the forces that create it also explain why it is so difficult to remove world inequality and to make poor countries prosperous.”¹⁵ Their conclusion raises a troubling question: If the seeds of national successes and failures were indeed planted long ago and became rooted over time, what can nations lacking the right history do today?¹⁶

The observation that many poor nations fail *because* they suffer troubled histories and bad starts is correct, but by itself not particularly surprising. What is harder and more useful, instead, is to explain why some nations succeed *despite* ominous starting points and daunting odds, as witnessed most dramatically in China’s rise from a socialist backwater to a global powerhouse since market reforms began in 1978.¹⁷

This book investigates how China escaped the poverty trap and made the Great Leap from a barren communist political economy into the middle-income, capitalist dynamo that it is today. More broadly, grounded in my analysis of China’s metamorphosis, this is a study about how development *actually* happens. Is it really the institutions of good governance so keenly proffered to developing countries today that launch markets? Or is it growth that enables good governance? Or is history destiny?

My answer begins with a simple observation: development *is* a coevolutionary process. States and markets interact and adapt to each other, changing mutually over time. Neither economic growth nor good governance comes first in development. China’s experience provides an especially rich illustration of the coevolutionary process of development, but this process is not unique to China. As we shall see by the end of this book, the rise of Western societies, too, actually followed a coevolutionary pattern,¹⁸ as did the astonishing boom of the movie industry in contemporary Nigeria.

Although development as a coevolutionary process is intuitively observed (in my experience, it appears that the less formal training one receives, the more intuitive it is), analyzing mutual changes among many moving parts is far from

easy. To this end, I lay out a framework for systematically mapping the coevolution of states and markets. This approach reveals surprising insights into the causal sequence of development and raises new questions about the sources of societal adaptation.

My answers to how China—and poor and weak societies in general—escaped the poverty trap are twofold. The first: build markets *with* weak institutions. My analysis reveals that the institutions, strategies, and state capacities that promote growth vary over the course of development, among countries and even among localities within countries. Even more surprisingly, I show that the practices and features that *defy* norms of good governance—normally viewed as “weak” institutions—are paradoxically the raw materials for *building* markets when none exist. By contrast, the “good” or “strong” institutions found in wealthy economies are institutions that *preserve* existing markets.

The idea that we can harness weak institutions to build markets carries tremendous political and practical import. Perhaps the one thing poor countries possess in abundance are so-called weak institutions. Examples of weak institutions featured in this study include the fusion of public and private interests (vs. bureaucratic professionalism), partial (vs. impartial) regulation, campaign-style (vs. routine) policy implementation, indiscriminate and uncoordinated (vs. selective) industrial promotion policies, incentives for petty fee extractions (vs. eradicating corruption), to name some.¹⁹ Normally, we believe that the way out of poverty traps is to “quickly” replace such weak institutions with strong institutions that define advanced industrialized economies.²⁰ This book points to a different path. It illuminates the development potential that may lie hidden within apparently weak institutions.

The second answer: create the right conditions for adaptation. History is not destiny. Although past encounters determine starting points, any given legacy may be reshaped for destructive or constructive ends. Instead of attributing national successes and failures only to history or geography,²¹ I emphasize instead the efforts of reformers to foster improvisation among ground-level agents, such that they may effectively utilize existing resources to tackle the problems of the poor, and thereby turn the typical *problems* of underdevelopment into the *solutions* to development.

Yet while improvisation is essential to the development process, improvisation does not occur automatically and indeed often fails. Instead of dispensing obvious advice like “avoid mimicry,” “promote innovation,” and “embrace experimentation,” fashionable among some development pundits who invoke adaptive language,²² I underscore the inherent challenges of achieving these goals. By studying how China tackled these challenges, we’ll learn about some actions that may be taken to spur the coevolution of states and markets as well as the effects

of particular measures deployed. Also, by unpacking the processes through which China escaped the poverty trap, we will also understand how China arrived at the particular problems that it faces today.

How Did China Escape the Poverty Trap?

Today, with news of China's spectacular rise repeated ad nauseam, it is easy to forget the dire circumstances confronting its reformers following the death of Mao.²³ It is also convenient to attribute China's transformation to the misimpression of a "strong state" or that China was perhaps not so poor at the start of reforms. So a basic reality check is in order.

In 1980 China's GDP per capita was only US\$193, lower than that of Bangladesh, Chad, and Malawi,²⁴ present-day "bottom-billion" countries.²⁵ In practical terms, an income per capita of US\$193 means that average food consumption fell below basic nutritional standards. The Chinese people did not eat more or better food during the 1970s than they had in the 1930s, before the Chinese Communist Party (CCP) took power.²⁶

Not only was China abjectly poor, the regime had oscillated between extreme dictatorship and political anarchy. In three decades under Mao's rule, China suffered two major political disasters. The Great Leap Forward (1958–1961) was Mao's frenzied scheme to accelerate economic production by political command, a campaign that culminated in mass starvation and claimed an estimated thirty million lives. Mao then tried to reconsolidate power by unleashing the Cultural Revolution (1966–1976), also nicknamed "ten years of madness."²⁷ Young red guards loyal to Mao went on a purge against alleged class enemies at all levels of government, including national leaders like Deng Xiaoping. In many official year-books, statistics during the period of the Cultural Revolution are missing,²⁸ for the bureaucracy was so devastated that it literally stopped counting. Mass killings spread to society and descended into what Walder describes as "virtual civil wars."²⁹ An entire generation of young people was deprived of formal education. Reflecting on the state of anarchy, MacFarquhar and Schoenhals conclude, "For a decade, the Chinese political system was first turned into chaos and then paralyzed."³⁰

Granted, China was at least unified under the CCP when Deng and his reformist team took power. Nonetheless, the state apparatus they inherited hardly fit the description of a strong state. Add the fact that China was poorer than bottom-billion countries like Chad, and the starting point in 1978 bode ill.

Now, fast forward thirty-five years. China has become the world's second largest economy, the world's largest exporter, and America's largest foreign creditor. By 2012 China's GDP per capita had jumped thirty-fold from US\$193

to US\$6,091, leaving other bottom-billion countries far in the dust (in Malawi, GDP per capita nudged up by only \$50 in thirty-two years, a typical case of being stuck).³¹ Undergirding these impressive growth statistics is a radical restructuring of the economy. China today boasts legions of private firms, Fortune 500 companies, multinational investors, a booming middle class, and capitalist institutions like securities, e-commerce, and corporate governance standards.³²

Politically, power remains firmly and solely in the hands of the CCP. Yet the absence of multiparty elections does not mean the absence of political change. Inside the dictatorial regime, the bureaucracy has undergone several makeovers that have altered the role of the government, its delivery of public services, and citizens' daily encounters with the state. In particular, although the reform-era bureaucracy remains notorious for corruption,³³ it is equally famous for being adaptive and entrepreneurial. China ranks among the world's most decentralized administrations. Local governments embrace capitalism, advance policy innovations, and compete to produce economic results. Under Mao, the bureaucracy was ossified and doggedly anticapitalist. But, today, as one Chinese official declared with a dash of irony, "Our nation cares about businesses. In fact, I feel that no capitalist state can match our devotion to the capitalist sector."³⁴

For mainstream political economists, China's great transformation—both economic and bureaucratic—is intriguing but also troubling.³⁵ In *Why Nations Fail*, Acemoglu and Robinson struggle to make sense of China's rise. According to them, growth is preconditioned on the establishment of nonextractive and inclusive institutions, essentially, democratic institutions. But even today China is not a democracy. National elections are barred. Members of the judicial and legislative bodies are handpicked by the ruling party. Extractive practices are still rife in parts of China. During the early phase of reforms, there was no formal protection of private property rights.

In defense, Acemoglu and Robinson surmise that sooner or later, China's hyper-growth will run out of steam.³⁶ Yet even if growth slows, which is expected for any economy that reaches middle-income status, the burning question remains: how did China come *this* amazingly far? Their reply is that "a critical juncture," namely Mao's death, followed by Deng's efforts to build a reform coalition, turned China around. Furthermore, they claim, growth under extractive institutions was possible because an extremely poor country like China had plenty of "catching up" to do. Finally, they sum up: "Some luck is key, because history always unfolds in a contingent way."³⁷

Luck, of course, influences any outcome. But assigning three decades of sustained economic and institutional remaking to luck is hardly satisfying. Moreover, all poor countries have ample room for "catching up," so why didn't they catch up the way China did?

Looking beyond luck and easy explanations, specialists of China have proposed a wealth of theories to account for its astonishing turnaround. All of these theories are valid and valuable, but, as we shall see, they form only parts of the grand picture of China's political-economic transformation that has been missing thus far. Let us first review some pieces of the puzzle.

For a start, some credit China's boom to loosened restrictions on capitalism in an economy that possesses basic growth factors, for example, abundant cheap labor and coastal cities poised to export.³⁸ There is no doubt that inputs like capital and labor are necessary for growth, but to conclude that such factors on their own will produce an economic miracle is like believing that eggs, sugar, and flour will turn into cake if left overnight in a mixing bowl.³⁹ Especially in a late-developing, communist context, how basic inputs are mobilized and distributed by the state is critical to the rise and shape of markets.

Shifting from economic to political factors, another set of explanations cites changes in bureaucratic incentives as the key to China's growth spurt. Under Deng's reformist agenda, local leaders who delivered prosperity were promoted,⁴⁰ and local governments were allowed to retain a sizable share of revenue earned.⁴¹ These changes in incentives, it is argued, sparked local officials nationwide to pursue growth. These incentives, however, did *not* work equally throughout China. It is well-known that while some localities, concentrated on the coast, grew rich and built competent administrations, others remained poor and predatory.⁴² These geographically limited theories not only mask wide variation in local outcomes within China, but more significantly, they underplay the role of regional inequalities in China's national reform success. As my study will show, unequal rates of political-economic coevolution across regions served to accelerate early takeoffs on the coast and late takeoffs among inland locales.

Still a third explanation looks to the incremental quality of China's reforms. As is well-known, Chinese reformers rejected the shock therapy approach of the former Soviet Union and instead chose to modify pre-existing institutions on the margins, such as by creating dual-track pricing and a system of hybrid property rights.⁴³ Some argue that such "second-best" and "transitional" institutional forms are sufficient to stimulate markets in the beginning.⁴⁴ Then, as predicted, once markets mature, early institutions "should eventually be replaced by more conventional, best-practice institutions."⁴⁵ My book extends this crucial idea that conventionally good institutions may not be necessary for early growth. But whereas the previous literature stopped at asserting that initial institutions "should" eventually be replaced,⁴⁶ this study presents historical evidence to identify *when*, *why*, and *how* institutional replacement occurs.

Yet a fourth body of literature lists various adaptive actions taken by the CCP-state as a cause of "authoritarian resilience" and reform success.⁴⁷ Examples

include policy experiments,⁴⁸ eliciting and incorporation of social feedback,⁴⁹ party co-optation of private entrepreneurs,⁵⁰ bureaucratic initiatives in generating revenue,⁵¹ and efforts to study the experiences of other countries.⁵² This abundant literature describes various adaptive or entrepreneurial actions,⁵³ but it does not explain *why* China displays such exceptional inventiveness, especially in contrast to many other stagnant postcommunist systems and failed states. Moreover, China's apparent adaptive capacity cannot explain authoritarian resilience because such adaptability itself needs to be explained.

One notable effort to trace the sources of China's adaptability is Heilmann and Perry's *Mao's Invisible Hand*. They propose that post-Mao leaders inherited "guerrilla" norms of flexibility from the CCP's revolutionary past and applied these norms to market reforms.⁵⁴ I completely agree that the Maoist legacy has contributed to the current leadership's cache of rhetoric and tools.⁵⁵ Still it doesn't explain why reformers were persistently keen to reconfigure various elements, whether from the past or the present, to formulate new solutions and why many of these solutions successfully propelled change. A revolutionary legacy can lead down many paths. And the particular path China has taken—with distinct steps, achievements, and pains—is not neatly dictated by the past.

In short, existing accounts each highlight a different piece of the grand puzzle: basic growth factors, bureaucratic incentives, incremental reforms, historical legacies, and more. Every piece is essential, yet none can explain how the other pieces interacted and aggregated to remake an entire political economy within the span of a single generation.

Nor can existing theories account for three distinct patterns of China's capitalist revolution. First, the changes are *broad*. China's reforms are famously incremental; yet they culminate in a drastic economic and bureaucratic restructuring nationwide. Second, the methods are *bold*. State actors seemed unfazed by the use of extreme and unorthodox methods to achieve goals. Third, local outcomes are *uneven*. Coastal locales like Shanghai and Shenzhen sped ahead, growing markets and modernizing governance ahead of others. In China, national success is coupled with sharp regional inequalities not seen in East Asia or in other large countries like the United States.

Evidently, numerous factors were simultaneously at play in China's great transformation. A dynamic and comprehensive account, however, will have to go further to consider the underlying conditions that allowed multiple factors to interact and coevolve and to explain the distinctively broad, bold, and uneven patterns of change. To draw generalizable lessons from China's unique experiences, we must also answer this question: What is exceptional and not exceptional about the nature of adaptation in China?

Building this new and integrative account of how China escaped the poverty trap requires that we rethink some of the foundations of traditional social science analyses.

Complexity: An Alternative Paradigm

Development is more than a problem of growing from poor to rich. As the scholarship on poverty traps emphasizes,⁵⁶ the poor are simultaneously beset by problems of instability, corruption, patrimonialism, and weak policy enforcement that arise from and deepen poverty. No doubt, wealthy nations have their own share of problems too, such as obesity and aging populations, but these are problems that stem from material abundance. Cast more precisely in game theoretic terms, development is a problem of making the transition from one self-reinforcing equilibrium (poverty traps) to another equilibrium (rich and modern), a process that may be termed the Great Leap.

Existing frameworks and tools in social science are extremely useful for answering certain questions where endogeneity (mutual causation) is irrelevant, but they do not take us very far in understanding an inherently interactive and complex process like political-economic development.

Take for instance a state-of-the-art study by North, Wallis, and Weingast, which tries to explain how underdeveloped societies can make the transition to capitalism and modernity. They argue that this process requires several “doorstep conditions,” including rule of law among elites and centralized control of the military. Once such doorstep conditions are in place, they hold, it is possible but not inevitable that “a transition proper ensues.”⁵⁷ Needless to say, we must first arrive at the doorstep before we can step past any door. Although North, Wallis, and Weingast take us one major step back in the causal chain, their conclusion is still critically missing insights into the “incremental changes” that led to the doorstep or,⁵⁸ in Krasner’s term, “the empty middle.”⁵⁹

Then consider the abundance of quantitative analyses that attempt to prove either the modernization theory or good governance as the primary cause of growth.⁶⁰ A debate between Kaufmann, Kraay, and Mastruzzi (creators of the Worldwide Governance Indicators or WGI) and political scientists Kurtz and Schrank is especially instructive.⁶¹ Kaufmann and his colleagues have used the WGI, the most widely accepted measure of governance in the world, in many regression analyses to prove that “governance matters, in the sense that there is a strong causal relationship from good governance to better development outcomes.”⁶² Kurtz and Schrank refute this claim. Running regressions using the

same data but with different empirical specifications, they reach the opposite conclusion: “good governance is in all likelihood a consequence, rather than a cause, of economic growth.”⁶³ So who’s right and who’s wrong?⁶⁴

Both conclusions are partial. The big, commonsense picture is lost in debates about whether growth or good governance comes first in development, as Przeworski acutely underscores in his sweeping review of the literature. He writes, “In the end, the motor of history is endogeneity. From some initial circumstances and under some invariant conditions, wealth, its distribution, and the institutions that allocate factors and distribute incomes are *mutually interdependent and evolve together*.”⁶⁵

My book takes the reality of “mutual interdependence” between growth and governance as the starting point and pursues two objectives:

1. Develop an analytic template and data-collection strategy to systematically map the coevolution of states and markets over time and across space.
2. Explore the conditions that allow and foster coevolutionary processes of radical change.

I adopt a paradigm that is different from the one we currently embrace. Our conventional paradigm (meaning the way we view the world) assumes a *complicated*—rather than *complex*—reality. The terms “complicated” and “complex” are often conflated in daily language, but in fact they describe two completely different worlds.⁶⁶ In a complicated world, collectives are made up of many separate parts that do not interact and change with one another, of which a toaster is a good example. A toaster is a machine made up of many separate parts. Press a button and it will produce a predictable action: toasted bread pops up. To study complicated worlds, we can parse out the different parts into separate categories of cause and effect and then try to pin down the linear effects of a hypothesized independent variable on a dependent variable. Much of our analyses have proceeded as if social worlds are complicated. In this view of the world, it makes sense to debate whether it is growth that causes good governance or the reverse.

Yet we all know that social worlds are not complicated; they are almost always complex. Complex systems comprise many moving parts that interact with one another and change together, triggering outcomes that cannot be precisely controlled or predicted in advance. Human bodies are an example of complex systems. Political economies, comprising many players, many institutions, and many interactions, are complex.

Traditional assumptions of causality and tools of analysis serve us well when studying complicated worlds, but “using these same tools to understand complex worlds fails,” state Miller and Page, two leading theorists of the booming and interdisciplinary field of complex adaptive systems (which I term “complexity”). Why is that? They elaborate with an apt metaphor: “Because it becomes impossible to reduce the system without killing it. The ability to collect and pin to a board all of the insects that live in the garden does little to lend insight into the ecosystem contained therein.”⁶⁷

Fortunately, just as we don’t always have to kill insects in order to study natural habitats, we don’t have to reduce complexity in order to make sense of complex worlds. This book applies some concepts and tools from complexity studies to the political economy of development.⁶⁸

Mapping Coevolution

My first and easier—but not easy—task is to develop a method for *systematically* mapping the coevolution of states and markets. As Pierson observes, “contemporary social scientists typically take a ‘snapshot’ view of political life.”⁶⁹ For example, those who follow China may be inclined to draw conclusions from the most current events. The present, however, gives only a temporally limited view. Hence Pierson urges researchers to “shift from snapshots to moving pictures” by “*systematically* situating particular moments (including the present) in a temporal sequence.”⁷⁰ My work extends this emphasis on time, and I seek to enrich this agenda by adding several new dimensions.

Without going into methodological details that will later be elaborated, here is a sketch of my approach. (1) I select two institutions or domains of activities (e.g., markets and bureaucratic functions, markets and state development strategies). (2) I specify the significant time periods of analysis, since we cannot obviously regress infinitely to the starting point of human development. In the case of China, the year of 1978, the official launch of market reforms, is a clear place to start. (3) I collect data to track the institutional traits of each domain studied. For example, to trace the market conditions of a city, I examine not only quantitative but also qualitative patterns, such as industrial makeup and the focus of economic reforms, at each significant time period.⁷¹ My approach of recording state and market features over time generates a qualitative panel dataset for each case (observations of multiple dimensions repeated over time), rather than cross-sectional snapshots of several cases. (4) My final step is to locate and trace evidence of mutual feedbacks, where relevant, among the domains of concern in each case.

In examining mutual feedbacks, I focus on three signature mechanisms of coevolution:⁷²

1. *Variation*: generation of alternatives
2. *Selection*: selection among and assembly of alternatives to form new combinations
3. *Niche creation*: crafting of distinct and valuable roles among heterogeneous units within a system

Each of these mechanisms raises concrete questions that guide our mapping of coevolutionary paths, as follows. *Variation*: Were new options and strategies being produced, and by whom? *Selection*: What shaped the motivation for selection at a given juncture? Was an adaptive choice retained or abandoned for a new selection, and why? *Niche creation*: Was a unit in question trying to differentiate from other members of the system or blindly replicating the strategies of others? Are their roles competitive or complementary? By attending to these signature mechanisms, we have a grounded basis for examining whether—and *exactly* how—states and markets coevolve.

One key distinction between my approach and the seminal work of Thelen, Mahoney, and other historical institutionalists on “institutional evolution” and “gradual institutional change” is my focus on mapping sequences of mutual adaptations.⁷³ I start with a precise understanding of evolution as an *adaptive* process that occurs through the mechanisms outlined above. As Holland, another leading complexity theorist, defines, adaptation is the process by which an agent “fits itself to its environment,” including other agents.⁷⁴ A process of gradual change may *not* involve adaptation. For example, aging occurs gradually, but it is not the result of our adaptive responses to the environment. Nor are evolutionary processes always slow-moving;⁷⁵ microcosms can adapt and evolve within minutes. My analysis examines the processes of mutual adaptation—coevolution—among two or more populations or institutional domains in political economies, a process that is *not* synonymous with gradual or slow changes.

My empirical approach generates multiple snapshots of reciprocal feedbacks between states and markets. When these snapshots are strung in sequence, it reveals a causal logic that integrates and yet departs sharply from the conclusions of conventional theories. To get a feel for what I mean, consider five snapshots taken from my historical study of one coastal county in China,⁷⁶ reviewed in reverse order from its most current status.

Snapshot 1: Around 2002, the county government planned the construction of a central business district (CBD) and relocated businesses into

state-designated zones. This forceful effort paved the way for an unprecedented economic boom.

For proponents of the developmental state, this snapshot illustrates the indispensable role of strong and autonomous states in accelerating growth among late-developing economies.⁷⁷

Snapshot 2: During the late 1990s, as local industries flourished and the county became congested and chaotic, there was an increasing demand for urban zoning.

Now we learn that county officials initiated an aggressive zoning program in response to an earlier economic contingency and bottom-up demand for state interventions to address the problem, not because autonomous state planners came up with the initiative on their own.⁷⁸

Snapshot 3: Between 1993 and 1995, collectively owned enterprises were privatized en masse. The state, at that time, limited its role to facilitating the creation of private property rights. It did not pick winners (favor some industries over others) nor had it conceived the idea of constructing a CBD.

This evidence would cheer the proponents of good governance, who advocate limited government and private property rights protection.⁷⁹ Looking at this snapshot in isolation, we would mistakenly conclude that the developmental state school was proven wrong.

Snapshot 4: Prior to 1993, the county achieved an initial growth spurt, but the expansion of existing collective enterprises were constrained by vestiges of state control and the lack of clear private property rights.

Again, proponents of good governance would cheer. Even prior to privatization, though, industrial production had already grown at a phenomenal rate (thirty-three-fold since 1978!), which disproves their assumption that private property rights are necessary for growth.

Snapshot 5: From 1978 onward, the county promoted the establishment of collectively owned township and village enterprises (TVEs), which sparked rural industrialization and early growth.

This snapshot illustrates that early growth can occur in the absence of private property rights and that “small initial changes can have a large impact.”⁸⁰ With the benefit of hindsight, however, we know that such “small initial changes” were soon replaced by new institutions and development strategies.

So, depending on when (which year) and where (coastal or inland) we look in China, there is evidence for a whole variety of competing explanations for

successful reforms: developmental vs. minimalist states, private vs. collective property rights, orthodox vs. unorthodox institutions.

What happens if we string the five snapshots in sequence, starting from 1978? Generically expressed, we obtain this causal sequence of *mutual feedbacks*: Pre-existing “weak” institutions (e.g., communes rather than private individuals and centralized states as political units)⁸¹ → creatively adapted to build markets (e.g., creation of hybrid enterprises based on collective property rights) → market emerges → generates new pressures and resources for institutional change → market consolidates → generates new pressures and resources for institutional change again → market takes off and matures.⁸²

Compressing the causal chain above, we arrive at a succinct three-step formula:

harness weak institutions to build markets → emerging markets stimulate strong institutions → strong institutions preserve markets.

Although the particulars vary wildly from case to case, this is the long-term pattern of political-economic coevolution that I find at the national and sub-national levels in China. And as I will explore in the concluding chapter, such a pattern also emerges in the expansion of trade in late medieval Europe, the revolution of public finance in the antebellum United States, and the flourishing of Nollywood in contemporary Nigeria. To be clear, the causal pattern that emerges from my analyses does not suggest a teleological process that converges at the same end point. As is already well-known, even among advanced economies, good governance and strong institutions do not function and look the same.⁸³

Rather, the value of extracting a coevolutionary causal chain lies in making clear what the study of development has critically missed. The third step of “strong institutions preserve markets” has been firmly established by the work of North,⁸⁴ North and Weingast,⁸⁵ Weingast,⁸⁶ and Acemoglu and Robinson,⁸⁷ among other leading political economists. The second step of “markets stimulate strong institutions” constitutes the domain of modernization theory.⁸⁸

By comparison, with few exceptions,⁸⁹ we know woefully little about the *first* step of the causal chain: build markets *with* weak institutions. Even less is known about how these three essential steps connect in sequence. These are the gaps I seek to fill through a coevolutionary approach to development.

Fostering Adaptation

Mapping the coevolution of states and markets is the easier part of the book. Addressing the harder question comes next: What are the conditions that enable a continuously adaptive process of coevolution? Do these conditions result from exogenous forces or can they be created? In his thought-provoking book

Understanding the Process of Economic Change, Douglass North raises a similar question: “It is not sufficient to describe societal change; rather we must attempt to find the underlying forces shaping the process of change.”⁹⁰ He dubs these underlying forces “adaptive efficiency.” In his words, “Put simply the richer the artifactual structure the more likely are we to confront novel problems successfully. That is what is meant by adaptive efficiency; creating the necessary artifactual structure is an essential goal of public policy.”⁹¹

What does this “necessary artifactual structure” look like? And how can we go about creating it? North proposes a causal link between individual beliefs at the cognitive level and adaptive efficiency at the societal level, but he does not indicate how we can bridge the overwhelming gap between the extremely micro and the extremely macro levels. Nevertheless, North’s probing ruminations clearly indicate that the quest for understanding the underlying sources of adaptive efficiency is not wishful thinking. It marks the next frontier of development theories and practices, waiting to be explored.

To embark on a new intellectual journey to explore the creation of adaptive efficiency, we must find a different guide. Axelrod and Cohen’s *Harnessing Complexity* provides an especially useful and concrete framework. Two founding thinkers of complexity, Axelrod and Cohen begin with the observation that adaptation is “both promising and problematic.”⁹² Not everyone would immediately agree with this observation. Normally we are inclined to think about adaptation itself as the solution to all problems. Thus popular literature readily invokes buzzwords from complexity and adaptation to accessorize slogans: “Embrace experimentation! Muddle through purposively! Promote innovation! Celebrate diverse solutions! And above all, don’t fear change!”

Although adaptation is universally desirable, people often fail to adapt, and even if they try they may still fail. Experimentation and muddling through may not produce useful solutions or indeed any solution. Bottom-up participation may degenerate into shouting matches and gridlock, as is sometimes seen in democratic settings. And if promoting innovation were easy, then we would all have done it long ago, and all our problems would have been magically solved. Obviously it is easier said than done to adapt and to adapt effectively.

What precisely are some obstacles against effective adaptation? And what can we do about them? Drawing on the complexity paradigm, this book highlights three universal problems of adaptation, grouped into the themes of variation, selection, and niche creation. Interpreted in the context of reform China, these problems manifest as follows.

Variation: Central reformers want local agents to flexibly implement central mandates according to local conditions. But too much leeway

may generate chaos. So one enduring problem in China's policy making and implementation is how to strike a balance between flexibility and conformity, variety and uniformity.

Selection: How agents adapt to particular situations is shaped by their criteria of success. In the corporate sector, success is defined by financial performance, so corporate agents adapt to make profits. Governments, on the other hand, typically have to cater to multiple and even conflicting goals and demands.⁹³ So how does the CCP state clearly define and reward success in the bureaucracy?

Niche creation: Diversity provides raw material for innovation and allows for niche creation.⁹⁴ In China, however, the sheer diversity of conditions across regions also leads to huge disparities that may impede national economic progress and foment political discontent. This generates a third problem of how regional diversity may be turned from a liability into a collective advantage.

China is not exceptional in the adaptive problems it faced; rather it is unique in the way it tackled these problems. Each of the remaining chapters in the book will be devoted to examining how the Chinese state, national and local, responded to the three adaptive problems named above.

Through this analysis, we will arrive at a dynamic picture of how China escaped the poverty trap. We will also understand why its transformative process has displayed three distinct patterns: systemic changes despite incremental reforms (broad), unusually entrepreneurial but also corruption-prone bureaucrats (bold), and wide regional disparities coexisting with national prosperity (uneven).

The Argument in Brief

Authors are often asked to give a one-line summary of their argument. Here is mine: Poor and weak countries can escape the poverty trap by first building markets with weak institutions and, more fundamentally, by crafting environments that facilitate improvisation among the relevant players.

It is tempting to search for a single “model”—a package of particular institutions and policies—that can be replicated across all contexts and believed to produce equal success. If such a model were to exist, it would be delightfully convenient. But this is a search for a mirage. In fact, whether in the capitalist-democratic West, the East Asian developmental states, or China at different periods of reform, no particular solution is universally effective or ideal. Particular solutions work

only when they *fit* the needs and resources of particular contexts and the success criteria of the players involved.

Instead of aspiring to copy the exact actions taken by others, what is fundamentally needed for development are conditions that spur a productive and sustained search for solutions that fit different and evolving environments. Stated in North's terms, such conditions are "the necessary artifactual structure" that enables economic and political agents to "confront novel problems successfully."⁹⁵ And as Axelrod and Cohen emphasize, this process of confronting novel problems may produce endless possible solutions, "even without knowing in advance just what will change, or just what will be learned."⁹⁶

China escaped the poverty trap by constructing a set of underlying conditions that fostered an adaptive, bottom-up search *within* the state for localized solutions. As China is a late-developing, single-party authoritarian regime, the state plays an oversized role in shaping adaptive processes and outcomes. Condensing various elements of its adaptive approach into a pithy maxim, I call it *directed improvisation*. Central reformers direct; local state agents improvise. The center does not direct by precisely dictating what local agents must do. Instead, it directs by tackling the problems of adaptation earlier outlined: authorizing yet delimiting the boundaries of localization (variation), clearly defining and rewarding bureaucratic success (selection), and encouraging mutual exchanges between highly unequal regions (niche creation). Within these centrally drawn parameters, local authorities improvise a variety of solutions to locally specific and ever-changing problems. It is this paradoxical mixture of top-down direction and bottom-up improvisation that lays the foundation for coevolutionary processes of radical change.

In other words, generalizable from China's market reforms are insights into the process of building markets with weak institutions and the strategies of directing improvisation, not the particular solutions that were improvised to solve particular problems at various times and places. Furthermore, such lessons need not apply only narrowly to other countries. Numerous organizations and groups share similar challenges of improvising with existing resources and making adaptation work.⁹⁷

This book will focus on the processes of state-and-market coevolution and the conditions that enabled adaptive efficiency in the first thirty-five years of reform, starting from 1978. By the time the new leadership under Xi Jinping took office in 2013, China had ascended to middle-income status. Domestically and internationally, China also inhabits a different political environment. By exploring the adaptive processes that have taken China this far, we can better understand the origins of the particular challenges it faces today and assess whether its leadership can continue to tackle them in years to come.

Road Map

Here's how the rest of the book proceeds. Part 1 lays out the building blocks of my analysis in two chapters. Chapter 1, "Mapping Coevolution," introduces and previews my approach to mapping coevolutionary paths of development. In the style of a mini-analytic narrative, this chapter zooms in on the mutual emergence of industrial markets and professional bureaucratic traits in a modeled Chinese locality. As this chapter shows, a coevolutionary approach reaches sharply different conclusions about the causal relationship between growth and governance compared to linear and path-dependent theories.

A preview of *how* states and markets coevolve provokes the deeper question of *why* such processes could occur the way they did in China. Chapter 2, "Directed Improvisation," locates the answer in the way Chinese reformers tackled three key obstacles to effective adaptation, following the themes of variation, selection, and niche creation. The remaining chapters flesh out each of the three themes outlined in chapter 2.

Part 2 explores the role of central authorities in setting directions. Chapter 3, "Balancing Variety and Uniformity," investigates how the leadership empowered local authorities to boldly pursue change and flexibly tailor reforms to local conditions, while at the same time delimiting the boundaries of localized policy implementation. It locates the answers in the design of national reform packages and the articulation of central directives.

Chapter 4, "Franchising the Bureaucracy," examines how market reformers tackled the problems of weak incentives and muddled goals common to public organizations. Their solution, I show, is to run the bureaucracy like a franchised corporation, where local leaders are evaluated like CEOs and regular cadres (employees of the public administration) are paid like corporate employees. In combination, chapters 3 and 4 illuminate the strategies for influencing the amount of local variability and the selection criteria of bureaucratic agents.

Part 3 shifts to the improvising role of local governments. Working as a pair, chapters 5 and 6 chronicle the coevolutionary paths of three locales that are each defined by different geographic conditions and starting points. Chapter 5, "From Building to Preserving Markets," tells the life story of a city in Fujian province with a mixture of growth advantages and constraints. Applying the analytic template introduced in chapter 1, this chapter maps the reciprocal changes among markets, property rights, and developmental strategies from the 1980s to 2014. It documents the unfolding of a three-part causal sequence in thick details: harness weak institutions to build markets → emerging markets stimulate strong institutions → strong institutions preserve markets.

Chapter 6, "Connecting First Movers and Laggards," compares the coevolutionary paths of two unequally endowed locales: a coastal county in Zhejiang

(a first mover) and a landlocked county in Hubei (a laggard). Expectedly, this analysis finds divergent speeds and outcomes of political-economic coevolution between the two cases. Unexpectedly, however, it also uncovers the different ways that first movers and laggards contributed to each other's economic takeoff at early and late periods of reform. Finally, I bring the central state back into the picture again, this time focusing on its role in regional niche formation and the evolution of its policies toward regional development.

The concluding chapter addresses the comparative question: Are coevolutionary processes of development unique to China? Extending my empirical approach, I retell accounts from late medieval Europe, America following independence, and Nigeria since the early 1990s from a coevolutionary perspective. These snippets provide further evidence that development *is* a coevolutionary process, not only in contemporary China but also in other national and temporal settings. Drawing on the cases analyzed, I summarize six lessons for constructing an adaptive environment. I also discuss some core obstacles that China must overcome in order to stay adaptive in the twenty-first century.

Through this book, I hope to show that we can study political economies as complex systems in coherent and constructive ways. Confronting the basic question of how development *actually* happens compels us to revise the theories we build, the analytic methods we use, and the actions we take to improve human lives.

