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Authoritarian Upgrading and
Innovative Potential**

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Economic Governance

Authoritarian Upgrading and Innovative Potential

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THIS CHAPTER QUESTIONS CERTAIN analytical and normative predispositions that dominate the Western debate about the future of economic governance. I argue that China, due to its distinctive processes of economic policy-making, may be rather well positioned to deal with the novel structural and contextual challenges of the twenty-first century. I hold that the key to understanding the adaptability of China's political economy over the past few decades lies in the *unusual combination of extensive policy experimentation with long-term policy prioritization* that has been practiced under the shadow of a hierarchical authority structure. Therefore, China's economic governance represents a case of authoritarian upgrading that challenges traditional assumptions about the economic and institutional superiority of Western governance models.

The main focus of my analysis are the *processes* of crafting policies and institutions that advance economic change. A static institutional focus will not help to understand developmental dynamics since the setup of China's economic institutions and economic administration has been in constant flux for most of the PRC's history. In such a rapidly shifting context, the informational content and explanatory power of institutions should not be overrated. I also doubt the usefulness of reproducing the usual GDP and income growth statistics that may look impressive but are often misleading as national average data in a highly heterogeneous economic space and as the products of China's heavily politicized statistics administration. So as to avoid the pitfalls of institutional and statistical analysis and still obtain general insights into the mechanisms that have driven China's economic transformation, I rely on an

explicitly process-oriented political economy perspective that is focused on shifting modes of interaction, communication, coordination, and feedback in economic policymaking, planning, and experimentation.

One important caveat has to be made from the start when analyzing China's record of adaptiveness and inferring the potential for future innovation from past experience. The hardest test for systemic adaptive capacity arrives with disruptive developmental fractures, that is, domestically or externally induced systemic crises, in which not only economic and social learning but also political-institutional responsiveness and societal support for the political system and the incumbent government are stretched to their limit. China, as well as other political systems, may have to face such a crisis in the coming years. And it remains to be seen how China's government, beyond the creative economic policy process that has been so productive in times of normal politics, will respond to a developmental fracture that hits economic growth, social cohesion, and political authority at the same time.

In this chapter, I proceed in four steps. First, I clarify what I mean by "authoritarian upgrading" and "innovative potential." Second, I present core findings on the intriguing interplay between development planning and policy experimentation in China's economic governance. These two core mechanisms in China's overall policy process are much too often ignored, since they don't fit well into standard models of market-based political economies. Third, I suggest that planning and experimentation, if constantly refined and refocused, may also have the potential to promote China's innovative potential tremendously over the next decades. This hypothesis is not just based on past achievements and experiences, but rather on the assumption that the coming decades will be shaped by technological, environmental, and sociodemographic contextual factors that will be starkly different from previous decades. Powerful nontraditional forces will be at work in the twenty-first century, and these new forces will privilege modes of governance that are substantially different from governance modes that have been successful in the past. In my fourth and concluding step, I will deal with the possible advent of a type of governance that I call, as a shorthand for a rather complex phenomenon, "techno-authoritarianism."

The Significance of "Authoritarian Upgrading"

The term "authoritarian upgrading" was coined by Steven Heydemann in a paper for the Brookings Institution that deals with political and economic modernization in the Arab world. In his analysis, Heydemann focuses on how autocratic rulers in resource-rich political economies try to contain and deflect the forces of political liberalization. He explains the selective and limited

institutional and policy adjustments made by Arab rulers as a series of ad hoc responses to pressures for political reform and to Western democracy promotion strategies. As a result, politically "upgraded" authoritarian regimes appear smarter and more complex than in the past while autocratic rulers avoid ceding any of their substantive authority.¹

In order to adapt Heydemann's authoritarian upgrading model to the East Asian, and especially the Chinese, experience with the political management of economic and social modernization, I reformulate and add a number of distinctive governance features that can be found in the East Asian context. Authoritarian upgrading thereby is depicted as a more proactive, foresighted, and broad-based enterprise and trajectory (instead of being just a reactive, evasive, and elitist effort) than is usually assumed from a normative democratization perspective (see table 6.1).

Though political competition and opposition still have no legitimate role in this variant of authoritarian governance, striking unconventional elements can be seen in the much more consultative, pluralistic, and globally integrated policy process that makes upgraded authoritarianism much smarter than its precursors in the twentieth century and much more challenging to established democracies and market economies.

TABLE 6.1
Core Features of Authoritarian Upgrading in the Early Twenty-first Century

- *Making the political economy more inclusive:* spreading the benefits of economic reforms beyond the state elite to broader segments of the population.
- *Engaging in consultative policymaking:* precluding open conflict through systematic consultation of important interest groups before issuing major regulatory/redistributive policies.
- *Appropriating civil society:* integrating civic organizations as gongos (government organized nongovernmental organizations) into the official system; absorbing, warping, or deflecting the language of democracy and the rule of law.
- *Cultivating a split public sphere:* upholding a strict delimitation between a tightly controlled official public sphere and an unofficial, volatile, fragmented, and therefore rarely politically threatening, blogosphere (thereby nurturing a systemic collective action deficit).
- *Maintaining direct state control over core parts of the economy:* fostering powerful and profitable government-linked companies in oligopoly areas of the national economy.
- *Fostering a national innovation system* through massive acquisition of technology and organizational know-how, while simultaneously building up the indigenous foundations for technological innovation.
- *Promoting international outreach:* increasing international linkages, establishing economic bridgeheads in strategic locations of the global economy; making key players in the world economy dependent on capital and/or resource flows from authoritarian upgraders.

The term “innovative potential” in the title of this chapter points to processes and mechanisms that are conducive to the incessant generation of new knowledge and technologies that can be put to work in diverse parts of the economy, society, and public administration. The Organisation for Economic Co-operation and Development (OECD) defines a national “innovation system” as the “purposeful combination of market and non-market mechanisms to optimise the production, deployment and use of new knowledge for sustainable growth, through institutionalised processes in the public and private sector.”² According to the OECD and a growing body of scholarly literature, it is a creative combination of market and nonmarket, public and private forces that produces the strongest capacity for innovation in modern political economies.

China is dealing with these requirements of “mixed governance” in a very ambitious way. The Chinese leadership defined crafting an innovation-driven nation as one top priority in 2006 when a Long-term Plan for the Development of Science and Technology (2006–20) was issued. Hu Jintao outlined strategic objectives for propelling China onto a “new path of innovation with Chinese characteristics” and formulated four general guidelines, each in a four-character slogan, aiming at: indigenous innovation (*zizhu chuangxin* 自主创新), leapfrogging in key areas (*zhongdian kuayue* 重点跨越), science and technology supporting economic and social development (*zhicheng fazhan* 支撑发展), and science and technology leading the future (*yinling weilai* 引领未来). According to the strategic plan’s prescriptions, China is supposed to become a leading global science and technology power by the middle of the twenty-first century. Technological innovation is intended to become the central pillar of upgrading China’s economic, social, and political order.

Distinctive Features of China’s Economic Governance

Though the Chinese government and Chinese academia since the 1990s increasingly came to use Western concepts to describe their approach to economic governance, there are many misnomers and misunderstandings in this effort due to the very different political, legal, social, and cultural-linguistic context that China provides for making these concepts work. Even China’s basic policy cycle, including agenda-setting, formulation, implementation, and revision of policies, is essentially different from the Western experience that dominates social scientists’ and legal scholars’ discussions.

The Chinese polity is not dominated by the rhythm of election campaigns with their inherent shifting policy priorities and their often abrupt leadership

changes in key executive positions. Beyond short-term crisis management, economic policymaking in China is instead still dominated by the rhythm of programs that are drafted with a much longer time horizon in mind than in most other political economies. In China, policy priorities are not supposed to shift quickly. Remarkably, the regular five-year planning periods are not synchronized with the turnovers in party and state leadership. Incoming new leaders remain bound to the previous plan for three full years and thus cannot openly discard the policy goals that had been laid down by their predecessors. In effect, policy priorities really do not shift quickly in the Chinese polity. This feature of “long-termism” (as opposed to the “short-termism” built into global capital markets and also into electoral cycles), has given China comparative advantages in pursuing economic modernization and may also provide advantages in dealing with certain future challenges.

Key components of China’s policymaking approach to economic growth and restructuring in the past thirty years are summarized in table 6.2. Beyond the growth imperative, no preconceived and sweeping reform strategy (such as “privatization” or “marketization”) was laid down. The means to achieve economic growth and efficiency gains were largely left open to broad-based explorative efforts and policy experimentation. Since Chinese policymakers, in the context of an authoritarian polity, do not have to face organized opposition and electoral competition they can afford to wait for newly emerging elements in the political economy to “outgrow” the old ones over an extended period. The comparatively stable position and extended time horizon of top policymakers thus facilitated “institutional displacement” and “institutional layering.”³ Moreover, the protracted process of policy learning was made possible by the massive growth in nonstate economic activity that lessened the pressure for immediate structural reform in the public sector and thereby provided Chinese policymakers with an unusually opportune environment for learning and adaptation over an extended period of time.

It must be emphasized here that China’s reform experience cannot be characterized sweepingly as “gradualist” or “incrementalist” across the board. Major reform breakthroughs such as those in 1992–1993 (program for market-oriented restructuring as a response to the collapse of socialism in the Soviet Union and Eastern Europe), 1997–1998 (state-owned enterprise, SOE, reform under the shocking impression of the Asian financial crisis), and 2001–2002 (foreign trade liberalization as a result of WTO accession negotiations) clearly went beyond cautious incremental adjustments. Big reform pushes such as these should be seen as instances of “political lightning”⁴ or, in Chinese political jargon, as “assaults against fortified positions” (*gongjian* 攻坚) that can only be achieved in extraordinary periods when top-level policymakers are facing intense, unifying decision pressures.⁵

TABLE 6.2
China's Economic Governance: Core Processual Features, 1978–2008

Strategic Orientations

- Embracing an *open-ended design* to economic reform: Western standard recipes such as the “marketization-cum-privatization” paradigm were never fully accepted and therefore effectively shunned or warped by Chinese policymakers; beyond the growth imperative, no preconceived reform strategy and no clear vision of the resulting economic “system” were laid down; the means to achieve economic growth were generated in an open-ended, experimental process.
- Promoting a *fixation with national growth, wealth, and power* while neglecting the social and ecological consequences of economic expansion (1978–2003).

Development Planning

- Setting *policy priorities and goals* through refocused development *planning*: from socialistic “planning as a *substitute* for markets” to “planning *with and for* markets.”
- Initiating recurrent *big pushes in infrastructure, manpower, technology*.

Experimentation

- Searching for suitable *policy instruments* through *experimentation*: decentralized policy experimentation (including illicit policy initiatives) stimulated/tolerated by national policymakers.
- *Experience first, lawmaking later*: local policy experiments seen by decision makers as successful and acceptable were selectively expanded “from point to surface” in official pilot programs. Major economic legislation usually came only as a result of extended experimental programs.

Learning from Abroad

- Selective learning from “advanced *foreign experience*”; translating these experiences into reforms that serve China’s “national situation.”
- Employing *foreign investment*, foreign firms, and foreign technology to advance economic modernization while keeping foreign business on a leash through regulatory discrimination.
- *Playing two-level games*: policymakers play two-level games in economic diplomacy (e.g., WTO negotiations) to intensify transnational adaptive pressures and accelerate economic restructuring.

Institutional Layering

- Longer time horizon of policymakers facilitates *institutional layering/displacement* over an extended period (“*dual track*”: new system can outgrow old system).
- Working with *transitional and hybrid institutions*: economic institutions constantly recombined in unconventional ways resulting in an uneasy, yet flexible and often productive, shifting mix of state and market, centralized and decentralized coordination.

Authoritarian Safeguards

- Sustaining the *state's capacity to intervene* by administrative means in core branches of the economy and to curtail private and foreign businesses.
- *Communist Party reserve capacities in economic administration*: in “periods of extraordinary politics” (1992–1993, 1997–1998, 2001–2002, 2008–2009) when big reform pushes were undertaken by the center, top-level initiatives and institutional reorganization were imposed through the party hierarchy.

Development Planning and Innovation

In characterizations of China's reform period, there is much talk about the “demise of the plan,” the “dismantling of the state planning apparatus,” and the “transition from plan to market.”⁶ In a recently published state-of-the-art volume on China's economic rise, coordination through state planning is mentioned in passing only.⁷ From a comparativist perspective, influential economists edited books with titles such as *The Collapse of Development Planning* in which the contributors told readers why national governments, including China's government, would have to retreat, why economic planning would necessarily result in underdevelopment, and why markets would regulate themselves and guide economic activities in an efficient way in developing countries.⁸ So as to make China's success story fit into Western marketization narratives and models, coordination through plans has rarely been allowed to play a role in standard explanations. Instead, to make China's achievements intelligible to Western preconceptions, it is widely assumed that markets *must* have taken over and *must* have pushed back incompetent state bureaucrats.

Contrary to the sweeping mainstream logic that takes the demise of the plan for granted, institutionalized planning can be found in almost every policy domain in China to the present day, though it has undergone substantial reorganization in terms of content, process, and methods since the mid-1990s.⁹ An inventory of the wide range of recent and current government plans and programs makes it clear that the very essence of state development planning—*ex ante coordination and proactive prioritization of a government's economic activity, instead of ad hoc or reactive intervention through individual policies, laws and funding schemes*—is still being preserved in China's polity, with particularly profound ambitions in the realm of the “national innovation system” (i.e., complementary industrial, technology, and research programs).¹⁰ Long-term, mid-term, and short-term plans can be found in every single policy sector. And beyond the rather general national Five Year Plans (FYP), detailed and partly mandatory Special Program Plans (专项规划) are designed to steer the economic behavior of firms, households, and individuals “through scientific forecasting, clearly defined objectives, government policies, and public goods provision.” Special Program Plans deal with key areas of public policy and include not only policy objectives and quantitative targets, but frequently also a catalogue of concrete measures and funding arrangements.¹¹

It is not surprising that the Chinese government continues to draft and implement plans for certain key industries, technology, education, and the environment since mid- to long-term planning exercises are made in these policy areas even by the most market-oriented governments in the West. Yet

in China, we find multiyear as well as annual, national as well as subnational plans in domains ranging from human resources, lawmaking, and social security to tourism and national morality. Even for managing insolvencies in the state sector in a phased manner, a National Plan for Enterprise Closures and Insolvencies was drafted for the 2005–2008 period. And this plan was carried out in a rather consistent way.¹²

All these examples make it clear that China still is a *planning polity* that is committed to guiding economic, social, and technological development through state coordination and from a longer-term perspective. Among China's policymakers we rarely find an inclination to move to an ad hoc mode or "bystander and fireguard mode" of economic policymaking that had become so prevalent in the governance of Western political economies since the late 1970s.

From 1994 on, the functions of planning were redefined fundamentally to give room to market coordination while preserving overall state "macro-control." The "new-style development planning system" was supposed to move away from fixing a huge number of quantitative targets and control figures to focusing on macro, strategic, and policy issues.¹³ While planning had been used as a *substitute for markets* in the Maoist era, Chinese administrators were now charged with the task to "take markets as the foundation" (*yi shichang wei jichu* 以市场为基础), that is, to *plan with and for markets*, to absorb major trends in domestic and global markets into mid- and long-term government programs. By 2004, plan formulation had moved from the traditional *model of closed, intrastate bargaining* (often punctuated by interference from top policymakers) to a *multiple advocacy model* that is based on consultation of state, nonstate, and even foreign economic actors and on much more regularized administrative procedures that are supposed to support "scientific" policymaking.

The effects of this departure from traditional socialistic planning on administrative practice and economic performance have proven to be very uneven. Table 6.3 provides a matrix of governance modes that are all based on detailed, formal Special Program Plans, yet reveal strong variation across policy sectors.

We find policy sectors in which public and social goods (such as railroad infrastructure, anti-poverty programs, environmental protection) are supposed to be provided through *mandatory planning* that includes direct allocation of funding and administrative oversight (see table 6.3, column I). This type of planning has driven the spectacular expansion of China's physical infrastructure since the 1990s. The Railway Ministry and the Transport Ministry in particular have demonstrated that they are capable of launching and implementing very "big pushes" to top-priority sectors of national development. Yet, big pushes can only be initiated from the center if the ministries in charge

TABLE 6.3
The Governance of Development Planning in China (2006-2010)

| | <i>I</i> Mandatory Planning (administrative and SOE-based provision of public/social goods) | <i>II</i> Contractual Planning (central-regional and government-enterprise cooperation) | <i>III</i> Indicative Planning (government-induced market activities) |
|-------------------------------|--|--|--|
| Allocative-Promotional | railway construction | technology policy | "going global" program (outbound investment) |
| Redistributive | anti-poverty programs | rural health services | rural income generation |
| Regulatory | environmental policy | energy industry restructuring | private/SME sector restructuring |

Note: Typology based on range of "Special Programs/Plans" (专项规划/计划) under Eleventh FYP (2006-2010).

provide generous funding and can rely on an integrated administrative apparatus. That is why the Railway Ministry has been exceptionally effective in directing the massive infrastructural buildup in its sector, while policy coordination has been much more fragmented, for instance, in the realms of energy production/electricity supply and alleviation of regional disparities.

Generally, China's efforts at development planning display a fundamental weakness in pursuing redistributive goals (improving the development potential of disadvantaged regions and population groups) that are at the heart of the western and northeastern development programs and also at the heart of rural healthcare reform. Mandatory environmental and energy conservation targets that have been part of many recent long-term plans have failed even more obviously, according to official evaluation of these programs. Mandatory planning appears to work best if focused on narrow policy targets that avoid redistributive battles, add value on top of an already profitable (i.e., usually monopolistic) sector, and can be pursued by well-integrated, financially strong administrative "agencies-cum-investors," such as the Railway Ministry with its affiliate corporate vehicles.

Besides classical mandatory planning, Chinese planners have increasingly employed nonstandardized forms of *contract-based planning* to guarantee implementation of their policy goals by lower-level agents (see table 6.3, column II). Targets and funding arrangements are written into formal contracts that are concluded between, for instance, a central ministry and a provincial government, or a provincial government department and major enterprises that take part in implementing state plans. Plan implementation through

contractual targets is most visible in technology zones, energy production, and marketing reforms (e.g., for rural or cultural products) for which government organs need the collaboration of major market participants.

In the top-priority realm of technology policy, striking achievements based on long-term planning have been diagnosed in a comprehensive OECD report that states that Chinese innovation policies are “characterised by the strong legacy of the planned economy, as the programmes—literally ‘plans’ in Chinese—are the main instruments for addressing policy priorities.”¹⁴ While the OECD judges Chinese technology planning as successful in comparison to many other economies, numerous policy advisors and academics in China and abroad question the overall effectiveness of government-sponsored, centrally coordinated innovation policies. They point to the failures and misallocations that have accompanied state technology planning and stress the potential of decentralized, market-driven innovation that has not been fully utilized in China yet.

In addition to mandatory and contractual planning, we find a plethora of less binding forms of *indicative planning*, that is based on government forecasting (e.g., statements that attest growth potential to certain industries), signalling (e.g., announcements about substantial, step-by-step cuts of rural taxes or about preferential policies for small and medium-sized enterprises, SMEs), and indirect incentives (e.g., improved access to bank credits and domestic/overseas markets) to stimulate market activities and resource mobilization in sectors that are identified by the government as having development potential (see table 6.3, column III).

Considering the mix of coordination mechanisms, the variation in the effectiveness and credibility of planning efforts across policy sectors, and the scores of special plans that have been evaluated officially as failing (most notably in environmental and energy conservation), one can hardly speak of integrated national planning in China. Development planning in China confirms one core lesson of policy studies: political economies should be disaggregated into policy subsystems, each of which is characterized by very different dynamics.¹⁵ Thus, we will find effective plan implementation in certain policy areas, while finding persistent blockades or outright failures of plan-based coordination in other policy realms. Due to such crass variation, it is imperative to exercise restraint on generalizing across policy subsystems and refrain from jumping to sweeping hypotheses (e.g., “China even makes planning work” or “Chinese planning is a complete failure and has to make way for markets”) about the entire planning system.

Beyond its patchy role in economic coordination, development planning serves crucial integrating functions in China’s polity that are regularly overlooked. The formulation of comprehensive, long- and mid-term plans and

programs provides top policymakers with an extraordinary opportunity to set the agenda, define new priorities, influence the direction, and coin new slogans for communication and coordination across all levels of China’s administration. Lower-level administrators may prefer to ignore novel policy priorities and high-minded goals defined by the central government. But they are still compelled to pick up national policy conceptions and regularly spend considerable time with formulating and justifying local development plans that must not contradict nationally defined priorities. Across administrative levels, plan-making thus amounts to a strategic exercise in administrative communication that includes a formal demonstration of compliance with the national leadership. Development planning thus fulfills important, and possibly indispensable, functions for integrating China’s vast, fragmented administrative apparatus and legitimating the Communist Party’s central leadership.

The planning system has also served unintended functions and provided useful policy instruments for the stimulus programs that China’s government launched in 2008 and 2009 to counter the global economic downturn. Several Special Program Plans that included detailed investment schemes, policy packages, and administrative coordination mechanisms for boosting infrastructural buildup in western China, had already been drafted before the onslaught of global economic downturn. When Chinese policymakers needed swift action to counter economic contraction, they could literally download these plans from the government server, squeeze them into an accelerated schedule for implementation, and thereby had readymade policy packages for boosting investment and creating employment at their disposal.

Overall, the functions of “new style development planning” for policy prioritization and administrative integration may be more important than the concrete allocative, redistributive, and regulatory functions of most planning exercises. Planning that defines long-term development priorities yet remains incoherent in implementation provides space for a governance technique that has arguably been the most powerful driving mechanism behind institutional and policy innovation from 1978 to 2008: broad-based, decentralized policy experimentation.

Policy Experimentation and Innovation

Whereas planning is about setting policy *goals* and clarifying policy *priorities* for the longer term, experimentation is about finding the policy *instruments* to meet the goals and priorities defined in the government’s programs. Policy experimentation in China consists of a process in which central policymakers encourage local officials to try out new ways of problem solving and then feed the local experiences back into national policy formulation. This processual pattern, as depicted in figure 6.1, has been a pervasive feature in China’s economic

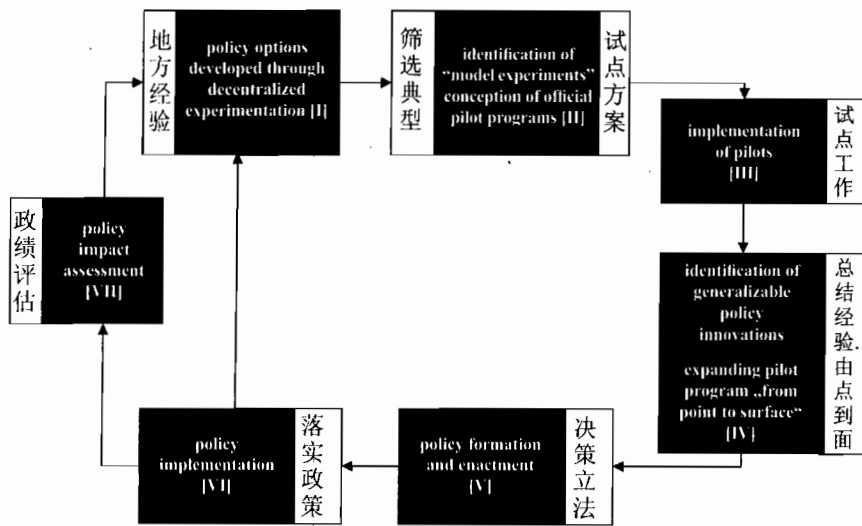


FIGURE 6.1
China's Experimentation-Based Policy Cycle. Note: For more details on this policy cycle, see Sebastian Heilmann, "Policy Experimentation in China's Economic Rise," *Studies in Comparative International Development* 43, no.1 (March 2008): 1–26.

transformation. This experimental cycle has decisively shaped the making of policies in areas ranging from rural decollectivization, foreign economic opening, and promotion of private business to state sector restructuring.

A striking example of the experimental approach to economic restructuring is the introduction of stock markets in China, since these had to be "squeezed into an economy still based on state planning and the absence of private ownership."¹⁶ Chinese stock market history is marked by a series of experimental schemes. Limited experiments with share issuance and trading had already been approved by the central government and undertaken locally during the 1980s. Larger-scale experiments were promoted with the repackaging of SOEs into listed shareholding companies (early 1990s), selected transfers of legal person shares to new owners (1992), Hong Kong listings of SOEs (1993), the creation of "national champions" (from the second half of the 1990s), and several attempts at reducing the holdings of state shares (1999, 2001, and 2005). The two stock exchanges in Shanghai and Shenzhen themselves were classified as "experimental points" from 1990 to 1997. Remarkably, giving stock exchanges a try was supported even by otherwise staunch sceptics of capitalist methods since this experiment was designed to open new channels for SOE financing without relinquishing state control over the listed entities. The introduction of exchanges produced the volatile dynamics of equity

trade and speculation, while private property and equity rights were still ill-defined and hardly protected. The Shanghai and Shenzhen stock exchanges were under the supervision of the respective municipal governments in the early to mid 1990s. Only after 1997, responding to a series of domestic scandals and to the Asian financial crisis, did the central government bring the stock exchanges under its control, affirm their legitimate role in a "socialist market economy," and make them serve the purposes of national industrial policy and SOE restructuring.

Chinese-style experimentation comes in three main forms as (1) experimental points (pilot projects in a specific policy domain, such as the Shanghai and Shenzhen stock exchanges in the 1990–1997 period), (2) experimental zones (local jurisdictions with broad discretionary powers, such as the special economic zones), and (3) experimental regulation (provisional rules made for trial implementation).¹⁷ These experimental policy tools are regularly used for pioneering reforms that belong to the top of the policy agenda.

In China, experimentation implies a policy process in which experimenting units try out a variety of methods and processes to find imaginative solutions to *predefined tasks* and to *new challenges that emerge during experimental activity*. Policy experimentation leaves a lot of room for decentralized tinkering and creative ad hoc solutions that can best be found by actors on the ground who are in command of the necessary local knowledge, as opposed to central policymakers who lack this knowledge, yet can benefit from it. Thus, unexpected, random policy fixes seem to have shaped China's economic transformation to a considerable extent. Yet, in the context of China's hierarchical polity, experimentation is not equivalent to freewheeling trial and error or spontaneous policy diffusion. It is a purposeful activity geared to producing novel policy options that are injected into official policymaking and then replicated on a larger scale, or even formally incorporated into national law. It is precisely the dialectical interplay between dispersed local initiative and central policymaking that has made China's economic governance so adaptive and innovative from 1978 to 2008.

In many social science analyses of China's reforms, the effectiveness of experiment-based policy-crafting tends to be underestimated. But it is this particular approach to policymaking that has helped to facilitate policy and institutional adaptation. A type of governance that I tend to characterize as *experimentation under the shadow of hierarchy*,¹⁸ stimulated policy learning and economic expansion effectively in those sectors in which political elites could benefit from supporting new types of economic activity. And it has served as a powerful correcting mechanism to grand technocratic modernization schemes that are often part of state planning.

Combining Planning and Experimentation

In generating capacities for “indigenous innovation,” as demanded by the Chinese government, a plethora of mutually complementary plans containing industrial, technology, and science policies as well as educational and infrastructural components have come to be one major focus of state activity in recent years. Yet, China’s “national innovation system” does not rest exclusively on plans and industrial policy, but is combined with myriads of local-level implementation experiments that are concentrated in special zones and industrial parks. National policies are thus combined with bottom-up initiatives sponsored by local authorities that oftentimes go beyond, or run ahead of, national plans, in constructing an innovation-driven economy. Though capacities for technological innovation are still confined to a limited number of special zones with “limited synergies between them and . . . limited spillovers beyond them,” China has “excelled in mobilising resources for science and technology on an unprecedented scale and with exceptional speed,”¹⁹ thanks to a combination of planning with experimentation in this crucial arena of state-promoted modernization.

China’s planning process constitutes a strategic exercise in communicating national priorities and demonstrating political unity and common purpose across administrative levels. It thus bolsters the national government’s claim to be in control of economic administration though this claim may appear as predominantly symbolic with a view to administrative practice that often ignores centrally defined goals. For realigning state and market activity, decentralized policy tinkering fulfills vital functions by facilitating creative problem solving and policy innovation on the ground. While the recurring planning exercises thus serve as an integrating mechanism for China’s fragmented administration, experimentation provides the policy agility that makes a bureaucratic polity work for and adapt to economic change.

Government Interventionism in the Twenty-first Century: Nontraditional Forces at Work

Most studies of present-day China focus on traditional forces of discontinuity that may bring change or collapse to the present political system: social, ethnic, religious, economic, financial, and political contradictions and upheaval. Though these forces are clearly important and hotly debated, I want to focus on a new class of nontraditional factors that may work for authoritarian upgrading, not for systemic collapse or democratization, in China and elsewhere. There are a number of novel macrorends under way that may compel us to

redefine some basic assumptions about successful modes of governance for the future. The following points are a consciously one-sided extrapolation from these trends and are put together exclusively for analytical purposes. Thus, please note, the following paragraphs do not reflect the normative preferences of the author of this chapter.

As to *domestic and global markets*, we have entered a *new cycle of economic ideology* that is moving away from the discredited “market fundamentalism” of the last two decades to a kind of “neo-etatism” that will be based on tighter economic regulation to avoid the investment bubbles of the recent past and will be oriented toward more social redistribution in order to counter growing social inequity and resulting political instability. Globalization of trade and capital flows has possibly passed its peak. National and regional protectionism is on the rise. Nation-states will try to establish stricter oversight over domestic and transnational economic activity. The resulting losses in growth potential will be accepted by most people, as long as they feel protected against market risks and social insecurity by the state. Against this background, the Chinese complementary view of state control and market coordination in the economy will appear modern and up-to-date in the transformed ideological and regulatory context of the early twenty-first century.

As to domestic politics, *big and interventionist government* will be accepted in most societies to counter market volatility, security threats, social instability, and environmental degradation. Democratic decision making may come to be seen as slow and costly in a world of fast-changing technological, social, and environmental challenges.²⁰ Overall, due to a massive concern with economic, social, and environmental stability, the legitimacy of governments will increasingly be judged by performance (output and crisis management) criteria, whereas procedural legitimation will lose the understanding and attention of many citizens. Present-day China is the major protagonist of such an output-based polity.

Regarding *political values and the public sphere*, modern societies will become more and more technology- and media-driven. Beyond short-term attention cycles (e.g., during electoral campaigns, political scandals, single-issue protests, etc.), public interest and trust in both markets and democracy will decline considerably. As long as personal security and consumption are not threatened, political apathy will grow along with pronounced consumerist attitudes. The media will be less and less independent, either commercialized as subdivisions of huge corporations or directly controlled by the state. Cyberspace will result in an extreme fragmentation of the public sphere that will be split into myriads of minigroups that communicate in quasi-sectarian online communities without being able to act collectively. China has already moved quite some way into this direction.

With a view to *social development*, we are entering a period of increasing *demographic pressures* in the aging societies of Europe and East Asia. The growing proportion of elderly people will challenge the previous generational contract and possibly delegitimize the democratic welfare state. The cost explosion in health care, the redistributive burden to the younger generation, and the ethical requirements of caring for the elderly in an appropriate way will become a huge strain for any political system that has to manage it. China will have to face the impact of a rapidly aging society already from the end of the next decade. Yet its authoritarian system may be in a position to deal with the demographic challenge by way of longer-term anticipatory policymaking and accumulation of old-age reserve funds so as to contain politically divisive and ethically destructive generational conflict in the future.

Concerning *resources and technology*, becoming more independent from oil and gas imports, finding alternative technologies for producing and saving energy, as well as minimizing environmental damage will move to the center of economic innovation. This will give rise to a new class of technology-driven political economies and “techno-states.” Technological innovation and leadership will determine the status of a nation-state in the global power distribution. Governments will become obsessed with technological innovation. China is already working hard for achieving technological leadership as soon as possible.

As to the *environment*, ecological pressures will move to the center of national and global policy agendas. Disaster control will require extensive government interventions. Various types of “eco-reformism” and “eco-authoritarianism” will emerge. The state-primacy theory in green thinking²¹ will supersede the market-primacy thinking of the late twentieth century and therefore bolster the emergence of big government and authoritative interventions in markets and societies.

In sum, we are witnessing changes in our environment, demography, technology, and in communicative interaction that provide a political, economic, and social playing field that will be rather different from what we have seen in the nineteenth and twentieth centuries. And this is what may propel authoritarian upgrading in China and possibly elsewhere.

The Advent of “Techno-Authoritarianism”

In such a changing macrocontext, what kind of comparative advantages does China have to outperform other political economies? The prerequisites to a planning and experimenting “techno-authoritarianism” are strong. During the last three decades, China’s political economy has proven to be

highly innovative in finding policies and institutions to master the complex challenges of large-scale economic, social, and international change while avoiding systemic breakdown. China’s economic transition has been facilitated by an unusual adaptive capacity. This adaptive capacity entails institutions and processes that, despite ubiquitous uncertainties, enable society to try out alternative approaches to overcome long-standing impediments to development, tackle newly emerging challenges, and grasp opportunities when they open up.²²

State coordination for the longer term will be essential in dealing with the gigantic challenges of environmental degradation and the massive rise in the proportion of elderly people in China’s demography. Markets whelp of their own accord to contain the impact and prevent the worst dealing with these megachallenges. Long-term policy prioritization, at least in part at the expense of economic growth and free markets, will be in very strong demand. It will be one general core challenge for future policymaking to overcome the short-termism that most societies have become used to in the twentieth century. China, with its refocused planning capacities and government-initiated rush for environmental technology, appears to be well equipped to make the transition from “red authoritarianism” to “green authoritarianism,” as some commentators called it,²³ in the next two decades.

Beyond the capacity for long-term policy prioritization, it is another crucial challenge of the twenty-first century that we do not yet know the proper instruments and policy combinations that may help to master the new tasks that we are facing. Here the entrenched Chinese technique of institutional and policy experimentation comes into play. In a rapidly aging society, for example, conventional ways of organizing and funding social welfare will not work anymore. In addition, due to a constantly changing demography, a welfare system that may have been useful in the past or in the present may become rapidly outdated and overburdened within a few years. This will require constant institutional and policy adaptation. China’s experience with extensive experimentation under the shadow of hierarchy may serve as a powerful mechanism of innovation in such a context.

Overall, China’s unorthodox approach to policymaking that can be paraphrased in a short formula as “foresighted maximum tinkering” at its core—pursuing priorities defined in long-term programs while constantly changing and experimenting with novel policy instruments—may become a huge processual advantage in the years to come, if this variant of steady, visible governance is being maintained and adapted in creative ways.

Therefore, I suggest that China’s mode of governance may be instrumental in dealing with the novel environment of the twenty-first century. China is in a position to be at the forefront of “neo-statist” trends that are

already under way. The scenario that I depict here is one of a highly diversified techno-authoritarianism that is partly “welfarist” and partly “green” out of necessity. It will be a variant of authoritarian governance that is obsessed with technological innovation, yet must balance the traditional growth imperative with powerful social, political, and ecological constraints.

There are many counterarguments to be made against this scenario. There clearly also exists a strong potential for traditional movements (e.g., social protests and political divisions) and for nontraditional developments (e.g., new activist political values emerging from the cybersphere; environmentally or technologically induced systemic disasters; all sorts of random events and disruptions) that may work against a further upgrading of China’s authoritarian governance. There even may be new human value systems emerging globally over the next few decades that leave the old growth and consumption paradigm behind. But as I tried to demonstrate: the conditions for economic governance are currently shifting in fundamental ways, and the possibility of authoritarian upgrading should therefore be taken seriously.

Chapter 6: Economic Governance: Authoritarian Upgrading and Innovative Potential

1. Steven Heydemann, "Upgrading Authoritarianism in the Arab World," Saban Center Analysis, Brookings Institution, November 2007; for the term see also R. A. Specter and A. Krickovic, "Authoritarianism 2.0: Non-Democratic Regimes are Upgrading and Integrating Globally" (paper presented at the annual meeting of the International Studies Association's 49th annual convention, San Francisco, March 2008).

2. *OECD Reviews of Innovation Policy: China* (Paris: OECD, 2008), 45.

3. Cf. Wolfgang Streeck and Kathleen Thelen, "Introduction," in Streeck and Thelen, eds., *Beyond Continuity: Institutional Change in Advanced Political Economies* (Oxford: Oxford University Press, 2005).

4. See Murray Scot Tanner, "How a Bill Becomes a Law in China: Stages and Processes in Lawmaking," *China Quarterly*, no. 141 (March 1995): 42.

5. Cf. Sebastian Heilmann, "Experimentation Under Hierarchy: Policy Experiments in the Reorganization of China's State Sector, 1978–2008" (Working Paper No. 172, Center for International Development, Harvard University, June 2008).

6. See for example, Joseph C. H. Chai, ed., *China: Transition to a Market Economy* (Oxford: Oxford University Press, 1998); Long H. Liew, *The Chinese Economy in Transition: From Plan to Market* (London: Edward Elgar, 1997).

7. Cf. Loren Brandt and Thomas G. Rawski, eds., *China's Great Economic Transformation* (New York: Cambridge University Press, 2008).

8. Cf. Peter J. Boettke, ed., *The Collapse of Development Planning* (New York: New York University Press, 1994).

9. For comprehensive treatises on development planning written by high-ranking policymakers and advisors, see, for example, Cheng Siwei, *Fazhan jihua de zhiding yu guangli* (The setting and management of development planning) (Beijing: Jingji kexue chubanshe, 2004); Zhong Qifu and Xu Guangjian, *Zhongchangqi fazhanguihua de jichu lilun he fangfa* (The fundamental theory and method of mid- and long-term developmental programs) (Beijing: Zhongguo jihua chubanshe, 2001).

10. For striking evidence in this regard see *OECD Reviews of Innovation Policy: China*.

11. Cheng Siwei, "Lun Zhongguo sheshui zhuyi shichang jingji zhidu xia de fazhan jihua" (On development planning under China's socialist market economic system), *Gonggong guanli xuebao* 1, no.2, (May 2004): 5.

12. See Heilmann, "Experimentation Under Hierarchy," 12.

13. Li Pumin and Li Yong, "'Jiuwu' shiqi woguo jihua tizhi gaige huigu" (A look back at the reform of China's planning structure during the ninth five-year plan), *Hongguan jingji yanjiu*, no.2 (2001): 24–26.

14. *OECD Reviews of Innovation Policy: China*, 46, 80.

15. Michael Howlett, M. Ramesh, and Anthony Perl, *Studying Public Policy: Policy Cycles and Policy Subsystems*, 3rd ed. (Toronto: Oxford University Press, 2009).
16. Carl E. Walter and Fraser J. T. Howie, *Privatizing China: Inside China's Stock Markets* (Singapore: Wiley, 2006), 4.
17. See Heilmann, "Experimentation Under Hierarchy," 5–9.
18. The term "shadow of hierarchy" stems from Fritz Scharpf, *Games Real Actors Play: Actor-Centered Institutionalism in Policy Research* (Boulder, CO: Westview Press, 1997), 197–98. Scharpf points to the indirect effects of a hierarchical authority structure. Though lower-level administrators may enjoy considerable leeway in a noncoercive hierarchical environment, they still remain embedded in the overall authority structure and vulnerable to ad hoc intervention and the threat of sanctions if something goes wrong. Thus, even if hierarchical authority doesn't achieve effective control, it still affects the calculations, behavior (be it evasive or loyal), and interactions across levels of state administration.
19. *OECD Reviews of Innovation Policy: China*, 45–46.
20. Pranab Bardhan, "What Does This Authoritarian Moment Mean for Developing Countries?" The Economists' Forum, August 22, 2008, *Financial Times online (FT.com)*.
21. Cf. Alan Carter, *A Radical Green Political Theory* (London: Routledge, 1999).
22. See Douglass C. North, *Institutions, Institutional Change and Economic Performance* (Cambridge: Cambridge University Press, 1990), 80–81; North, *Understanding the Process of Economic Change* (Princeton: Princeton University Press, 2005), 154.
23. Nathalie Rothschild, "Hypocrisy of Olympian Proportions: For Years Western Observers Slammed China's 'Red Authoritarianism.' Yet Today They Positively Cheer On Its Eco-Authoritarianism," August 20, 2007, *Spiked (spiked-online.com)*.