

# The Asian Developmental State

Reexaminations and  
New Departures

Edited by YIN-WAH CHU



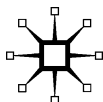
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THE ASIAN DEVELOPMENTAL STATE

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The idea of the developmental state, having once served as a most influential account of the economic miracles in East Asia, became discredited with the surfacing of the 1997–1998 financial crises, yet reemerged again to generate insights into the economic growth and transformations of many emerging or even developed economies. The purpose of this edited collection is to partake in this debate. It will examine the idea in the broader context of the capitalist state, evaluate its continuing applicability among the East Asian cases of South Korea and Taiwan, and explore its utility for understanding the emerging economies of China and India.

This book owes its completion to the kind assistance and generous support of many individuals and organizations. Most fundamental, the Chiang Ching-kuo Foundation for International Scholarly Exchange has provided generous financial support to fund the December 2013 workshop, which took place at the Hong Kong Baptist University and served as a preparatory meeting for this volume. The participants include most contributing authors to this book. Together with Jean-Pierre Cabestan, Yun-chung Chen, Louis Kuijs, Tak-wing Ngo, Ngai-ling Sum, and Bryan Pak-nung Wong who served as discussants in the workshop, they generated vibrant discussion that helped to set the parameters of the debates explored in the present work. Some of the contributing authors, Rahul Mukherji, Iain Pirie, and Anil Kumar Vaddiraju, in particular, did not take part in the 2013 meeting. However, they were good enough to accept my invitation to contribute a chapter even though we were hardly acquainted with each other. Altogether, it was through the hard work of the contributing authors that this book has been made possible. To all of them, I am grateful.

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Yin-wah Chu

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## CHAPTER 1

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# The Asian Developmental State: Ideas and Debates

*Yin-wah Chu*

### Introduction

The rapid economic transformations of Japan and, later, South Korea, Taiwan, Hong Kong, Singapore, and other second-tier East Asian newly industrializing countries have since the 1970s daunted observers around the world. The “developmental state” is one of the most influential ideas that have been put forth to make sense of the drama. Johnson (1982, 1995), in presenting a pioneering study of Japan, identified the developmental state as one that gives priority to economic growth, productivity, and technological competitiveness. It is led by a small, elite bureaucracy recruited from the best managerial talents, which provides leadership through the formulation of industrial policies. Furthermore, a pilot agency within the bureaucracy exists to coordinate the policy formulation and implementation. Such industrial policies do not displace the market, but gear to market rationality in the long term. Finally, it is facilitated by a political system that gives sufficient room for the bureaucracy to take initiatives (see Öniş 1991).

The idea has been elaborated, reconceptualized, and, not surprisingly, criticized over the years. Even though the 1997–1998 Asian financial crises have dwelt a heavy blow to the approach, it has reemerged after a brief interlude and continued to shed light on the experiences of an increasing number of countries, both within the developing world and beyond (Levi-Faur 1998;

Kurtz 2001; Cummings and Nørgaard 2004; Block 2008; Evans 2010; Evans and Heller 2015). The present volume aspires to partake in this continuing debate.

Apart from this introduction, the book contains 11 chapters divided into three sections. The first section includes two chapters that examine the theoretical concept and the case of the United States. Bob Jessop adopts the strategic relational approach to provide a robust critique and reinterpretation of the developmental state literature. He examines the developmental state as a subcategory of the “Listian Workfare National State” (LWNS) and, analyzing the crisis of Atlantic Fordism and other internal challenges to the LWNS, investigates the turn to the accumulation strategies of “knowledge-based economy” and “finance-dominated accumulation,” and explores the room for continued developmental state intervention in each case. Adopting an “insider view,” Fred Block and Marian Negoita elaborate on Peter Evans’ notion of embedded autonomy. They identify practices that allow the state officials to acquire “organizational” and “cognitive” autonomy, specify the reasons why embeddedness contributes to the prevention of network failures, and so explain the state officials’ ability to “engage effectively with technologists and firms” (p. 57). The second section contains four chapters that examine the cases of South Korea and Taiwan. Michelle F. Hsieh revisits the historical emergence of Taiwan’s export-led industrialization by analyzing contributions made by para-public institutions such as the Metal Industries Research and Development Center to the myriads of small and medium enterprises and, at the same time, examines the contribution of this “decentralized coordination” to the technology upgrading of the 1990s. In these ways, she provides some very instructive information on embedded autonomy as practiced in Taiwan. In turn, Jenn-hwan Wang and Yin-wah Chu analyze changes in the global context and domestic politics and the impacts they exert on the metamorphosis of Taiwan’s and South Korea’s developmental state. Wang, in particular, examines Taiwan’s biopharmaceutical industry and identifies four policy directions that the state has pursued to fulfill its new role as a “platform builder.” Professing a rather distinct view of what constitutes a developmental state, Iain Pirie argues that because South Korea no longer pursued economic growth at all cost, became receptive to foreign direct investments, and lost control over credit allocation, it ceased to be developmental since the mid-1990s.

Finally, the third section contains five chapters that explore the applicability of the concept to China and India. Just as Erik Baark evaluates the relevance of the approach to China by providing a historical overview of the country’s science and technological development, Alvin Y. So benchmarks the country’s similarities to and differences from the Asian developmental states.

Through examining China's effort to address the challenge of technological upgrading, he suggests the need to reconsider the importance attributed by the developmental state literature to a meritocratic state bureaucracy, long-term industrial policies, and the failure of the literature to differentiate between variants of developmental state. In turn, reviewing China's shifting policy directions since 1978, Rebecca S. K. Li suggests the need to consider the state's changing degrees of developmental-ness, and attributes the latter to the strength of the state relative to economic elite, the ability of the political process to produce a dominant ruling coalition or faction, and the capacity of the state administrative apparatus to implement the development policies and work with the economic elite.

Analyzing the case of India, Rahul Mukherji suggests the idea of embedded autonomy or a focus on bureaucratic-technocratic rationality does not take one very far in understanding policy change in the country. Nonetheless, the Indian state in his estimation does play a strategic role, not only in matters of economic transformation but also welfare provision. He proposes to examine the ideational change within the state bureaucracy and, given the coexistence of a weak state and strong society within a democratic framework, emergence of political support from the executive that can help to withstand resistance from the vested interests. Finally, Anil Kumar Vaddiraju rejects the idea that the Indian state has been developmental. In reviewing the widening income gap, urban-biased growth, rural poverty, and regional disparity, he contends that the Indian state has since the 1990s assumed a neoliberal stance and contributed to hardships experienced by the lower social strata.

To chart the contribution of these chapters, the following will review the main ideas and debates that emerge from the developmental state literature, with the positions and contributions of the present volume inserted where appropriate.

### **The Developmental State: Odyssey of a Concept<sup>1</sup>**

For many students of Asian development, Johnson's (1982) research on Japan is a pioneering work that has laid the foundation for the analysis of the developmental state. At the same time, the state-centered approach, which gains ascendancy in the study of social revolutions and welfare states, has also provided theoretical inspirations (Skocpol 1979; Lim 1985; Gold 1986; Quadagno 1987; Chu 1989; Evans 1995). Just as political economists and policy analysts have explored the issue from their disciplinary angles (Amsden 1989; Wade 1990), the discussion has also been enriched by attempts to apply the concept beyond Northeast Asia (Oi 1995; Chibber 2003; Cummings and

Nørgaard 2004; Kohli 2004; Ó Riain 2004; Howell 2005). Despite their divergent theorization, the debates center on the defining characteristics of the developmental state, which include the dimensions of policies pursued, relevance of ideational foundation, the institutions of a rational bureaucracy and a pilot agency, and the domestic and international sociopolitical contexts. Related to these are debates on whether the developmental state is compatible with democracy, its continuing relevance as the national economy matures, or even the onset of globalization.

### ***Policies***

Authors have *in part* identified the developmental state with the policies it pursued. The strategic use of fiscal incentives and trade policies to help create modern industries and upgrade the industrial mix (Johnson 1982; Wade 1990; Low 2001), manipulation of the price system to enhance competitiveness (Amsden 1989), suppression of labor and the civil society (Deyo 1987), provision of collective consumption as a means to reduce labor cost and enhance productivity (Castells 1992), and the sponsorship of research and development (R&D) (Evans 1995; Amsden and Chu 2003) have all been examined. Although special attention has been given to the control of investment finance and the latter's importance as leverage for the developmental state to realize its goals, most scholars have recognized the divergent and changing policy mixes adopted by different countries at different times depending on their specific political-economic constellations (Johnson 1987; Woo 1991; E. Kim 1997; Woo-Cumings 1999).

Regardless of the specific policies and the ministries steering them, scholars view these interventions as national-level strategies. They also find among the policies a tendency to promote the *private sector* rather than the public one.<sup>2</sup> Referring to the case of Japan, Johnson (1995, 46–8, 67) characterizes it as a “catalytic state” that alters incentives, reduces risk, offers entrepreneurial visions, and manages conflicts, all with a view to working with the *zaibatsu* and workers, and helping them to capture larger market share, ever higher value-added products, rather than short-term profitability. The policies that facilitate public–private coordination, moreover, are devised in ways that do not displace market forces. In other words, just as support was given to strategic sectors so as to encourage their long-term growth, the businesses were exposed to intensive (international) competition and subjected to stringent market discipline. This forward-looking yet ultimately market-rational quality of the policies has been characterized variously as “market conforming” (Johnson 1999, 38–9), “market-leading” (Wade 1990), or “getting the price wrong” (Amsden 1989).



Contributing authors to this volume have in general recognized the multiplicity of economic policies pursued and their changes over time. Hence, while Hsieh's study of the 1970s Taiwan has examined the introduction of industrial standards and export inspection schemes, Block and Negoita, Wang, and Baark have all analyzed the support to science and technology research in their respective cases. Above all, Jessop suggests that the "successive latecomers had to find their own path to development" and that catch-up competitiveness strategies may vary "taking account of stages in the development of the world market, different state capacities, and different leading edge technologies and accumulation regimes" (p. 39). Furthermore, instead of focusing on industrial policies as most developmental state theorists have done, he extends our horizon to examine the room for continued state intervention in the strategies of knowledge-based economy and financialization.

Having said so, it is notable that Pirie in this volume has used rather restrictive types of economic policies to define a developmental state. He highlights, in particular, a production-oriented economic system, caution against foreign direct investment, and state control of credit allocation as the determinants. By applying these three criteria, he contends that the present-day South Korea is no longer a developmental state. In a similar way, Baark suggests that China has increasingly turned to some international organizations' [e.g., Organisation for Economic Co-operation and Development (OECD)] market-oriented approach for policy inspiration and thus cautioned the applicability of the developmental state to China.

### ***Ideational Foundation?***

Apart from industrial policies, students of the developmental state also examine the institutional structure, sociopolitical constellations and, in some cases, the ideational foundation. Johnson (1995, 67), for instance, quotes with approval Manuel Castells' definition that: "A state is developmental when it establishes as its principle of legitimacy its ability to promote and sustain development, understanding by development the combination of steady high rates of economic growth and structural change in the production system, both domestically and in its relationship to the international economy" (Castells 1992, 56). Accounting for Japan's (and South Korea's) "priority," Woo-Cumings (1999, 6–9) suggests that economic development was chosen as a means to combat the acute (and genuine) threats posed by Western imperialism on the countries' national survival. Hence, instead of seeking to "achieve consumer utility, private wealth, mutually beneficial exchange or any other objective posited by economic determinists," the Japanese "pursue

economic activities primarily in order to achieve independence from and leverage over potential adversaries" (Johnson 1995, 105–6). Of course, the social background of the ruling elite also contributes to the definition of the threats to national survival (Gold 1986; Cheng 1990; Castells 1992). Johnson, for instance, refers to the priority as "economic nationalism" and considers it to originate "as a reaction . . . to the structural contradictions of the society of orders. In particular, it was a response of individuals in elite sectors of society, who were personally affected by these contradictions and were placed by them in a state of status inconsistency" (Liah Greenfeld, cited in Johnson 1995, 104). The inability of the lower ranking members of the ruling samurai class in Meiji Japan to meet their debts was cited as a case in point.

The commitment to develop is considered to work in two ways. First, Johnson (1995) suggests that, together with wartime social mobilization, economic nationalism underlay the goal culture of Japan and defined the worldview of policy-makers at the Ministry of International Trade and Industry (MITI). The same could be said of the planners working in South Korea's Economic Planning Board (Woo 1991). Second, economic nationalism also served to incite and mobilize the general public with "developmental determination." In Woo-Cumings' view, this is the "binding agent" or "will to develop" as articulated by Albert O. Hirschman (1958, 8). The reliance on economic nationalism to mobilize the workers has also been documented (S. Kim 1997). It provides the source of legitimacy for these elite and renders superfluous (at least for a time) the concern with whether a developmental state is democratic or otherwise, a point that will be examined further.

Observers of some advanced economies have concurred with this emphasis on the ideational foundation. Writing on France, Loriaux (1999) contends that, even though the bureaucratic structure of the French state and the ways it mobilized bank credits to shape economic decisions were remarkably similar to the cases of Japan and South Korea, the French state was not "developmental." Not only had the country developed before such strategic intervention was undertaken, the country lacked the "solidaristic vision" and the "moral ambition" that were central to a developmental state.

Having said so, it remains to be emphasized that not all students of the developmental state consider political commitment or the will to develop to be of definitive significance. Most prominently, Evans (1995) argues that fostering economic transformation and guaranteeing minimal levels of welfare have become nearly as important to the modern state as making wars and preserving internal order. This is because political survival and internal peace depend increasingly on economic resources and, at the same time, economic success becomes a source of legitimacy. In his view, all modern states intervene

into the economy in one way or another. To Evans, then, the fact that most developing countries encounter massive difficulties in amassing capital, mastering production technology, and generating entrepreneurship does not make the task of economic development more pressing for these countries. As well, the fact that many late, late developers are dominated by the developed countries, multinational corporations, and their local accomplices has not made the emergence of such a commitment to foster economic transformation problematic (cf. Cardoso and Faletto 1979). These being the case, the emergence of such a political commitment to develop among the late, late developers does not warrant particular theoretical consideration. Evans thus refuses to define a developmental state by its commitment to foster development. Evans' viewpoint is shared by Chibber (2003), who claims in his comparison of India and South Korea that, immediately after World War II, state elites in both countries were no different in their levels of developmental commitment.

Few of the contributing authors to this edited volume have explored in depth the significance of the ideational foundation. Chu's study of Taiwan and especially South Korea suggests that "economic nationalism," which historically provided the normative foundation for state-business coordination in these two societies, has continued to give meanings to and help sustain such coordination despite massive reduction in the levels of subsidy or other leverages commanded by the state vis-à-vis the business elite. More significant is the work of Linda Weiss, who took part in this book's preparatory workshop, but chose eventually not to contribute a chapter. She emphasizes the ideational dimension in her study of both the developing and developed countries, yet gives very little currency to its significance as a source of incitement (binding agent) for the business leaders and the general public or as a basis of legitimacy for the state elite. Speaking about the Northeast Asian developing countries, she suggests that a country's history of international vulnerability determines the policies pursued as well as the organizational arrangements and normative orientations of the domestic institutions (Weiss and Hobson 1995). Applying the framework to the case of the United States, she suggests that the latter should be considered a national security state rather than a developmental state even though the US government works closely with the private sector to generate many cutting-edge technologies. Among other things, the driving force behind the US "national security state" is military-political primacy rather than economic growth or national autonomy as such, and this hegemonic concern has interacted with the country's political norm of "antistatism" to shift public-private coordination away from the "military-industrial complex" to the multitude of high-tech firms that work with state actors in "hybrid organizational forms" to facilitate United

States' present-day technological leadership (Weiss 2014). In other words, ideas emanating from international relations shape the orientation of the state elite and "delimit" the range of possible institutional arrangements.

Block and Negoita in this volume differ markedly from Weiss' position even though they examine broadly the same phenomena. While not giving much weight to the ideational foundation, they make reference to the stifling ideology of economic liberalism, point to circumstantial factors that allow state actors housed in marginal government offices to attain "organizational autonomy," and so account for their ability to engage in developmental intervention.

Finally, coming from a distinct theoretical tradition, Jessop suggests that the commitment to promote "catch-up competitiveness" in a capitalist world economy could be traced as far back as the commercial city republics of the Italian Renaissance and the Tudor Plan in England. While conceding with Johnson and Woo-Cumings that imperialist domination and military defeat could generate "economic nationalism," he contends that other external and internal threats could also trigger economic and political logic of "national security" that constitutes an important basis of the developmental state's transformative capacities. Above all, in considering the state as a constellation of relationships, he sees the emergence of the "will to develop" tantamount to the construction of "comprehensive concepts of control" that successfully "unify the ruling class and attract mass support by combining mutually compatible blueprints for balancing the rival interests of different capital fractions and for managing capital-labor relations" (p. 32). Weiss' notion of a "national security state" could be understood likewise.

### ***State Institutions and Sociopolitical Constellations***

Regardless of the importance attached to the ideational foundation, researchers have all considered it imperative to analyze the dimension of state capacity. As Castells suggests (1992, 64), "the fundamental element in the ability of developmental states to fulfill their project was their political capacity to impose and internalize their logic on the civil societies" (my emphasis). In addressing this issue, most scholars have examined the state bureaucracy, on one hand, and the latter's "linkages to the society," on the other hand.

#### ***Rational Bureaucracy and Pilot Agency***

Among the four essential features identified by Johnson (1982, 314–20) for a developmental state, two pertain to the state bureaucracy. The first concerns the "existence of a small, inexpensive, but elite state bureaucracy staffed by the best managerial talent available in the system . . . the duty of [which] is

to identify and choose the industries to be developed.” Writing in another context, he notes that the elite bureaucrats were recruited from the top ranks of the best law schools in Japan and appointment was made on the basis of national examinations. They possessed among other things the credential to make the necessary policies and lead the private sector (Woo-Cumings 1999, 14). Employing Weber’s theory, Evans (1995) made a more general argument concerning the importance of a rational bureaucracy. A genuine bureaucracy, which organizes on the principle of rational–legal authority, relies on formal rules to guide the practices of its functionaries, emphasizes merit in recruitment and promotion, and nurtures a sense of *esprit de corps*. The bureaucracy’s being a corporately coherent entity presents a situation “in which individuals see pursuing corporate goals as the best way to maximize their individual self-interests” and is therefore in a position to “support markets and capitalist accumulation” (Evans 1995, 30). This contrasts with a predatory state, which relies on personal ties as the only source of cohesion, and uses the state machinery to extract at the expense of the society. In other words, a rational bureaucracy is not only capable of, but is also inclined to, facilitate economic development.

On top of the civil service, Johnson highlights the presence of a pilot organization like the MITI as another feature of the developmental state. MITI combines “at least planning, energy, domestic production, international trade, and a share of finance (particularly capital supply and tax policy)” (Johnson 1982, 314–20, cited in Johnson 1999, 38–9). The concentration of various government functions enhances coordination and renders it possible for state actors to make and implement plans effectively. Criticizing Evans’ preoccupation with formal bureaucratic rationality, Chibber (2003, 20) suggests that “economic agencies within the state . . . can often be saddled with responsibilities that are in conflict with one another.” They will necessarily come into conflict by merely adhering to the rules. Interagency competition for resources has only made things worse. To attain what he calls “strategic rationality,” interagency coordination attained through the creation of what he calls “nodal agencies” is imperative. Indeed, since the work of Johnson, scholars of Asian development have analyzed pilot agencies comparable to Japan’s MITI. They include South Korea’s Economic Planning Board, Taiwan’s Council for Economic Planning and Development, and Singapore’s Economic Development Board (Gold 1986; Amsden 1989; Haggard 1990; Wade 1990; Castells 1992; Low 2001).

*Bureaucratic Capacity, Sociopolitical Constellation, and Embedded Autonomy*

Scholars have put forth two major arguments to explain how the aforementioned state institutions actually exert their impacts on the society. The first

centers on the sociopolitical constellation that makes possible the elevation of the economic bureaucracy's position, whereas the second examines the formal and informal ties that facilitate state–business coordination.

Elaborating on the case of Japan, Johnson (1995, 132–3) explains how circumstantial factors had facilitated the emergence of a “political system in which the bureaucracy was given sufficient scope to take initiative and operate effectively.” The occupation reformers, especially the Supreme Commander for the Allied Powers (SCAP), destroyed rivals of the economic bureaucracy and thus strengthened Japan’s “plan rationality,” rationalized the *zaibatsu* and thus created a hospitable political environment for the bureaucracy’s activities, and made economic recovery rather than democratization the main goal. Furthermore, corruption that plagued strong state systems was confined in the case of Japan to the ruling party, which in Johnson’s (1995, 68) words, reigned rather than ruled (see also Katzenstein 1985).

The hint of class politics in Johnson’s study of Japan was made explicit in Amsden’s (1985), Gold’s (1986), and Cheng’s (1990) analyses of Taiwan. Land reform, which signals the first effort of developmental state intervention on Taiwan, was attributed to the absence of social ties between the ruling Kuomintang (KMT) and the landed elite on the island republic. Only then could the KMT appropriate and redistribute land in ways it failed to achieve on the mainland. Comparable arguments have been proposed for South Korea (Lim 1985; Cumings 1987). Making a more general argument on the political capacity to impose the state’s logic on the civil society, Castells (1992, 65) suggests that it entails, on the side of the dominant classes, efforts to destroy, disorganize, or make totally subordinate to the state and, on the side of the working and other subordinate classes, measures to prevent mass movement formation, repression, or in the long run, integration.<sup>3</sup> The argument thus suggests a certain affinity between the developmental state and authoritarian domination.<sup>4</sup> Indeed, other observers contend in addition that the struggles for national independence paved the way for the emergence of authoritarian regimes that, in turn, put into place constitutional arrangements that privileged the executive branch at the expense of the legislature (Gold 1986; Wade 1990). Some go so far to argue that each policy transition was accompanied by a reconsolidation of authoritarian domination in all the East Asian cases (Haggard 1990).

The above processes, namely, the elevation of the economic bureaucracy to a superior position and the exercise of what might be called “despotic power,” have been given rather different evaluations. For Johnson, they were essential processes, though it was also important to engender a close working relationship through the alteration of incentives and reduction of risks (Johnson 1995, 46). Similarly, Weiss and Hobson (1995, 164) suggest that the ability

to exercise despotic power was important only at the early stage and in granting some kind of autonomy to the economic bureaucracy. However, this bureaucratic autonomy or insulation has to be combined with embeddedness to generate “institutional capacity” or the capacity to exercise “infrastructural power.” In their words, infrastructural power is the “state’s capacity to mobilize elite collaboration in pursuit of developmental goals” (Weiss and Hobson 1995, 162). Collaboration may be achieved through various state–industry linkages, such as state-sponsored industrial associations, export cartels, and policy consultation bodies. However, insofar that elite collaboration does not entail an equal partnership but domination or at least “leadership” on the part of the state, those state–industry linkages are also expected to “enable relevant state elites to engineer compliance of key business groups with larger non-negotiable goals of the state” (Weiss and Hobson 1995, 170–8). This is what they call “governed interdependence.”

However, Evans (1995) is the scholar who brings the idea of “embedded autonomy” to prominence. In part relying on a reinterpretation of Johnson’s work, Evans (1995, 5) argues robustly for the strategic importance of linkages between the bureaucratic elite and the business sector. He coins the term “embedded autonomy” to characterize the state–society relationship that allows the bureaucrats to intervene or selectively stimulate, complement, and reinforce entrepreneurship. Just as *esprit de corps* facilitates bureaucratic autonomy, embeddedness in the form of the bureaucrats’ ties to societal actors and intimate connections provide “institutionalized channels for the input of intelligence and continual negotiations of goals and policies” (Evans 1995, 12). In Japan and South Korea, state actors worked closely with the business enterprises, bureaucrats, and managers of major private corporations graduated from the same elite universities, and it was also commonplace for retired bureaucrats to work for such corporations.

A few of the contributing authors have applied or explored the idea of embedded autonomy. Wang, for instance, highlights how the Taiwan state has finally reassembled the various state agencies for promoting the biopharmaceutical industry, succeeded in connecting some local firms to international ones, and so facilitated the formation of “multiplex networks.” More pertinently, Hsieh generates important information on the ways public–private coordination on matters of standard-setting has helped to build Taiwan’s bicycle parts and machine tool industries and, furthermore, helped them to meet continuing challenges of quality assurance and technology breakthroughs. In so doing, she goes beyond most studies of Taiwan’s export-led industrialization, which focus either on the state and its policy networks or private initiatives among the small and medium enterprises (SMEs) (Gold 1986; Wade 1990; Feenstra and Hamilton 2006).

However, it was Block and Negoita who had given greater specificity and thus deepened the discussion of Evan's notion of embedded autonomy. Drawing upon the cases of the Defense Advanced Research Projects Agency (DARPA) and the National Bureau of Standards (NBS), they introduce the notions of "organizational autonomy" and "cognitive autonomy" to explain, on one hand, how marginal government offices could operate under the radar to launch development policies and, on the other hand, how specialty knowledge would allow the officials to discipline the business enterprises they support. Furthermore, they also explain why the embeddedness of state officials within such networks will bring additional funds, technological expertise, market and network information, as well as policing work that will help to prevent "network failures."

Other contributing authors have shown a greater concern with the sociopolitical constellation. Focusing on the case of China, Li claims that the changing degrees of the Chinese state's developmental-ness depend, among other things, on the relative strength of the state vis-à-vis the economic elite as well as the presence of a dominant ruling coalition or faction. Similarly, Mukherji contends that policy change in India has been aided by what he calls a "bureaucratic-technocratic cum political synergy." Above all, Jessop provides a most robust challenge to the exclusive concern with state institutions, and helps to refocus on the broad historical processes and sociopolitical relations that both constraint and facilitate state developmental intervention. Adopting the strategic relational approach, Jessop contends that the state should not be examined from the vantage point of the state managers alone, but "the broader coalition of forces, within and beyond the state (and its borders), that steer development strategies and enable the state to project its power through these alliances" (p. 33). Instead of the state institutions, he analyzes four aspects of state involvement in securing capitalist economic growth. In the case of the LWNS, they include the efforts to secure economic growth with export-led industrialization combining catch-up supply-side interventions and neo-mercantilist demand management; deploy social policies with distinct workfare characteristics; operate within the historically specific matrix of a national economy, national state, and an imagined national community; and rely on a strong national security state with its institutions as the chief means to guide and supplement market forces in securing the conditions for economic growth and social cohesion.

### ***China and India: Fragmented State Bureaucracy?***

Over the years, the idea of the developmental state has been applied to many cases in Latin America, Southeast Asia, Central Asia, Africa, and indeed



China and India, two countries examined in the present volume (O'Donnell 1988; Gereffi 1989; Schneider 1999). Research into these countries has often involved direct or indirect comparison with the Northeast Asian cases, thus contributing to the critique or retheorization of the concept. Studies of China and India have generated many important insights, yet the following will concern with the issue of what might be called a "fragmented" state bureaucracy.

Chibber's (2003) comparison of India and South Korea, for instance, contributes to a refinement of our understanding of bureaucratic capacity. Unlike Schneider (1999) who argues that Brazil was plagued by an "appointive bureaucracy" inclined to make deals and peddle ideas rather than promote coherent interest, Chibber (2003) finds within India a robust bureaucratic tradition. Not only has the Indian state adhered stringently to formal rationality and rule following, the latter had often been used to facilitate inter-ministry competition for power and resources. The absence of what he called a "nodal agency" made it impossible to attain the strategic rationality that characterized South Korea and other Northeast Asian cases. Together with the feature of public-private linkages in the country, India was plagued by paralysis and lack of direction.<sup>5</sup>

If Chibber (2003) has highlighted the threat of inter-ministry competition, Sinha (2003) draws our attention to regional differences in India's economic performance, investment flows, public-private mix of investments, and thus another potential source of "fragmentation" of the Indian state. Instead of condemning the "wooden bureaucracy" of the central state for India's development failures, she suggests that given India's continental scale, it is necessary to disaggregate the concept of the "state," adopt a "multilevel, interactive model," and take development outcome as the product of "central rules, provincial strategic choices, and subnational institutional variation" (Sinha 2003, 460–1). More substantively, she suggests that the willingness of the provincial state to negotiate with the central state for investment funds and the availability at the regional level of institutions that facilitate private-public interactions are the two determinants of industrial growth.

Studies of post-reform China have sometimes found the idea of developmental state inspiring, though others have been more critical. Remarking on the fabulous success of China, Lin (2007) contends that, on one hand, the Chinese state has triggered the emergence of the market mechanism, implemented economic rules and regulations consistent with international standards and, on the other hand, showcased Evan's notion of embedded autonomy by working with both labor and business to make sure that economic development would proceed at a pace that maintains social and economic stability and justice. Just as important, a flurry of studies has

examined China's local states and coined such terms as "entrepreneurial state," "decentralized developmental state," and "local corporatist state" to characterize them (Blecher 1991; Whiting 2001; Duckett 2006; Ong 2012).<sup>6</sup> Oi (1995), for instance, contends that the Maoist bureaucracy, which was extended to all levels of society, well-disciplined, yet infected by what she calls "plan ideological," had been encouraged by changing incentives and transformed into "local corporatist states." Local officials worked closely with the township and village enterprises, facilitating the enterprises' access to inputs and services, relying on a corporatist strategy to pool resources and debts, using preferential allocation to channel resources (e.g., fuel, raw materials, and credit) into the most promising areas, and manipulating regulations to secure the biggest advantage to the local firms.

However, alongside these studies are those that profess a more critical view on China's style of developmental state. Oi (1995, 1149), for one, has cautioned that, owing to a lack of coordination among the localities, the proliferation of the local corporatist states might in the long term challenge the central one. Elaborating on this theme, Howell (2005) highlights not only the vast regional variations, but also the decline in the party-state's revolutionary legitimacy and its authority to lead workers and businessmen alike, tendency among the officials to displace collective goals with personal/local interests, and the threat of state-business linkages to degenerate into forms of clientelism.

Above all, drawing upon studies of Chinese political institutions and the idea of "tiao-kuai," Breznitz and Murphree (2011) point out that the Chinese bureaucracy is vast, complex, and permeated by competing lines of authority that crosscut domains as well as national, regional, and local layers of the state bureaucracy. The same policy area, whether environmental protection or technological development, could fall under the jurisdiction of several ministries and tackled by governments at different levels without a clear line of reportage. Although the competing lines of authority are supposed to be unified under the leadership of the Communist Party, Breznitz and Murphree (2011) contend that the latter only adds to the confusion and conflict. Instead of providing unified leadership capable of crafting far-sighted industrial policy, the country's development policies are said to be characterized by structural uncertainty that allows for multiple interpretation (see also Breslin 1996). Together with fiscal decentralization and the importance of economic performance in the evaluation of local officials, it generates intensive interlocal competition and, insofar as technology development is concerned, encourages investments into research that promises short-term gains. The aggregate outcome is that, although China thrives at second-generation innovation and moves progressively up the value chain, it

fails to develop the capacity for novel product innovation and compete at the frontier of scientific research.

Contributing authors to this volume have striven to apply the idea of developmental state to China and India, though they also deepen our understanding of the nature of state fragmentation just examined. Importantly, So's study of China has drawn upon Breznitz and Murphree's (2011) argument to show how the interests and concerns of the local governments have deflected the objectives of the central state, so that even though some economic transformations have been attained, the goal of attaining technological leadership has been overshadowed. Though stop short of a theoretical explanation, Vaddiraju has shown for India the existence of tremendous regional and interstate variations in economic performance, which not only deepened social conflicts but also generated quests for political fragmentation. Finally, Li's study of China draws our attention not so much to spatial but longitudinal fragmentation. As mentioned above, the Chinese state has over time varied in developmental-ness depending on the success of the Communist Party in forging a ruling coalition capable of dominating over the business elite.

In addition, contributing authors to this volume also draw our attention to the socialist legacy of China and, to some extent, India. Baark, for instance, suggests that a large part of China's technology development policy involves an effort to "dismantle the stifling influence of the state in the detailed, day-to-day activities of research and development, and instead to increase the role of markets and engage various actors in strategic initiatives through more subtle policy instruments" (p. 170). To the extent that this involves some kind of continued public-private coordination at the same time that hitherto protected workers/enterprises are exposed to harsh market discipline, it might entail complex coordinating and learning processes that differ from the East Asian cases. In their divergent ways, then, scholars writing on China and India within this volume have cautioned against an indiscriminating application of the term developmental state to their cases.

### ***Developmental State and Democratization***

An earlier subsection has examined the forces that have elevated the economic bureaucracy to a superior position, thus allowing them to gain the autonomy to make and implement industrial policies. In the process, we have touched upon the issue of whether authoritarian rule is necessary for the national project and whether developmental intervention can be compatible with a democratic government. This section will reexamine the issue in greater detail.

For some observers, the authoritarian origin of the Northeast Asian developmental state was only incidental and, therefore, of historical interest at most. Weiss and Hobson (1995), for instance, consider the ability to exercise despotic power to be important only in generating autonomy for the economic bureaucracy. Institutions that facilitate state–business consultation and negotiation, such as business associations and trade cartels, are more compatible with democratic than authoritarian regimes. Evans (1995) shares this viewpoint and suggests in his recent studies that a democratic government can make transparent the process of policy consultation and negotiation, thus enhancing the chance of an open, fair, and effective allocation of public resources (Evans 2010; Evans and Heller 2015).

Apart from the earlier studies that assert a certain affinity between authoritarian rule and developmental intervention (Katzenstein 1985; Gold 1986; Castells 1992), a few recent analyses also contend for the threats posed by democracy to policy fragmentation (Herring 1999; Kohli 2004; Wong 2004). In addressing the broader issue of state–market relationship, Kohli (2004) identifies three ideal types, namely, neopatrimonial state, cohesive capitalist state, and fragmented-multiclass state. In his view, even if the so-called neopatrimonial state might assume the façade of democracy, it is characterized by officeholders more inclined to using public resources to enrich themselves and their aides than pursue national development as such. In turn, a “cohesive capitalist state” is akin to the developmental state, which focuses single-mindedly on the goal of industrial development and, given its centralized control of state power, can work with the capitalists without paying heed to other interests and concerns. Finally, a “fragmented-multiclass state” wields public authority that rests on a broad class alliance, has to pursue policies with a view to gaining popular support, and therefore cannot focus exclusively on economic development. Hence, in his view, there is indeed an elective affinity between authoritarianism and a developmental state. India, in his view, is an archetype of the “fragmented-multiclass state.”

Examining the cases of South Korea and Taiwan in the aftermath of their mid-1980s democratic transition, Wong (2004) has proposed a comparable observation. In his view, development projects are of high risk and, even if successful, take a long time to materialize. It requires a stable policy environment to provide continuity to the projects and allow sustained efforts to continue even in the face of adversity and failures in the short term. Democratic government, with its regular change of regime, has difficulties generating this kind of policy continuity and may lead to setbacks in developmental support.

Not many contributing authors to this volume have made explicit their positions on this issue, though the chapters by Wang and Chu do provide

some indications. In the first place, they support the application of a dynamic perspective. Hence, if the threat to national survival had been used initially to secure support to projects of national development, more complex forms of public–private coordination emerged in both Taiwan and South Korea at a later stage. In the second place, they both find, albeit in different ways, democratic transition to change the state–business relationships. For Wang, democratization led to the devolution of many state functions, resulting in the loss on the part of the Taiwan state of its “centralized coordination capability in decision making” (p. 107). It took 15 years for the Taiwan government to “reassemble” various state agencies so as to promote the biotechnology sector. As for Chu, she finds that, despite the democratic transition, much of the routine public–private coordination has continued to be practiced by the economic bureaucracies and research institutes. However, owing to the heightened concern with equality and transparency, and importance of economic growth as a source of legitimacy, there emerges not only a competitive pressure for the incoming regimes to propose new plans, which creates a massive challenge to policy continuity, but also considerable obstacles to mobilize adequate resources for each project. In turn, the severity of the aforementioned challenges depends on the ability of the post-transition state to build consensus and the preexisting industrial structure of each society. Within Taiwan, the difficulties of building consensus and prevalence of SMEs have made it particularly hard to initiate projects generative of “multidimensional conspiracy” (Hirschman 1977).

Block and Negoita have unwittingly made a comparable observation when they say that, “Even after more than a half century of experience with these kinds of developmental state initiatives . . . they are still so little known and so against the grain of prevailing ideologies that even successful programs are vulnerable . . .” (p. 68). This is similar to Mukherji’s argument on India’s engagement with globalization and deregulation. In his view, ideas against import substitution have been consolidated among the bureaucratic elites as early as in 1975; yet they had to await the balance of payment crisis in 1991, which hit the capitalists badly, to initiate the policy reform.

In short, owing to the need for the ruling elites in democratic government to gain popular support, policy-making and implementation have to address divergent concerns and tend to be more politicized. Groups and individuals may also capture state resources to advance short-term consumption-oriented benefits or other sectarian interests. Of course, democracies differ in the extent to which economic institutions and initiatives are shielded from political contention. However, if “organizational autonomy,” critical for the initiation of developmental support, is hard to come by even in the mature democracy of the United States where conflict resolution and consensus

building are routine, it would perhaps be even more challenging (and time consuming) for the new democracies and their institutions of developmental support to adapt to each other. As such, there seems to be reasons for caution when asserting the compatibility between democratic government and developmental intervention.

### *Whither the Developmental State?*

Early contributors to the literature have made passing comments on the future of the developmental state. For Johnson (1999, 60), the challenge for rapid growth would become much more complex in the climate of economic globalization and as the economy moves beyond the stage of catching up. Nonetheless, he thinks there is room for continued developmental intervention and that he has no doubt the developmental state would fare better than the regulatory state in this context. Similarly, Weiss and Hobson (1995, 193–7) are skeptical of the view that developmental states would decline with industrial maturity. Referring to the Northeast Asian cases, they suggest that, even though there appeared to be massive policy changes and weakening of particular policy tools, they were more apparent than real. At most, these developmental states were only shifting their roles from commanders-in-chief to that of senior partners. Furthermore, because the collaboration between state and economic elites is constitutive of state power, the changing pattern contributes to an enhancement of state power rather than its reduction.

Writing in the aftermath of the 1997 financial crisis and setback in the East Asian economies, Ó Riain (2000, 2004) suggests the onset of a global knowledge economy, which challenges the “developmental bureaucratic state,” yet is compatible with what he calls a “developmental network state.” According to him, the developmental bureaucratic state is typified by South Korea. It chooses national champions, provides financial resources, excludes foreign corporations, and helps build vertically integrated corporations. With the emergence of the global knowledge economy, finance alone is inadequate for the generation of knowledge and commensurate services. The bureaucratic state and vertically integrated corporations tend to be rigid and cannot adapt rapidly. Given opportunities provided by the global economy, the large corporations have fewer reasons to comply with state imperatives. The developmental network state, by contrast, helps to develop skill and research competence and facilitates networking among the corporations and research institutes, be they public or private, located at the national or transnational levels. All these help the national economy and its corporations to compete successfully in the new era.

Wong (2011) takes the argument a step further. He suggests that most studies of the developmental state concentrate on the phase of technological catch-up. Once the catch-up phase is over, the institution and political economy of developmental intervention run into grave difficulties. He draws a distinction between risk and uncertainty, and contends that if the catch-up phase was characterized by risk, where decision-makers could use “known existing information to estimate the likelihood of certain outcomes” and use state resources to mitigate the risks, the state confronts pervasive technological, commercial, and temporal uncertainties when promoting biotechnology and other cutting-edge frontiers of the knowledge economy. Hence, despite having expended extraordinary amounts of energy and money, the governments of South Korea, Taiwan, and Singapore have little to show for their efforts and enthusiasm in the biotech sector.

Among the contributing authors, Pirie has been most explicit in suggesting that globalization and a country’s graduation from its catch-up status will tremendously circumscribe the viability of the developmental state. Examining the case of South Korea, he suggests that the aforementioned processes have accounted for the decline in profit rate since the mid-1980s when “profitable investment opportunities necessary to support an investment-led growth regime” have been exhausted (p. 146). In addition, major financial institutions have become foreign-owned and the state loses its ability to allocate credit or even make effective economic plans. As such, he considers it misleading to continue to examine South Korea’s experience with the idea of developmental state.

Pirie, however, is rather unique among the contributing authors. Contending that the distinction between seeking to “catch up” and competing at the “technological frontier” collapses in an era of global competition, Block and Negoita suggest that a “developmental network state” as examined by Ó Riain (2004) can still confer great support. Examining the case of Taiwan, Wang also suggests that the national state can continue to play a crucial role in a global knowledge economy, though it has to transform itself from a domineering leader into a platform builder. The latter has four institutional characteristics, which include the learning of the best practices from abroad, injection of massive resources, formation of multiplex networks, and creation of commercial opportunities.

Finally, Jessop contends that the knowledge-based economy and finance-dominated accumulation, which emerge in the aftermath of the crisis of Atlantic Fordism, are no less susceptible to state intervention. Nonetheless, crisis tends to disrupt the so-called “complementary institutional hierarchies,” leading to “essentially political struggles to roll back past compromises and establish new ones” (p. 40). Referring to the empirical cases of South

Korea, Taiwan, and Singapore, he suggests that they emerged from the Asian financial crisis, more or less succeeded in reestablishing “new compromises,” and continued to promote catch-up development. In the case of the knowledge-based economy, catch-up strategies entail arrangements to promote public–private collaboration in R&D in ways not too different from those expounded by Block and Negoita, and Wang in this volume. As for finance-dominated accumulation, catch-up strategies have involved “promoting the interests of national or regional financial institutions and organizations, competing for regional financial hub status, and seeking to offer the best regulatory frameworks for financial institutions and services” (p. 49).

### Concluding Remarks

The above overview has hardly done justice to the vast and wide-ranging debates on the developmental state, an idea that has continued to capture attention from and provide inspirations for scholars around the world. It would also be audacious to draw definitive conclusions on the prevalent scholarship or contributions made within this volume. Nonetheless, a few tentative remarks will be attempted.

First, as Block and Negoita suggest in this volume, Evans’ (1995) idea of “embedded autonomy” is perhaps the most important breakthrough in the developmental state research. His idea has inspired many researchers and helps to shed light even on old cases such as Taiwan’s export-led industrialization (see Hsieh in this volume). Furthermore, bureaucratic rationality and public–private coordination are indeed very important or, as Öniş (1991) suggests, the most transferrable findings. Not surprisingly, many scholars have recommended the strengthening of public–private linkages to the developing countries (Evans 2010; Wade 2010). The mechanism will no doubt improve the skill and technological levels of the workers and enterprises alike.

Second, while not disputing with the importance of fostering public–private linkages, the above review also suggests the need to pay attention to the political-structural contexts. For one, the first wave of researchers has demonstrated powerfully the significance of imperial domination, economic dependence, and the search for national pride in the initial effort to build the developmental state. For another, it would also be fair to suggest that these structural forces continue to shape the policy options and decision-making processes of each case via the political institutions that have been put into place. Hence, even though democratic politics and developmental intervention are not incompatible, it takes time, to say the least, for the new democracies to realign their political institutions in ways that would facilitate



the launch of development support programs with transformative potentials (see Wang and Chu). Furthermore, for societies where developmental support is at odds with the prevailing political norms, be it “free market competition” in an established democracy (Block and Negoita) or the obliteration of public and private as in a neopatrimonial state, it will be challenging to generate the “organizational autonomy” and “bureaucratic integrity” to initiate the support programs. Finally, Jessop’s magnificent “outsider view” has drawn our attention to the capitalist world economic context and how its dynamics have transformed the accumulation strategies and thus the challenges for late developers to catch up. His strategic relational approach and effort to analyze the Asian developmental state alongside other LWNs also bring us outside the narrow focus on the state managers and, furthermore, open up potentials for in-depth comparative analysis.

Third, the above also suggests that it might be helpful to be more discriminative in the study of the “developmental states.” One does not need to agree with Pirie’s substantive analysis to concur that there will be a point when it ceases to be meaningful to attach the label “developmental state” to any political entity that has provided forms of business support. Furthermore, China’s socialist legacy, its particular state/party organizational setup, and the central-local dynamics have interacted in ways that cannot be straightforwardly captured by ideas like structural autonomy, bureaucratic or strategic rationality, and public–private linkages. The same can be said for the case of India. More generally, paying attention to the specific structural–political context, the precise organizational setup of the state bureaucracy, norms that inform the interactions between state and social actors will, if anything, add nuance and depth to the analysis of the developmental state.

### Notes

1. The title of this subsection is adapted from the title of Johnson’s (1999) book chapter. Furthermore, given the scope of the literature on the developmental state, it goes without saying that the present review is but selective.
2. Of course, the meanings of public and private, as Johnson (1995) suggests, have often been kept vague and obliterated.
3. International politics is another factor considered to underlie the political capacity of the Asian developmental state. Specifically, given the erstwhile attempt on the part of the United States to combat totalitarianism during the Cold War and the strategic geopolitical locations of these Asian states, the latter were able to pursue mercantilist policies without getting repercussions (Cumings 1987; Pempel 1999). Together, subordination of the dominant class and tolerance of the global power have generated what Castells (1992) calls “double autonomy” that allow the developmental state to impose its visions on the society.

4. Despite the argument summarized above, Johnson (1995, 53) makes it clear that it is not a simple question of democracy versus authoritarian rule. On the one hand, he does not think an authoritarian regime is able to promote development projects for a sustained period of time. On the other hand, if by democracy one means "some form of state accountability to the representatives of the majority of citizens combined with respect for the rights of minority," it would not be compatible with a developmental state either. In his opinion, leaders of the developmental state are endowed with "revolutionary authority" and enjoy a kind of legitimacy that authoritarian rulers do not.
5. Specifically, India's "development councils," which could have facilitated state-business negotiation and coordination, were not constituted by representatives of the business community that could make binding decisions. In turn, this was because India had pursued import-substitution industrialization that shielded the businessmen from international competition. As a result, whereas Indian businessmen were keen to get state subsidies, the Indian state lacked leverages to impose state guidance and discipline (Chibber 2003).
6. The high level of local autonomy can be traced to the Maoist years. According to some observers, it has allowed China to pursue economic reform without initiating political ones. Specifically, success of the township and village enterprises and support to economic reform given by local and provincial officials have enabled Deng Xiaoping to defy the conservative political forces at the center and "push his reform program through the bureaucratic decision-making process and avoid the risks of changing the political rules of the game" (Konai 1986; Shirk 1993, 14; Walder 1996). Although this point has seldom been made by scholars examining China as a developmental state, it can be considered a source of political autonomy that allows the Chinese state to initiate the 1978 reform.

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## CHAPTER 2

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# The Developmental State in an Era of Finance-Dominated Accumulation

*Bob Jessop*

There have been three main accounts of East Asian export-oriented economic growth in the 1980s: getting prices right, the developmental state (DS), and Confucian capitalism. None is satisfactory and, together, they reproduce the market–state–civil society triplet, which originates in European Enlightenment thinking, and one-sidedly highlight the roots of the miracle in one or other of these ensembles. This suggests the need for an alternative approach to interpreting and explaining economic development and social formations that can provide a more powerful and comprehensive account not only of the East Asian economic miracles but also of their crisis tendencies and partial recovery from that crisis. This approach should also be able to explain the variety of DSs in this region and the similarities to, and differences from, cases in other times and places. This is one aim of this chapter.

The so-called Asian crisis in the late 1990s prompted a search for alternative economic and political strategies and other ways to recalibrate the DS strategy. While this search was home grown, it was influenced by two strategies that were pursued in advanced economies to exit the crisis of Atlantic Fordism in the 1980s and 1990s. The two main exit routes were the knowledge-based economy (KBE) and neoliberal financialization. Japan had anticipated the KBE project in promoting the information economy and/or society and it was also embraced relatively early in other East Asian newly industrializing economies (EANICs). In contrast, financialization seems to have reached East Asia as much through stealth and external pressure as through imitation and overt domestic strategic goal setting. Yet some

East Asian economies, notably Singapore, have also pursued financialization alongside the more dominant knowledge-based growth strategies. So it makes sense to revisit the history and dynamic of the DS and its crisis tendencies, and examine how it has been adapted following economic crises. The chapter ends with some remarks on the research agenda that follows from this approach. Considering these themes is the other goal of this chapter.

### The Other Canon

I define the DS in three steps. First, the modern state is a local, regional, national, or supranational state that exercises authority over a stable population resident in its territory. Second, in turn, a DS is one that plans, orchestrates, or steers economic, political, and societal strategies oriented to catch up with a more advanced reference economy or economic growth dynamic. This definition does not limit the DS to EANICs nor to national territorial states more generally but allows for DS strategies over a much longer time span, on different scales, with due regard to the forms of polity, politics, and policies appropriate to the shifting horizon of what it means to catch-up (Reinert 1999, 2010). And, third, for the sake of clarity, I define an apparently rival concept: the competition state. This term was also introduced in the 1990s to describe an allegedly new phenomenon (Cerny 1990; Hirsch 1995). However, like the DS, it can also be given a generic meaning. Here it denotes states that proactively seek economic growth within their borders and/or seek to secure competitive advantages for capitals based within them, even where they operate and may even be headquartered abroad, by promoting the economic and extraeconomic conditions that are currently deemed vital for success in competition with economic actors, sectors, and spaces in other states. This includes attempts either alone or with other forces (including other states) to project power beyond their political frontiers to shape cross-border or external economic spaces relevant to capital accumulation and social reproduction. This makes the DS, which is oriented to catching up with more advanced economies, a subtype of the competition state. Moreover, although the competition state's strategies and, *a fortiori*, those of DSs, may be targeted on specific places, spaces, and scales and directed against specific competitors, they are always and necessarily mediated through the operation of the world market as a whole—especially as efforts are made to widen and deepen the latter through strategies of neoliberal globalization.

The basic idea behind the modern DS dates back to the early nineteenth century and, in particular, to the work of Friedrich List (1789–1846) on state policies to promote “catch-up” competitiveness. Through his travels and translations of his work, he contributed to the contemporary coevolution of

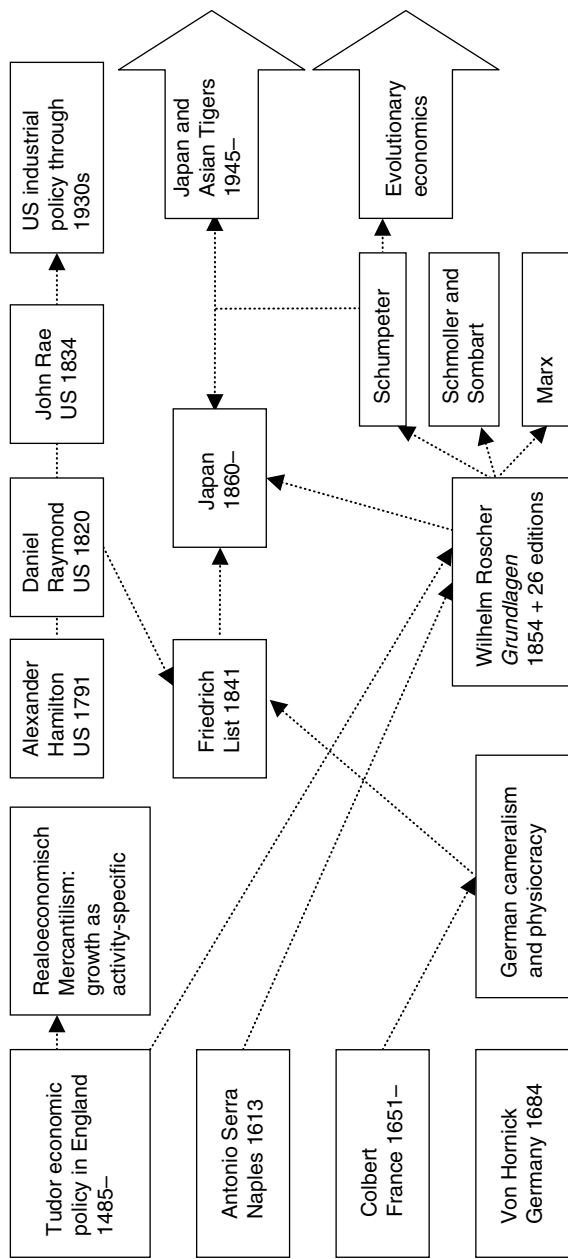
German and American theoretical and policy paradigms in political economy. His ideas were also adopted in Russia and Japan. The Listian approach concerned not only political economy, influenced by mercantilist and cameralist ideas, but also questions of national security.

List's ideas were already common in Continental Europe and can be traced back at least to the commercial city republics of the Italian Renaissance, the Tudor Plan in England (oriented to catching up with Burgundy, which had grown rich by transforming imported English raw materials into finished goods), the United Provinces (later to become the Netherlands), France (in the form of Colbertism), and various regimes in the German-speaking world. Mercantilism, cameralism, and enlightened despotism<sup>1</sup> were core features of economic cum political governance in this 500-year period but became increasingly marginalized with the rise of vulgar political economy, neoclassical economics, and free-trade doctrines. In contrast, the now marginalized "other canon" stressed the complementarity of economic and political development and the key role of the state in technological, economic, and social development (Freeman 2002, 2004; Reinert and Daastøl 2004; Chang 2005; Caldentev 2008). For examples of the other canon in different times and places, see Figure 2.1.

Later examples of the DS occurred in many German-speaking states from the mid-1800s through German unification to the 1914–1918 World War and in the United States at state and federal level through the nineteenth century (on the German cases, see Tribe 1995; on the United States, see, for example, Hamilton 1791).<sup>2</sup> Japan moved toward a DS (modeled on Prussia) in the late nineteenth century but its capacities were only fully deployed after 1945 (Johnson 1982; Reinert 1995). We can also add Kemalist Turkey after 1933 (when the first 5-year plan was introduced) to the list of DSs that existed before the term was coined (Bayar 1996). Summarizing their economic doctrines and strategies (under the rubric of developmentalism), Erik Reinert suggests that their primary goal is "to diversify the economy out of a dependency on agricultural and other raw materials alone" (if need be, by exploiting the agricultural sector) and to increase national wealth "by building a diversified industrial structure where economic activities with large potentials for technological upgrading, subject to increasing returns (falling unit costs), and important synergies (linkages) between a large variety of economic activities play an important role" (Reinert 2010, 3).

Nineteenth-century variants of the "other canon" rejected the increasingly orthodox view that free trade facilitates modernization. They focused instead on how emerging, developing, peripheral, or dependent economies could enhance their position in a world economy and interstate system imprinted (and thereby transformed) by the rise to dominance of the leading economies.





**Figure 2.1** The knowledge- and production-based canon of economic thought  
 Source: elaborated from Reinert (2004) and Reinert and Daastøl (2004).

Thus successive latecomers had to find their own path to development and consider the changing world-historical conjunctures and institutional contexts in which catch-up competitiveness strategies are pursued. The “other canon’s” marginalization in mainstream economics is one reason why the DS seems unusual, even shocking, to outside observers in the postwar period.

List was a prominent critic of the Ricardian doctrine that prescribed global free trade based on the current distribution of factors of production and their productivity. This implies that competitiveness requires efficiency in allocating resources to minimize production costs with a given technical division of labor. List argued that catch-up competitiveness strategies should rely on mercantilist rather than Ricardian free trade, protect infant industries against premature competition, and build a strong cameralist state able to dismantle *internal* barriers to mobility, trade, and communication (e.g., outdated skills, inadequate infrastructure, and tariff barriers). Thus, his approach anticipated Nicholas Kaldor’s theory of growth based on increasing returns to scale. For Kaldor, a post-Keynesian economist, resources should be allocated among available processes and products in terms of their likely impact on growth. He formulated three laws bearing on catch-up competitiveness: first, the rate of growth of productivity in industry depends on dynamic increasing returns to scale in this sector; second, as output and employment in manufacturing increase, workers move from the agricultural sector, leading to an overall rise in productivity; and, third, there is an export demand multiplier because increasing demand leads to increased investment, produces a younger stock of capital, boosts productivity in export industries, and leads to virtuous cumulative causation (Kaldor 1971; cf. Reinert 2004).<sup>3</sup> Cameralists recommended similar policies, advocating industrial import substitution, export-led growth, and state and nation building (Von Schmoller 1897/1976; Perrotta 1993; Tribe 2008). List opposed free trade because, he argued, it benefits the most advanced economies and blocks the development of semi-peripheral and peripheral economies. Yet he added that, if an economy has caught up, it would also benefit from free trade.

First presented in exile in *Outlines of American Political Economy* (1827), List, inspired by the mercantilist economic growth already achieved in the United States, elaborated his ideas into a general theory in *The National System of Political Economy* (1837/1841). This analyzed economic development as a series of stages of agricultural, manufacturing, and commercial activity. Balanced development of the world economy would require equilibrium among national economies in the temperate zone *and* their abstention from exploiting lands in the hot zone, which would make them dependent on the manufacturing powers. A recurring theme was his emphasis on technology and production and, especially, the importance of specific national

endowments and institutional arrangements. Thus his work differed from the prevailing liberal paradigm with its emphasis on commerce, trade, and purely quantitative analysis.

In the language of the Amsterdam School of transnational historical materialism, the developmentalist approach corresponds to a productivist rather than liberal (or money) “proto-concept of control.” Proto-concepts reflect the “spontaneous” or self-evident interests of a particular fraction of capital and how to secure these interests in the economic, political, and social fields. The *productivist* variant prioritizes the production of use-values and reflects the interests of industrial capital, which typically needs to valorize a given set of specific assets in a particular space and time; in contrast, the *liberal* variant prioritizes the mobility of money as money and as capital and is oriented to maximizing exchange value (or monetary profit). Drawing on these ideal types, Amsterdam scholars explore historically specific, “comprehensive concepts of control” that aim to unify the ruling class and attract mass support by combining mutually compatible blueprints for balancing the rival interests of different capital fractions and for managing capital-labor relations (van der Pijl 1984, 31). However, because capital-capital and capital-labor relations are marked by social contradictions, it is hard to win and reproduce the class compromises necessary to secure the hegemony of these comprehensive concepts and implement the corresponding strategies (Overbeek 1990; van der Pijl 1998, 4–8). The crisis of one concept, such as the DS project, opens space for struggles over what might replace it and whether this would reflect a productivist or liberal proto-concept of control. This can be seen in the EANICs following the “Asian crisis” and again in the wake of the global financial crisis.

The DS concept was first applied *explicitly* to Japan (Johnson 1982, 1999). It was then adopted for late-industrializing East Asian economies, and has since been applied to other continents (e.g., Latin America, Europe, and Africa) and to scales of economic and political organization that are local, regional, or even supranational (e.g., the European Union). Indeed, the myths of the Japanese state proved popular in Western Europe and North America during the early years of Fordist crisis as a progressive reformist paradigm to challenge bankrupt economic strategies (see, further, Caldentev 2008).

The relevance of this model was already being questioned in the 1990s, however, following the crisis of Atlantic Fordism, the collapse of state socialism in the Soviet Bloc, the end of the Cold War, the turn from Maoism to Dengism in China, the rise of neoliberalism and the Washington Consensus, the training of DS economists and officials in neoclassical economics, and the search for other paths to development. These trends undermined the legitimacy of the DS model and prompted demands to downsize the state and make its functions more market confirming and conforming.

### Revisiting the Concept of the Developmental State

There are many criticisms of the DS paradigm. My critique, for example, noted its embrace of its reified distinction between the market economy and sovereign territorial state (Jessop 2005). Advocates of the DS approach failed to see that the division between market and state is socially constructed and may be maintained, redefined, or otherwise manipulated as social forces seek to encourage or prevent the co-deployment of economic and political resources and capacities in pursuit of specific economic, political, and security objectives. More sophisticated accounts attributed DS success to *operationally autonomous* state managers (who may nonetheless have important institutional, organizational, and ideational links to forces beyond the state) who orchestrated a changing balance of markets, networks, government resources, and national solidarity to pursue national goals. Depending on the scale of the state, these goals could concern substantive local, regional, national and, indeed, quasi-continental economic interests—corresponding respectively to city-states (Singapore), regional DS (the Third Italy), national DS (Japan and South Korea), and the European Union (e.g., EU President Jacques Delors’ growth strategy from 1983 or the EU’s Lisbon strategy for 2000–2010).

A second problem is the state-centric tendency to focus on properties of the state apparatus (such as Weberian bureaucracy) and/or state managers (such as technocratic expertise) without regard to the specific economic, political, and social conditions and particular balance of social forces that enabled an autonomous but embedded state to promote developmental policies or to guide interdependent actors to the same end (Evans 1995; Weiss 1998). This approach highlights that DSs do not just rely on imperative coordination to promote development but more or less judiciously combine several modes of governance to pursue catch-up competitiveness. This emerges more clearly if we see the state as “government + governance in the shadow of hierarchy.” The variability of governance in this regard was recognized by Séan Ó Riain (2000, 2004) when he distinguished the developmental bureaucratic state (DBS) with strong Weberian bureaucracies and strong links to big business, exemplified by Japan and South Korea; from the developmental network state (DNS), where states coordinate cross-border and transnational networks among regions, clusters, and production chains to attract technology and foreign direct investment (FDI) and boost development, exemplified by Taiwan, Israel, and Ireland (2004, 4–5). Such distinctions indicate the risk of focusing on state managers at the expense of the broader coalition of forces, within and beyond the state (and its borders), that steer development strategies and enable the state to project its power through these alliances.

A third problem is that the DS theoretical paradigm seeks to explain an apparently anomalous “economic miracle” in terms of the particular features of an equally anomalous state apparatus. This leads DS theorists to treat *phenomenal* features, which were possible in special contexts, as the *essence* of its East Asian variant. This implies that, in contrast to the EANICs’ state-centered path to development, Western economies followed a market-centered path of growth. But, as the other canon reveals, the state has played key roles in the West too. Indeed, the later a country embarks on capitalist development, the stronger is the need for state intervention to secure success (cf. Gerschenkron 1962). More generally, rapid economic growth outside East Asia displays substantively equivalent modes of regulation. Thus first- and second-generation DS theoretical and policy paradigms overlooked the actual roles of Western states in capitalist development (including periods of relative laissez-faire, which is a distinctive form of state intervention, as well as the more obviously interventionist periods of mercantilism, imperialism, and the Keynesian Welfare National State) and the conditions that shape state capacities in different contexts.

To overcome these problems, we must rethink the relation between the economic and the political without reifying them or assuming that they are in a zero-sum relation; analyze the specificities of accumulation regimes and their modes of regulation rather than study growth rates and other quantitative trends; adopt a relational analysis of the state and state power; and explore the contradictions, dilemmas, and crisis tendencies of the “miracle” as well as the continuing strengths of the postcrisis period. This is one way to avoid the risk of equally one-sided analyses of the pre- and postcrisis periods—exaggerating the success of the former and failures of the latter or else interpreting the past as pathological and positing a new start if only the “right” policy choices are made. It would also enable research on earlier periods where the “other canon” (developmentalism) prevailed and informed more or less successful catch-up competitiveness strategies based, as Reinert puts it, on the following principles:

- (1) National wealth cannot be created or based on raw material production in the absence of a manufacturing/increasing returns sector.
- (2) An inefficient manufacturing/increasing returns sector provides a much higher standard of living than no manufacturing sector (Reinert 2004).

Note two points here. First, the idea of “competitiveness” is discursively constructed and rests on specific economic imaginaries. This opens space for discursive struggles, with material interests also at stake, over the nature and

bases of competitiveness. In addition to Ricardian and Kaldorian accounts, concerned with static comparative and dynamic allocative advantage, respectively, we can also mention Schumpeterian competitiveness oriented to entrepreneurship and innovation (Schumpeter 1934; Porter 1990; Jessop 2002; see the later section on the knowledge-based economy or KBE in this chapter). Different discourses imply different forms of political action with different effects on the competitive positioning of firms, sectors, regions, and nations as well as on the balance of political forces within and beyond the state. Second, as the leading edge of economic development and forms of competition change, so do patterns of competitive advantage and, therewith, the requirements of catch-up competitiveness.

Competition does not occur on a level playing field but around three hierarchies: (1) the relative importance of commercial, industrial, intellectual, and financial markets in setting the overall parameters of competition; (2) the relative super and subordination of different forms of competition such that, for example, sectors where perfect competition survives are subordinate to monopoly or state monopoly competition; and (3) the form of the corporations that set the parameters of competition in each market, with the peak of the global corporate hierarchy occupied at least from the 1980s by denationalized transnational banks and “stateless” multinational firms (cf. Grou 1985). Thus state capacities to promote competitiveness depend on adapting competitive strategies to the position of national economic space and its key economic actors within the changing competitive hierarchies of the world market. At the same time, however, the capacity to compete is grounded in diverse sources of competitiveness, both economic (broadly considered) and extra economic. This raises the question whether increasing return to scale activities, as defined by Kaldor, Reinert, and others, may expand from industry to include services and, in particular, whether financialization can provide the basis for DS strategies—especially when we include Schumpeterian competitiveness.

### **The Listian Workfare National State**

To address these issues more concretely, I distinguish four aspects of state involvement in securing capitalist expansion. The first is the broad field of economic policy oriented to securing conditions for profitable private business that cannot be secured through market forces alone. These conditions involve *institutional* competitiveness (Jessop 2002; Campbell and Pedersen 2007) and include conditions favorable to the “creative destruction” produced through innovation (Schumpeter 1934). The second aspect is social policy, that is, the state’s roles in reproducing labor power individually and

collectively over different time horizons from day to day through individual life cycles to intergenerational reproduction. This poses economic problems over the individual and collective suitability of labor power to capital's needs and its own survival without a secure income or other assets; social problems such as social inclusion and cohesion; and political problems regarding the legitimacy of state intervention in this area and its relation to other identities that workers may have. The third aspect concerns the main scale, if any, on which economic and social policies are decided—even if underpinned or implemented on other scales. This matters because economic and social policies are politically mediated and the scales of political organization may not match those of economic and social life. The fourth aspect is the relative weight of different governance mechanisms deployed in efforts to maintain profitability and reproduce labor power by compensating for market failures and inadequacies. Top-down state intervention is just one mechanism in this regard; and states as well as markets can fail. This suggests the need for other flanking mechanisms and, insofar as these also fail, for attention to the relative balance.

Although the Listian Workfare National State (LWNS) shares certain general properties with other types of capitalist state, it is also distinctive on each dimension. First, it was *Listian* insofar as it aimed to secure economic growth through export-led industrialization from an otherwise relatively closed national economy and did so mainly by combining catch-up supply-side interventions and neo-mercantilist demand management. Invoking List's name is not a Eurocentric conceit but reflects the influence of his mercantilist approach in Japan and other East Asian economies (cf. Cumings 1999; Weiss 1998). Thus catch-up competitiveness was based on switching investment into sectors and clusters that offered increasing returns to scale in an increasingly integrated national market protected by neo-mercantilist policies and measures but organized to encourage export-led growth rather than import-substitution alone. This reflects the importance of industrial merchandise trade as the key economic driver in each EANIC's takeoff and consolidation phases. Even though Hong Kong was more Ricardian in orientation, its self-described laissez-faire colonial government used critical economic levers, especially its control over land supply and the industrial and domestic property markets, to guide economic growth (Sum 1994).

Second, LWNS social policy had a distinctive *workfare* orientation. This is reflected in five policies: (1) limiting wage costs *qua* cost of production; (2) investing in human capital; (3) promoting personal savings and accumulation of assets to assist the reproduction of labor power over the life cycle; (4) encouraging limited forms of occupational welfare for core workers at factory level as a means of reducing overall pressure on wage demands; and

(5) promoting forms of collective consumption favorable to the exportist growth dynamic, which, as noted by Kaldor and Reinert, involved a virtuous circle of export expansion and reinvestment of export earnings in the next generation of capital goods. Workfare may also involve repression of organized labor not only to contain labor costs in early stages of factor- and investment-led growth; but also to limit political opposition in a national security state.<sup>4</sup>

Third, the LWNS was *national* insofar as economic and social policies were pursued within the historically specific (and socially constructed) matrix of a national economy, national state, and imagined national community. National security discourse, institutions, and practices affected all three elements of this matrix. Neo-mercantilism was an important basis of economic security; the national state was a national security state; and a strong nationalist ideology was developed to counteract challenges from divided societies (Korea, Taiwan, Singapore, and Hong Kong) or Cold War enemies (Japan). Local governments in Taiwan and South Korea acted mainly as relays for national policies; and the international regimes that were established after World War II, the Chinese revolution, and the Korean War were mainly intended to restore national economies and states within the orbit of the Western bloc under US hegemony.

Fourth, the LWNS was *statist* insofar as a strong national security state and its institutions (on different levels) were the chief means to guide and supplement market forces in securing economic growth and social cohesion. National security discourse legitimated this role, including the repression of organized opposition and dissent; and it also justified state guidance of market forces even before “market failure” occurred. Given the residual nature of government social policy and the limited institutional separation of the economic and political, a major secondary role fell to the extended family, *guanxi*, and other institutions of “civil society” in the shadow of the state.

To elaborate the LWNS concept, I now consider five sets of social relations that were crucial for EANIC pursuit of catch-up competitiveness. These are the individual and social wage relations; the enterprise form and modalities of competition; the money and credit system (banking and credit systems, the allocation of capital to production, national currencies and world monies, and monetary regimes); the forms of state intervention and its social bases in institutionalized compromise; and the international regimes that link national economies and states into the world system (see Boyer and Saillard 2001; Jessop and Sum 2006). The relative weight of these forms varies across modes of growth—as does the relative importance of their twin aspects (e.g., wage as cost of production versus source of demand) in specific conjunctures. The relative dominance of different forms and the relative importance of one



or another aspect of each form provide a useful heuristic for exploring the specificity of comprehensive concepts of control, economic strategies, state projects, and hegemonic visions and their respective crisis tendencies and dynamics (cf. Jessop 2015). I now illustrate these remarks for the LWNS and will do so later for the KBE and financialization.

First, export-oriented growth prioritized the wage as an international cost of production rather than source of domestic demand. This was reinforced where the wage relation was subordinated to an exportist and workfarist (rather than welfare) logic under the auspices of a strong national security state that also repressed or limited workers' struggles for economic, political, and social rights. Nonetheless, as incomes tracked export earnings (if not always in line with productivity), there was growing pressure as well as increasing scope to expand domestic demand for better housing and more consumer durables. This began among the middle classes, spread to organized labor, and supported the growth of capital oriented to domestic mass consumption. This trend is evident in first-generation NICs (South Korea, Taiwan, Hong Kong, and Singapore), second generation (Thailand, the Philippines, Malaysia, and Indonesia), and most recently, in mainland China, which has been called "a neo-Listian developmental state with Chinese characteristics" (Breslin 2011, 1336; see also Boyer 2013).

Second, enterprise competition was balanced by cooperation. Sometimes the state and/or peak organizations promoted extensive "pre-market" collaboration; sometimes firms divided markets to reduce wasteful competition to promote "catch-up" growth. Small and medium enterprises were also integrated into larger supply chains managed by domestic conglomerates or overseas buyers (and, in Singapore, state-sponsored multinationals engaged in inward FDI). Such cooperation-competition was crucial to export-led growth based on flexible imitation, technological, process, and product innovation, and, eventually, to targeted movement up the world technological and product hierarchy. At stake here, then, was state guidance or steering rather than top-down planning to develop or transfer new core technologies as motive and carrier forces of economic growth and to widen their application to promote competitiveness. In this sense, even the DBS (Ó Riain 2000) worked through networks. In addition, there were also strong elements of Max Weber's three kinds of political capitalism in DSs: profits from force and domination, profits from financing political undertakings (e.g., financing political parties and lobbying activities), and profits from unusual deals with political authority (Weber 2009). This would later provide the basis for charges of crony capitalism.

Third, the catch-up strategy privileged credit allocation for long-term growth and prioritized the allocation of national money (and international aid or loans) to investment rather than consumption. This required a

strong DS and/or close coordination between banking and industrial capitals (*keiretsu*, *chaebol*, KMT-capital and state capital, Singaporean state-owned banks and holding companies) mobilized behind the national economic strategy. Any liberalization of the supply and demand for international credit would have threatened this key pillar of the LWNS—especially in EANICs without strong prudential banking controls—as would expansion of major conglomerates abroad through the building of a regional division of labor and/or their transfer of R&D and FDI to Europe and North America. Nonetheless, as we shall see below, following the “Asian crisis,” DSs began to see financial capital not just as an adjunct to industrial and commercial capital but also as a growth engine in its own right, leading to new state strategies to promote financialization.

Fourth, critical in the DS’s transformative capacities was the economic and political logic of “national security” and its reflection in “exceptional forms” of state (military dictatorship, formalized or de facto one-party rule, etc.) justified by external and internal security threats. Hong Kong differed because of its continued postwar colonial domination and more Benthamite approach to governance and security. In all cases, however, state insulation from popular control would eventually be undermined as perceived security threats declined and economic growth continued, which raised popular expectations about mass consumption and democratic participation. Finally, regarding international regimes, the EANICs had a privileged position in the Cold War and the massive inflow of military aid and other subsidies from the United States as part of its Cold War economic, political, military, and ideological strategy.

Table 2.1 summarizes some of the key features of LWNS-led catch-up competitiveness in these terms during the period when it was relatively successful. This table could also be respecified for earlier examples of the DS, taking account of stages in the development of the world market, different state capacities, and different leading edge technologies and accumulation regimes. In the next section I will examine how the LWNS and catch-up competitiveness were undermined by changes in the leading edge of competitiveness and shifts in the dynamic of the world market and changes (for further comments on the theoretical assumptions, see Jessop 2015).

### **Crisis Tendencies of the LWNS<sup>5</sup>**

I now turn from comparative statics to a more dynamic account of how regimes handle contradictions and dilemmas by (1) treating some as more important than others; (2) prioritizing one aspect of a contradiction rather than another; (3) switching priority as the secondary aspect becomes more urgent or crisis prone; and (4) allocating the handling of different

**Table 2.1** Catch-up competitiveness

Basic form	Primary aspect	Secondary aspect	Institutional fixes	Spatio-temporal fixes
State	Strong state that guides investment-led growth	Legitimation through national security and continuous growth	Authoritarian Listian Workfare National State	Nation- and state-building and/or national security
Capital	Productive capital in given (national) time-place	Mobility of capital within monopoly complexes	State-monopoly complexes and revolving doors	National economy–national state–economic security
Competition	Catch-up to bench-marked sectors and economies	“Race to bottom” + effects of creative destruction	Pre-market collaboration, then competition	Create and protect national market as basis for exports
(Social) wage	Cost of international production	Source of national demand	Occupational and family (asset-based) welfare	National reskilling plus global war for talents

<b>K</b>		Dominant structural forms		Secondary structural forms
<b>E</b>		Primary aspect of principal form		Primary aspect of secondary form
<b>Y</b>		Secondary aspect of principal form		Secondary aspect of secondary form

Source: original compilation

contradictions and their different aspects to different scales, networks, or sites of action (cf. Jessop 2015). Following Robert Boyer (2000), I note that periods of stability involve complementary institutional hierarchies and, in more pluralistic or democratic regimes, institutionalized compromise; and that, in periods of instability, one structural form tends to disrupt these institutional hierarchies and leads to essentially political struggles to roll back past compromises and establish new ones. This was particularly evident during the “Asian crisis,” when the operation of money and credit systems began to dissolve the institutional complementarities of the LWNS, prompting neoliberal policy adjustments and/or new forms of control over capital flows to preserve the overall developmental logic in new circumstances.

Each LWNS had its own distinctive economic regime and mode of regulation that combined its four features with other functions, scales of action, and modes of governance. This means there was no pure crisis in and/or of the LWNS—let alone one with identical outcomes. In some cases, one finds greater continuity, linked to the view that there was a crisis *in* the

prevailing form of the LWNS, which required only incremental shifts to move toward a new regime (e.g., Singapore and Taiwan); in others, there was more discontinuity—especially in declared policy changes rather than actual outcomes—linked to a discursively constructed domestic crisis *of* the DS, to the constraints linked to accession to the World Trade Organization (WTO), and, postcrisis, to structural conditionalities and externally reinforced imposition of domestically promoted radical restructuring (e.g., Korea). Even in Korea, Thailand, and Indonesia, where the crisis was greater, there were significant continuities. Malaysia pursued a different strategy, reinforcing the LWNS strategy, and the International Monetary Fund (IMF) later conceded that it had merits (cf. Iceland following the North Atlantic financial crisis).

The export-oriented LWNS system had its own vulnerabilities and crisis tendencies. First, as export-led growth continued, it became harder to maintain the relative “structured coherence” of the EANICs’ modes of growth and *regulation*. The neoliberal promotion of global flows of disembedded capital and domestic deregulation had a particularly adverse impact on the virtuous Kaldorian relation between exportism and growth in the LWNS paradigm. Internal pressures also developed to adopt more Schumpeterian (innovation and competitiveness-oriented) forms of economic intervention and workfare—either through gradual adaptation of the DS in alliance with producer interests, local authorities, and the wider scientific and R&D community or through its more radical neoliberal rollback. Second, rising personal incomes and popular demands for social welfare weakened the effectiveness and acceptability of the initial workfare regime. Third, the coherence of the economic core and the primarily national matrix of regulation that had permitted concerted state guidance were both challenged by growing interest in promoting inward and outward direct investment as well as a regional division of labor that stretches production networks across national border. Fourth, there were growing external pressures to “rollback” the DS through such measures as privatization, liberalization, deregulation, market proxies, reduced taxes, and an opening to foreign direct investment. This arose in different ways—through preparing to meet the free trade requirements of entry into the WTO, through the impact of the Asian crisis, or simply through massive trade dependence on US markets that made export-oriented economies vulnerable to American pressure to adopt neoliberal measures favorable to US interests.

Responding adequately to these four sets of pressures would have required major institutional changes in the economy and state that would inevitably threaten certain sectors of the dominant economic and political elites and thereby destabilize the hegemonic constellation and its power bloc within and beyond the state. Not all states had the institutional capacities and balance of

forces to resolve the resulting economic and political institutional crises—Japan is the most notorious example of state failure here, despite continuing export competitiveness in many industries (with Abenomics the latest example of economic policy failure). Among first-generation EANICs, Korea was affected in the early to mid-1990s by the rise of strong neoliberal currents among the *chaebols* and US-trained economic mandarins and by attempts to rollback key elements in the inherited LWNS model. Nonetheless, as we shall see below, it has reinvented rather than rejected the DS paradigm. Second-tier East Asian NICs were hard-hit by the economic crisis because of their much faster catch-up process, more rapid integration into the emerging regional as well as global division of labor, greater economic, social, and political stresses due to uneven development, and greater vulnerability to large and sudden inflows (and outflows) of short-term, speculative capital. They also had less effective state capacities.

“Globalization” did not affect all East Asian economies in the same way. But we can note two general sets of factors that were mediated through the private more than the public sector. First, there were growing cost pressures as they competed with each other and even newer NICs in the region (such as China and Vietnam) for market share, sought to cover the costs of new rounds of investment and technological innovation, tried to cope with a rising real effective exchange rate both against the dollar, to which national monies were pegged, and, more seriously, against the yen (which was then depreciating against the dollar), and addressed workers’ demands for higher wages and social welfare benefits. Second, there was the destabilization of national systems of credit allocation through the attempted global imposition of liberalization and deregulation, the use of short-term dollar-denominated foreign credits to finance long-term investment, the additional inflow of short-term speculative “hot money” and resulting excess liquidity, and the search for easier profits in land, property, stock market speculation, and intensified political corruption as compared to industrial production. In general, the free movement of global capital made the East Asian economies (especially second-tier NICs) increasingly vulnerable to currency speculation even though many still had strong underlying “fundamentals,” namely, high domestic savings, budget surpluses, low inflation, and good growth prospects. Unsurprisingly, then, the crisis itself was triggered by the collapse of financial bubbles generated by hypermobile speculative capital (aided and abetted by some local economic and political forces) rather than by long-term balance of trade problems. The most vulnerable EANICs in this regard were those that had embarked on liberalization and hence weakened their LWNS neo-mercantilist defenses.

Hong Kong, Singapore, and Taiwan had the strongest trading accounts and foreign exchange reserves and were less affected than South Korea,

which had severe short-term debt problems and a deeper institutional crisis. Singapore and Taiwan were also protected by strong prudential controls over the allocation of credit; and Hong Kong benefited from background financial and political support from the People's Republic of China, which had no interest in a spectacular collapse of the Hong Kong economy so soon after its "return to the motherland." Second-tier NICs (notably Thailand, Indonesia, Malaysia, and the Philippines) suffered even more from acute pressures of foreign debt and domestic institutional crises. The "IMF-3" (South Korea, Thailand, and Indonesia) were initially drawn furthest into the "illogic" of globalization due to the IMF and World Bank's "neoliberal" conditionalities and structural adjustment programs. But, after the initial shock, South Korea reoriented its neo-statist strategy around the KBE and financialization. More generally, there was growing interest in regional initiatives, beginning with the deepening of the intra-regional division of labor and associated intra-regional trade and, perhaps, despite initial IMF and US opposition, toward a relatively "dollar-free" regional currency regime.

### **Recalibrating Developmental States versus Post-Developmental States**

The problem of reinvigorating and re-regularizing accumulation after the Asian crisis involved more than finding new ways to manage the same dominant structural forms. For the relevant spatio-temporal dynamics and contexts had changed, the inherited forms of the DS were in crisis, the horizons for catch-up competitiveness had altered, new accumulation strategies and state projects were emerging, and, in this context, the most important structural forms and their contradictions and dilemmas also changed. Moreover, far from being purely regional, the crises of exportism and the LWNS were closely linked to the exhaustion of the Atlantic Fordist growth dynamic to which EANIC exportism had been closely tied. This indicated the need to develop a new catch-up competitiveness strategy as well as to rebalance export-led growth and domestic demand. The two main strategies considered in this regard have been the KBE and financialization and each has been pursued at multiple scales from the local through to the supra- and transnational, taking advantage of new opportunities opened by regional integration and the rise of China as the new regional and global economic powerhouse.

In terms of catch-up strategies, the dominant competitive forces are those that set the terms of competition in the most important market. These include not only various kinds of firm-specific assets and competences but also meso- and macroeconomic factors and forces. This has been captured in the idea of "structural competitiveness." The Organisation for Economic

Co-operation and Development (OECD) sees this as a way of expressing the fact that, while the competitiveness of firms will obviously reflect successful management practice by entrepreneurs or corporate executives, it will also stem from the strength and efficiency of a national economy's productive structure, its technical infrastructure, and other factors determining the "externalities" on which firms build, i.e., the economic, social, and institutional frameworks and phenomena which can substantially stimulate or hamper both the productive and competitive thrust of domestic firms (Chesnais 1986, 86–7).

Once deemed relevant, meso- and macroeconomic competitiveness can be targeted for action. This extends economic competition to diverse extra-economic institutional factors and sociocultural conditions that bear on economic performance and it thereby subjects entire societal regimes to the audit of the world market. Which extraeconomic factors matter depends on the competitive positioning (comparative and competitive advantages) of firms and sectors in the changing international division of labor, and hence the position of local, regional, and national economies in the hierarchically ordered world system. At any given time, growth in a given economy will reflect patterns of decline (due to competitive disadvantage), growth (due to competitive advantage), and recovery (thanks to effective restructuring of uncompetitive sectors). This invites the question whether DSs are being reinvented or replaced by "post-developmental states." A clue is found in Ó Riain's distinction between *bureaucratic* and *network* DSs. For, although he does not observe, the DBS is more suited to catch-up strategies in heavy industries and the DNS to catching-up in the software industries that Ó Riain studied in Ireland, Israel, and Taiwan. This distinction can be elaborated by referring to Herbert Kitschelt's study of the complex interactions among national institutions, governance structures, and industrial sectors in different stages of economic development. The next two paragraphs summarize his arguments.

Based on general theoretical observations and close attention to the historical trajectories of Japan, Europe, and the United States, Kitschelt suggested that different technologies and industrial sectors are best promoted through different governance mechanisms (Kitschelt 1991; cf. Freeman 2002; Perez 2002). Industrialization in the late eighteenth century was based on light consumer and investment goods, notably textiles and machine tools, which involved loosely coupled technological systems with linear interactions. These can be developed in decentralized, market-oriented economies with a weak state. The next wave of industrialization, in the mid-nineteenth century, relied on steam power, iron, coal, and railway construction, all of which enabled economies of scale. This favored oligopolistic markets and industrial

centralization through large corporations and, where these were weak or absent, required a stronger state role in industrial development. On this basis, latecomers, such as Germany, Japan, and a then neo-mercantilist United States could catch up and, indeed, overtake England in these industrial sectors. In turn, new science-based technologies that were developed at the end of the nineteenth century were compatible with two kinds of governance. The first is networks of medium-sized enterprises with close linkages between customers and suppliers and close interaction with a not-for-profit research infrastructure of universities and laboratories; the second involves large corporations that organized mass production industries based on economies of scale. Using Ó Rian's terminology, one might infer that the flexible specialization sectors are more suited to a developmental network state and mass production sectors to its bureaucratic variant.

The next round of major technological innovations comprised, according to Kitschelt, tightly coupled, complex systems with high development costs and uncertain outcomes (e.g., nuclear fission, aircraft, large computer and telecoms systems, advanced chemical processing, and pharmaceuticals) where public agencies had a key role (cf. on the United States, Weiss 2014) and where any catch-up would require strong support from DSs with deep pockets (e.g., Japan and China). Finally, Kitschelt identifies some fifth-generation technologies with loose coupling, modest capital requirements and modest economies of scale, and serious causal complexity and uncertainty. Examples include computer software, customized microprocessors, genetically engineered products and drugs, and specialty chemicals. These technologies are suited to mixed private and public networks that interact flexibly in the fields of R&D, manufacturing, and service provision to link producers and consumers. Kitschelt concluded that strongly statist economies (such as France) and strongly liberal economies with weak nonprofit research infrastructures (such as the United Kingdom) will lose out in these sectors but that the United States, Japan, and Germany could remain competitive in at least some of them (Kitschelt 1991, 471–5; cf., on the United States, Weiss 2014). Although he did not study the EANICs, his taxonomy does have obvious implications for their past evolution and future trajectories as DSs.

Without endorsing all aspects of Kitschelt's analysis, which is consistent with much of the more detailed case study literature, it does highlight the moving horizon of catch-up competitiveness and the different kinds of institutional and governance arrangements appropriate to different horizons of catch-up competitiveness. It also indicates that the one-sided stress in some DS literature on the state's role in economic planning is misleading about the governance mix that facilitated catch-up and even leapfrogging. For, although the state may have had crucial roles in the "government + governance" mix



that facilitated development, it was typically one powerful player within a more complex set of arrangements that involved public-private partnerships, networks, clubs, and other forms of cooperation, sometimes with cross-border alliances and other arrangements. This suggests in turn that these states may have had capacities and resources to recalibrate their catch-up strategies as the frontiers of competition and competitive hierarchies changed. In this sense, then, less reliance on bureaucratic state controls may not signal the end of the DS but a reasonable adaptation of structures and strategies in response to changes in the technological, organizational, and financial reference points for catch-up competitiveness.

### **The Knowledge-Based Economy**

Following the search for a plausible new economic imaginary after the crisis in/of Atlantic Fordism and its global repercussions, the KBE emerged as the hegemonic post-Fordist imaginary and was translated into various economic strategies at firm and sectoral level and economic policies at local, regional, and national state level. It was promoted by leading corporations, states at different levels, and international bodies, including the Asia-Pacific Economic Cooperation (APEC) and the Association of Southeast Asian Nations (ASEAN) as well as more global organizations such as the OECD, World Bank, and WTO. The KBE applies knowledge reflexively to knowledge production to develop technology, process, and products and this gives knowledge and knowledge work a major role in shaping the relations of production (Castells 1996; Jessop 2002; Sum and Jessop 2013). Most sectors become more knowledge intensive, reflecting a more general shift from investment- to innovation-driven competitiveness (cf. Porter 1990). In the EANICs, this reorientation was also a specific response to crises in their patterns of export-led growth and involved restructuring “DSs” rather than actively rolling them back entirely or allowing them to wither away. What was required was more effort to promote the network economy, network forms of governance, and a network society (Castells 1996). If so, whereas the developmental network state is preadapted to promoting the KBE strategy, the DBS would need to recalibrate and reorient its inherited LWNS forms of economic and social governance further toward partnership and networking arrangements to strengthen existing KBE elements in their respective economic spaces and to develop, where possible, newer technologies. Such changes have been strongly promoted by international bodies such as the OECD, APEC, and ASEAN and international consultancies as well as, domestically, by some government agencies, industry associations, strategic bodies, think tanks, and so on.

Using the same schema as that deployed to analyze catch-up competitiveness in the LWNS, the two dominant structural forms in the ideal-typical KBE are capital and competition. The primary aspect of capital is the valorization of knowledge as a fictitious commodity such that the production, management, distribution, and use of knowledge becomes a key driver of economic growth, wealth generation, and job creation across the private, public, and “third” sectors. This is related to a shift in the relative importance of different kinds of competition. Specifically, there is a shift from investment-led Kaldorian, catch-up competitiveness to innovation-led Schumpeterian catch-up competitiveness. In DSs, this is associated with moderate intellectual property regimes to facilitate rather than block knowledge sharing so that as many firms as possible benefit from new opportunities created by R&D activities and other forms of innovation. This is reflected in measures to: (1) to create and valorize design- and knowledge-intensive capital and manage the tensions between intellectual commons and intellectual property; (2) to facilitate technological intelligence gathering; create independent technological capacities; and promote innovative capacities, technical competence, and technology transfer; (3) make the wage relation more flexible, use the social wage relation and social policy to provide flexicurity, reskill and upgrade the workforce (including through the global war for talents), and promote the supply of enterprise skills and competencies; and (4) relax national monetary controls to facilitate the internationalization of capital movements (while, in the EANICs, preserving prudential controls over hot money flows). In turn, “Third Way” social policies would address new forms of social exclusion, especially for those excluded permanently or temporarily from the asset-based welfare economy that is common to the EANICs.

The Asian crisis prompted a revaluation of the LWNS strategy based on investment-led competitiveness and prompted a turn to investment- and innovation-led KBE strategies. This was not a radical rupture in Japan or the first-generation EANICs because they had already embraced the information economy and society, promoted national systems of innovation, and strengthened the learning economy. Thus we find a wide-ranging set of discursive, institutional, and policy changes in government and governance. Symptomatic of this reorientation are Korea’s strategy to become a KBE, endorsed by the OECD and World Bank (Chu 2009); Taiwan’s commitment under the Democratic Progressive Party to become a “Green Silicon Island” based on the KBE, sustainable development, and social justice as well as its promotion of an “e-Taiwan” project to build e-business, e-government, and an e-society (in general, Chen and Li 2004); Singapore’s strategy to become an “Intelligent Island”; Malaysia’s “2020 vision” and master planning

to move from a production-based economy to a “K-economy”; and, albeit more rhetorically, Hong Kong’s strategy in the 1990s (recommended by scholars and consultants linked to Massachusetts Institute of Technology) to become a KBE specializing in knowledge-intensive business services for the Pearl River Delta (on this, Masayama and Vandenbrink 2003; and Sum and Jessop 2013).

To illustrate the potential continuity between the DS and the KBE, let us note that, under President Lee Myung-bak, South Korea formed a Ministry of Knowledge Economy (MKE) in 2008. Its mission was to promote the knowledge economy, which would add value to traditional goods and services through greater levels of research and innovation intelligence, adding value and making them more competitive globally. It declared that, “*different from other economic models which rely primarily on natural resources or manpower, knowledge will be the primary engine of productivity and growth for the Korean economy*” (italics in original). Above all, “the Ministry strives to assemble traditional industrial know-how, cutting edge R&D, and strong pro-business policies” (Ministry of Knowledge Economy 2008, cited in Erawatch 2012). Its remit also included developing new growth engines by supporting Information and Communications Technologies (ICTs) and high-end manufacturing, promoting foreign trade, attracting FDI, and develop environmentally friendly economic projects by promoting a green economy (Erawatch 2012). This strategy was revived by another new ministry in 2013: the Ministry of Science, ICT, and Future Planning (MSIP), which was tasked with leading the development, coordination, and implementation of “creative economy” policies.

The MSIP initiative reflected the vision of incoming President Park Geun-hye. She wanted to create a “Second Miracle on the Han River” by promoting a “creative economy.” This would stimulate growth and employment through “the convergence of science and technology with industry, the fusion of culture and industry, and the blossoming of creativity in the very borders that were once permeated by barriers” (Park 2013). Reflecting a Schumpeterian view of catch-up competitiveness, President Park’s program emphasized the key role of entrepreneurs as “carriers of innovation” in products, services, processes, markets, and business models. Her program incorporates six strategies to achieve these goals: establish an ecosystem that promotes the creation of startups; strengthen the role of start-up companies and small and medium-sized enterprises and enhance their ability to enter global markets; generate new industries as growth engines; foster world-class creative talent; strengthen Korea’s science, technology, and ICT to increase innovation capabilities; and promote a creative economic culture within Korean society (cf. Connell 2013).

### Financialization

The other main strategy that emerged in the aftermath of the crisis of Atlantic Fordism in the 1980s was financialization. This reflects the liberal (or money) proto-concept of control and prioritizes the logic of flows in the world market over the interests of productive capital considered as a stock of fixed assets to be valorized in specific places and at particular times. In its extreme form, it privileges fast, hyper-mobile money but this is unsustainable as a general model on a global scale, especially as the long-term viability of financialization depends on the “real economy” (which is always mediated through money and credit relations). Thus financialization as a general economic strategy for national territorial states (as opposed to offshore tax havens, city-states, or microstates) is oriented to promoting global financial centers or regional financial hubs in particular places and/or to promoting the interests of financial (or interest-bearing) capital. Where neoliberal *regime shifts* occurred (e.g., the United States, the United Kingdom, and Ireland), financialization has developed into a finance-dominated accumulation regime that subordinates other aspects of the economy to the interests of financial capital—even after the spectacular eruption of financial crisis in these economies in 2007–2008. In contrast, the EANICs underwent only *neoliberal policy adjustments* within the prevailing institutional framework of their respective DSs. Indeed, the path-dependent nature of their industrial profiles and the institutional bases of their export competitiveness precluded the kind of radical *neoliberal regime shifts* noted above. Thus their governments pursued a more hybrid strategy for financialization, which involved controlled deregulation of financial markets and capital flows together with further measures to strengthen asset-based welfare regimes based on the private wage, household credit, and high savings for home ownership, equity investment, education, and pensions. Despite the shocks to asset-based welfare in the aftermath of the “Asian crisis” and the contagion effects of the North Atlantic financial crisis, financialization has continued, aided by a more robust regulatory and institutional framework than is found in the United States, the United Kingdom, and Ireland.

In addition, catch-up competitiveness has been extended to include financialization in several ways: promoting the interests of national or regional financial institutions and organizations, competing for regional financial hub status, and seeking to offer the best regulatory frameworks for financial institutions and services. These measures can coexist with the KBE strategy, especially where financialization is related discursively to knowledge-intensive business services, financial innovation (e.g., through new financial instruments), the role of venture capital or private equity capital, and capturing the value-added of high-end asset and wealth management

services. This strategy can also backfire when it leads to speculative bubbles in stocks and shares, commodities, and real estate (including private housing in asset-based welfare regimes).

In Japan, the EANICs, and, more recently, China, this strategy cannot be achieved solely through private-sector initiatives. As Jokim Lai observed regarding Korea's strategy, it "also required government cooperation in at least reforming and liberalizing the sector through policy and legislative changes" (2012, 64). Before President Lee Myung-bak highlighted the KBE strategy in 2008 with the formation of the MKE, a strategy to make South Korea the Northeast Asia Financial Hub Road Map was launched in December 2003 by President Roh Moo-hyun. This was part of a broader program to advance national development goals by building a globally competitive financial sector, now considered an essential part of, and stimulus to, a high value-added, knowledge-based service sector. As Yoon-shik Park, an international finance professor, notes, "successful international financial centers also nurture the development of other advanced knowledge service industries such as world-class medical services and educational institutions, sophisticated telecommunications, and renowned cultural institutions" (2011, 4). Strategic measures included deregulating capital markets, liberalizing the capital account framework and foreign exchange system, and attracting foreign participation in financial markets. A second roadmap in 2005 reflected criticisms from the Seoul Financial Forum (an industry think tank) about the lack of ambition to date and reasserted the importance of the role of state strategic interventions:

An international financial center requires modern infrastructure in such areas as telecommunication and high-speed Internet connections, convenient air and sea transport, modern mass transit and other local transportation system, electricity, gas, sanitation and health systems, and first-class education facilities from kindergarten through graduate school. An efficient financial center also needs advanced legal and accounting firms, hotel and other lodging facilities, modern housing, and well-educated and English-conversant finance professionals and support staff. Visas and work permits for foreign workers should be readily available as well.

(Park 2011, 8)

The question remains whether this reflects a shift in the DS as its catch-up competitiveness strategy changes or a move to a post-DS. I return to this question in the conclusions. A more critical observation is that, despite this commitment, Korea's financialization strategy has had limited success compared to continued advances in other areas of the KBE and compared with rivals such as Singapore, Hong Kong, Shanghai and, indeed, Bahrain.

In contrast, Lee Kuan-Yew had already committed his government to developing Singapore as an international financial center in 1968 and, in addition to time-zone advantages, an entrepôt and entrepreneurial tradition, and English and Chinese language skills, it benefited from two major sovereign wealth funds, Temasek Holdings (1974–) and the Government of Singapore Investment Corporation (1981–). This financial hub strategy was reaffirmed after the Asian crisis to exploit opportunities from continued economic growth in North and Southeast Asia in order to rise up “the knowledge-based value chain” in financial services. The current strategy is to enable Singapore-based financial institutions to service foreign businesses investing in Greater China, finance Chinese enterprises, and manage offshore Chinese wealth; and offer Indian businesses high-quality legal, technology, and financial infrastructure to assist their fund-raising and overseas expansion efforts. Further, Singapore-based institutions would intermediate economic recovery in Southeast Asia by financing or underwriting the risks of investing in companies and countries in the region (cf. Economic Review Committee 2002).

More recently still, China has been pursuing a gradual, stepwise internationalization of the Renminbi as an international currency that may eventually rival the US dollar and has established the Asian Infrastructure Investment Bank to challenge the World Bank and Asian Development Bank. In addition, the State Council unveiled a nine-point capital market reform plan to develop and internationalize its financial sector. Relevant measures include the creation of a China (Shanghai) Pilot Free Trade Zone in September 2013, linking the Shanghai and Hong Kong stock markets to permit cross-border investment, deregulating futures markets, and making it easier to float shares and issue local government bonds. Financialization is a crucial aspect of China’s new economic strategy.

## Conclusions

My chapter has critiqued the DS as a theoretical and policy paradigm and suggested an alternative approach that addresses the issues that prompted these paradigms. This alternative may enable a rapprochement between those who claim that neoliberalism has superseded the DS and those who argue that the latter remains essentially unaltered. I introduced an alternative state- and regulation-theoretical framework that is relevant not only to the coexistence of Atlantic Fordism and East Asian exportism but also to new or adapted strategies following the crisis of Fordism and exportism and the contagion effects of the North Atlantic Financial Crisis. These new strategies are the KBE (or creative economy) and financialization, each of which

involves, in different ways, dissolution-conservation effects in the DS, that is, discontinuities within a broader framework of continued commitment to catch-up competitiveness. It is interesting to note how strategies are framed in terms of more general economic imaginaries but adapted to local conditions through recontextualization and rearticulation with past structures and strategies. As the horizons of catch-up competitiveness change, so do the discursive, institutional, governance, and policy conditions needed for success. But, in light of the preceding remarks, I suggest that we are witnessing shifts in the DS rather than a transition to a post-DS. The changes reflect shifts in the horizons of catch-up competitiveness, corresponding forms of governance, and new alliances, not the fundamental goal of catching up. In this case, the general principle that, *plus ça change, plus c'est la même chose*, seems to hold.

### Notes

1. In the tradition of enlightened despotism, the *right to rule a state* carried with it the *duty to develop it* for the common good.
2. Andrew Hamilton, the first US Secretary of the Treasury, developed a plan to industrialize the United States that deployed the same theoretical arguments then current in Continental Europe. He advocated bounties and incentives to manufacturers to be financed from the tariffs imposed on imported manufactured goods (Hamilton 1791).
3. Two other sources of demand are public sector investment in a closed economy (e.g., rearmament) and demand from the agricultural sector (Kaldor 1971).
4. More detailed historical analyses would also need to consider the role of land reform at the cost of large landowners, especially in South Korea and Taiwan.
5. This section draws on Jessop (2005, 2015).

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## CHAPTER 3

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# Beyond Embedded Autonomy: Conceptualizing the Work of Developmental States

*Fred Block and Marian Negoita*

In this book, Bob Jessop looks at developmental states from the outside; his project is to situate them in terms of larger historical trends from the nineteenth century down to the present. The perspective of this chapter is different; our goal is to look inside developmental states to try to understand how state actors are able to encourage private actors to develop key technologies and to make critical investments. In short, we are trying to specify the conditions that allow some state agencies to be developmental.

Evans' (1995) book, *Embedded Autonomy*, was the last major advance for the literature on developmental states because it addresses this question of why some government officials and not others were effective in pursuing developmental policies. Evans argued that state officials need some of the critical aspects of Weberian bureaucracy to insulate them from outside pressures; this was the reason he emphasized "autonomy." But he simultaneously stressed that these officials must be directly engaged with the networks that link entrepreneurs and technologists in particular industries. "Embedded autonomy" was meant as a kind of paradoxical description since embeddedness and autonomy pull in different directions. But Evans' point was that successful state actors are those who manage these conflicting pulls.

Evans' account, however, did not give the reader a good sense of the "how" of this; he tells the reader little about the specific practices that these state officials use to engage effectively with technologists and firms. Fortunately, over the last two decades, an expanding literature on developmental states has given us considerably more data to work with. At this point, it should be

possible to extend and deepen Evans' line of argument to get a better sense of the "how"—the specific things that state actors need to do to create effective developmental policies. The aspiration of this chapter is to propose a fuller account of what embedded autonomy actually looks like in agencies that have been effective.

The literature distinguishes between two distinct developmental state projects—the task of catching up with more advanced nations and the task of developing industries that are able to compete at the technological frontier. Historically, this distinction has been important because highly centralized government initiatives, labeled as "developmental bureaucratic states" (DBS) (Ó Riain 2004), made it possible for some nations to engage in catch-up industrialization, especially in East Asia. However, in the last three decades, such centralized strategies have become significantly less feasible for a number of reasons. Changes in the global trade regime have made it much more difficult for governments to develop catch-up industries behind import barriers. It follows that even when governments work to create new domestic industries, the firms they help must be ready relatively quickly to compete on the world market (Schrunk and Kurtz 2005). And in almost every industry, the ability to compete globally requires that firms be highly adaptable and have the ability to upgrade their technologies continuously.

In a word, successful catch-up firms increasingly need many of the same qualities that are required by firms that are capable of "indigenous innovation"—flexibility, the capacity to learn, and strong network connections with firms with complementary skill sets. But there is little reason to believe that centralized government initiatives can nurture these capacities (Block and Keller 2011). On the contrary, what Ó Riain (2004) described as a "developmental network state" (DNS) is indispensable for developing these more flexible firms. The DNS is decentralized and involves ongoing collaboration between public agencies and private firms. While the DBS provided firms with financing and other incentives to copy the production technologies of Western firms, it basically established an arms-length relationship between government agencies and private firms and this tends to be ineffective when entrepreneurs must overcome continuous technological challenges.<sup>1</sup>

We see this clearly with the example of Chile's state initiatives designed to create globally competitive firms in agro-industries including salmon farming, wine production, and specialty fruits. In each of these cases, the Chilean firms not only had to catch up with global production techniques and efficiencies, but the strategies that the state used followed closely the DNS model. Decentralized government agencies worked to recruit entrepreneurs, train them, connect them to the technologies they needed, help them build effective networks that included financial support, and work with them on an

ongoing basis to solve problems (Negoita and Block 2012). For this reason, we think the requisites for effective developmental state initiatives are now similar whether the goal is catching up or indigenous innovation.

Our argument will be presented in four parts. The first will take on the concept of autonomy and attempt to further specify the dimensions of autonomy that are most important. The second looks more closely at the concept of embeddedness and explains what we have learned about what forms of embeddedness are most fruitful for state officials. The third part describes how state actors within embedded autonomy can operate as public entrepreneurs driving the development of new industries. The last part is a conclusion.

### Autonomy

In Evans' (1995) framework, the key aspect of autonomy is that it protects government officials from being captured by the interest groups with whom they are working. Capture increases the likelihood that the resources that the state has allocated for developmental projects will simply be absorbed by existing firms and would-be entrepreneurs who have no real intentions of doing anything new or different from their ordinary practices. This lack of autonomy can sometimes be coded as corruption, especially if state officials receive some kind of personal *quid pro quo* for providing state resources. But it can also occur simply because the officials do not have any effective leverage on business officials to change their standard practices. So, for example, during the Clinton administration, the US government used a partnership with the auto industry as a way to get the big three auto companies to develop more energy efficient vehicles. Even though funds went to the auto companies, those firms made little progress in moving toward more energy-efficient vehicles. Instead of the actual matching funds the firms were supposed to provide, they simply pretended that ongoing research efforts fit the agenda of the new partnership, and the government officials administering the program were not able to discipline the firms for this pattern of noncooperation (Sperling 2001).

Two critical aspects of autonomy are that public officials not be captured by industry and they have the authority to discipline the firms they are working with by withholding funds when the business firms are not meeting their obligations. It is possible to further specify this dimension of autonomy as "organizational autonomy"—the actual parts of the state that are engaged in developmental policies need some degree of insulation from the lobbying efforts of firms and politicians who are trying to appease constituents or donors.

Organizational autonomy explains why effective developmental policies have often been housed in small and relatively marginal government offices (Breznitz and Ornston 2013). Such offices can operate “under the radar”; they escape the kind of close scrutiny to which more central government offices are subject. The classic example in the United States was the Defense Advanced Research Projects Agency (DARPA) created in the aftermath of the Soviet launch of Sputnik in 1957. From the start, the agency was given a mandate to operate independently of the Joint Chiefs of Staff who had historically controlled Pentagon procurement projects. The mandate also included freedom from the Pentagon’s notorious bureaucratic controls; DARPA could hire program officers who were given considerable autonomy and discretion.

Analyses by Ó Riain (2004) and Breznitz and Ornston (2013) show similar patterns where relatively small and marginal agencies have been effective in implementing developmental policies. Ó Riain’s argument also highlights the fragility of these arrangements. As awareness of the Irish “high-tech” success spread, the autonomy of these smaller agencies was diminished as more central bureaus sought to gain control of activities that were getting positive publicity. The result was an expanded use of various performance measures that discouraged the kind of risk taking that had earlier produced technological rewards (Ó Riain 2011).

This is not to suggest that large and central government agencies can never be successful in pursuing developmental policies. The Departments of Energy and Commerce in the United States have a long history of proven successes, but much of the effective work has been done in offices that are substantially removed from the central bureaucracy. In the Department of Commerce, the National Institute for Standards and Technology is a separate agency with a long and storied history that was able to manage the highly effective Advanced Technology Program for a substantial period of time (Negoita 2011). At the Department of Energy, many of the most important initiatives have been organized through the network of national laboratories including Lawrence Berkeley and the National Renewable Energy Laboratory (NREL). In the case of solar panels, for example, much of the leadership of the decades-long project to bring down the cost of panels was provided by NREL in Colorado (Knight 2011).

### **Cognitive Autonomy**

Organizational autonomy is a necessary precondition for a second dimension of autonomy—cognitive autonomy. Government officials who pursue effective policies need to have some ability to think independently about the technologies they are overseeing. Without this ability, they are unable

to exert any effective discipline over the firms and technologists they fund. For example, technologists often overestimate the speed with which they will overcome the remaining obstacles to scaling up a new technology, so officials need the ability to discount such claims or they will tend to acquire portfolios of innovations that never make it to the commercial sphere.

Cognitive autonomy looms large in the history of DARPA. The program officers who drove the early history of computer technologies were themselves star scientists or engineers who had a vision of where the technology was headed. They also were deeply networked in the relevant technological communities, which meant that long before they started working in the Pentagon, they knew who was doing good work. They could also draw upon these professional networks for advice in evaluating the potential of particular projects.

There is an important but little known precursor to this DARPA model that occurred many years before anyone thought about the developmental role of the state. Samuel Stratton, a physicist at the University of Chicago, was persuaded to come to Washington in 1899 to head the Office of Weights and Measures that was housed in the US Coast and Geodetic Survey. With significant support from the rapidly growing electrical industry—both manufacturers and utilities—Stratton led a successful campaign for legislation that transformed his agency into the National Bureau of Standards (NBS) in 1901. (The NBS was later renamed the National Institute for Standards and Technology.) Stratton was then able to hire other scientists, build laboratories, and create an agency that has played a critical developmental role ever since. While NBS did not provide funding for outside research, its technologists worked closely with industry scientists and engineers to anticipate and solve the multitude of technological challenges that had to be overcome to transform the few hundred central power-generating stations that existed in 1890 into the national electrical grid that took shape by the 1930s. The importance of the agency's role is suggested by the fact that when NBS began, there were no shared definitions of the basic measures of electrical power such as the volt and the watt (Cochrane 1966).

The importance of cognitive autonomy is indicated by one of NBS' main strategies. The agency was careful to avoid imposing standards for fear of invoking the hostility to "big government" that was as much an issue in the United States a century ago as it is now. It worked instead to negotiate standards that were ultimately adopted by professional associations of engineers such as the American Institute of Electrical Engineers (AIEE). This was a clever strategy because in an era in which concerns about monopoly power and collusion were central political issues, direct collaboration between the government and big firms such as General Electric (GE) and Westinghouse

would raise suspicions. But organizations such as AIEE included engineers with key positions at these firms, so the dialogue between NBS and AIEE became an important mechanism through which the industry could pursue the goal of an integrated national grid without any hint of corporate-state collusion.

But NBS could pursue this strategy because its leaders were widely respected in the scientific and engineering communities. They had not just cognitive autonomy but also considerable scientific legitimacy that made it easier to coordinate the development of the national electrical grid, the telephone grid, and the creation of broadcast radio with national reach. While the agency's historical role in advancing these technologies has been largely forgotten, it was recognized at the time. After working for the government for 24 years, Samuel Stratton's next job was to be president of the Massachusetts Institute of Technology (MIT), the nation's most prestigious engineering school.

To be sure, developmental efforts can still be successful when government officials are not star scientists. Even officials who lack specialized training can gain cognitive autonomy over time by focusing on a few specific areas of technology and gaining increasing experience and knowledge. One key skill that can be developed with experience is the ability to detect flawed arguments and wishful thinking and be able to second guess the confident claims of those who are overpromising. Moreover, this kind of technology development process is always uncertain. This means that effective government practitioners only have to guess right on the projects they fund some of the time. Even the people with the highest levels of cognitive autonomy will fund projects that fail.

The importance of specialization for acquiring cognitive autonomy helps to account for an observed difference between mission-oriented agencies and science agencies in their success rates in nurturing new technologies. In the United States, all of the agencies with large research budgets are required to set aside 2.5 percent of their R&D budgets for the Small Business Innovation Research Program (SBIR). When the program was first created in 1983, many government agencies were hostile to it because it restricted how they could spend their funds and it imposed a burdensome requirement to evaluate many proposals from small businesses. But over time, enthusiasm rose because these smaller firms were far more eager to develop new technologies than large entrenched government contractors. Over the years, quite a number of SBIR firms have been successful in developing new products and capabilities (Keller and Block 2013).

But the data suggest that the Defense Department and the National Institutes of Health (NIH) have been more effective in using the SBIR program



than, for example, the National Science Foundation (NSF)—that had initially piloted the idea. This difference is usually explained with the argument that agencies with a focused mission such as national defense or fighting cancer are better able to identify promising new technologies. We suspect, however, that the issue is really specialization and differing levels of cognitive autonomy. At the Department of Navy or at NIH, the people who make SBIR decisions have been able to accumulate enough knowledge that they are able to spot the outstanding applications in certain areas. At NSF, in contrast, the applications cover a much wider range of scientific disciplines and issues, so those making the decisions are more dependent on the referee reports to separate the wheat from the chaff. It seems probable that referee reports are a less reliable way to identify outstanding projects than having specialized knowledge.

### Embeddedness

Our key idea for adding specificity to the embeddedness side of Evans' formulation is the concept of "network failure" that has been elaborated by Andrew Schrank and Josh Whitford (2011). They argue that most new technologies emerge and develop as a result of network collaborations, first among different groups of scientists and engineers working in different organizations (Block and Keller 2009) and then among different firms that must cooperate to bring the product to market. One thinks, for example, of the cooperation among wireless carriers, providers of software platforms, hardware firms and their subcontractors, and the army of application developers, all of whom must be involved for a new generation of smart phones to succeed in the marketplace.

But Schrank and Whitford point out that just as markets and states routinely fail, so, also, can networks. They fail because technologists or firms cannot find the partners they need or those partners lack the competence or trustworthiness needed for successful collaboration. This is where government officials enter the story. Evans emphasized that they must be embedded in these networks of technologists and firms. But Schrank and Whitford help us to understand how their presence can significantly reduce the incidence of network failure (see also Keller and Negoita 2013).

Clearly, one thing that government officials do is that they themselves become network partners for technologists or for new firms, providing them with funding in the early stage of technology development. While venture capital and angel capital can be important in helping new firms get established, the reality is that most private investors have a very low threshold for risk and they tend to stay away from firms in the early stages of

technology development with relatively few exceptions. Hence, public sector funding tends to be extremely important in the earliest stages of the effort to commercialize new technologies.

But this is where the DNS differs significantly from older models such as the classic Japanese DBS described by Chalmers Johnson (1982). In the Japanese case, the main thing that government officials did was to locate firms that were interested in developing specific new products to compete against imports and they provided those firms with access to relatively cheap capital. In this sense, the government officials were dealing with market failure alone since the domestic market was simply not able to support firms willing to take the risk of competing with established global firms. So all they had to do to overcome the failure was to incentivize firms to take on these risks.

But in the current model, providing some initial financial resources is just the first step that government officials take; they recognize that firms are likely to require additional help. So the government officials assist the technologist or the firm with getting the ideas that they need to overcome the technological barriers that they face. This might mean connecting them with one of the government laboratories that has expertise in this particular area, or it might mean connecting them with university-based researchers who are researching related issues. In some technology agencies, firms and individuals working on a particular problem are required to attend workshops where they share their research findings with the idea that collaborations might emerge or someone else's experience could provide a critical spur to try a different strategy for overcoming a particular barrier.

Lester and Piore (2004) argue that government agencies are sometimes able to create what they call "collaborative public spaces" within which technologists from different organizations share ideas. This is a particularly important measure for overcoming network failure since both individual technologists and firms are deeply fearful of losing control over their most important ideas. This fear is an ongoing barrier to establishing effective business partnerships because there is a real danger that the other party might steal one's key ideas and then establish ownership by filing the first patent application. When they are just on their own, business firms have great difficulty in overcoming this barrier and creating effective collaborations.

In fact, in the 1980s, it was widely anticipated that private research consortia would be a key technique for pushing innovation forward. SEMATECH was a consortium started in 1987 to help the US semiconductor industry compete effectively against the Japanese. With initial funding from the government, SEMATECH was quite successful and seen as a model. But once the government funding disappeared, the organization was less successful perhaps because when the business firms were left to work together by

themselves they had more difficulty overcoming their mutual distrust. Significantly, SEMATECH in the 2000s moved back to a model in which public agencies again played an important role. SEMATECH now works in collaboration with the Center for Nanoscale Science and Engineering that is part of the State University of New York at Albany. As argued by Currall et al. (2014), these university-based centers have frequently become the hubs of innovation networks.

There are multiple reasons why these interfirm collaborations work better when there is a public entity involved. First the addition of public resources, whether it is money, equipment, or highly trained technologists, shifts the calculus of firms from a zero-sum game where they have to worry whether they will get out more than they contribute in both ideas and funds to a positive sum game where the probability is high that the final yield will be greater than the firm's initial investment. Second, the presence of public sector officials can discourage other firms from stealing another firm's intellectual property. One way this happens is that in the collaborative process, no firm is allowed to free ride; they all are required to reveal some of what they have discovered through their own research efforts. But sometimes, it is more a question of there being a disinterested witness; it is simply easier to steal intellectual property when the only people involved are the collaborators from private firms.

Public officials can also actively discourage network participants from engaging in violations of trust. In the Pentagon, the people who oversee the SBIR program work actively to connect the small firms with larger military contractors who could incorporate their technologies into weapon systems. They organize events where the highlight is "speed-dating" in which the small firms have half an hour to pitch their ideas to the large firms in the industry. But if one of those large firms were to steal the idea of an SBIR firm without paying for it, the Pentagon practice is that the SBIR application processes are considered formal documentation of intellectual property ownership and the officials would force the large contractor to pay up.

But these public officials do not just help the scientist, the engineer, or the firm to overcome key technological obstacles, they also help overcome barriers to creating an effective business. We know, for example, that at the energy department laboratories, there are entrepreneurial leave programs that are designed to help laboratory employees to start up new firms. At Sandia, the laboratory will cover the health insurance for two years for an employee and his or her family when the person leaves to create a startup (Schrank 2011). The person also gets a promise for that time period that they will be employed again in the event that the new firm does not succeed.

Beyond this, laboratory officials also do what they can to help the budding entrepreneur make the network connections that he or she needs to be

successful. From previous experience, they might connect the firm to a venture capitalist or to a different government office that might be willing to support the firm's work. As the firm grows, they might be able to connect it to people with the management skills necessary to transform a startup into a viable business. They might also help in the search for potential customers for the new product that the firm is developing.

But Schrank and Whitford also make the point that the government officials can also play a key role in assuring that network participants have the skills needed for success. One element of this is validating the quality of the intellectual property held by a new firm. It is notoriously difficult for potential private sector network partners to judge whether a set of technological claims made by a firm is actually plausible. Many significant innovations involve overcoming what was long seen as an insurmountable barrier. So a firm that claims to have significantly raised the power generated by a new kind of battery or the amount of sunlight that can be transformed into electricity is likely to meet with a skeptical response. But government officials can help overcome this skepticism by providing an unbiased evaluation of the firm's technology.

So, for example, there is evidence that venture capital firms in the United States often tell new firms to go through the SBIR granting process. One part of the rationale is that with two or three years of development funding, the new product would be that much closer to being ready for the market. But the other part is that successfully competing through the two phases of the SBIR program provides the venture capitalists with considerable reassurance that the technological claims made by the firm have some validity. The CEO of one SBIR firm that develops energy-saving light fixtures went through the challenging process of procuring the contract to replace all of the light fixtures on a naval battleship. When asked why they took on this project, the answer was that having successfully retrofitted a naval battleship was a signal of competence that allowed them to distinguish themselves from potential competitors in a field where some firms are making exaggerated and unrealistic claims (interview by Fred Block at "SBIR Beyond Phase II Conference," Palm Desert, California, September 2008).

Sometimes government initiatives are explicitly aimed at raising the capacity of organizations across an entire supply chain. The Advanced Technology Program at the Department of Commerce recognized that US automakers were slipping behind foreign competitors in the quality dimension of car production. They initiated a program designed to upgrade the accuracy of machining across the whole auto supply chain, drawing on the capacity of new technologies to make metal parts more precisely (ATP 1998). But this involved spending time and effort helping smaller firms in the supply chain to master the complexities of more accurate machining. The Chilean

government has faced similar challenges in diffusing higher levels of expertise across the firms that it has nurtured in agro-industries such as salmon and wine production (Negoita and Block 2012).

One way to understand the role that public officials play is through the concept of public entrepreneurs. Mariana Mazzucato (2013) has recently drawn attention to the developmental role of government agencies by titling her book, *The Entrepreneurial State*. In using the term, “entrepreneurial,” Mazzucato is emphasizing risk taking. Her point is that neither private firms nor private investors are able or willing to gamble large sums on unproven technologies that will take years of development. Hence, for much of the last century, it has been governments that have footed the bill to nurture and develop radical innovations such as atomic energy, computers, the Internet, solar panels, and a range of different nanotechnologies. She goes on to argue that it is often the case that while it is the government that takes the risks with public money, the rewards often are monopolized by private firms that entered the picture only after the risks had dramatically diminished.

While Mazzucato is clearly correct to emphasize the importance of the financial risk that governments take on by investing in the development of unproven technologies, there is another important dimension to the entrepreneurial role of public officials. This other dimension is based on the idea that effective entrepreneurs are brokers who successfully bridge gaps in networks; in the language of Ronald Burt (1992), they connect across “structural holes” in networks by bringing together people and resources that had previously been unconnected. As Hargadon (2003) argues, Thomas Edison was so successful because he was able to build a bridge between the electrical expertise of his group in Menlo Park and other industries such as railroads, fire alarms, and stock tickers.

In the same way, public officials with embedded autonomy help to build new industries by connecting people with different kinds of resources and by strategizing to overcome some of the bottlenecks and barriers an emergent industry is likely to face. As mentioned earlier, Samuel Stratton at the NBS played this role vis-à-vis the emergent electrical industry by sponsoring scientific work to set standards for various elements of the electrical system and by working to develop a national safety code for electricity. Given common accidents involving electrocution in the early days of the twentieth century, it seems doubtful that the public would have embraced this new technology if questions of assuring the safe use of electricity had been ignored.

Sometimes the entrepreneurial role focuses on raising the skill levels of network participants and potential employees. For example, when a new cluster of high technology firms emerges in a particular area, public officials work to get local institutions to provide potential employees with the technical

skills that are required. As green energy firms began to pop up around Sandia National Laboratory in New Mexico, lab officials worked with local institutions of higher education to set up programs to give people the appropriate skills. This was similar to what DARPA had done in the 1960s when it funded the creation of Computer Science Departments at a number of major universities. They recognized that the new field could not really take off without a critical mass of highly trained people with the relevant skills.

Public entrepreneurs can also help anticipate and overcome bottlenecks. Another classic instance involves DARPA during the Strategic Computing Initiative (Roland and Shiman 2002). Agency officials recognized that the fabrication of new computer chips was a major bottleneck because turning a design into a chip was a costly operation that often prevented graduate students, faculty, or startup firms from being able to test their ideas. DARPA financed a laboratory that would transform any plausible design into a chip without any cost beyond postage. A similar thing happened with the National Nanotechnology Initiative where the government paid for expensive laboratories and urged firms to use those facilities to test their ideas.

Perhaps most importantly, public entrepreneurs are sometimes able to organize bridging institutions that help facilitate ongoing cooperation among different groups within the emergent industry. This often requires a patient and trustworthy individual with considerable persuasive power to overcome the resistance of business firms that are often reluctant to share any information with competitors. These bridging institutions are often critical for helping an emergent industry to alert elected officials to its needs and to develop common strategies for handling shared problems.

## Conclusion

We have tried to flesh out Evans' (1995) concept of embedded autonomy by focusing on some of the successful cases in developmental state policies. But this exercise also suggests that there are many different paths to failure for government officials seeking to engage in developmental policies. Even after more than a half century of experience with these kinds of developmental state initiatives—dating back to the start of DARPA—they are still so little known and so against the grain of prevailing ideologies that even successful programs are vulnerable to losing the organizational autonomy they need or to lose their funding despite strong track records. In the Irish case and with the Advanced Technology Program in the US Department of Commerce, we see examples in which successful programs are not able to survive either because of outright political opposition or because of jealousy by other government agencies (Negoita 2011; Ó Riain 2014).

In other cases, government officials might have the organizational autonomy they need but they are not able to develop sufficient cognitive autonomy to choose promising ways to invest their available dollars. So, for example, we saw that the SBIR program within NSF has had relatively weak results (National Research Council 2008) because program officers are unable to develop the kind of specialized knowledge that helps them to identify the most promising candidates for support. Furthermore, even when government officials have appropriate levels of organizational and cognitive autonomy, they still might not be able to overcome the network failures that block or slow progress in bringing a new technology to the commercial space.

A recent example is the case of developing alternatives to corn- or sugar-based ethanol in the United States. Despite considerable effort and investments by both the Department of Agriculture and the Department of Energy in the United States to accelerate the development of commercially viable forms of biofuel that do not take land away from food crops, there is still little evidence that any of the multiple technologies being pursued can be scaled up to mass production. There have been demonstrations that these techniques can produce viable forms of fuel, including even jet fuel, but so far, there has been little sign that any firm has succeeded with mass production at prices that could compete commercially even if petroleum prices returned to historic highs.

At one level, this result is not altogether surprising. Almost every major biotechnology innovation has taken substantially longer to reach maturity as a consumer product than analysts expected. The blockbuster biotechnology drugs often spend as long as 15 years in the pipeline before achieving commercial success. In contrast to technologies that rest on microchips, those that rest on biological processes take much longer to complete each new round of experiments. Hence, it is not altogether surprising that perfecting a process that uses genetically engineered algae to produce mass quantities of biofuel is more likely to take 15 years than 5.

Nevertheless, it is still humbling to recognize that even when things are going right, the payoff to state developmental efforts can take so long to reach fruition. And then one must add the further problem that has been evident in the US effort to push forward solar photovoltaic technologies. As a consequence of massive US investments, aided by overproduction by Chinese firms, the cost of solar panels has dropped precipitously making them more commercially viable. And yet in the absence of national energy legislation, there remain multiple barriers to the more rapid spread of solar generation. For one thing, despite the rapid drop in the price of panels, the balance of system costs has not seen any comparable price decline. Moreover, local building codes continue to be an obstacle to bringing down balance of system

costs. Furthermore, resistance by electrical utilities has been mounting; they complain that more affluent customers are opting out of the system by generating their own electricity and the requirement that the utilities purchase their surplus electricity is making it harder to finance upkeep of the whole system.

In sum, even when officials in a government have the embedded autonomy needed to drive innovations in the commercial space, strong action by more central government agencies might be required to overcome a range of regulatory and other obstacles to broad take up of those innovations. This is likely to be a less severe issue when the focus of innovation processes is to expand overseas markets, but increasingly developmental efforts will have to focus on simultaneously conquering both foreign and domestic markets. Therefore, the efforts of state developmental officials will also require supportive action by other parts of government.

The point, quite simply, is that while there is ample scope for effective developmental state policies even under the current restrictive global rules for trade and intellectual property, there is no simple recipe to be followed for success. Pursuing these policies is very much an art rather than a science even for those who have considerable scientific knowledge. But the point of this chapter is to try to specify some of the conditions under which policy-makers can learn to be more effective in the way they practice this art.

### Note

1. We see the United States as following the model of the DNS. In this respect, we reject the view of Linda Weiss (2014) that the United States should be seen as a national security state. While Weiss is certainly correct to emphasize the national security origins of many of US policies and institutions, we have two objections to her approach. First, we see the methods used by a developmental state as a specific technology that can be used either for military or civilian purposes. We do not think that the state's geopolitical orientation make a difference in the specific methods used by state officials. Second, we see key aspects of US developmentalism such as the large government role in agricultural innovation and the activities of the NBS as long predating the Cold War era.

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## CHAPTER 4

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# Embedding the Economy: The State and Export-Led Development in Taiwan

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The rise of East Asian Tigers Taiwan and South Korea (hereafter Korea) since the 1970s has supported an empirical claim for the importance of the role of the state in economic development. The chief conventional explanation of postwar East Asian success, also known as the developmental state thesis, focuses on the capabilities of the East Asian states in shifting to export-led industrialization (in contrast to the lack of such state capabilities in Latin America and India) and the emphasis on industrial policies to induce entrepreneurship. This process is accomplished by encouraging firms through the mechanism of finance to enter and compete in targeted sectors (like technology-intensive industries) which they would otherwise not be willing or able to enter.

While the old developmental state has been successful in the catch-up project by maintaining state autonomy, for a country to stay ahead, the state needs to develop a concrete set of ties with the private sector to induce the growth of new firms (the so-called embedded thesis) and develop new innovative industries. Essentially, the new developmental project is about exploring the state-society linkages that are conducive to industrial transformation, such as “embedded autonomy” (Evans 1995), “governed interdependence” (Weiss 1998), or the “developmental network state” (DNS; Ó Riain 2004; Block 2008; Block and Keller 2011; Negoita and Block 2012). The transformation often requires decentralized and more flexible state policies and flexible firms to respond and adapt to the rapidly changing global environment and to develop cutting-edge technological capacities continuously in order to stay ahead.

The rise of Taiwan's information technology (IT) sector can serve as an empirical example of one variety of the embeddedness thesis, where the state creates a new class of entrepreneurship and moves up the technology ladder to compete successfully in the global market (Breznitz 2007; Chu 2007; Wang 2010). Despite Taiwan being a showcase of the DNS, the specifics of how this kind of embeddedness works remains unclear under analysis. Many of the narratives center on the leading public research institutes, such as the Information Technology Research Institute (ITRI), in acquiring and researching frontier technologies and transferring them to the private sector. This implies a top-down approach of capability building (Breznitz 2007). Alternatively, analysis focuses on the dense policy networks and the reengineered bureaucracies in building high-tech economies (Chu 2007), thus producing information that is more about government than about the economy.

This chapter reexamines the developmental state thesis by revisiting Taiwan's export-led development since the 1970s. It does so by investigating how the state has assisted firms to successfully compete in the global market and assert themselves in the global value chains. Building on the notion of the DNS (and the embeddedness autonomy thesis), this chapter illustrates the unacknowledged but widely practiced model of loosely coupled Taiwanese para-state agencies coordinating with a series of small and medium enterprises (SMEs) to establish the quality and technical capacities needed to succeed in the global market. Attention is focused on the para-state institutions that serve as the institutionalized linkages (which I define as "embeddedness") between the state and the economy. Moreover, going beyond the well-studied IT sector, I show that this pattern of institutionalized linkages between the para-state agencies and SMEs was prevalent at the onset of export-led industrialization when the state built infrastructures for an export-led economy (when facing a decentralized SME sector) and has continued in its subsequent quest for SMEs' industrial upgrading since the 1990s.

This chapter is organized into three parts: I first revisit the competing arguments on Taiwan's export-led development to establish the context for studying export. I then unpack the specifics of "embeddedness" via studies of export-led development using case studies of para-public agencies, including the Metal Industries Research and Development Center (MIRDC) and the China External Trade Development Council (CETRA) in the 1970s in building the infrastructure for export-led economies in an attempt to open the black box of "doing export." I demonstrate how these initiatives in addressing collective needs such as testing and standardization programs are relevant for understanding the upgrading of the SME sectors in the 1990s through case studies of industry-specific research and development (R&D) centers in

the machinery sector, as well as the initiatives that facilitated the intricate embeddedness between the decentralized loosely coupled network of state agencies and the varieties of networks of producers and suppliers in the quest for upgrading.

### **Existing Accounts of Taiwan's Export-Led Development**

The key feature of the East Asian developmental state (sometimes called developmental bureaucratic state) focuses on the state's capacities to foster entrepreneurship via financial incentives to induce firms into sectors that they would otherwise not enter and to discipline firms to channel funds into targeted sectors and productive use. Empirically, this has been achieved via exports. The state's ability to push industrialists to export-led industrialization distinguishes the East Asian developmental state from other developing countries, like India; for engaging in export is bound to be more difficult than maintaining a domestic monopoly (Chibber 1999). For instance, the Korean state's power stemmed from its control of allocation of credit and by providing concession loans and credit to push the private sector to actively engage in export during export-led industrialization. Should firms fail to meet performance standards, sticks such as tax penalties, calling in loans, and revoking import licenses were employed (Amsden 1989; Woo 1991; Evans 1995, Kim 1997). The policies developed a class of large conglomerates to compete head to head with multinational corporations (MNCs) (Amsden 1989). In other words, export building was closely associated with the state's capacities to discipline capitalists.

Yet, Taiwan stands as an interesting case when compared with its successful developmental neighbor states. The state used fewer financial incentives in inducing firms into export; instead, policies for export drive were mostly fiscal incentives, such as tariff rebates, tax breaks, and export subsidies, as opposed to sector- and firm-specific incentives like the firm- and industry-specific loans in Korea (Cheng 1990; Wade 1990). Instead of fostering a class of large industrialists to compete internationally, the Kuomintang (KMT) state resumed a direct role in industrialization through state enterprises in the upstream industries, which served as providers for the downstream SMEs, a role that Wade calls "governing the market" (1990). Moreover, the ethnic cleavages in Taiwan favored policies that would fragment business and disperse economic power that would otherwise consolidate the social base of state legitimacy (Gold 1986; Cheng 1990). The historically aloof relationship between the state and society resulted in a distinct dual economy during the export-led industrialization of the 1970s and 1980s. A highly decentralized segment of SMEs fiercely competed in the downstream export sector while

business groups and state enterprises occupied the domestic and oligopolized upstream sector (Wade 1990; Chu 2007).

The presence of the SMEs in the export sector, which went against the experience everywhere else, creates a puzzle that motivates this research. How did SMEs connect to the world market while traditionally it is assumed that large firms could better meet the transaction cost of participating in international markets? As Wade acknowledges in his book, little has been said or research done on this subject (1990). In the few works available, the consensus points to the view that the success of the SMEs in the export sector was independent of the state. For instance, Feenstra and Hamilton (2006) attribute the export-led industrialization to a demand-responsive phenomenon led by US retailers and trading companies outsourcing in East Asia, which occurred independently of the state. In this view, varieties of original equipment manufacturing (OEM) arrangements in which Taiwanese suppliers manufactured products according to foreign buyers' specifications and blueprints connected the Taiwanese SMEs to the world market (Gereffi 1994; Gereffi et al. 2005; Feenstra and Hamilton 2006). Thus, the SMEs learned by doing OEM and gradually moved up the value chains.

The buyer-driven thesis may well explain the individual success of the leading firms, yet it remains puzzling how numerous SMEs acquired the capacities needed to succeed in exports in a context of decentralized industrialization where all the parts to be assembled in a product had to reach the quality for export. It is one thing to talk about imitation and quick response as a source of learning; but to succeed in the international markets could be a daunting task for firms in developing countries. Just think of meeting the rigorous requirements and regulations that advanced countries enforce upon imported goods. The question becomes more intriguing by situating ourselves in Taiwan in the late 1960s, when export was about to begin. Compulsory nine-year education began in Taiwan only in 1968, and vocational training at the high school level had only recently been extended. There was a lack of coherent science education policies as the government debated whether the focus should be on elite education or a more broadly based education that would focus on technological development (Greene 2008). The main arm of the state in coordinating industrial development, the Industrial Development Bureau (IDB), was established only in 1969. But already by 1969, an export boom related to light industries had taken off. How, therefore, did a series of Taiwanese SMEs acquire the technical capacities needed for export and establish economies of trust with foreign buyers in the early 1970s?

Given that export-led industrialization has been vital for understanding Taiwan's postwar development, the way in which SMEs connect to the world

market needs to be studied and explained beyond macro-industrial policies. Wade acknowledges the limits of using industrial policies as an explanatory variable, and his remarks illustrate the complexities that developing countries have to handle in order to succeed in exports:

Government must recognize that successful exporting of manufactured goods to richer countries is not just a matter of getting the exchange rate right and keeping labour cheap, even in the absence of protection. This is because many kinds of manufactured exports to richer countries are only saleable as complete packages meeting all buyer specifications, including packaging, labelling, colors, raw materials, finishes, and technical specifications . . . Thus, marketing, transformation of information, and quality control turn out to be key activities for export success.

(Wade 1990, 362)

Second, studying exports is also theoretically important. Export activities can be relevant to understanding the state-building process and state-societal alliances for latecomers. Chibber (2003) argues that export serves as an incentive structure for large capitalists to accept a strong disciplinary state in Korea. Therefore, if export-led development is an important element in understanding the East Asian developmental state, and if the state-centric thesis is to have explanatory power, it needs to demonstrate how the East Asian states escort firms in their entry into the world market and the forms of embeddedness that demand detailed scrutiny.

Drawing on over a decade of interviews with SMEs in the machinery sector, senior engineers in the public research agencies, relevant government officials who were involved in export promotion in the 1970s, and the first generation of entrepreneurs succeeding in export, together with reports from public research centers, the following case studies open the black box of doing export in the 1970s and show how entrepreneurs and engineers worked together to solve collective problems and build the technical capacities needed to succeed in export. The experience of the bicycle industry is used extensively to illustrate the export drive in the 1970s. Bicycles were one of the first and key export items in the 1970s, and the organization of the industry resembles the industrial structure of Taiwan's SME-based export-oriented industries on the whole. I should make it clear that these initiatives in the 1970s were not only limited to bicycles, but were applicable to many other export-oriented industries. I show how the specific patterns of a DNS coordinating a decentralized economy as discussed in the 1970s were prevalent in understanding the transformation in the machinery sector, which was dominated mostly by SMEs in the 1990s. Examples from the machine tool industry, the bicycle

industry, and the auto parts industry in the machinery sector are used to illustrate the upgrading process since the 1990s.

### **Establishing a Quality Regime: The State, SMEs, and Exports in the 1970s**

The export boom of light industries, such as apparel, household appliances, umbrellas, toys, shoes, hand tools, and bicycles, took off in the late 1960s. For instance, in the case of bicycles, the number of bicycle exported went from 17,000 in 1968, to 107,000 in 1970, to over one million in 1972, and the main destination was the United States. Many entrepreneurs responded to the sudden surge of US demand and the number of firms almost doubled (from 279 to 447 firms) from 1971 to 1975. Most were small in scale, with over 95 percent of the firms having fewer than 100 employees (Hsieh 2011). It is puzzling how these firms mushroomed in such a short time. Yet with the rapid response to demand came shabby products, mounting recalls, and trade disputes in the early 1970s. Many US stores were refusing to sell/repair bicycles from Taiwan by 1973. Together with the mounting trade disputes, a potential market failure was arising. However, despite a setback in 1974 and 1975, bicycle exports increased on a yearly basis, reaching almost three million bicycles in 1980, and ten million in 1986.

How did these SMEs respond to demand rapidly and sustain it after a potential market failure? Conventional accounts focus on the quick response of entrepreneurs to the sudden surge in US demand (Hamilton and Kao 2010). The gradual improvement in quality was achieved simply by buyer pressure and effort to implement quality control, which was in part achieved via learning from the buyers. Proponents of the state-centric theory suggest that the quality inspection scheme introduced by the state whereby all goods had to pass inspection before being exported boosted the image of goods from Taiwan (Wade 1990; Egan and Mody 1992; Chu 1997). However, neither approach explains how technical capacities were gained to meet export requirements given that bicycle production in Taiwan at that time involved numerous small assemblers and parts suppliers, and this would have generated daunting tasks and high transaction costs for a potential buyer.

Using the concept of the DNS as coordinating a decentralized industrialization process, I show that the state was instrumental in building the hidden infrastructure of the export-led economies. It not only enforced the quality inspection scheme that boosted the national image of goods made in Taiwan, thus establishing economies of trust between foreign buyers and suppliers, but also assisted in building the technical capacities of the SMEs. In other words, the state mitigated the potential problems that could occur in



decentralized production, such as issues of trust and lack of competence, as discussed in the emerging “network failure” literature (Schrang and Whiford 2011). MIRDC and CETRA are cases in point to illustrate the state’s efforts in building the hidden infrastructure of the export-led economies via standardization programs, the quality control inspection scheme, and varieties of export promotion services that alleviated barriers for SMEs to enter the world market in the 1970s.

### ***Standardization and Capability Building for Export: The Case of MIRDC***

MIRDC, established initially by the United Nations and Taiwan’s Council for International Economic Cooperation and Development (CIECD) in 1963, aimed at promoting the growth and technological development of the metal and metal-related industries. It became a state-funded research institution in 1967, entrusted to the Ministry of Economic Affairs (MOEA), to provide services and technology training to Taiwan’s manufacturing firms, especially SMEs in the parts sector. MIRDC was assigned to the IDB under the MOEA to survey the general state of Taiwan’s machinery sector in the early 1970s. Problems such as lack of interchangeable parts, lack of economies of scale, lack of workable standards, and poor quality were identified and noted as common problems within various industries in the machinery sector. The bicycle industry was among those studied and soon came to the attention of officers of Bureau of Foreign Trade (BFT) since it was one of the rapidly growing export suppliers but with mounting trade disputes (MIRDC Report 1983).

The bicycle industry consists of an assembling sector and a parts sector that produces over one hundred components. In the context of Taiwan’s decentralized production in the 1970s, assemblers acquired parts from various suppliers and assembled complete bicycles for export. At the same time, parts suppliers were not tied to any one particular assembler. The sudden surge of US demand propelled many to engage in bicycle ventures. As one interviewee expressed, “The export orders were like swarming bees, but there was not enough parts” (Interview Chou 2004). Other interviewees stated that to respond to the demand, they asked people around them to start businesses: “We kept asking parts factories (small auxiliary workshops at the time) to produce bicycle parts: ‘You do this and he does that’ . . . that was how we started” (Interviews Mady 2004; Hsu 2004). Yet, the aforementioned problems in the machinery sector were present in the bicycle industry; and a potential market failure was emerging as either orders were not being delivered on time because of shortage of parts or the poor quality of parts, bicycles were

being returned by US customs because of poor quality, or parts suppliers were suffering from phony deals and their production was accruing excessive inventories (Interviews Chou 2004; Chien 2003). Sporadic efforts were made by entrepreneurs (assemblers) to develop blueprints and convince their parts suppliers to follow Japanese Industrial Standards (Interviews Hsu 2004; G. Hsu 2004). In the end, the mounting trade disputes and recalls led to government intervention.

The solution the government decided upon was to improve the quality of bicycles, especially in the parts sector. In 1971, the BFT engaged the MIRDC to work with the industry. According to a former MIRDC engineer who was in charge of the bicycle project, the initial plan was to focus on improving the processing and manufacturing methods, standardization, and quality control, and to teach the firms how to do inspections and verify their components for mass production. In particular, given the same component could be produced by several suppliers in a decentralized SME network, the standardization program was the first priority because all components had to be interchangeable and fit into a bicycle when they were assembled together (Interview Chiang 2010).

Thus, a key element for standardization was to set their own industrial standards, which later became the new revised Chinese National Standards (CNS). The former MIRDC engineer in charge of this Bicycle Assistance Project recalled their standardization efforts and how they worked with bicycle manufacturers at that time:

For example, we were trying to understand where our standards should be. We looked at the Japanese Industrial Standards (JIS), the US Standards, German Industrial Standards, and integrated them and came up with our standards. For instance, the JIS is very detailed. It tells you the exact tolerance and how you verify, sample, and inspect. The European and American Standards are mostly consumer standards, based on performance and function. The US standards did not care whether your nuts and bolts are interchangeable. It does not give you the details of size and tolerance or individual parts specification unless there is a safety issue involved. But we [i.e., Taiwan] were not up to that level yet, so we opted for a very detailed one. Our standards specification would tell you how surface treatment should be done, how one does electroplating and heat treatment. We specified them individually. So our foundation is established based on JIS. At that time, the bulk of our efforts was devoted to standardization. All the nuts and bolts for bicycles, for instance, like for the bottom brackets, we would suggest them to follow this standard . . . Then, the next question arises: one may then ask, how did one know if they had done it correctly [even] if they had followed the spec? We then showed them how to make gauges based on these standards and told them to follow this

to verify and enhance precision before it went to production. It was about standardization. We spent a lot of time on this. We also taught the assemblers how to do quality control and inspection of parts makers, and they would follow this standard. The problem at that moment was about standardization, not product development.

(Interview Chiang 2010)

Thus, technical learning by Taiwanese SMEs began in this way—learning about specs, learning about making the right blueprints, and learning how to verify one's own design and product.

In fact, developing a workable industrial standard dominated the discussion among the various actors involved in exports in the 1970s. The outdated CNS (established in the 1940s) made it impossible to work with the export-oriented sector in the early 1970s, as seen in bicycle exports. Compulsory inspection for certain goods for export had existed since the 1960s to ensure they met the CNS. Items that received disproportional buyer complaints were subject to inspection. Yet, the lack of appropriate industry standards (especially for parts) dominated the discussions in the meetings between bicycle industry representatives and the Bureau of Inspection and Quarantine Control in 1972, when the government first implemented export inspection on complete bicycles. Industry representatives challenged the government's standards as being outdated and thus called into question the basis of the inspection scheme. Assemblers also pointed to the poor quality of the parts as the problem and suggested extending the inspection of parts, establishing standards for parts, and improving quality and the interchangeability of parts (Interview Chou 2004; *United Daily* 1972/11/20; 1972/09/10; 1972/11/10; 1974/3/22; 1974/12/23).

The MIRDC played a crucial role in developing the architecture of the export inspection scheme, as can be seen in the case of bicycle exports (especially on the standards and testing of parts). The aforementioned standardization initiatives worked hand in hand with the export inspection schemes that came into effect in 1976. MIRDC worked with the Bureau of National Standards to come up with specifications for export inspection based on their prior knowledge through working in the industry. It worked with the Bureau of Inspection and Quarantine Control to execute and evaluate the inspections of items like bicycles.

The conventional narrative goes that the export inspection scheme enforced by the government since 1976 has helped to establish market order and boost the image of goods coming out of Taiwan. Yet, it is plausible to argue that the institutionalization of the export inspection scheme provides an institutionalized basis of technical learning that extended to all

firms. Here, MIRDC served as an important instrument linking the state with the export-led economy. It helped collect information and assisted in the state-building process when Taiwan tried to strengthen its export trade promotion and establish a quality regime, as can be seen in the case of the export inspection scheme. The export-merchandise inspection scheme maintains that merchandise in five broad categories (textiles, electronics, electrical appliances, processed foods, and specified miscellaneous items such as toys, shoes, bicycles, machine tools, hand tools, hardware, and household appliances, etc.) have to pass inspection before export (United Daily 1976/03/13; MIRDC Report 1993). A quality grading system on export factories was introduced whereby export factories must apply for a grade: factories scoring below the minimum are not allowed to export, whereas factories scoring above the minimum are classified into three grades according to their level of quality control. The products with scores in the top grade are exempted from inspection and can be exported directly (Wade 1990). In the case of bicycles, the abovementioned revised CNS became the basis for the export inspection scheme, as happened for many other industries in the machinery sector for which the MIRDC helped to reformulate the CNS. The MIRDC was entrusted to conduct lab testing in various machinery products and parts, such as bicycle parts, valves, hand tools, hydraulic jacks, and milling and lathing machines.

In addition to standardization initiatives, the MIRDC provided varieties of industrial training and extension programs that helped to develop the technological capacities of the SMEs, especially in the parts sector, including on-site problem-solving visits, manufacturing extension programs to SMEs, and seminars on various manufacturing processes (e.g., heat treatment, casting, and forging) for export-oriented industries, starting with the sewing machine industry in the late 1960s, the bicycle industry, the machine tool industry, the fastener industry, and other metal- and machinery-related industries in the 1970s (MIRDC Report 1983). These initiatives paid off and sowed the seeds for successful exports. The bicycle industry is illustrative: the presence of a dynamic parts sector and the improvement in quality of components meant that Taiwan has developed backward linkages and an indigenous parts sector that allowed Taiwanese assemblers to negotiate with multinationals to increase local content when moving up to quality bicycle production. The industry, thus, bypassed the typical third-world factories that were assembling imported parts in exchange for processing fees. Taiwan subsequently became a key supplier of higher end bicycles as it began to win contracts with the more quality-focused bicycle buyers among the US-independent bicycle dealers who comprise the premium market segment, such as Schwinn and Trek.

### *Export Marketing and Promotion: The Case of CETRA*

In addition to building quality capacities for export, the government assisted SMEs with export marketing. The CETRA<sup>1</sup> was established on July 1, 1970, as a government initiative to promote foreign trade. CETRA is a para-state market promotion agency in which the council consists of a few government officials and the majority of board members are presidents of industrial and export associations in the private sector. Its budget came from the export promotion fund, through which export firms were levied 0.626 percent of their total export value. This gave the organization autonomy and flexibility beyond its being dependent upon government budgets. The founder and former deputy chairman of CETRA repeatedly emphasized this important distinction between CETRA and their Japanese and Korean counterparts, as he noted in an interview:

We modeled from other trade promotion organizations in East Asia like Japan (JETRO) and Korea (KOTRA), which were established prior to CETRA. But I think that we had moved beyond them in the sense that CETRA was part of the initiatives of the state and the private sector, whereas both JETRO and KOTRA belong to the government bureaucracy and thus are subject to government budgetary constraints. Their staffs are considered civil servants, whereas CETRA is an independent organization. By being independent I mean that our programs could be more flexible and adapt to the ever-changing world market. Moreover, most of our board directors are industry representatives from various industry associations. By doing so, we have connected all firms in export promotion. In JETRO and KOTRA, initiatives came from the government and expected firms to follow. In contrast, what we had done in Taiwan was that we wanted the firms to take initiatives and CETRA would provide them with the hardware (e.g., exhibition halls and varieties of services) and market information to assist them to succeed in export.

(Interview Mr. Wu 2008)

Thus, from the time of its establishment, CETRA was a public-private initiative that aimed to be flexible and connect SMEs in multiple ways.

CETRA's main functions were to provide information, organize overseas trade missions, and trade fairs as well as to conduct extensive worldwide market research. Existing research has credited its well-developed services when compared with those of other developing countries. These include the detailed computerized database on markets abroad, Taiwanese suppliers, and domestic and foreign buyers, which anyone can access with a minimal fee, and extensive trade information and library catalogues in its office about the available Taiwanese suppliers, aiming at a one-stop source of information about suppliers (Wade 1990). These information and matchmaking services

arguably would lower the transaction costs between buyers and suppliers; just imagine the daunting task for a foreign buyer landing in Taiwan to try to locate numerous SMEs in a decentralized production system.

Huge efforts went into training commodity specialists and collecting market information on both what was being made in Taiwan and the overseas demand for the product. The former deputy chairman reiterated that maintaining an independent organization, one that would be free from political interference, is crucial for them to develop their expertise for export promotion. He makes a distinction between CETRA and the government trade offices:

We can't expect government officers to know about these products. Their main job is to serve the government, not to serve business. And that is why CETRA is a trade promotion agency and we train commodity specialists, whereas the Bureau of Foreign Trade is a trade administration organization, not a promotion one.

(Interview Wu 2008)<sup>2</sup>

CETRA also organized many export promotion missions in the early 1970s to explore potential export possibilities for numerous industries and to conduct market surveys. The tours were organized on a product and industry basis. For instance, many of my interviewees in the bicycle industry went on the initial study and promotion tours. CETRA also offered a variety of trade promotion seminars and training programs for export personnel in the 1970s when trade personnel were scared in a climate in which doing export was a national sport.

One may argue that these services provided by CETRA could be easily handled by trading companies according to the buyer-driven thesis. The Japanese trading companies were said to have played a vital role in handling about 30–50 percent of Taiwan's exports in the 1970s,<sup>3</sup> which was subsequently replaced by US retailers and many local trading companies. In particular, many small local trading companies sprang up in the 1970s and 1980s, from 2,777 trading companies registered in 1973 to 55,000 in 1985. These small trading companies not only played the role of agent in handling trade, but were often involved in creating entire supply chains and collaborating with US buyers (Hamilton and Kao 2010). Similar remarks were also frequently mentioned in my interviews. Yet, given the small size of Taiwanese trading companies (with an average of fewer than ten employees) and the scarcity of trade specialists in the 1970s, it is plausible that entrepreneurs had also benefited from the various services that CETRA provided. It could be that the market information and overseas trade missions and fairs organized by CETRA had lowered the entry barrier for entrepreneurs to venture into

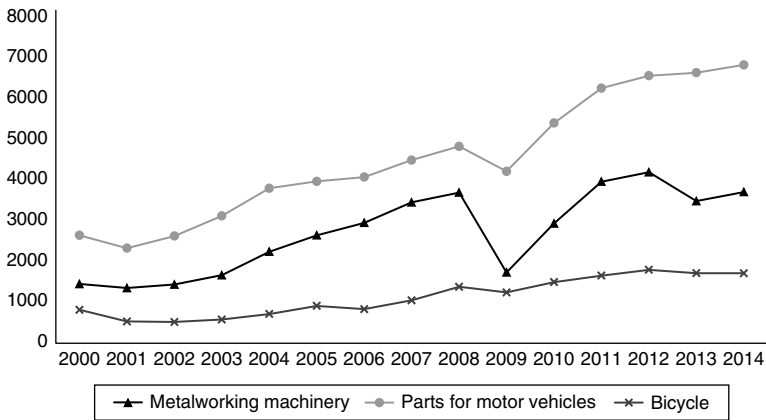
setting up their trading companies, or for small manufacturers to succeed in export. In other words, trade promotion agencies like CETRA served as the hidden infrastructure to induce export-oriented entrepreneurship by disseminating trade-related information and providing external economies that those interested could tap into in the critical period of the 1970s.<sup>4</sup> In fact, many informants concurred that participation in these export promotion tours were useful for them to understand the potential export markets at a time when information was limited, as was the kind of market information provided by CETRA.

It is plausible to argue that these para-public institutions sowed the seeds and provided the infrastructure that explains the dynamism of export entrepreneurship as seen in the export success of the bicycle industry and the proliferation of trading companies in Taiwan. It is unlikely that a small company was able to research and obtain the varieties of information needed for export and to meet the requirements for various designated countries on their own. Access to these services also explains how many small manufacturers were able to export directly on their own instead of depending on large trading companies, as in South Korea and Japan. These initiatives that built the infrastructure of export-oriented economies are contrary to the conventional wisdom of state intervention via finance, upon which the idea of a developmental state draws (Woo 1991). In Taiwan, the state was linked to the private sector through a variety of para-state agencies.

### **The Quest for Industrial Upgrading Reconsidered: The 1990s Onward**

In addition to the celebrated stories of the industrial transformation in the IT sector, various industries in Taiwan's machinery sector, mostly SMEs, have continued to be strong exporters in the global market, contrary to the prediction of a hollowing out of SME-based industries (Hsieh 2014). For instance, export-oriented industries like bicycles, machine tools, and auto parts have continued to be strong exporters, and statistics suggest that the total export values have doubled or even tripped in the last decade, as illustrated in Figure 4.1. Moreover, parts suppliers have been strong exporters by inserting themselves into varieties of global production networks, as exemplified by the increasing export shares of bicycle parts, auto parts, and fasteners. Their adaptation to global competition creates a puzzle given their relatively small scales and low R&D expenditures. This is not to mention that the state support they have received is minimal compared to the targeted high-tech sectors, such as the IT industry.<sup>5</sup>

In what follows, I show that the underlying mechanisms that made the DNS tick in the 1970s have continued to work against the backdrop of



**Figure 4.1** Export value of selected industries (Unit: million US dollars).

Sources: Statistics of Import and Export of Republic of China. Bureau of Foreign Trade. Retrieved May 5, 2015 (<http://cus93.trade.gov.tw/fsci>).

high-tech growth by facilitating industrial upgrading and export for the SME-based machinery sector since the 1990s. The SME experience suggests that broad and overlapping ties were constructed among varieties of lower ranked state agencies, public technology supporting agencies, and varieties of SMEs in advancing industrial upgrading and innovation, following the similar patterns of decentralized coordination from the 1970s. This is contrary to the existing emphasis on the top-down division of labor between leading research institutions such as the ITRI in conducting the lion's share of R&D and the private sector in development and commercialization (Brenzitz 2007; Chu 2007).

This kind of support focuses on an overarching support to solve collective problems, alleviate the R&D burden of SMEs, shorten their learning curves and induce firms to engage in complementary investments in a context of decentralized production. This includes initiatives and technology support that extend to the entire supply chain to ensure technology indigenization and export-diversification growth, to bridge different production networks, and to facilitate cross-industry fertilization as a means of innovation. I use cases from the machinery sector, including bicycles, auto parts, machine tools, and fasteners, to illustrate these initiatives.

### *Building Technological Capabilities for Export Success*

The state's effort to develop closer collaboration with industries in the quest for upgrading is exemplified by the IDB's Program for the Development



of Critical Components and Parts in the 1990s. Several industry-specific research centers were established, including the Automotive Research and Testing Center (ARTC), the Bicycle R&D Center (BIRDC), the Precision Machinery Research Development Center (PMC), the Plastic Industry Development Center (PIDC), and the Footwear Technology Research Center (FTRC). These centers are considered public-private partnerships as funding comes from both government and industry. Board members include firm representatives, MOEA representatives, and university professors.

In evaluating the actual operation of the centers, studies have revealed that the services that provide external economies applicable to all firms in the industry work best in assisting firms to move up to a higher segment of trade in the global market, despite the initial goal of developing critical components and parts. In particular, building international accredited independent/professional R&D testing labs has been fundamental in assisting the technology development and export of the SMEs, similar to what the MIRDC did in the 1970s in working with parts suppliers and specialist firms on standardization and testing. These industry-specific R&D centers provide testing and certification of products for the designated markets. (For instance, BIRDC built a database of worldwide industrial standards for bicycles and parts and the respective testing methodologies. Similar cases can be found for auto parts for the ARTC and machinery equipment for the PMC.

R&D-related testing has been crucial for problem solving in complex product development and is, thus, fundamental to innovation. A remark by the PMC's general manager well captures the necessity of the testing in R&D and collective problem solving provided by the center:

Testing helps to reveal the problems of the product we are trying to develop. Once the problem is identified, we can then proceed to find a solution for improvement . . . Of course, big firms also build their own R&D labs with a focus on developing their products. We focus on building a lab to address common needs, such as testing. The SMEs tend to rely on (expect) the industry R&D center to solve collective problems . . . You can consider PMC as a place to incubate technical skills and a think tank for collective problem solving. For instance, we provide training of skilled technicians for new technology, disseminate them and develop new testing methodologies as technology evolves. It is like sowing the seeds.

(Interview Chan 2011)<sup>6</sup>

Testing services by the industry R&D center can also mitigate undue risks because firms can take advantage of the lab's testing facilities without having to invest upfront in testing equipment for something that may not work. This kind of infrastructural support facilitates learning by inducing firms

to explore possibilities for new methods of product development that they would otherwise not undertake (Interviews Chan 2011; Glee 2011).

Moreover, these R&D-related testing services have been important in assisting firms to succeed in diversifying export outlets and move to higher value-added production, as the regulations for advanced countries often involve stringent quality control and standards compliance. The compliance to CE Standards (European Community Marks)<sup>7</sup> for machinery exports and the US Fastener Quality Act in the 1990s are examples of initiatives by R&D research centers to assist firms to overcome export barriers and technology upgrading. The industry R&D centers proactively responded to potential changes in standards of the export market and the respective changes needed for testing methodologies and manufacturing methods to ensure that firms were not shut out of the export market. The senior engineer of the PMC explained their efforts in studying the CE marks for the machine tool industry:

We were both involved in investigating the impacts of CE marks. I was mainly concerned with technical details associated with the changes in the technical standards. But he (the general manager) was quick in bringing to our attention the serious consequence that export firms would be shut out from the EU market if they could not meet the standards. Goods can't even enter the customs. What these new regulations involved are not just technical standards but safety requirements. We used to just think of design in terms of functionality, but now our designs need to incorporate risk management and assessment.

(Interview Huang PMC 2011)

Similar cases occurred in the fastener industry. The MIRDC's testing division took the initiative to study the US "Fastener Quality Act" (Public Law 101-592), which came into effect in 1993, and the CE standards and to inform fastener suppliers of the potential consequences. They explored the new testing requirement, interpreted the regulations, and developed measurements and solutions at a time when SMEs were unaware or adopted a wait-and-see strategy (Interview MIRDC Lin 2013). ARTC engineers maintained that the ability to conform to the US and EU safety standards was crucial for auto parts makers to succeed in breaking into these markets (Interview ARTC 2013).

Having access to industry-specific testing centers in Taiwan means that SMEs, especially parts makers, can tap into the external economies provided by the semipublic research agencies, whereas an individual SME is unlikely to be able to function effectively on its own. These collective problem-solving services, such as testing and standards compliance, alleviate the burdens of SMEs by reducing entry barriers for export and R&D. The result is export

diversification by SMEs in the machinery and transportation sectors. For instance, in the past decade, about half the total exports went to the top five destinations in the aggregated transportation industries, while over one-third of the total exports went to destinations outside the top ten countries. In the machinery sector, over 50 percent of the total export value went to countries outside the top ten export destinations, while the top five export destinations received less than 50 percent of total exports (Hsieh 2014).

### ***Bridging Different Networks and Facilitating Learning***

Public technology support agencies also play an orchestrating role in bridging different networks and resources. They connect SMEs from different production networks and facilitate cross-industry fertilization where innovations and breakthroughs occur through recombination of existing means. For instance, ARTC connected firms in the IT industry with auto parts component makers in pursuing electronic applications on auto components and orchestrated the development (Interview ARTC 2013). Linkages are also made among various industry R&D centers. The PMC initiated a research consortium with other industry-specific R&D centers in developing specialized equipment for manufacturing technology by tapping into others' expertise. In other cases, the BIRDC, working with the MIRDC and other research institutes specialized in materials, explored the application of magnesium material for bicycles.

In a context of decentralized industrial structure, the technology extension services focus on enhancing local spillover effects, integration, and developing technical capabilities of the entire supply chain as opposed to a top-down technology transfer to selected firms. The technology adaptation and breakthroughs often occur at the level of intermediate input (meaning the parts sector) and work upward and downward along the supply chain to create backward linkages. Thus, R&D centers work with SMEs to develop supply chains. For instance, in an initiative to apply hydro-forming manufacturing technologies to bicycle tubes, the MIRDC approached the case by first developing locally built equipment for manufacturing this technology. The MIRDC formed a research consortium and connected firms from different production networks, including materials suppliers, mold-making specialists, processing specialists, equipment builders, bicycle tube makers, and bicycle assemblers. An engineer explains the importance of developing the entire supply chain for the specific manufacturing technology so as to induce further manufacturing applications and adaptation among SMEs:

An equivalent machine imported from Germany is too costly for the SMEs to consider experimenting with this new production technology conventionally

used for heavy industries and apply it on consumer industries... Once we can build the equipment for this manufacturing technology locally at a modest cost that fulfills the functions, we are able to induce others to apply this new production technology. We then broaden the impact of application of this technology.

(Interview Chung 2008)

At the same time, cascading of knowledge goes both ways: the MIRDC engineers acknowledged that they have learned tremendously from these SMEs by working on the project; they had subsequently taken the experience to work with other consumer industries that could benefit from this production technology (Interview Chung 2008).

The technology support institutions work to sustain industrial clusters instead of growing individual firms. The fastener industry, made up predominantly of SMEs, successfully made the transition to become higher grade fastener suppliers for the auto parts and aerospace industries from producing lower end standardized fasteners that face fierce competition from countries with lower wages. The MIRDC was central in facilitating key production technology breakthroughs by working with the entire fastener supply chain and tapping into the decentralized network. The MIRDC first worked with machine-tool firms and fastener-parts makers to develop the required equipment for the advanced manufacturing technology. Subsequently, the upgrading diffused not just among the fastener manufacturers but also to a wide range of auxiliary specialists and equipment manufacturers (Hsieh 2014). Like the case in hydroforming application, once the supply chain for the equipment is established locally, the technology can be widely diffused and extended to different applications.

In a decentralized structure where firms, state agencies, and public research agencies are connected in multiple ways, SME learning started with standardizations and quality control to succeed in the export market. Along the way, varieties of public agencies provided external economies for the firms to tap into to build their technological capabilities. They disseminated technology to induce entrepreneurs to engage in complementary investment. Instead of pursuing cutting-edge frontier research, they employed pragmatic R&D aimed at solving problems, breaking the bottlenecks that the industry faced, and responding to common demands by the industry. These initiatives, in turn, shortened the learning curves of SMEs and alleviated undue risks. These R&D alliances were often about promoting learning as opposed to mutual risk reduction (Mathews 2002). This accounts for Taiwanese SMEs' technological capacities, despite their relatively low R&D

expenditures, and their ability to connect to varieties of global production networks.

The aforementioned cases demonstrate that the linkages that are conducive to learning and export success rest upon routinized interactions among lower ranked officials, engineers of semipublic funded labs, and SMEs where the networks are extensive and the actors are connected in multiple ways. One might question how effective these technology extension services and their collaborations with SMEs are. How can we be sure that these R&D centers are capable of connecting suppliers from different fields since they are not firms competing in the market? This is especially so when the R&D done by elite research institutions such as the ITRI has frequently been criticized for technologies that have no commercial value or are so advanced that cannot be easily commercialized when working with SMEs. In other words, how could these lower ranked, para-state agencies, with much less funding and fewer Ph.D. researchers, be capable of identifying partners for product developments and capability building? Engineers in these technology supporting agencies credit the varieties of industrial training, problem solving, technology extension services, and testing services that they provide as the working ingredients that connect them with SMEs in various industries, especially in the parts sector. In particular, testing services for various industries have helped them build knowledge and gain access to industries (Interviews MIRDC Lin 2013; Kao 2013; Chung 2008). In other cases, the testing services helped them to identify the market trends and industry prospects to feed back to the IDB and the MOEA when discussing or evaluating new government initiatives and grants (Interview ARTC2013). Engineers also point out the fact that they are in direct communication with the owners of SMEs, who are usually directly involved in R&D, thus eager to solve problems and to learn, make these collaborations possible (Interview MIRDC Chen 2013).

## Conclusion

These cases suggest that the state in Taiwan is embedded in the economy via varieties of para-state agencies where diffused and decentralized linkages have assisted the network of SMEs to build technological capabilities needed to succeed in the global economy. These successful initiatives may constitute a very small portion of the government's expenditure on R&D activities and are often invisible, since they tend to be situated in the peripheral offices as projects of the hidden developmental state (Block 2008; Ó Riain 2011). These initiatives are invisible because they build collective goods as opposed

to growing individual firms. In the interviews, individual SMEs often claimed that they did not receive government assistance (in financial terms); yet if the question were rephrased to ask whether they used the testing services at the industry R&D center, the answer would be yes. These responses may well capture these invisible initiatives.

Thus, the multiple and overlapping linkages, which tend to fly under the radar, are the backbone of export-led economies by establishing the quality regime (capabilities building), including technical standardization and quality control, which in turn boosts economies of trust between foreign buyers and suppliers. Subsequently, the initiatives have been successful in sustaining clusters, building technological capacities, alleviating SMEs' R&D burden, and averting risks. These linkages cultivate entrepreneurship by reducing entry barriers for export, diffuse and disseminate information, and are conducive to broad-based development, as illustrated in the dynamism of the parts sector. The transformation and export success illustrated here is contrary to the conventional view that the state and the business elite form cozy relationships to generate coherent industrial policies. Yet these under the radar initiatives are equally important as, if not more important than, higher level and formal ones. The diffusion of power also explains why embeddedness does not turn into crony capitalism.

The specific ways in which the state has coordinated decentralized economies, addressing the common problems and not picking winners, have preserved interfirm collaborations and impacted subsequent forms of firms' technological learning. They encourage inter-sector exchange and recombine resources among different networks, which is conducive to innovation and technology diffusion, as illustrated in the industrial upgrading quest in the machinery sector. Lastly, the narratives presented differ from the conventional view of how the East Asian developmental state intervenes to ramp up production for export through financial incentives. Instead, it centers on the institutionalized linkages among lower rank state agencies and public research institutes and firms, an argument that resembles the literature of the DNS in facilitating frontier technology development in advanced countries. The Taiwan experience contributes to the literature by arguing that the DNS could also prevail for late developers at the onset of industrialization in the attempt to correct potential network failures resulting from decentralized production. Here, export making is closely associated with state building, which refers to the capacity of the state to develop linkages with the private sector through varieties of para-state institutions to extract and collect information from producers through routinized interactions so as to build and mobilize a greater level of industry collaboration. These decentralized and institutionalized linkages are what make a DNS tick.

## Notes

1. CETRA was renamed the Taiwan External Trade Development Council (TAITRA) in 2004.
2. Mr. Wu Kuan-Hsiung, the former deputy director of CETRA, repeatedly emphasized the importance of independent export promotion agencies in his public speeches (see Wu 1999, 204).
3. Formal statistics were not available; thus the figures were based on rough estimation and speculation from various sources (Wade 1990, 147; Hamilton and Kao 2010, 133).
4. CETRA's orientation shifted to trade diplomacy and industrial targeting by focusing on diversifying Taiwan's trading partners in the 1980s after Taiwan lost its international recognition (Wade 1990). By then, its significance might have been replaced by the many private trading companies that had sprung up. Still, I maintain my view on its contribution for the critical period of the 1970s in laying the foundation for export development.
5. The IT sector has received many fiscal incentives, such as five-year tax holidays or a 20 percent tax credit against shareholder's income tax; loans at preferential interest rates; a favorable schedule for equipment depreciation and tax deductions; duty free imports of crucial components; R&D matching funds; and exemption from commodity taxes on exports, under the program of ten emerging industries (Chu 2007, 104–105).
6. Similar remarks were made by engineers working in MIRDC and BIRDC.
7. CE marks basically comprise the European safety standards which demand that goods entering the EU meet the requirements of applicable EC regulations and directives. They came into effect in 1995.

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## CHAPTER 5

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# Toward a Platform Builder: The State's Role in Taiwan's Biopharmaceutical Industry

*Jenn-hwan Wang*

### Introduction

Recent debates on the economic role of the state have focused on two major issues: the first is the impact of globalization on the policy effectiveness of the state; the second is the transformation of the developmental states in East Asia due to the double pressure coming from democratization and globalization processes. In the first stream of the debate, some argue that the globalization process has created economic integration and social relations across borders and thus the state's capacity has been largely constrained (Ohmae 1990; Reich 1992). Still there are some scholars who argue that the state's role is transformed rather than constrained, because the state is still one of the major actors in the domestic economy that is responsible for mitigating the impact of global processes against the domestic society (Mann 1997; Weiss 1998, 2005). As Weiss (2005, 346) argues, "if we combine both long-run and contemporary trends, it is difficult to avoid the conclusion that globalization is reinforcing and, in some important respects, augmenting the role of territorially-based institutions." Or in the terms of scaling politics, the state in the globalized world has been de-territorialized and re-territorialized to strengthen its economy's competitiveness (Brenner 1999; Jessop 2002).

In terms of the debate on the role of the developmental state in East Asia, many have argued that the state's role has declined due to the changes of geopolitical environment, globalization processes, and domestic politics (Kim 1999; Dent 2003; Radice 2008; Wong 2005). Nevertheless, Chu (2009) uses

the case of information and communication technology (ICT) industries to illustrate that the “Korean state continues to play a developmental role by providing leadership and arbitrating differences,” and successfully promoted those Korean industries to be the leaders in the world market.

Indeed, the above two streams have recognized the impact of globalization and democratization on the role of the state in the economy. This chapter agrees that the transformation of the state does not necessarily mean the decline of the state; it rather indicates that the state has to adapt to a new environment and readjust itself to a newly globalized world. In the globalized world, the segmentation of the global value chain for a specific industry, for example the automotive, the semiconductor, or the biopharmaceutical industries, which this chapter is focused on, has created a global production network that links firms in various places of the world together to produce a specific product (Ernst 2004, 2005; Breznitz 2007; Wang and Lee 2007). Through these global networks, a new international division of labor has been created that is different from the former North-South division. Now due to the abundance of cheap talent in the developing countries, a new global innovation network has been formed, in which many segments of the innovation works are performed in the developing countries. Globalization of the segmentation of value chains indeed has created new opportunities for the state to adapt to the new environment so as to facilitate its competitiveness in the new world market (Breznitz 2007). As Weiss (2005, 346) observes, “there is strong evidence that in the contemporary period, the growth of the state has gone hand-in-hand with the rise of global corporations and multilateral institutions, and that these contemporary global networks remain intimately entwined with the domestic structures of nation states.”

Thus, the state remains important in restructuring its economy. The question, however, is not whether the state’s role has declined, but how the state has been reformed and transformed to adapt to the new globalized environment. In the East Asian context, the issues also relate to how the states transformed from helping the economies to change from the catch-up to the innovation-based stage, as well as from the labor-intensive to the knowledge-based economy. It is well known that the nature of the innovation-based economy is highly uncertain and risky; state bureaucrats may not have sufficient frontier knowledge in making adequate decisions to lead the economy as they did in the catch-up era. Thus, when developing an innovation-based industry, the state tends to learn the best practice from abroad (Gertler 2001) and transform itself into a *platform builder* that links various actors together to foster the emergence of the industry. We argue that this transformation is an evolutionary process which involves a process of learning and adaptation where the effect of state policy is not ensured due to the uncertain nature

of the innovation-based industry. This chapter will use the Taiwanese state's promotion of the biopharmaceutical industry to illustrate how the state transforms and adapts to a new global competition in facilitating the formation of a frontier knowledge-based industry.

### **Toward an Innovative State**

The developmental state model is well known for its explanatory power in accounting for East Asian catch-up economies. It, however, has difficulty explaining the transition of these economies toward building frontier, innovation-based industries. On the one hand, in the catch-up stage, state bureaucrats have a better knowledge base to build certain roadmaps learned from advanced countries in order to transform the local economy (Johnson 1982; Amsden 1989; Wade 1990). However, in promoting an innovation-based economy, what state bureaucrats can do is to learn the best practices from advanced countries (Gertler 2001) and adapt it to the local institutional conditions. It is therefore a learning and evolutionary process that involves a high degree of uncertainty.

On the other hand, compared with the former catch-up stage when the regime was based on authoritarian rule and state bureaucrats had much higher degree of autonomy to monitor the economy (Evans 1995; Weiss and Hobson 1995; Öniş 1991), the state does not enjoy this type of state autonomy in a democratic regime. The state therefore has to become a supporter and enabler rather than a top-down leader to promote innovation-based industries. In doing this, as Wong (2004) stresses, the state's role in developing highly innovative industries has to adapt to features suitable for these industries: principally to streamline policies among state bureaucracies in order to achieve effective coordination; to build research and development (R&D) collaboration in fostering learning through interaction; and to enhance competition in strengthening innovation (Wong 2004, 495).

In the age of globalization when the segmentation of the value chain has become a world trend, there are multiple entry points through which the states can pursue to build linkages with global networks to evolve into innovation-based industries. As Breznitz (2007, 29) argues, the state can use its science and technology (S&T) policy to pursue innovation activities in individual segments rather than the entirety of a particular industry. In turn, the state can be viewed as consisting of multiple groups of bureaucracy, each with unique capabilities and embedded in society to pursue innovation within those segments. In order to develop those innovation-based industries, Breznitz (2007, 29) also maintains that the state "should focus on motivating private agents to work in these areas and to collaborate with one another

and with the state.” Similar to Wong (2011), Breznitz argues that because the market is not well developed and production is fragmented in the rapidly innovation-based industry, the state needs to develop the capacity to innovate, it “needs to be able to change its role from that of initiator and leader to that of a supporting actor” (Breznitz 2007, 16).

Based on the above views, this chapter further argues that, in order to develop innovation-based industries, the state in advanced developing countries cannot replicate its past successful model that was based on the catching-up approach. Instead, it has to become an innovation facilitator. Specifically, the state should emphasize the creation of an innovation milieu through various S&T policies; moreover, state agencies should also act as flexible facilitating agents, and motivate potential private agents to work and develop broadly defined and open-ended collaborations that facilitate knowledge flows, and induce the formation of multiplexed networks among the domestic and international R&D, financial and production networks.

This type of platform builder, as an innovation-based state, has the following institutional characteristics. First, because the former development state model lacks experience in promoting frontier knowledge and technologies, the state therefore tends to learn the best practice (Gertler 2001) *from external sources*, especially on institutional building from advanced countries to promote innovation. Currently, the national system of innovation (Lundvall 1992; Nelson 1993), the Silicon Valley model (Saxenian 1994), or the national competitiveness model (Porter 1990) have become the classic cases that state officials want to learn. In order to learn from abroad, the *community of practice* is the vehicle for institutional transfer. “Communities of practice are groups of individuals informally bound together by shared expertise and a common problem . . . In essence, communities of practices are seen as the principal mechanism through which tacit knowledge relating to which ‘best practices’ may be spread throughout large, including multi-locational organizations” (Gertler 2001, 18). Therefore, in terms of a specific industry, such as biotechnology, the state not only seeks to find experts from communities of practice abroad, but also asks them to help to build the global-local scientific networks so as to facilitate the knowledge flow and creation. In other words, in order to promote innovation-based industry, the state bureaucracy needs to build multiple ties with industries both locally and globally.

Second, the state uses *resource leverage* tools to promote strategically important industries. The ways in which the state initiates and implements these policies are not very different from those in the former developmental state stage. The major differences lay in the fact that the targeted industries are now innovation based rather than mature ones, and the knowledge in question is related to frontier science rather than technology (Amsden and Tschang

2003). Therefore the state depends very much on the communities of practice to build and to reform institutions to foster the industry to emerge. It is clear that, without injecting abundant resources into the targeted innovation-based industries, the state can hardly attract scientists and private firms into those highly uncertain ventures.

Third, the state has to become an assembler of flexible agents to facilitate the *formation of multiplexed networks* among the domestic and international financial and production networks, and thereby to build up innovation-based industries (Breznitz 2007, 29–31). Different from the former developmental state model, where strong and coherent leadership is necessary, this type of state flexibility is shown in its various state agencies that can act as facilitating agents to motivate private agents as much as possible to develop broadly defined and open-ended collaborations. It is therefore taking the heterarchical or multi-central, rather than hierarchical, form of coordination.

Fourth, the state's promotion of the new innovation-based industry also has the ingredient of *market augmentation*. Although innovation-based industries always involve a high degree of scientific elements, they need to be commercialized in order to become profit-making industries. The state, as in the former stage, had to help the private companies to expand their linkages with the world market and to expand the market share (Amsden 1989). In doing this, the state may facilitate global-local linkages via commercial exhibitions, forming strategic alliance among firms in various areas around the world in order to match or create market demand. In other words, the state's policy is directed at "improving the ability of the private sector to solve coordination problems and overcome other market imperfection" (Aoki et al. 1997, 2).

Fifth and finally, the state's transformation is a learning process that involves *path dependency* features. Indeed, the transformation of the state's role cannot occur in a vacuum and without country-specific contexts. State bureaucrats learn from abroad the best practice and their past experiences to adapt to specific innovation-based industries. Even if there are some degrees of institutional change, many existing elements that have inherited from the past are recombined and reconfigured with new ones. Institutional change, as Campbell (2004) argues, is a process of recombination, referred to as "bricolage," in which existing institutions provide the tool kit or repertoire that actors are able to modify. In this sense, the development of this state form is an evolutionary process that involves learning and power restructuring as well as a trial and error procedure.

In sum, the platform builder view of the innovative state argues that the state is learning to promote innovation-based industries by facilitating the formation of global-local linkages and networks, adapting new institutions

from abroad into the locality, and constructing alliances to generate market demands for the private firms. In doing so, the state may fail and then relearn from past experiences due to the lack of frontier knowledge. As Wong (2011) argues, the East Asian states' pursuit to promote the highly uncertain biotechnological sector is tantamount to making a "bet" in the absence of a clear usable roadmap. The state's roles are mainly to mitigate uncertainty and managing risks. Now, we will analyze the Taiwanese state's transformation in promoting biopharmaceutical industry.

### **Taiwan Insert into the Global Biopharmaceutical Industry**

The process of developing a new drug, from its discovery, to official approval, and to marketing is a long process that may take as long as 12 years. During the past three decades, owing to the molecular revolution, the drug discovery process has dramatically changed, as a result of which the organization of the biopharmaceutical industry has also been greatly transformed (Nightingale and Mahdi 2006; Pisano 2006; Dosi and Mazzucato 2006). With the support of institutional reforms in the United States in the 1980s, many scientists were allowed to establish new firms to engage solely in R&D as well as to sell their research results to big pharmaceutical firms before clinical trials were performed (Dosi and Mazzucato 2006; Pisano 2006). A vertically disintegrated industrial structure was created (Nightingale and Mahdi 2006, 76). Moreover, due to cost considerations, these big firms have strong incentive to outsource their R&D activities to firms inside or outside of the United States, such as those from Israel, Ireland, India, China, South Korea, and Taiwan. This transformation of the global pharmaceutical industry has created a window of opportunity for the late industrializing countries to enter this new science-based industrial arena.

Since the 1980s, there has been a world-wide euphoria about the development of biotechnology, which was regarded as a robust industry that might trigger new industrial revolution. Having been influenced by the global tendency to promote biotechnology, the Taiwanese state also began to regard biotechnology as one of its pillar industries in the early 1980s. Nevertheless, the industry achieved only a very small degree of success before the new millennium (Wang et al. 2012). It was only from the mid-1990s when the state passed the "Biotech Action Plan (1995)" that the state's determination was felt and the biotechnology industry began to take off. Since then, many new science-based firms have been created and a number of new drugs are undergoing clinical trials and are in the process of receiving US patents. The general pattern has been that new small Taiwanese science firms do the R&D and then sell the results to giant global pharmaceutical firms for royalty fees. The

total revenue of biotechnology<sup>1</sup> industries has increased from NT\$110.9 billion in 2002 to NT\$240.3 billion in 2011; among these subcategories, the biopharmaceutical industry has increased from NT\$54.1 billion (equivalent to US\$1.8 billion, with US\$1 = NT\$30) in 2002 to NT\$73.9 billion (equivalent to US\$2.5 billion) in 2011. Although this achievement is not as dazzling as that of the Taiwanese semiconductor industry (Mathews and Cho 2000), it indicates that the state has moved unmistakably ahead, transformed itself, and learned to engage in this highly uncertain and innovative industry. We will discuss how the state learnt to promote this biopharmaceutical industry first, and then discuss why it has not been able to create admirable results.

### **The State and Biopharmaceutical Industry**

The state's transformation from a leader to a platform builder mainly has been shown in the following features: learning the best practice from abroad, resource leverage, formation of multiplex networks, market augmentation, and path dependency. We discuss them, respectively, as follows.

#### ***Learning the Best Practice from Abroad***

The way in which Taiwan learnt the best practice from abroad was mainly by recruiting Taiwanese scientists from overseas back to Taiwan to build the institutional infrastructure and the biopharmaceutical industry itself (Wang 2014). Based on the former successful experience, the Taiwanese state recruited prominent overseas Chinese scientists who would return to Taiwan to facilitate the development of biotechnology. The first one was Dr. Cheng-Wen Wu (吳成文), a prominent specialist in virus oncology who returned to Taiwan in 1988 to serve as the director of the Institute of Biomedical Sciences at the Academia Sinica. The second was the return of the Nobel Laureate Yuan-Tseh Lee (李遠哲), who was then a professor at the University of California at Berkeley, to serve as president of the prestigious Academia Sinica in 1994.

The return of these prominent scientists had a great impact, because they continued to recruit and attract even more prominent scientists to return. The current president (2006–) of Academia Sinica, Dr. Chi-Huey Wong (翁啟惠), who is an internationally renowned specialist in bio-organic and synthetic chemistry, was recruited by Lee to work at the Genomics Research Center in 2000. The social networks of these individuals had a snowball effect and attracted even more biotech people working in the United States both in academia and industry to return. These scientists had a great impact on the



development of biotechnology, and helped to amend many outdated laws and regulations (Wang 2014).

Second, due to the return of these prominent scientists, the state continued to revise its biotechnology policies and make new suitable laws for developing innovation. From 1997 on, the state has held a “Strategic Conference on the Biotechnology Industry” on an annual basis, gathering both local and overseas scientists, as well as firms and state bureaucrats, to discuss issues related to the development of biotechnology. The status of the annual conference has been largely elevated since 2005 when it was singled out to become the “Strategic Consular Committee for Biotechnology” under the Science Advisory Group of the Executive Yuan. More generally, learning from the United States’ Bayh-Dole Act (1980) to release the R&D capability to the industry, the Taiwanese version was passed in 1999 as the “Fundamental Science and Technology Act,” which allowed state-sponsored researches to generate profits for their own benefits. As a result, university professors and researchers are given more freedom to sell their patents to the industry, contributing to a tighter linkage between R&D and industry and thus generating more innovative products for the market.

In addition, the Biopharmaceutical Act of 2007, which is the latest piece of legislation pertaining to the industry, is also the single most important law that has ever been designed for a specific industry. This Act recognizes the fact that developing a new drug is so different from the activities of an industrial manufacturing firm that many tax incentives have been extended to help defer the expenses of R&D activities, to recruit university professors (they were also given a certain degree of freedom to collaborate with private firms), to allow university professors to create their own venture capital firms, and to purchase expensive R&D equipment.

Furthermore, the state’s strategy in promoting the biopharmaceutical industry is also based on creating related science parks to generate a cluster effect in promoting innovation. Taiwan’s learning experience from the United States has been successful in imitating Silicon Valley to establish the Hsin-Chu Science-based Industrial Park. In promoting the biopharmaceutical industry, the state also learns from the Boston Biotech Cluster and the North Carolina Biotechnology Center where frontier innovation in biotechnology is promoted. These clusters are called “the triple helix” model (Etzkowitz 2003), which emphasizes the cooperation among university, industry, and government with a view to generating *interactive learning* that is essential for innovation (Lundvall 1992; Malmberg and Maskell 2002; Bathelt et al. 2004; Maskell 2005). The above cases provide blueprints for the Taiwanese state to build new research-based science parks in the late 1990s, including Tainan Science-based Industrial Park, and Nankang Software Park.

Finally, the state also imitates the United States and sets up the Taiwan Food and Drug Administration (TFDA) in 2010 to streamline the former separated agencies that were responsible for different types of functions on food and drug risk evaluation. Before the setup of TFDA, the evaluation of new drugs, new medical devices, and health technology assessment were done by the Bureau of Food and Drug Evaluation under the Department of Health (DOH). In 1998, DOH established a Center for Drug Evaluation specific for new drug evaluation. In 2010, the state further integrated the original functional units for Food Safety, Drug Administration, Drug and Food Evaluation, and Drug Regulation under DOH into the new TFDA to make Taiwan's institutional framework to parallel with its US counterpart. Regarding the evaluation of new drugs, TFDA further established a new office in 2011, called the Integrated Medicinal Products Review Office (iMPRO) to streamline new drug registration and evaluation processes as to speed up the review time period.

### *Resource Leverage*

The state's financial support for the biopharmaceutical industry is of three types: injecting financial resources to the industry, inducing private venture firms to this industry, and establishing new research institutes. First, since the implementation of the "Biotech Action Plan" in 1995, the state has channeled more financial resources into the biotech industry than it did before. The main strategies have been to subsidize the firms' R&D expenses, provide tax incentives and low interest rates for lending, and induce venture capital to support the biotech industry. The level of state's direct financial support increased from NT\$6.7 billion in 1997 to NT\$21.5 billion (approximately US\$660 million) in 2006, and to NT\$38.5 billion (approximately US\$1.28 billion) or roughly a 5.7-fold increase (BPIPO 2007).

Moreover, besides direct financial support, the state also encouraged private venture capital into this industry to promote new science firms to emerge. The state's actions include using tax incentives to induce capital to invest in biotechnology, channeling venture firms' resources to collaborate with the state's Development Fund to nurture new firms, and encouraging projects that call for collaboration between firms and universities. Take the 2009 Taiwan Biotech Take-off program as an example, the state invested 40 percent of the program's NT\$10 billion in the Biotechnology Venture Capital industry, which was to be executed by a professional team. This indicates that privately owned venture capital accounts for the remaining 60 percent of the public-private joint stake (DCB 2009). In short, the Taiwan state has begun to experiment with a new approach in fostering venture

capital to work with R&D activities without controlling the decisions as to what should be done with the investment. In this sense, the state is creating a platform to generate possible collaboration for new knowledge. In 2010, a total of NT\$1.2 billion was injected into biopharmaceutical industry, composing 6 percent of all investments, as most of the funding still went into the electronics and semiconductor industries (TVCA 2013).

Third, the state established many research institutes to help to construct the industry. As occurred in the former stage, Taiwanese state imitated its successful story of promoting semiconductor industry by creating the Development Center for Biotechnology (DCB) in 1984, with the mission of creating and disseminating knowledge to firms. According to its website's statement, "DCB's mission is to accelerate the development of Taiwan's biotech-pharma industry, by accomplishing the main objectives of building infrastructures, developing key technologies, promoting cooperation and industrialization, and training talented workforces, in coordination with governmental, industrial, and academic institutions" (DCB 2013). However, as many have argued, new drugs are very difficult to develop, even when they had been developed, the new candidate drugs still needed to undergo a long period of pretesting and clinical trials before they could be approved and commercialized.<sup>2</sup> Therefore, the DCB could not function as well to the biopharmaceutical industry as the Industrial Technology Research Institute (ITRI) to the semiconductor industry.

Moreover, in order to face the challenge of the emerging biotechnology industry, ITRI also established a "Biomedical Engineering Center" in 1998, which was later reorganized into the "Biomedical Technology and Device Laboratories" in 2010. Different from pure scientific research, ITRI's biomedical research aims at more applied and engineer spheres as to differentiate itself from DCB, which intends "to capitalize on the Institute's multi-domain engineering expertise, integrating Taiwan's superiority in the fields of electronics, informatics, optical, materials, and high-precision manufacturing" (ITRI 2013). Therefore, it focuses more on biomedical device than on basic research.

In addition, the state also set up many research institutes to facilitate pioneering biotechnology research. The most important initiative was the establishment of the National Health Research Institutes (NHRI) in 1988, which sought to replicate the US National Institute of Health and undertake basic and applied medical research. NHRI's first president was Dr. Cheng-wen Wu. Another case was the establishment of the Genomics Research Center (GRC) in the Academia Sinica. The first director of the center was Dr. Chi-huey Wong, who was elected to be the president of Academia Sinica in 2007. The major focus of GRC's research is to understand diseases

associated with genes, in the hope of discovering and developing new diagnostic tools and therapeutic strategies. The Academia Sinica also established an incubation center in Nankang Software Park to encourage the formation of new science firms in order to link scientific research with industry.

All and all, the state's resource leverage has been intended to facilitate the emergence of the biotechnology industry (Wong 2005). However, there were many institutes that were pursuing and competing for resources. Therefore, how to streamline the competing agencies has been a difficult issue for the post-authoritarian state.

### *Formation of Multiplex Networks*

In the post-authoritarian and democratic stage, the Taiwanese state has lost its centralized coordination capability in decision making. Many state functions have been decentralized and devolved to various state agencies. As Wong (2005) observed in the early 2000s, there were a large number of state research agencies that were doing similar works and competing among themselves for state funding. These agencies include the Academia Sinica, the Ministry of Education, the National Science Council, the Ministry of Economic Affairs, the Council of Agriculture, the Ministry of Finance, the Environmental Protection Administration, the DCB, the ITRI, the DOH, and the NHRI. In order to coordinate these diverse agencies, a task force made up of government officials as well as academic and research-based organizations was formed in 1996 to streamline the work of the diverse units: this was the Biotechnology and Pharmaceutical Industries Promotion Office (BPIPO). However, the BPIPO seemed not to work well afterward, so the problem of incoordination did not really improve. According to Wong's observation, "the model of biotechnology development in Taiwan is akin to a jazz band—several different instruments 'doing their own thing'" (Wong 2005, 179).

By recognizing the chaotic organizational feature, the state once again strengthened the BPIPO's function and assembled all the related departments of the state to form a "one-stop service for the biotechnology industry" office under the Ministry of Economic Affairs to reduce the coordination problems in December 2001. Also, in 2009, the state announced the "Biotech Take-off Action Plan" that aimed to enhance the industrial value of biotechnology and streamline the division of labor among state agencies. This Action Plan decided to form a supra venture capital, promote an integrated incubation center, create the TFDA, and restructure medicine-related laws to fit international standards. Under this Action Plan, the National Science Council is responsible for frontier scientific research, the Ministry of Economic Affairs is responsible for mid-stream industrialization, and the TFDA is responsible

for downstream review and approval mission. All the applications have to go through the BPIPO's "one-stop service for the biotechnology industry" office. It seems that only at this stage, after almost 15 years, that the state has finally accomplished the reassembling work on various state agencies to promote the biotechnology industry.

In the meantime, as many prominent overseas Taiwanese scientists returned to Taiwan, they not only contributed to the creation of the industry, but also linked Taiwanese firms to the global market (Wang 2014). For example, the founder of Genelabs Technologies<sup>3</sup> returned to Taiwan to start Genelabs Taiwan and received investment from the National Development Fund; in 2002, it was renamed as Genovate. This was the first returnee case in the biopharmaceutical industry. Other cases such as TaiGen Biotechnology, which was founded in 2001 by returnees and was dedicated to new drug development, and TaiMed Biologics, dedicating to AIDS New Drug discovery, were also founded by returnees in 2007 and received a large amount of funding from the government (Chen 2008). These newly established science firms have been engaging in exploratory research that targets specific diseases. Once they are able to obtain experimental results either during or before the stage of the preclinical tests, they tend to sell the results to big global Pharmas to gain royalty fees (Tseng 2008). Indeed, these newly emerging science firms have much closer linkages with global Pharmas than they do with domestic firms. This case shows clearly how Taiwanese firms utilize the fragmentation of the global value chain to insert into the global networks.

### Market Augmentation

The development of Taiwan's biopharmaceutical industry suffers from two major related hurdles: the first is the weakness of Taiwan's industrial structure due to its lack of big pharmaceutical firms. Therefore, even when those small science firms developed candidate drugs, they could only sell them to global firms. Secondly, because Taiwan's market size is very small, therefore, even though most of the resources were devoted to frontier research, the products still lacked sizeable markets. China thus became the ideal place to amend the difficult situation. It was with this consideration that the improvement of relationship between China and Taiwan, since President Ma Ying-jeou took power in 2008, had opened the windows of opportunity for the industry to establish the economies of scale. In so doing, the state plays the role of market creator to augment the interest of the industry.

There are two programs that the Taiwanese state has been negotiating with China in order to enhance Taiwanese industry's share in its market. The first one is the "Bridging Program" promoted by the Ministry of Economic Affairs

since November 2008. The purpose of the program is to enable industries across the Taiwanese Strait to work together so that Taiwanese firms would be able to penetrate the Chinese market and Chinese firms would also be able to acquire knowledge from the Taiwanese side. Fifteen industries were selected by both sides, including the development of new drug based on Chinese traditional herbs. The agreement includes: joint development on new products, construct market channels, protect property rights, set industrial standards, build evaluation system and certification mechanisms. Various conferences held by both sides have taken place ever since. Regarding the development of new drugs from Chinese herbs, both sides also signed an agreement that included the joint development of new drugs and assistance for Taiwanese firms to build marketing channels in China's market (Yang and Tseng 2010).

Moreover, via a series of Cross Strait Summits, held annually by both the Association for Relations Across the Taiwan Straits (the Taiwan side) and the Straits Exchange Foundation (the China side), an "Agreement on Cross Strait Medical and Health Cooperation" was signed in 2010. The latter involved many important issues, including public health, disease control, medicine import and export control, and most importantly, helping Taiwanese firms to use the Chinese market to pursue global excellence.

Owing to its enormous size, the Chinese market is one that has attracted the attention of global pharmas. It is especially attractive to Taiwanese firms due to Taiwan's small market size. Therefore, if both sides of the Taiwan Strait are able to cooperate, especially when China wants to build its own new drug evaluation system that is under its own control, Taiwanese firms are going to have a window of opportunity to expand its capability not only in the frontier new drug development stage, but also in the clinical test, production, and marketing stages. There is the hope that both sides would benefit from this arrangement. The Taiwanese state now is helping the industry to realize its China dream and expand its market share.

### **Path Dependency and Its Effects**

As a whole, the development of the biopharmaceutical industry has not been able to achieve as striking a result as the semiconductor industry has done. This may relate to the fact that state bureaucrats are not very familiar with promoting an innovation-based industry. Although the state learnt from abroad and invited overseas Taiwanese scientists to help to facilitate the formation of the new industry, the development of this industry has been difficult and full of uncertainty. State officials tended to follow the methods inherited from the former stage to facilitate the emergence of the industry.

As a result, a path dependency effect was created. The evolutionary process can be shown in the following institutional features.

First, the state tended to emulate successful cases from the past and apply similar approach to the current situation. Thus, we found that, in the first stage of the promotion of biotechnology in the early 1980s, the state still intended to lead the industry to develop as it had done before. It set up the DCB, collaborated with Sanofi Pasteur of France, and created two national champion firms to produce vaccines for Hepatitis B and Hepatitis C. The state still wanted to lead at this stage. However, as neither DCB nor the firms were able to continue develop, the project was ultimately terminated in 1995 (Wang et al. 2012).

Second, although the state learnt from abroad the institutional mechanisms, it still had the legacy of institutional rigidity that lacked the elements of risk taking in facilitating frontier innovation. We can use two examples to illustrate. First, Taiwan imitated the United States and established a venture capital market in order to support the innovative start-ups. However, different from venture capital in the United States, which is willing to invest in the initial stage of innovation when risks are high, their Taiwanese counterparts tend instead to invest in the mature stage when the products are ready to go into the market and profits are predictable. This creates a situation in Taiwan where the 3Fs (friends, family, and fools) predominate in the initial stage of investment in the start-ups (Author interview, Taipei, November 8, 2012). Second, although Taiwan has established the TFDA in order to streamline the review and evaluation process for new drugs, the review process always takes a very long time. This is because state officials lack confidence in approving frontier products; they therefore tend to wait for the USFDA results. As a consequence, Taiwanese firms tend to apply directly to the USFDA and skip the Taiwanese application, or use the approval from USFDA to apply to the TFDA (Author interview, Taipei, December 7, 2012). One informant complains, “although the situation has been improving in recent years, the speed is still too slow. Our TFDA is still too conservative. Our standard also seems to be higher than that of the United States, which holds a more favorable attitude toward the industry. Ours is afraid of making mistakes. Local firms are wasting their time when applying to the TFDA” (Author interview, Taipei, May 8, 2013).

Third, the national system of innovation does not seem to favor linkages of R&D institutes with industries. For example, universities provide little incentive to induce professors or researchers to link up with industries or create their own enterprises (Author interview, Taipei, May 7, 2012). This is because the university's evaluation system for professors is mainly based on academic performance so as to catch up with top-ranking universities in the

world; the practice tends to discourage university professors from carrying out research that solely addresses local industrial needs.

Indeed, to transform from the developmental state to an innovative state has been a long-term process which involves institutional learning and evolution. Even when new institutions are established, the old catch-up mentality will not change rapidly. As a result, state officials and local scientists dare not take the risk of uncertainty and failure, which are ingredients of innovation, but tend to follow the safer and in that sense better strategy of following the others.

## Discussion and Conclusion

By taking the opportunity of the fragmentation of the global value chain in the biopharmaceutical industry, the Taiwanese state intended to upgrade its economy and move it from the catch-up to the innovation stage. In doing so, the state has gradually transformed from taking a leading to a facilitating role. This chapter shows that this facilitating role as a platform builder has four institutional characteristics: learning the best practice from abroad to implement compatible institutions to nurture innovative industry; using the strategy of resource leverage to stimulate the innovative industry to emerge; building multiplex networks to help local firms to insert into global networks; and augmenting the market size by negotiating with China to expand the industry's prospective future. This chapter also shows that the state transformation has been an evolutionary and learning process that has a path dependency effect, therefore, the state's promotion of the biopharmaceutical industry has met many institutional obstacles, especially state officials' risk-avoiding attitude that resulted in the slowness of the evolution.

Our study of the transformation from a developmental state to a platform builder raises three issues that deserve further discussion: first, the building of the institutional platform raises the question of coordination and, in particular, the effective allocation of productive resources (Wong 2004, 495). In the past, the developmental state had a clear leadership, owing to its authoritarian characteristics. Now, in a democratic society, public opinion and special interests always penetrate the state bureaucracy which leads to the incompetence of state bureaucrats. Wong (2004, 2005) observes that both the South Korean and Taiwanese states faced the problem of coordination, which led to competition among the ministries for the same goals and the resultant wastage of financial resources. However, our case has shown that bureaucratic coordination or governance in promoting an unfamiliar and uncertain industry needs a process of learning. The Taiwanese case shows that this chaotic



situation has continued for quite a long time until recently. Furthermore, the emergent form of coordination is not so much characterized by top-down “leadership,” but heterarchical mode of coordination that achieves its goals through a clear division of labor among units and collaboration among them.

Second, our study shows that even though Taiwan has endeavored to develop a frontier innovation-based industry, in the end it has to be inserted into the global value chain controlled by big global pharmas (Breznitz 2007). Presently, these new Taiwanese science firms have only become the R&D centers for the global giants. Taiwan still lacks the capability to create a whole value chain controlled by itself. Of course, there is a debate whether an economy needs to establish an industry that ranges from upstream to downstream. As one informant argues, “if the industry can earn enormous profits by doing mainly R&D, then it is good enough for the economy” (Author interview, Taipei, December 7, 2012). But the problem is that this industry has used an enormous amount of public funding; enlarging private profits at the expense of public interest is not enough. Moreover, due to the nature of this knowledge-intensive sector, the biopharmaceutical industry so far has generated only very limited job opportunity and this tendency will continue for a period of time. Therefore, whether this industry will create benefit for the economy as a whole is questionable (cf. Chen and Wang 2010; Wang 2014).

Finally, as a platform builder, the state tends to let the related actors build networks by themselves without clear guidance. This version of the state looks similar to the neoliberal state in its outfit. This issue relates to a much debatable topic on the developmental state. For example, as an exemplar case of a neoliberal state, the US government still puts many resources into universities and R&D institutes to conduct strategically important research, such as medicine and semiconductor, which therefore raises the question as to whether the United States is a “hidden developmental state” (Block 2008). Or should we say that Taiwan has gradually become a neoliberal state when emulating the “best practice” from the United States? The topic is too complicated to be dealt with in this chapter. However, as our case has shown, the old version of the Taiwanese developmental state is gone, and the state is adapting to a new globalized environment in the search for an innovative state form.

## Notes

1. For the Taiwan state, the biotechnology industry includes three subcategories: emerging biotech industry, biopharmaceuticals, and medical devices. The figures include the financial input of all three subcategories.
2. In Taiwan, most of the public research institutions, such as the DCB, receive funding mainly from the state and face fierce competition for national resources.

Because developing new drugs is a time-consuming process, the DCB has to have academic research publications to show its performance. Over time, the publication of academic papers has replaced the original *raison d'être* of the DCB, which was to function as a mediating institute.

3. Genelabs Technologies was founded at Boston in 1984 and was listed in NASDAQ in 1991.

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## CHAPTER 6

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# Democratization, Emergence of the Knowledge-Based Economy, and the Changing Developmental Alliances in South Korea and Taiwan

*Yin-wah Chu*

### Introduction

The developmental state has since the 1980s been considered one of the most important forces that have facilitated the economic development of some East and Southeast Asian societies. The strong arm of the state in devising economic plans, supporting business enterprises, suppressing the civil society, and managing the global economy is considered imperative for the late developing countries to catch up with the advanced ones (Johnson 1982; Gold 1986; Amsden 1989; Wade 1990; Evans 1995; Weiss 1998; Woo-Cumings 1999).

With the deepening of globalization and democratization of some of the Asian societies, the adaptability of the Asian developmental state has been called into question (Castells 1996, 1998; Ó Riain 2000a, 2000b). However, while some scholars have found evidences to show continued state guidance (Woo-Cumings 2001; Weiss 2003), other observers try to strike the middle ground and propose ideas like “adaptive” or “twenty-first century” to denote continuities and changes in the developmental state (Wong 2004; Stubbs 2009; Evans 2010; Amsden 2013).

This chapter intends to contribute to the debate by examining the information technology (IT) sector of South Korea and Taiwan. The sector, which includes computers, electronic components, and telecommunication equipment in this context, has been considered to epitomize the flexibility

and borderlessness of globalization. In turn, the two societies have undergone democratization in the mid-1980s, while their growth since the late 1990s has been facilitated by the superior performance in their IT sectors.

Making use of government documents, news reports, empirical studies, and interviews with government officials, business executives, representatives of business associations and researchers,<sup>1</sup> this essay will argue that, unlike Castells' (1996) and Ó Riain's (2000a) propositions, the Asian developmental states have not come into perpetual decline. Furthermore, they have also moved beyond the making of bureaucratic regulations and provision of financial support, which is quite different from Woo-Cumings' (2001) observation. Findings of this study suggest that, while heightened global economic integration has intensified the demands for flexibility and knowledge inputs, it has far from engendered a borderless world. At the same time, although democratization has undermined authoritarian state domination, it has not shattered all the developmental institutions or the cultural understanding on state economic leadership, but has generated additional mechanisms for consensus building. The Asian developmental state has become reconfigured, entered into developmental alliance with various economic actors, and continued to exercise a considerable level of economic leadership through measures acceptable to global trade regulations. Compared with the recent works of Amsden (2013), Evans (2010), and Wong (2004), this study focuses on economic development as such and delineates specific ways in which the reconfigured developmental states have negotiated with divergent stakeholders to forge continued development.

### **Globalization, Democratization, and Challenges to the Asian Developmental State**

Two transformations in the late twentieth century are considered to have challenged the Asian developmental state. The first major change refers to the globalization of economic activities and shifting nature of competition. In the words of Castells (1996, 101–2), a truly global economy or one “whose core components have the institutional, organizational, and technological capacity to work as a unit in real time . . . on a planetary scale” has emerged since the 1970s. With globalization, finance, industrial capital, and labor have all become more mobile, hence intensifying the pressures for cost reduction, swift market response, and continuous innovation. These emerging conditions are incompatible with the vertically integrated and hierarchically organized Fordist enterprises, but favor network enterprises that achieve production and innovation through the weaving of internal and global networks (Castells 1996; Harvey 1989).

The Asian developmental states had historically prompted rapid industrial growth by mobilizing the bureaucratic state apparatuses, providing capital, giving directions, and working with home-grown conglomerates such as the Japanese *zaibatsu*, Korean *chaebol*, and Taiwanese state enterprises. Following Castells' (1996) and Harvey's (1989) lines of reasoning, the opportunity for global networking reduces the attraction of state support for the Asian conglomerates. Nationalist inclinations and bureaucratic devices used by the Asian states also render them too inward looking and rigid to facilitate innovation and network building across the globe. Their leadership potential has declined and becomes overshadowed by the Irish "developmental network state" or US "regulatory state," which observers have found to enable local professional-led innovation networks to link up with global technological and business ones (Ó Riain 2000a, 2000b; Hart and Kim 2002).

The second transformation pertains to changes in global and national political relationships. The historical emergence of the Asian developmental states was said to be "based on the premise of a double-edged, relative autonomy" (Castells 1998, 333). At the same time that the strategic geopolitical locations of the Asian states had enabled them to pursue mercantilist policies with no fear of repercussions from developed countries including the United States, authoritarian rule in their countries also allowed them to direct the dominant classes and control the subordinate ones. With the end of the Cold War, the United States has become less tolerant of mercantilist policies. Democratization of some Asian states in the mid-1980s, furthermore, has led to the reorganization of developmental institutions and bolstered people's demand for accountability, thus limiting the Asian states' discretion in and capability of supporting the conglomerates.

Despite the above arguments, scholars have found evidences to suggest continued developmental state intervention in the global age. In the aftermath of the Asian financial crisis, Woo-Cumings (2001, 363) argues that South Korea has been brought back onto the developmental track by the "deep intervention by the state, using the tried-and-true method of industrial swaps and mergers dictated or brokered from above" (Weiss 2003).

Perhaps more important, other observers strike the middle ground and suggest that the Asian states have remained developmental even as they adapt to the aforementioned changes. According to Wong (2004, 2005), despite the Asian states' diminishing leeway in allocating resources and their need to attune to an emerging private sector, they have continued to facilitate national development by deepening investments in research and development (R&D) and, furthermore, providing social welfare as an effort to extend the meaning of development. Democratization and the advent of more responsible governance have helped to introduce market mechanisms that counteract rent

seeking, while the surge of civil society has injected new forces to enrich policy formulation.

Similarly, Amsden (2013) argues that the need to address World Trade Organization concerns has led the developmental state to move from direct subsidy of heavy industries to the laying of groundwork for a technology-based economy. The latter involves investment in R&D, use of outward foreign direct investment to acquire advanced technology, and support to small and medium enterprises (SMEs). Despite the changes, the Asian states have remained essentially nationalist and continued to rely on national enterprises (private or public) to “secure the home market” as a first step to outward expansion. Speaking more generally of the “twenty-first century developmental state,” Evans (2010) reasserts the centrality of coherent state apparatuses, especially their ability to deliver collective goods such as R&D and education for the building of human capital. Unlike the authoritarian developmental state, however, its success depends not on the cultivation of close ties with a few industrial elites, but diverse ones with a broad section of the civil society.

While sharing some similarities with Wong (2004, 2005), Evans (2010), and Amsden (2013) in their research questions and findings, this study will focus on economic development as such, examining the political–institutional reconfiguration of the developmental state and delineating the strategies used by the reconfigured states to work with “national” enterprises and other economic actors to achieve the developmental goals.

### ***The Information Technology Sector: South Korea and Taiwan***

Contrary to propositions concerning the deterioration of the Asian economies in the face of assaults by globalization and democratization, South Korea and Taiwan have continued to attain admirable economic growth after 1997 with significant contributions from their IT sectors. Between 2000 and 2007, South Korea and Taiwan registered, respectively, an average of 5.2 percent and 4.4 percent annual GDP growth. Although the rates can hardly match the countries’ astounding records in the past, they compare adequately with other countries with major IT sectors, such as Ireland (5.6 percent) and Finland (3.5 percent) (IMF 2012).

The IT sector has played an important role in both cases. It has grown rapidly in South Korea since the 1990s and, in 2007, the sector’s production value stood at 267.6 trillion won, and its export amounted to US\$106.5 billion (NSO 2009, 2012). Although the sector’s growth has slowed down since 2005, its share in total export and GDP between 2006 and 2009 still averaged at 27.3 percent and 8.3 percent, respectively. The country has moved progressively into sectors with higher value added and, in 2010, Korean



firms secured leadership positions in mobile handset (Samsung 21 percent; LG 8.3 percent), liquid crystal display (LCD) (Samsung 26.5 percent; LG 23.7 percent), and dynamic random access memory (Samsung 41.7 percent; Hynix 21.8 percent) (Ko 2011). In the fast growing market of smart phone, Samsung even outpaced Apple to capture the largest market share in 2011 (19.0 percent) and 2012 (30.3 percent) (MobiThinking 2013).

As for Taiwan, the sector has also grown vigorously since the 1990s. In 2006, IT manufacturing contributed to 7.06 percent of Taiwan's GDP and, in 2007, exports of "electronic products" and "information and communication products" reached US\$75.1 billion or 30.4 percent of total export (CEPD 2011; Chen et al. 2012; MOEA 2013). Among the various subsectors, image display and especially semiconductor have achieved global leadership. Although Taiwan has historically concentrated in intermediary products, there emerge a few brands of global significance, including HTC that in 2011 occupied the seventh place in the global market for mobile handset (2.4 percent) and fifth place for smartphone<sup>2</sup> (8.9 percent) (MobiThinking 2013).

### **Reconstituted Developmental Alliance: South Korea and Taiwan**

Not only have the South Korean and Taiwanese economies performed well, their state elites have continued to provide economic leadership. In both cases, democratization and the emergence of a globalized economy have far from incapacitated or overwhelmed the "developmental bureaucratic states" (cf. Ó Riain 2000a; Castells 1996). Similar to Amsden (2013), Evans (2010), and Wong (2004), the following will point to the rising significance of R&D support. However, it will examine in addition ways in which the developmental state institutions have been reconfigured—detailing the persistence of the will to develop and deployment of new policy instruments, including the articulation of visions of development, setting of the standard of telecommunication, and provision of R&D support—and analyze their interactions with economic actors to help business enterprises to gain the first mover advantage, as in the case of South Korea, or move higher in the global value chain, as in Taiwan.

#### ***South Korea***

##### *A Reconfigured Developmental State*

Despite democratization and commensurate political–institutional changes since the mid-1980s, the South Korean state has retained the will to develop, preserved a measure of policy coherence, and devised novel means

to guide the economy. In the first place, the determination to lead economic transformation can be identified in the policy goals of different presidents regardless of their divergent political inclinations. Although President Kim Young-sam (1998–2003) and President Lee Myung-bak (2008–2013) appeared to be more market inclined, Kim's *segyehwa* (globalization) policy was a state-centric social reform to thrust South Korea into the club of the Organisation for Economic Co-operation and Development (OECD), whereas Lee's policy goal of "a lively market economy" had included the objective to "promote new growth engines" (Lee 2008). Similarly, despite the pro-labor orientation of President Kim Dae-jung (1998–2003) and President Roh Moo-hyun (2003–2008), Kim was careful to preserve the competitiveness of the top five *chaebol* when pursuing the "big deal," while Roh took pride in his effort to nurture future growth engines in line with the principle of "selection and concentration" (Woo-Cumings 2001; Roh 2006).

Their commitments reverberated in their administrations and among different levels of officials (cf. MKE 2012). Chin Dae-je, the Minister of Information and Communication under Roh Moo-hyun, articulated the position most eloquently: "due to [Korea's] relatively small market, the moderate size of funding available for R&D and the shortage of trained manpower in core technologies, industrialization can only be of limited effectiveness if solely driven by the private sector. [Consequently], a joint effort by the government and private sector is paramount" (Chin 2006). The will to develop and commitment to lead economic transformation are much alive.

In the second place, policy coherence has been maintained despite the dissolution in 1994 of the pilot agency, Economic Planning Board (BK Kim 2011). Apart from the state institutions, which deserve a thorough investigation elsewhere, the president in office and what may be called "correctional mechanism" are of special significance. First, it has been pointed out that "a strong presidency is as much intact under the civilian president's democratic rule as under the military president's authoritarian rule . . . Familiar with a political culture to which personalized authority outweighs institutionalized power, they have tended to pursue supreme power as executive leaders" (Lim and Han 2004, 278–9; see also Mo and Moon 2003). As such, the president can adjudicate the divergence of opinions and policy competitions. In the controversy over the adoption of code division multiple access (CDMA) as the standard of mobile communication, an informant from the former Ministry of Information and Communication (MIC) noted that their Minister was trusted by the President, and the President's decision ended "unnecessary discussion" (Interview, January 19, 2006).

Second, the threat to long-term policy coherence has also been remedied by the emergence of a "correctional mechanism," which is founded on the

processes of democratization and regime transitions. An illuminating case would be Lee Myung-bak's abolishment of the MIC and promotion of digital convergence owing to his conviction that the IT sector had exhausted its potential. Although his decrees were duly implemented, skepticisms surrounding the new policy and concern with the need for centralized administration and support for the IT sector were abound. Whispered initially only by some disgruntled civil servants, they gradually became a society-wide consensus, articulated or endorsed by independent researchers, researchers from government-funded institutes, the Speaker of the National Assembly and even Park Geun-hye when she was the ruling Saenuri Party's presidential candidate in 2012 (Lee 2010; Interview, May 11, 2012). On becoming the President, Park has accordingly set up a Ministry of Science, ICT, and Future Planning to provide centralized leadership.

In the third place, bureaucratic regulations and policy loans, though still used in a limited way to help the SMEs, are no longer the main instruments for directing the conglomerates as in the heyday of the Korean developmental state. Instead, the state elite have resorted increasingly to the articulation of visions, structuring of the market, and provision of resources. Relevant ministries would present "road map" or "policy direction" to identify strategic technologies or industries (e.g., MEST 2010). The IT839 Strategy crafted in 2003, for instance, projected the MIC's vision of how subsectors in the value chains of the IT industry might expand, how leapfrogging and first mover status might be achieved, and clarified the government's resource commitment (MIC 2003). In so doing, the Ministry encouraged and "coordinated" entrepreneurship by building the confidence that initiatives taken by individual enterprises would form part of a general, mutually reinforcing set of investment decisions. In addition, South Korea's state elite have sought to increase market competition by relying on intended and unintended policies like IMF-mandated reforms and support to SMEs. They have also attempted to shape and constitute the markets for various IT subsectors by designating telecommunication standards, the importance of which will be examined further in the discussion of the reformed *chaebol* below. The state elite also try to reduce the risk and provide a foundation for Korean firms by mobilizing R&D fund, government procurement, and forms of infrastructural support (Kim 2001; Chu 2009).

### *Reformed chaebol*

The Korean *chaebol* have become formidable global players even though more than half of the top 30 went bankrupt in the 1997–1998 financial crises. The remaining ones have been revitalized by subsequent reforms so that the combined assets of the top 30 *chaebol* nearly tripled in ten years

to reach 1164.4 trillion won in 2010, and their average debt-equity ratio dropped to 119.9 percent in April 2009 (Chang 2003; Rowley and Bae 2005; Hiraga 2010; TH Kim 2012). While these conglomerates remain vertically integrated and “very Korean” in management (Interview, January 19, 2006; cf. Feenstra and Hamilton 2006; Kim 1997), their relationships with sub-contractors and firms within their group have become less overpowering, allowing these conglomerates to go global in production and research (Kwon et al. 2005). Samsung Electronics, for example, has set up production networks and design and R&D centers round the world as well as entered into strategic alliances with global firms like Sony (Michell 2010, 174–6; Samsung Electronics 2011). As competent private economic actors, it is hardly surprising that, in the words of a Federation of Korean Industries informant, “they just want to be left alone” (Interview, July 23, 2010).

Despite the *chaebol*’s growth and extensive global ties, they have not categorically rejected developmental state leadership. Intense global competition, heavy investment costs, and the technological and political complexity of the IT sector have led the *chaebol* to remain vigilant of state policies and engage in close interactions with state elites, all with a view to better exploit market opportunities (Interview, August 1, 2005; Interview, July 29, 2005). On the financial side, although public R&D funds in South Korea as of 2009 amounted to 10.9 trillion won as compared with the 27 trillion won of private R&D funds, with Samsung Electronics alone putting up an R&D budget of 7.6 trillion won in the same year, the government’s resources remain helpful and sought after by the *chaebol* (Samsung Electronics 2011). Just as important, the Korean state enjoys a fair track record in picking the right technology. Apart from the well-known case of the CDMA, Wibro (wireless broadband), developed in 2004 as part of the government’s IT839 Strategy, is also expected to capture 10–20 percent of the 4G market by 2015 (TG Kim 2012). The *chaebol* have therefore both financial and technological reasons to observe state leadership when the circumstances arise. Hence, in as late as 2009, Samsung Electronics and Hynix Semiconductor were reported to work with the government, on the condition that the latter was to contribute half the budget or 12 billion won up to 2014, to make the world’s first spin transfer torque-magnetic random access memory (STT-MRAM) devices, in the expectation that the country will “control roughly 45 percent of the 30-nano type memory chip market by 2015” (Yonhap News Agency 2009).

The role of the state as a rule maker, both nationally and globally, and the centrality of the standard of telecommunication in shaping and constituting the IT market also add to the importance of state leadership. As an example, Samsung announced in May 2008 that it could bank on their Mobile WiMAX total solution to “solidify their leadership in the field” (Michell

2010, 163). It was able to do so in part because mobile WiMAX was adopted in 2007 as the 3G global standard at the International Telecommunications Union (ITU) and, notably, the ITU only accepts proposals from government actors.

Taken together, the Korean state's command of technological intelligence, regulatory prerogative, and to a lesser extent financial resources has allowed it to affect the *chaebol's* business opportunities, both at home and abroad, thus underpinning the state's capacity to lead.

Given the importance of monitoring state policies and liaising with government officials, the conglomerates have worked with business associations like the FKI for briefings with the ministries or make individual arrangements to guarantee the instantaneous command of intelligence. In 2006, an informant from the public affairs cooperation team of a *chaebol* pointed out that everyone in his department spent their days in government offices so as to get information and convey their viewpoints. Such activities had been extended to all branches and all levels of the government. Smaller enterprises also did this, though on a much smaller scale (Interview, January 16, 2006). In 2012, the head of an Internet firm's policy cooperation division also confessed that he spent one or two days per week in government offices, seeking information or lobbying (Interview, May 10, 2012).

### *Emerging Economic Citizens*

Democratization and reduction in the cost of social protests have enabled workers and other members of the civil society, who were previously excluded from South Korea's industrial development, to seek economic rights and become what might be called *emerging* economic citizens. Even though their success, achieved in the face of resistance from the state and *chaebol*, might have challenged the state's autonomy and capacity to lead, their active participation has inadvertently contributed to market rationalization and injected new sources of vigor to industrial advancement.

As an example, effort of the People's Solidarity for Participatory Democracy to coordinate minority shareholders and foreign institutional investors has helped the state elite to seal the five-plus-three corporate reform, which in turn has constituted an essential part in the enhancement of the conglomerates' corporate governance (Gills and Gills 2000; Chang 2003; Kim and McNeal 2005). As another example, society-wide dissents over the *chaebol's* economic domination have also prompted government actions to help the SMEs. Importantly, in responding to his deteriorating popularity, Lee Myung-bak's administration asked the *chaebol* to share profit with their sub-contractors and, despite an initial haughty response, Samsung was forced to show goodwill by setting up an R&D fund for them (Chartis Insurance 2012;

“Economic democratization” 2012). More generally, the Korean government has provided more financial and technological support to the SMEs since democratization. For the IT sector, Kim Dae-jung’s policy to support venture firms has been considered most progressive and, in 2001, as many as 14.5 percent of Korea’s working population actively sought to or had already set up businesses for less than 42 months (Woo-Cumings 2001; KISDI 2004, 69). Although the level of enthusiasm has not been sustained, some changes in industrial dynamism can still be detected.

Available data suggest that the number of venture firms and innovative SMEs increased rapidly from 9219 in 1997 to 21,105 in 1999, though it dropped to 13,629 in the next year (KW Kim 2003). The trend has fluctuated in subsequent years, yet showing an unmistakable upward tendency all the time (PCPP 2007; SMBA 2012). Similarly, even though large enterprises still contribute to the lion’s share of R&D expenditure, the contribution by SMEs has increased from 3,414,400 million won in 2005 to 8,010,900 million won in 2010 (YH Kim 2012, 8). Just as important, the shares of SMEs in the shipment and value-added of IT equipment have increased from 18.6 percent and 14.9 percent in 1996 to 21.3 percent and 17.0 percent in 2009, respectively, with the high point registered in 2002 (NSO 1999, 2004, 2009, 2012). The two largest local internet portal firms and some fair-sized creative Internet companies have also emerged initially as start-ups. Even though these changes have far from diminished *chaebol* domination, the SMEs’ contribution has added to the dynamism of Korea’s IT sector.

## *Taiwan*

### *A Reconfigured Developmental State*

Taiwan has also undergone democratization and, thus, regime transitions and a certain extent of institutional reorganization. As in the case of South Korea, however, the state elite’s will to develop, policy coherence and institutional capacity have only been affected moderately, so that the Taiwan state continues to serve as a leader and coordinator of developmental economic initiatives.

In the first place, despite striking differences in the political orientations of President Lee Teng-hui (1988–2000), President Chen Shui-bian (2000–2008), and President Ma Ying-jeou (2008–the present), they have remained committed to facilitating economic transformations and their priorities have appeared to be rather consistent. Significantly, in addition to advocating economic justice for workers and SMEs, Chen Shui-bian proposed the idea of “green silicon island” or the need to buttress information technology and develop green agriculture as a means to boost economic growth and

reduce unemployment (CEPD 2002). As for Ma Ying-jeou, the revival of Taiwan's economic vitality has become a main concern since the 2008 financial tsunami. Apart from the IT sector, which is considered a foundation, Ma has also proposed to support six emerging industries, four major intelligent industries, and ten major services sectors during his first term of appointment, and placed them under the rubric of "golden ten years" in his second (MOEA 2012a). Apart from their shared determination to facilitate industrial development, Chen and Ma have both chosen to reinforce the IT sector and, at the same time, support industries that either build upon or compatible with it. The similarities in industrial policies despite regime transition can in part be attributed to the absence of an intense contestation between neoliberal economic ideas and social-democratic ones in Taiwan. In turn, socialist ideology inherent in the Kuomintang (KMT)'s Three People's Principle and memories of the disasters stemming from runaway inflation that plagued the Republic in the 1940s and early 1950s explain why Taiwan people and government officials have been wary of the freewheeling market.

The commitment to facilitating economic development has been shared by the ministries and their officials. In as late as 2009, the National Science Council (NSC) identified the "strengthening of technology innovation to improve the industrial environment" and "drawing on technology power to facilitate sustainable development" as two of its six strategic goals (NSC 2009). Officials from the Industrial Development Bureau (IDB) have similarly expressed great enthusiasm and confidence in coordinating business enterprises to spearhead R&D projects (Interview, June 10, 2011). The government's authority to exercise economic leadership has also been sanctioned by the general public. Hence, in 2012 when leaders of major technology firms pledged their support to Ma Ying-jeou days before the polling date, public support to Ma was actually boosted.<sup>3</sup> Similarly, when Ma appointed Simon Chang (former director of Google Asia Regional Infrastructure) in 2012 to be a minister without portfolio in charge of technology-related affairs, the Taiwan media heralded that it bore resemblance to initiatives taken by Sun Yun-suan, the former Premier that oversaw Taiwan's introduction of technology deepening (Lu 2012).

Unlike South Korea, regime transitions in Taiwan have until recently not led to the formal reorganization of state developmental institutions. Nevertheless, two changes are notable. First, while the Council for Economic Planning and Development (CEPD), which for a long time has played a strategic role in planning Taiwan's economic future, remains intact, its policy priorities have shifted to urban and social development (Gold 1986; Wade 1990). Economic planning and support have persisted, however, in

part through the transfer over the years of the CEPD's personnel and policy-making knowhow to the Ministry for Economic Affairs (MOEA), so that the IDB, Department of Industrial Technology (DoIT), and NSC have gradually taken over the responsibility (Interview, August 10, 2011). Second, despite the lack of appeal of neoliberal ideas in Taiwan, the bulk of state enterprises have been privatized in the 1990s. The close association between the enterprises and the then ruling KMT regime was considered to give the party and its elite undue political and economic advantages, and privatization was meant to level the playing field for different political parties.

On top of these, the ability of individual premiers to mobilize their social networks and influences has been a crucial factor in the honing and pursuit of development policies (Wu 2004; Interview, August 10, 2011). The lack of strong leaders in recent years, together with the devolution of the policy-making function to various offices in the MOEA and the privatization of state enterprises—an important policy tool in the past, has not so much resulted in policy incoherence as to reinforce the island-state's longstanding tendency to support a variety of industrial sectors, which has been different from South Korea's inclination to pick a few major ones (Hamilton and Biggart 1988). Hence, as seen in the above, apart from information technology, the Taiwan state has also rendered support to green energy, electrical automobile, organic agriculture, cultural tourism, and so on.

Like South Korea, vision statements and policy plans have been issued by the MOEA and other relevant offices. While they have their use, research fund and research coordination remain the Taiwan state's most direct sources of support. First, although Taiwan's R&D budget has been small as compared with those of the United States, Japan, and South Korea, its share in GDP has been one of the highest globally. In 2009, the island-republic's R&D budget was NT\$367,174 million or 2.9 percent of its GDP, to which the public sector contributed 29.5 percent (NSC 2012). The funds have been disseminated by the NSC, IDB, and DoIT. Second, and arguably the most notable for Taiwan, government officials from NSC, IDB, DoIT, and researchers at the government-funded Industrial Technology Research Institute (ITRI) have provided guidance and facilitated networking for the firms. These officials or researchers take the initiative, oftentimes seeking to fill gaps in the value chain, and team up groups of technology firms to undertake research that would benefit the entire group (Interview, June 10, 2011). While the ability to work closely with business enterprises has been fine-tuned by years of extension service provision to manufacturing firms, the strategy to fill up gaps in the value chain and ability to inspire risk-taking among groups of potentially competing enterprises have emerged more recently.



*Network Enterprises*

Information technology firms in Taiwan have expanded, reached out globally for production and research, and some have even altered their business model since their emergence in the 1980s. Despite these, they have continued to value the guiding hands of the state (cf. Castells 1996; Ó Riain 2000b).

Like other business enterprises in Taiwan, most IT firms have started out as SMEs. According to one informant, the sector has emerged initially through “reverse engineering” and only later has the state provided resource input and guidance (Interview, June 2, 2011). The establishment of the Hsinchu science-based industrial park, technology transfer agreement with the American corporation RCA, formation of ITRI, and transfer of technology to its graduates<sup>4</sup> are widely known to have facilitated the rise of Taiwan’s IT sector (Saxenian and Hsu 2000).

Over the years, many of these enterprises have grown in size. Nonetheless, even the leading firms have remained small as compared with their South Korean counterparts. In 2011, the total equity of Taiwan Semiconductor Manufacturing Company (TSMC), a firm that enabled Taiwan to capture 68.4 percent of the global IC Foundry market in 2007, was about one-fourth of that of Samsung Electronics (Chen et al. 2012). HTC, a corporation that competes for the smart phone market, was less than one-thirtieth of Samsung Electronics’ size in the same year (Table 6.1).

In addition, although some Taiwan firms such as Asus, BenQ, and the aforementioned HTC have struck out and marketed products with their own brand names, most Taiwan firms have continued to specialize in the production of component parts or provision of manufacturing services with varying degrees of research inputs, and they have stayed competitive in part through their collective capability of smoothing the realization of the global value chain. The IC and wireless phone sectors described by Saxenian (2001, figures 11 and 13) are typical.

**Table 6.1** Selected IT firms: South Korea and Taiwan

		Total equity (USD/2011)	Total employees (N/2011)
South Korea	Samsung Electronics*	84.744 billion	221,726
	LG Electronics	11.195 billion	91,045
Taiwan	Foxconn	19.090 billion	1,000,000
	TSMC	20.793 billion	30,000 (2010)
	HTC	2.533 billion	16,746 (2012)

*Note:* \*The data refer to Samsung’s electronics operation alone; Samsung group as a whole is much larger, with total equity amounting to USD224.7 billion in 2011.

Third, many Taiwan firms, including those in the IT sector, have invested in mainland China. The level has increased sharply since the early 1990s and, by 2010, reached a cumulative amount of US\$97,321 million (MOEA 2012b). According to mainland China's statistics, Taiwan's direct investment between 1992 and 2010 totaled US\$51,093 million, placing it the country's fourth most important investor behind Hong Kong, Japan, and the United States (CSB 1994–2012). These Taiwanese firms have been lured initially by the low costs of labor and land and, in time, research capability of mainland engineers. Nevertheless, political factors remain a stumbling block, both on mainland even as Taiwan's cultural proximity has helped to appraise and thus somewhat alleviate investment risks and on Taiwan as both the KMT and Democratic Progressive Party regimes have imposed caps on technology content and value of investment in China.

Despite their manifold changes, Taiwan firms have continued to find state guidance and support to be of value. According to interviewed officials, technological development has become so costly that enterprises, large and small, have responded positively to their networking and guidance (Interview, June 10, 2011). Just as important, given the political risk of investing in China, Taiwan enterprises find it necessary to negotiate and coordinate with the state elite.

The above has already noted how these enterprises have worked closely with the MOEA, NSC, and ITRI. It may be added here that they also rely on business associations as a platform for information sharing and consultation. In addition to reporting on the conditions of the enterprises, the business associations also submit responses to policies introduced by the Taiwan government and, recently, the People's Republic of China government.

## Conclusion

Findings presented in the above suggest, among other matters, the presence of multifaceted articulations between global and local institutions and processes. At the same time that global economic processes shape national political-economic dynamics, state actors also contribute to the structuring of local and global economic opportunities. Hence, contrary to some scholarly propositions, the global economy is not compatible with only one type of political-economic setup, namely, flexible cooperation among networks of business enterprises (cf. Castells 1996, 1998), and the Asian developmental states are not fundamentally rigid and inward looking (cf. Ó Riain 2000b). Furthermore, globalization and associated forces have not shattered South Korea's and Taiwan's economic dynamism or dismantled their developmental states.

At the same time, quite unlike arguments put forth by Woo-Cumings (2001), the South Korean (and Taiwanese) developmental states no longer rely solely on time-honored bureaucratic regulations or financial assistance. Adding to the studies of Amsden (2013), Evans (2010), and Wong (2004), this chapter provides more information on the political-institutional foundation of continued state developmental leadership and, apart from pointing to the significance of R&D, details the strategies and policy instruments used by them.

More specifically, the above suggests that South Korea has tackled the challenges of globalization and democratization through the reconstitution of developmental alliance among the reconfigured developmental state, reformed *chaebol*, and the emerging economic citizens, whereas Taiwan has reconstituted its developmental alliance among what might also be called a reconfigured developmental state and the network enterprises.

In both cases, the commitment to economic leadership has persisted and policy coherence sustained in the face of democratization, regime transitions, and indeed formal or informal reorganization of the developmental institutions, even though there emerge significant changes in the strategies of development support. To begin with, cultural beliefs in the importance and possibility of state economic leadership, which have persisted and reverberated throughout the state bureaucracy and society at large, have played a most crucial role in sustaining the commitment.<sup>5</sup> Though not examined in the above, one may presume that cultural beliefs, as ethos, have provided meanings and served as the basis upon which policy coordination has been pursued and conflict of interests resolved. At the same time, whereas limited differences in economic beliefs among divergent political actors have facilitated policy continuity in Taiwan, democratic processes as practiced in South Korea, including presidential prerogative and correctional mechanism, have helped to sustain policy coherence despite wide disparities in the economic inclinations of the country. The above has shown how succeeding Taiwanese regimes have continued to offer support to both the information technology sector and other compatible ones, on one hand, and how the South Korean regimes have eventually resolved to provide focused support to the information technology sector despite wavering in the interim, on the other.

In both cases, the developmental states have shifted from the provision of financial support to institutional ones. Concerning South Korea, strategic plans, telecommunication standards, and R&D support have been used to coordinate economic actions among the business enterprises, help the *chaebol* to attain leapfrogging or even first mover advantage, and support large enterprises as well as small ones as a means to inject new dynamism into the sector. In turn, the defining feature of the Taiwan state's developmental support is

the ability of government officials and researchers to coordinate R&D effort among groups of potentially competing enterprises, which has enabled them to move up the global value chain.

The idea of developmental alliance has been used to highlight the fact that economic actors from the private sector have become more autonomous, even though the reconfigured developmental states can still claim their support. If compliance from the conglomerates has been at issue even for the authoritarian developmental state, it has become more tenuous over time. Once again, South Korea seems to have undergone more drastic changes so that, apart from the growth of the conglomerates, emergence of the civil society also helps to force the hands of the government into rendering more support to the SMEs, which in turn also help to rationalize the market and inject new dynamics into the sector. Taiwan's industrial development has historically been more inclusive and thus the developmental alliance has mainly been a deepening of the existing relationship.

Finally, the developmental alliances that emerge in South Korea and Taiwan have also exhibited considerable path dependency in the policy goals pursued. In South Korea, the reconfigured developmental state has continued to provide focused support to a few industrial sectors and help the enterprises to attain the first-mover advantage and command a larger share of the end-product market. As for Taiwan, the state elite has also perpetuated the longstanding trend of lending support to a variety of sectors and coordinating network enterprises to *capture* the global value chain. It is possible to surmise that the pattern of path dependency can be attributed to the mild changes in the two societies' political-economic structures, and hence the policy choices of the state and economic elites.

In short, if cultural beliefs and democratic practices have allowed the state elites to maintain their developmental commitments while political-economic structures have contributed to considerable path dependency in the policy goals followed, new policy instruments have been deployed to work with a wider range of economic actors to pursue the development goals.

## Notes

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1. The interviews were conducted during various trips to South Korea between July 2005 and May 2012, and in Taiwan between August 2010 and February 2012.

2. In 2012, HTC occupied tenth place (1.8 percent) in mobile handset market, and fourth place (4.6 percent) in smartphone shipments (MobiThinking, 2013).
3. Professor KH Hsieh, February 15, 2012, personal communication.
4. The graduates refer to engineers and businessmen who have completed the incubation programs etc. operated by ITRI and other institutions.
5. As Amsden (2013) pointed out, the South Korean state has provided development support while their economists as a rule deny it.

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## CHAPTER 7

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# South Korea after the Developmental State

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Since the 1997 Asian crisis, a vigorous debate has taken place as to the continued relevance of the concept of the developmental state in advancing our understanding of the nature of contemporary South Korea (Weiss 2003; Kim 2005, 2010; Pirie 2008). This chapter argues that the country can no longer usefully be regarded as a developmental state. The developmental state entered into a terminal crisis in the mid-1980s. However, the legacies of such a state continue to define the key economic and social challenges that contemporary South Korea faces. The country can, therefore, be defined as a post-developmental state. The argument that South Korea is no longer a developmental state is based on an analysis of investment rates and policy change. We argue that a core characteristic of the South Korean developmental state was the subordination of consumption to investment. Investment as a proportion of gross domestic product (GDP) increased from 8 percent in 1956 to a peak of 39.1 percent in 1991 (Chung 2007). The state's determination to suppress consumption and promote ever increasing rates of investment shaped every aspect of economic and social policy (Hart-Landsberg 1993; Waldner 1999). As such, it represented a core component of the developmental state regime. The decline in rates of investment since the mid-1990s has fundamentally changed the nature of the Korean political economy. At the same time, the role of the state in systems of credit allocation and industrial planning has fundamentally changed. In order to sustain the argument that South Korea remains a developmental state in the face of such changes, we are forced to adopt such a flexible understanding of this concept as to render it meaningless.

The legacies of the developmental state continue to define the key economic and social challenges that contemporary South Korea faces. Moreover, structures of economic governance in the country continue to be shaped by the experience of rapid state-led capitalist development. A comprehensive review of the continuing impact of the development state would require a multivolume work. This chapter instead focuses on three key issues. First, we highlight the extreme unevenness of neoliberal reform and the manner in which systems of economic governance continue to be shaped by South Korea's history as a developmental state. Second, the chapter explores the instabilities of the post-developmental growth regime and the country's failure to move to a sustainable model of consumption-led growth. Finally, we seek to draw attention to some of the key social legacies of the developmental state.

In order to advance the arguments and explore the issues outlined above, the chapter is organized into three main sections. The first focuses on debates on how we ought to define the "developmental state." Disagreements about the vitality of the South Korean developmental state in large part reflect a lack of consensus on definition. Scholars who argue that South Korea remains a "developmental state" have stressed the flexibility of the concept (Weiss 2003; Dent 2004; Wong 2004; Lee and Han 2006; Kim 2010). On the other hand, analysts who emphasize the significance of neoliberal reform in Korea and argue that the developmental state is in terminal decline adopt a more rigid understanding of the concept (Pirie 2008; Jang 2011; Lee 2011). The second section focuses on the crisis of the Korean developmental state and the process of neoliberal reform. The final section examines some of the key social legacies of the developmental state. The legacies of the developmental state combined with the impact of neoliberal reform have created an acute social crisis. This crisis is perhaps most vividly illustrated by the fate of older people in Korea. The developmental state's singular focus on growth and its hostility to social spending continue to shape key aspects of contemporary Korean policy in a negative fashion.

### **The Developmental State: An Elusive Concept**

A vast array of literature has been produced on the "developmental state" as a general concept and the functioning of particular national "developmental states" (see for example, Johnson 1982; Woo-Cumings 1999; Evans 1995; Kohli 2004). This literature is marked by a high degree of inconsistency in how this concept is actually defined or applied. Within elements of the literature the label is applied to different states that would, at first glance, appear to share relatively little in common. So for example, one of the most

influential texts on the “networked” developmental state takes contemporary Ireland as its case study (Ó Riain 2004). In terms of economic and political structures, contemporary Ireland and 1970’s Korea could not be more different. Leaving aside the obvious political differences Korea was an investment export-led economy with restrictive policies toward foreign direct investment (FDI). In Ireland, FDI accounted for 32 percent of gross capital formation in the 2000s and 23 percent in the 1990s (UNCTAD 2015). Furthermore, levels of household borrowing were the second highest in the Organisation for Economic Co-operation and Development (OECD) area and consumption played a major role in supporting economic expansion in the second half of Ireland’s long boom in the 2000s (OECD 2015a). A number of states that have enjoyed a degree of success in promoting new industries or sustaining relatively high rates of economic growth have been defined as “developmental,” or at least as having developmental characteristics, at some point since the mid-2000s (Block 2008; Hayashi 2010; Chang et al. 2012; Maman and Rosenhek 2012). When employed in this manner, across a range of temporal and spatial contexts, the developmental state is understood as a state that demonstrates a commitment and a capacity to intervene in the market in order to promote the development of particular technologies and industries. While traditionally emphasis would be given to ensuring domestic firms dominated new industries, “networked” developmental states may, in certain circumstances, confine themselves to insuring that there is a meaningful space for domestic firms within networks dominated by transnational corporations (Ó Riain 2004).

The primary problem with a definition of the developmental state based upon a capacity to promote innovation and the development of particular industrial structures is that it is unclear what states it actually excludes. To the best of our knowledge, no scholar has ever argued that Britain is a developmental state. However, the UK government spends more than the OECD average on direct financial support for business research and development (R&D) and offers preferential tax treatment to research-intensive firms (OECD 2013a, 106). At the same time, government support for research in higher education is relatively high in comparison to other advanced capitalist states (Ibid., 102). While limited, there are also official schemes that offer concessionary finance to firms in particular industries (UK Government 2015).<sup>1</sup> We may question the effectiveness of the UK government’s support for high-tech industries. However, it is clear that the government has committed a substantial amount of resources, channeled them into industries it has identified as having strong long-term growth potential, with the purpose of developing Britain into a center for research-intensive industries. Through its decision to fund (or otherwise) particular technologies, the government plays

a role in shaping the United Kingdom's industrial structure. The point we make is not that Britain should be considered a developmental state. Rather, it is that if we employ a definition based upon a capacity and willingness to engage in selective industrial promotion whether or not a state can be considered developmental becomes a question of degree. Furthermore, leading international institutions advocate a role for the government in subsidizing research in key sectors of the economy (OECD 2013a). So if we wish we could reasonably argue that not only do we live in a world of development states but that there is a global consensus regarding the superiority of the developmental state. Clearly, this is not the intention of any of the scholars writing on the developmental state but it is the logical consequence of the definition they employ.

The developmental state, not unlike the concept of social capital, comes to mean so many things that ultimately it loses any descriptive or analytical power. We need a more vigorous definition of the concept if it is to be analytically useful. In order to construct such a definition we draw upon the experiences of South Korea, Taiwan, and Japan.<sup>2</sup> While important differences exist between the South Korean, Taiwanese, and Japanese “developmental states,” there are also significant commonalities in these state experiences of rapid development. It is on the basis of these commonalities that we seek to identify core features of what may be usefully defined as the “developmental state.”

We would argue that the Northeast Asian developmental states could be seen as possessing three core characteristics. First, the state was committed to suppressing the growth of consumption while maximizing the rate of investment. In Japan, gross saving and investment peaked at approximately 40 and 38 percent of gross national product, respectively, in the early 1970s (Dean et al. 1989, 49). In South Korea, gross investment, as a percentage of GDP, increased by over 480 percent between the mid-1950s and the early 1990s, peaking at 39.1 percent in 1991. Although foreign borrowing was important in supporting the initial increases in investment, by the 1980s sufficient savings were being generated domestically. Domestic saving, as a proportion of GDP, more than doubled during the 1960s—reaching 18.1 percent by 1970 (Ibid.). By the latter half of the 1970s, South Korea was saving approximately 30 percent of its GDP and the relative importance of corporate saving, as a proportion of total saving, increased significantly over this period (Ibid.). Increases in corporate saving were facilitated by consistently restricting wage increases to well below the rate of productivity growth (Hart-Landsberg 1993). Increases in household saving in Korea have been linked to increases in inequality. Income became increasingly concentrated in the richest households with the highest propensity to save. The wealthiest

10 percent of households increased their income share from 26 percent in 1965 to 30 percent in 1980 (Chung 2007).

Gross national investment in Taiwan increased from 13.56 percent in 1955 to 30.9 percent of national income in 1975 (ROC 2015, 28). Rates of national investment averaged over 28 percent between 1976 and 1985 (Ibid.). Rates of saving increased from a low of 13.6 percent of national income in 1954 to over 30 percent in 1972 before peaking at over 40 percent in 1986 (Ibid.). Much of the initial increase in saving was attributable to the government itself. According to Wade (1990, 62), the state itself accounted for over half of total saving between 1956 and 1960. Government saving remained significant throughout Taiwan's period of industrial catch-up—during the late 1970s government saving continued to account for over 40 percent of total saving (Ibid.). The government used the fiscal system and its control over the pricing policy of state-owned enterprises to transfer resources from consumption (domestic working class) to capital accumulation.

In both Korea and Taiwan, the state played an important role in promoting household saving by denying consumers access to credit and failing to develop welfare safety nets. Saving represented the primary means of protecting oneself against the vagaries of old age and ill health. Equally, the absence of developed formal systems of consumer finance meant that saving was necessary to pay for educational expenses or the purchase of property. Those citizens who had the capacity to save had a powerful set of incentives to do so.

The developmental state's determination to maximize capital accumulation influenced every aspect of economic and social policy. In all three states (Korea, Taiwan, and Japan) it necessitated the exclusion of labor from conservative governing coalitions and the maintenance of tight controls over the growth of welfare spending (Lie 1998; Waldner 1999; Kohli 2004). In both Taiwan and Korea the state used its control over agricultural pricing to encourage the movement of new proletariats to urban areas in order to suppress wage growth (Gills 1999; Waldner 1999).

Scholars from a range of different theoretical traditions have stressed that the subordination of consumption was an integral feature of the developmental state project. Chalmers Johnson (1982, 52), for example, discusses the "need to mobilize the overwhelming majority of the population to work and sacrifice for developmental projects." More radical scholars would see the prioritization of capital accumulation in more explicitly class terms (Hart-Landsberg 1993; Waldner 1999; Kohli 2004; Chang 2009). Against this context, the manner in which the capacity to mobilize high aggregate levels of investment is neglected by much of the scholarship that stresses that the

continued relevance of the developmental state is highly problematic (Weiss 2003; Wong 2004; Lee and Han 2006; Hayashi 2010; Kim 2010).

The second core feature of the developmental state we would identify is a cautious, if not openly hostile, attitude to FDI. Levels of FDI in Japan were negligible until the turn of the millennium (UNCTAD 2015). On average, inward FDI in Korea and Taiwan accounted for 2 percent and 2.1 percent of total capital formation between 1970 and 1990. In contrast, over the same period inward FDI accounted for 10.6 percent and 6 percent of gross capital formation in Malaysia and Indonesia, respectively. For the developing world as whole this figure stood at 2.8 percent, although this would have included communist states largely closed from the capitalist world economy.

The final key characteristics we would argue that all three states shared were the central role public agencies played in determining the allocation of capital. As we have already made clear the state plays some role in directing investment toward sectors it regards as critical in all major capitalist states. However, the scale of such intervention was fundamentally different in Northeast Asian developmental states than in contemporary “network developmental states” or “liberal states.” The significance of state control of finance in Korea is well documented. Interest rate differentials between the official government controlled financial system and informal unregulated semi-legal curb market were very high. Between 1966 and 1980, the rate a firm could expect to pay on a loan on the curb market was between 23 and 30 percent higher than in the official financial system (Woo 1991, 104). The difference between curb rates and the cost of policy loans was greater still (*Ibid.*). State control of finance may have been less significant as an instrument of industry policy in Taiwan than Korea. However, the government made extensive use of state-owned firms to promote the development of strategically important industries—between 1951 and 1980 these firms accounted for almost a third of total investment (Wade 1990, 177). The role of the state in the allocation of credit was more limited in Japan than Korea and Taiwan but it was still highly significant. According to Johnson (1982, 210) “from 1953 to 1961 the direct supply of credit by the government to industry ranged from 38 percent to 19 percent.” These funds were focused in “priority” industries (electrical power, steel, shipbuilding, and mining). Scholars who argue that Korea remains a developmental state and that this strategy remains viable in the contemporary global economy frequently point to the continued existence of concessionary forms of finance for strategically important industries (Weiss 2003; Wong 2004; Lee and Han 2006; Kim 2010). However, as we have already made clear almost all states offer some level of support for investments in selected industries. The question of scale cannot be overlooked. It is necessary to carefully differentiate between states that intervene in a limited

manner within an essential liberal financial system and states that play a major role in shaping the overall allocation of credit.

When assessed against the criteria set out in this section, it becomes clear that contemporary Korea cannot be regarded as a developmental state. While levels of FDI within Korea remain relatively low, the financial system and growth regime have fundamentally changed. We explore the breakdown of the Korean developmental state in the next section of this chapter.

### **The Crisis of the Korean Developmental State**

The crisis of the Korean developmental state can be dated back to the mid-1980s. From 1987 onward there was a marked dip in the rate of profit. According to Jeong (2007, 58), the rate of profit on capital employed within the nonfarm sector fell from over 13 percent in 1987 to approximately 5 percent on the eve of the 1997 crisis. In part this fall is attributable to the breakdown of systems of labor control. Real wage growth consistently outstripped increases in labor productivity between 1987 and 1996 (Kim 2012). However, Jeong (2007) demonstrates that the capital-output ratio also fell over this period. Capital would have had to significantly increase its share of output to maintain levels of profitability. In the face of profitability pressures leading Korean firms actually increased their investment programs in an attempt to overcome these problems. In part this was supported by increases in overseas borrowing. The increases in rates of investment coupled with the decline in profitability inevitably created a corporate debt crisis. Approximately 40 percent of Korean firms were technically insolvent on the eve of the 1997 crisis (Woo-Cumings 2001, 358). The rate of returns on assets for all Korean firms was only 0.5 percent in 1996 and the interest rate coverage ratio of the corporate sector was 111 percent (OECD 2010, 46). The Korean growth model had always relied on heavy corporate borrowing. However, the underlying pressures on the rate of profit undermined the viability of the model.

Defenders of the developmental state model have argued that in the period leading up to the 1997 financial crisis there was overinvestment as a result of the state's withdrawal from its historical role in coordinating investment and the liberalization of controls over foreign borrowing (Chang et al. 1998). We do not dispute the truth of these claims. By historical standards, rates of investment in the early to mid-1990s were very high (IMF 2014). Nevertheless, a consistent feature of the developmental state was increasing rates of investment. The underlying problem was that the conditions for an investment-led growth model in Korea ceased to exist after the mid-1980s. There was a deeper structural problem relating to a growing lack of



the profitable investment opportunities necessary to support an investment-led growth regime. Lack of state coordination of private investment simply compounded this basic problem.

The process of economic liberalization that state managers engaged in with increasing vigor from the early 1990s onward can be understood as a response to the developing profitability crisis. The measures the state undertook in terms of liberalizing the financial system, removing controls on overseas lending, abandoning systems of industrial coordination, and promoting domestic firms internationalization clearly did not resolve the problems of Korean capitalism (Pirie 2008). Rather, they compounded the problems Korea faced. Nevertheless, they represented a response to a very real crisis in the regime of accumulation. They should not, therefore, be understood as inexplicable policy mistakes.

By the eve of the 1997 crisis, Korea could no longer usefully be described as a functioning “developmental state.” Financial liberalization had undermined the role of the state in credit allocation and the growth regime was in crisis. However, the extent to which a new neoliberal regulatory model had been established was limited. Major Korean firms were not subject to effective market pressures to manage debt levels and remain profitable. Equally, while key financial institutions were freed from state control they were not subject to global competition or effective market-based regulatory standards.

Since the 1997 crisis there has been a consolidation of key aspects of the neoliberal project. Systems of economic governance have been remodeled so as to increase pressure on firms to focus on maximizing short-term profitability (OECD 1999, 107–38). Given the key role that finance had historically played within the developmental state model the most significant changes have occurred within the financial system. Domestic capital adequacy standards have been brought into line with standards set by the relative international regulatory authorities (Bank of International Settlements, International Organization of Security Commissions, etc.). The criteria for classifying nonperforming loans have also been tightened since the 1997 crisis (Ibid., 82–7). At the same time as tightening capital adequacy standards the state has also reconfigured, systems of financial reporting around internationally accepted standards of best practice. Financial institutions must prepare public financial statements more frequently, observe international accountancy standards, and (in theory at least) it has been made more difficult to hide liabilities off balance sheet (Ibid., 82–5). The purpose of these regulatory changes is to enhance transparency and market discipline. By enhancing the pressures on domestic financial institutions to focus on maintaining profitability and solvency the state hoped to create a set of financial institutions that would effectively discipline the corporate sector. The financial system is

transformed from its historical role as an agent of industrial policy to an agent of market discipline which forces firms to focus more on their short-term financial positions.

There are questions relating to how consistently and effectively new systems of financial regulation have been applied. However, the performance of Korean regulators must be assessed against their counterparts elsewhere, which have clearly been a highly imperfect, rather than an abstract standard. In formal terms at least Korea possesses a comprehensive neoliberal (market-based) system of financial regulation. While there may be issues in how effective regulatory frameworks are in practice, it is clear that they are based on neoliberal principles.

In parallel with the process of regulatory reform, the state has promoted foreign investment within the financial system. At the time of writing, spring 2015, all three of Korea private nationwide commercial banks were majority foreign owed.<sup>3</sup> Furthermore, foreign investors have established a major presence in the life insurance and investment trust industries (PricewaterhouseCooper 2008). The state has effectively favored foreign investors by restricting the capacity of the *chaebol* to invest in the banking system. The restrictions on the *chaebol* effectively meant that foreign financial institutions were the only viable strategic investors in the Korean banking system (IMF 2006).

The changes in ownership and regulatory structures have fundamentally altered the behavior of Korean firms and leading financial institutions. Leading Korean firms have become more parsimonious in their investment plans and have strengthened their financial positions. Levels of investment have fallen. Between 1998 and 2013 levels of investment in Korea averaged 29.3 percent. If we measure postcrisis rates of investment from 2001 to 2013, in order to discount for the short-term effects of the 1997 crisis, the average is 31.6 percent. This represented a substantial decline from the levels experienced prior to the crisis, between 1990 and 1997 when the total investment averaged 39.2 of GDP (IMF 2014). We have to go back to the mid-1970s to find a period when investment rates were consistently lower than today (Chung 2007). While high by international standards, levels of investment are low by historical Korean standards. The profitability of the Korean corporate sector has improved since the crisis. The output-capital ratio has improved marginally since 1997 as capital has become more selective in its investments (Jeong 2007). However, the primary source of improved profitability since 1997 has been the suppression wage growth and the capacity of capital to capture an increasing share of output. Capital's share of total output increased from 35 percent in 1996 to 42 percent in 2008 (OECD 2015b). As a result of increases in the overall level of profitability,

corporate saving in Korea has increased markedly. In 2012, Korea had the second highest gross national savings rate in the OECD despite ranking 17 out of 23 for household saving (OECD 2015b). In relation to their size the cash reserves of Korean firms are second only to Japanese firms. Given improvements in levels of profitability and the decline in rates of investment many leading Korean firms have no real need to access external sources of finance.

Supporters of more *dirigiste* forms of capitalism have argued that neoliberal reforms are forcing financial institutions and firms to be overly conservative and to focus too intensely on short-term financial indicators (Shin and Chang 2003). Crotty and Lee (2007) argue that neoliberal reform has encouraged firms to divert funds to activities that will support share prices (share repurchases, dividend payments, and cash hoarding) and has made it more difficult for firms to undertake ambitious long-term investment programs. At the same time, financial institutions are incentivized to focus more on consumer than corporate finance. Crotty and Lee (2007) describe Korea as a “neoliberal mediocrity” as neoliberal reform is seen to have robbed the Korean economy of much of its capacity to sustain high levels of investment and growth. On the surface these arguments have much to recommend them but they do not engage with the central point that radical political economists make regarding long-term profitability pressures. The long-term tendency for the capital-output ratio to fall has not been addressed and Korea is facing a crisis of over accumulation. The manner in which improvements in profitability have been achieved since 1997 compounds this problem. By reducing the wage share of output, Korean capital is undermining its own domestic market. The profitable investment opportunities necessary to support a sustained return to the levels of investment we have seen in the past simply do not exist.

Given the fall in rates of investment and the decline in the labor share of output that has taken place since 1997, the Korean economy has registered reasonable rates of growth. Between 1998 and 2013, the Korean economy grew by an average of 4.2 percent per annum (OECD 2015c). While modest by historical standards, Korea’s growth rate is among the highest of the OECD states. Critical to the capacity of the economy to sustain a reasonable rate of growth has been the expansion of consumer debt and the strong growth in exports. Korea’s export to GDP ratio increased from 25.7 percent in 1996 to 53.9 in 2013 (World Bank 2015). The Korean economy has run a current account surplus every year since 1997 (averaging just under 3 percent of GDP) (IMF 2014). The Korean economy is extremely vulnerable to any downturn in exports. The Korean state is acutely aware of the central role that exports play in the contemporary Korean growth regime. As such it has

responded to periods of less vigorous export growth by instigating emergency fiscal stimulus packages (New York Times 2013).

The most striking changes in the Korean political economy that has taken place since 1997 relate to the role of consumer borrowing. Household saving in Korea has collapsed and consumer borrowing has grown at an unsustainable rate. Net household saving fell from 16.4 percent in 1996 to 2.7 percent in 2008 (OECD 2015d); rates of net saving averaged 4.6 percent between 2009 and 2013 (Ibid.). Levels of household debt increased from 80 percent of net disposable income in 1996 to 161 percent in 2014 (OECD 2015a; Song 2015). In comparison to Korea, the level of household debt in the United States is actually quite modest, 112 percent of household income (OECD 2015a). The share of total loans directed toward households has increased from approximately 23 percent in 1996 to over 50 percent by 2005 (Chung 2009, 86).

The nature of the growth regime and financial system has been transformed. As we make clear above, the financial system is now primarily focused on consumer rather than industrial finance. The old investment-led growth regime has been superseded by a rather fragile one based on ever increasing exports and consumer debt. Given these changes it would be entirely inappropriate to categorize Korea as a developmental state. Having said this, the impact of neoliberal reform in Korea has been sectorally uneven. The legacies of the developmental state continue to shape certain aspects of policy in Korea.

Systems of telecommunications regulation continue to reflect the principles and priorities of the developmental state. The state has consistently subordinated the interests of consumers to manufacturers. Domestic service providers must pay a levy to support R&D by local manufacturers (OECD 2007a, 141). The government has made access to spectrum resources conditional on the early introduction of services that use nascent technologies, so as to provide soft markets for newly developed domestic technologies. Finally, the Korean state has used its capacity to set technical standards to favor products created by domestic collaborative research networks in order to encourage the strengthening of these networks and to disadvantage overseas hardware producers (Kim 2010). The resilience of these policies can in part be explained by their success. The OECD argued that communications hardware was Korea's most internationally competitive industry. The industry accounts for over 15 percent of total exports (OECD 2007b, 49).

The legacies of the developmental state can also be seen in systems of public industrial finance. The Korean government continues to play a more significant role in the process of credit allocation than governments in other advanced capitalist states. In 2012, approximately 13 percent of loans to small

and medium enterprises (SMEs) carried some form of government guarantee (OECD 2013b, 154). However, these loans are not allocated to firms located in strategically important industries. Rather, they often used to support SMEs with chronic profitability problems engaged in low value-added activities with limited potential for productivity gains. The use of credit guarantee schemes in contemporary Korea represents a means of managing the problems that the developmental state and neoliberal reform have created for the sector. The Korean development state favored large firms and the origins of the SMEs' uneven relationship with the *chaebol*, which contributes to the sector's financial weakness, lie in the practices of the developmental state. Neoliberal reform has compounded the problems faced by the SME sector by creating a financial system increasingly focused on consumer borrowing. State intervention in financial markets is not driven by a strategic plan but rather the need to support employment in the SME sector. The logics underpinning contemporary interventions are quite distinct from those underpinning intervention within the developmental state.

The legacies of the developmental state can be seen as contributing to the problems contemporary Korea faces in terms of overdependence on household debt and exports. The issues Korea faces in terms of consumer debt are clearly not unique. The decreasing extent to which major firms are dependent on external sources of finance, declining labor share, and increasing household debt are global issues (Brancaccio and Fontana 2011). It is worth noting, however, that Korea and Taiwan have seen a particularly pronounced growth in household debt. Household debt in Taiwan increased from 47.81 percent of gross disposable income in 1987 to over 135 percent in 2013 (Shih and Tsao 2004; Central Bank of China (Taiwan) 2014, 45). Taiwan has faced the same fundamental issue as Korea. As rates of investment have declined, the labor share has also decreased from 54.6 to 47.8 percent as a result of a successful assault against the weakest elements of the working class (Feenstra et al. 2013). In this situation household debt and exports are the only viable sources of growth. The issues posed are not easy to tackle. A redistribution of income from capital to labor may increase non-debt-based domestic consumption but could place further pressure on profit rates. Nevertheless, it is imperative that the incomes of poorer citizens, with the highest marginal propensity to consume, are increased to create a more sustainable consumption-led economy. Perhaps one method of achieving this could be through the introduction of putative taxes on retained corporate profits, capital gains, and high personal incomes. The funds raised could then be used to fund a massive expansion of the welfare state. The legacies of the developmental state made such an outcome more difficult to engineer. The manner in which the state had relatively successfully disorganized labor, suppressed welfare spending, and

excluded social democratic forces from political power was economically functional during the era of investment-led growth. However, this history becomes an obstacle in the transition to a mature, sustainable, egalitarian, and consumption-driven economy.

Korea faces many of the same socioeconomic issues as other OECD states in terms of increasing inequality, low-income household debt, labor market insecurities, and elderly poverty. Nevertheless, the precise form that these problems take in Korea is shaped by its history as a “developmental state” and the underdevelopment of systems of public welfare.

### **The Social Legacies of the Developmental State**

A discussion of the social legacies of the developmental state could legitimately incorporate a vast number of issues. Our analysis focuses on three issues—labor market inequality, household debt, and elderly poverty. In selecting these issues we do not mean to suggest that they are more significant than other inequalities or problems. Our neglect of gender relations, the issues facing small farmers, and environmental degradation does not mean that we regard these issues as unimportant. We do not. Furthermore, it is impossible to develop a comprehensive analysis of debt, labor markets, or the position of older Koreans without considering how these issues are affected by gender and the subordination of small farmers to capital. However, our objective here is simply to provide the reader with a snapshot of some major social issues Korea faces and how these have been shaped by its history as a developmental state.

The issues of labor market inequality and increasing household debt cannot be understood in isolation from one another. Increasing household borrowing, in part, represents a response to stagnant wages. Prior to the 1997 crisis Korea had a dual labor market. Since the late 1980s, permanent workers at large firms had won very real concessions from capital (Koo 2001). However, many Korean workers were employed on a casual basis and wages in smaller enterprises were considerably lower. Since the crisis there has been an expansion of the precariously employed workforce. Over 90 percent of jobs created between 1998 and 2002 were temporary (IMF 2004, 34). The number of temporary workers further increased from 18.1 percent of the workforce in 2002 to 28 percent in 2007 (OECD 2008, 37). By 2013 Korea had the fourth highest rate of temporary employment in the OECD area (OECD 2015f). On average temporary workers earn 30–40 percent less than their permanent counterparts (Ha and Lee 2002). The proportion of total workers employed by large firms (300 employees or more) fell from 30.7 percent in 1997 to 12.4 percent in 2007. This decline is not indicative of the

decreasing importance of large firms. Rather, these firms continue to monopolize key technologies and dominate Korea's export profile. Rather, it reflects the use of subcontracting by large firms to shift noncore activities to the low-wage largely nonunionized SME sector. Wage levels in micro enterprises (five employees or fewer) were approximately half that of large firms and wage levels in medium-sized firms (with 100–299 employees) were between 25 and 30 percent less than their larger counterparts (Ha and Lee 2012). Wage differentials between large and small firms have grown considerably since the crisis and are exceptional by international standards. In 2012, Korea had the second highest proportion of workers, behind the United States, earning less than two-thirds of medium earnings in the OECD area (OECD 2015e).

International organizations have been highly critical of aspects of labor market duality, particularly the inequality between temporary and permanent workers, in Korea (OECD 2010). However, this analysis ignores the redistribution of income from capital to labor that has taken place since 1997—rises in intra-class inequality (broadly defined) are analyzed in isolation from inter-class inequality. We would stress the key role that the expansion of temporary employment and increased use of subcontracting has played in restored profitability in post-1997 crisis Korea.

The increases in household debt and falls in the rate of household saving can be directly linked to the growth of inequality. The savings rate for the wealthiest 20 percent of households has been fairly consistent since the early 1990s; there is no clear overall direction of movement (Chung 2009, 89). The savings rate for the poorest 20 percent of household has been negative since 1998 (Ibid.). The rate fell from 5 percent in the early 1990s to minus 17 percent in 2004, and it remains strongly negative today (Ibid.; ROK 2015). The savings performance of middle-income groups fell between these two extremes.

The increased use of outsourcing by large firms to control labor costs can be seen as a classic feature of neoliberalism. The same can be said of the use of temporary employment contracts. Moreover, the growth of low-income household debt would not have been possible without neoliberal financial reform. As critics of neoliberalism have highlighted noted, the financialization of low-income households and the growth of consumer debt have become increasingly integral to the (dys)functioning of the neoliberal model since the turn of the millennium (Lapavistas 2012). However, the impact of these processes in Korea has been shaped by its history as a developmental state. The extreme wage differentials between large firms and the SME sector cannot be understood outside of the historical bias of the developmental state toward the *chaebol* and the imbalances this has created. Moreover, Korean workers face the instabilities generated by flexible labor markets without the

protection that a developed welfare state offers. The underdevelopment of welfare systems in Korea is a product of the developmental state's singular focus on promoting capital accumulation. Public welfare spending in Korea, as a proportion of GDP, was less than the half of the OECD average in 2014 (OECD 2015f). In 2014, Korea spent 10.4 percent of GDP on welfare while no other OECD state with an income level similar or higher than Korea spent less than 15.5 percent. Poor households in Korea receive far lower levels of transfers from the state, in terms of cash or free access to goods, than their counterparts in other high-income states. Government action to ameliorate the impact of wage inequalities is very limited. The development of inequalities in the post-1997 period, and the subsequent extraordinary increases in household debt, should be understood as a product of neoliberal reform in the absence of a welfare state.

The underdevelopment of welfare provision in Korea has created an acute set of problems for many older Koreans. The rapid growth that the developmental state promoted brought with it profound social changes. Traditional family-based systems of care for the elderly have been greatly weakened. However, Korea has failed to develop adequate public systems of support for the elderly. The developmental state promoted economic growth without simultaneously constructing structures to manage the more negative implications of that growth.

Korea has the highest rate of elderly poverty in the OECD, with 45.1 percent of households over 65 have incomes below half the medium household level (OECD 2015g). This compares to an OECD average of 13.5 percent. Poverty rates among people over 65 years of age are over three times as high as those for the general population. In addition to the problem of low income, Korea has the second highest effective retirement age in the OECD after Mexico. The average age at which Korean men exit the labor market is slightly above 70 (OECD 2015b). However, most professions/firms have relatively early mandatory retirement ages—often as low as 55. Furthermore, 36.7 percent of workers aged 55–65 and 60.6 percent of workers aged over 65 are employed on temporary contracts (OECD 2015e). Public pension spending in Korea is limited to 2.1 percent of GDP, as opposed to an OECD average of 7.8 percent (OECD 2015h). The noncontributory pension scheme in Korea only provides an income equal to 3 percent of the medium wage (Jones and Urasawa 2014, 10). The basic livelihood program, aimed at the very poorest, provides an income equal to 26 percent of the medium (Ibid., 9). Older Koreans are forced to engage in marginal forms of self-employment and informal low-wage employment as survival strategies. We are not arguing that older people should not be active in the labor market. However, many older Korean are effectively forced to enter the labor market irrespective of



the quality of job they are able to secure or the long-term medical conditions they may suffer from. The terms on which they participate in the market are coercive.

The developmental state demanded immediate sacrifices in the name of maximizing growth. The legitimating ideology of the developmental state suggests that short-term sacrifices would create the basis for a more prosperous inclusive society. When we look at contemporary Korea, the limitations of the model of development become clear. The Korean developmental state largely succeeded in narrowing the income gap with advanced capitalist states. However, the developmental state played a key role in forging a society with by far the highest levels of elderly suicide in the world, high rates of wage inequality, and exceptionally high rates of precarious employment. The promises of the developmental state have proven to be illusionary.

## Conclusion

If the concept of the “developmental state” is to be analytically useful we must define it in a sufficiently vigorous manner. It is not adequate to argue that a state should be considered “developmental” because it has played a significant role in promoting the growth of a particular strategic set of industries. All major capitalist states employ some form of industrial policy. By this definition all states are “developmental.” This chapter instead argues that the “developmental state” can usefully be defined through three core characteristics. The first of these is a singular focus on maximizing rates of investment (capital accumulation) and minimizing consumption. The second characteristic is a cautious approach to FDI. The final core feature of the developmental state is the central role the state played in the allocation of capital. When assessed against these criteria it is clear that contemporary Korea cannot usefully be categorized as a developmental state as a result of changes in policy and the underlying growth model. Nevertheless, the legacies of the developmental state continue to define the key social and economic problems that contemporary Korea faces.

While a detailed analysis of the condition of “post-developmentalism” is beyond the scope of this chapter, it is worth noting that Taiwan faces many of the same basic issues as Korea. Taiwan and Korea have both experienced an extraordinary growth of household debt. Rates of elderly poverty in both states are exceptionally high and the absence of effective welfare structures is becoming increasingly problematic in the face of increasing wage inequality (Tai and Rixley 2008). Analysis of the common problems faced by post-developmental states certainly promises to be a productive area for future scholarly enquiry.

## Notes

1. See <https://www.gov.uk/business-finance-support-finder/> for details.
2. The focus here is on Korea and Taiwan. Japan's experience is somewhat different given its lower initial level of underdevelopment and the fact that its period of rapid industrial development occurred earlier in a different global environment.
3. See the following corporate websites for details:  
<http://www.shinhan.com/en/index.jsp>  
<http://www.hanafn.com/eng/ir/irStockInfo05.do>  
<https://www.kbfg.com/Eng/Stock/Finance/index.jsp>.

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## CHAPTER 8

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# The Chinese State and Its Role in Shaping China's Innovation System

*Erik Baark*

The Chinese leadership initiated a comprehensive reform of the management of science and technology (S&T) in the 1980s, with the explicit aim of developing a dynamic innovation system that could help the Chinese economy catch up with advanced industrialized countries. One key element of the reform has been to expand the funding of research and development (R&D) so that investment in R&D as a ratio of GDP tripled from 0.6 percent in 1996 to 1.8 percent in 2010; considering the exponential growth rate of GDP during this period, the resources available for innovation in China are now considerable. Much of the expansion has been driven by public funding, but the proportion of investments by industry has also gone up. Another key element has been the growth of human resources for innovation, which has been developed rapidly through the educational system and the role of Chinese trained abroad. The People's Republic of China has succeeded in using an approach akin to those of other developmental states to steer the economy toward an innovative economy, even if it is not considered an archetypical example of the developmental state model (Evans 2011). This chapter will first briefly review the legacies that the Chinese leadership faced in the late 1970s, when the reforms of the economy were initiated. Second, the transformation of the Chinese innovation system during three decades will be described, and I will analyze how the key policy initiatives and state–business interaction at various levels of Chinese society have led to the current state of innovation. However, the question remains open as to whether China's recent experience represents a proper example of the “developmental state” model.

### The Developmental State Concept

Much of the literature on the developmental state has taken as its point of departure the experience of industrial policy in East Asian countries. This was the case when Chalmers Johnson (1982) launched the concept in his classic analysis of the role of the Ministry of International Trade and Industry (MITI) in leading the technological upgrading of key Japanese industries. A similar focus on industrial policy characterized Robert Wade's (1990) analysis of the Taiwanese effort to establish or upgrade industries through technology imports, and received additional support through the studies of South Korea by Alice Amsden (1989) and Linsu Kim (1997). The importance of technology transfer, technological learning, and ultimately the development of innovative capabilities was a significant element of the strategies that were identified as vital to developmental states, and this emphasis on building capabilities for value-added industrial development has not diminished in the twenty-first century (see, e.g., Evans 2011). In other words, the enhancement of technological innovation has remained a core concern for developmental state actors in East Asia, and fundamentally preoccupied policy-makers in most emerging economies.

In the political economy literature, much of the debate has been fueled by state–society relations in general and, more specifically, the extent to which governments have the capacity to implement the priorities of economic growth, a professional technocracy that is not subject to capture by elites, and the ideational orientation toward strengthening the nation. This has helped scholars utilize the developmental state model to examine the experience of countries outside the narrow selection of economies in the East Asian region that were the empirical basis for the first formulation and applications of the concept. This effort is exemplified in the analysis published by Peter Evans in *Embedded Autonomy: States and Industrial Transformation* (1995), which examined the state's role in the promotion and development of the information technology sector in Brazil, India, and Korea. The actions and capacity of the governments in these countries reflected elements of the “developmental” state as an ideal type, in contrast to the ideal type of a “predatory” state—which resembled the state–society and state capacity of President Mobutu's Zaire. For Evans, a central issue was still the state's attitudes to the creation or development of competitive industrial sectors, in particular with reference to how state technocracies were able to engage with and induce the private corporate sector to help achieve national goals.

The earliest attempts to apply the developmental state concept to China indicated that state intervention in Chinese corporate sector was largely “dysfunctional” (Breslin 1996), or fundamentally not contributing a positive

effect at the local level (Nee et al. 2007). Other recent interpretations have pointed to the transformation of many developmental state “embedded autonomy” type relationships to a “clientilistic” relationship between local political leaders and capitalists that accounts for a massive asset stripping of firms since the late 1990s (Ong 2012). However, in the recent analysis published by John Knight (2014), the concept of developmental state is applied to China in rather simplistic terms, arguing that it designates a state that gives priority to economic growth and actively adopts policies that successfully achieve this objective.

### **The Political Economy of Innovation Systems**

Issues related to the role of the state have also permeated the literature on innovation and, in particular, the emergent literature on innovation systems. The innovation systems approach is often traced back to Friedrich List's political economy theories about the need for strong state support for national systems of production and protection of infant industries in the nineteenth century, a theme that influenced proponents of innovation systems thinking such as Chris Freeman (1995) and Bengt-Åke Lundvall (1992, 2007). The concept of an innovation system lends itself to visions of an influential role of the state, whether this role becomes manifest in the strategic financing of R&D, the operation of public research organizations or universities, promoting industrial clusters, or the merely creating a regulatory framework for “dynamizing” an innovation system (OECD 2002). This has also been a fundamental element of attraction for the many policy-makers in developing economies that have embraced the innovation system concept, attempting to use it as a model for catching up with industrialized economies.

The innovation studies literature displays several different streams, where innovation system approaches have emerged as an alternative or complementary understanding of the processes of innovation (see, e.g., the recent overview by Martin 2012). The field thus includes both the proponents of “free markets” with little intervention by government, and theorists that recognize a more important position of the state in regulating and promoting technological change in order to achieve economic growth and competitiveness. Neoclassical economics have been advocating limited government support for basic research due to the market failure of provision of public goods; that is, the fact that there is little incentive for private investment in knowledge that is difficult to appropriate by firms. A similar argument relating to market failure has secured support for government intervention for the protection of intellectual property rights, such as patents. The debate is of course ongoing, and it is often so closely linked to ideological or



political agendas that there appears to be little room for a consensus. Nevertheless, innovation studies have moved beyond the circumscribed views of neoclassical economics and increasingly turned its attention to interventions that are shaping the market, such as the use of government procurement for innovation (e.g., Lember et al. 2014).

Mariana Mazzucato in her recently published *The Entrepreneurial State* argues convincingly that many of the celebrated innovations—such as Apple’s iPhone—that have been considered the results of geniuses of high-tech firms assisted by the market, in fact relied to a crucial extent on the results of state-sponsored research or government industrial support funding programs (Mazzucato 2013). In most successful economies, the role of the government has gone way beyond creating the right infrastructure and setting the rules. Governments have been a leading actor in achieving the type of innovative breakthroughs that allow companies to grow. Her examples come from advanced industrialized economies such as the United States and the United Kingdom—countries where governments have often espoused a strong commitment to not “picking winners.” Instead, she finds that the evidence points to a “strong case for a targeted, proactive, entrepreneurial state, able to take risks, creating a highly networked system of actors harnessing the best of the private sector for the national good over a medium- and long-term horizon” (Mazzucato 2011).

In other words, it is not merely researchers who study emerging economies in East Asia that have been fascinated by the way that developmental or entrepreneurial states have played—and continue to play—an essential role as a proactive actor in economic development. Since the earliest launch of the innovation system approach, the proactive role of governments in shaping and supporting the development of innovation in the economy has been recognized.

### The Chinese Experience

Seen from a long-term historical perspective, the Chinese state has been a powerful actor in the development of the economy as well as the control of scientific and technological progress for more than two millennia. Karl Marx proposed the concept of the “Asiatic Mode of Production” in his critique of political economy, focusing on the impact of a despotic state, irrigated agriculture, and the lack of private property in Asian societies. The consistent theme running through Marx’s writings on the Asiatic mode of production is, according to Marion Sawyer (1977), that it designates a nonprogressive economic form marked by state intervention in the economy. A range of Western and Chinese scholars have explored this theme of the power of the

Chinese imperial court and its bureaucratic network and its influence on the development of S&T (Bodde 1991; Qian 1985; Munro 1996; Baark 2007). The key point to note here is that the social epistemology of science and innovation in state–society relations in contemporary China is rooted in a traditional concept of state authority (Baark 2007). The supreme power of the Chinese emperor was powerful and pervasive throughout much of China's imperial past, and held up as an ideal even in periods when state authority was undermined by war or political fragmentation.

Thus, immediately after securing political power and regaining economic stability in the early 1950s, the Chinese Communist Party embarked upon an ambitious program to acquire modern technology during the first five-year plan, 1953–1957. In many ways, the enormous effort associated with successful acquisition and assimilation of technology transferred from the Soviet Union was indicative of Chinese state's ability and willingness to concentrate resources on catching up with foreign countries. This transfer of technology from the Soviet Union was accompanied by the setting up of institutions for the development and application of scientific research under a system of planning, creating an infrastructure that, despite the conflict and damage caused by the Cultural Revolution, remained the core of China's S&T system until the 1980s (Suttmeier 1974; Wang 1993).

At the same time, the preeminence of the priorities of development of technologies for defense purposes became evident. Chinese leaders sought advanced technologies for military defense to the extent that these were available, and were willing to devote key indigenous scientific resources to the development of their own weapons systems. The development of nuclear weapons and the development of ballistic missiles are frequently considered two of China's greatest technological accomplishments (Lewis and Xue 1988). Much of the early industrialization was also dominated by heavy industries, for example, for the supply of steel for armaments, and most of the priority areas identified in the 12-year plan for scientific and technological development 1956–1967 were defense-related technologies (Wang 1993). The defense S&T system operated according to a separate chain of command, but key decision-makers such as Marshal Nie Rongzhen also served as a very influential Chairman of the State Science and Technology Commission (Ostrov 1991).

The late 1960s and early 1970s were difficult times for China because of the destructive impact of radical policies toward science, education, and management pursued during the Cultural Revolution. Nevertheless, books and articles celebrating Chinese achievements in S&T during the last 50 years invariably highlight the detonation of atom bombs and the launch of satellites, but frequently also note important advances in petroleum exploration,

the diffusion of hybrid rice, and other key successes. The impact of the Cultural Revolution on S&T in China has recently been reassessed from a range of perspectives that shows how some of the much maligned policies left an important legacy. For instance, the popularization of technology through barefoot doctors provided a first attempt to set up a primary healthcare system in rural areas (Wei and Brock 2013). Most of these success stories of technological development were associated with what has been termed the “Chinese-style large S&T system,” an approach that relies on state planning to concentrate and mobilize a wide range of organizations, individuals, and finance on a project (Chen et al. 1994, 176–7).

The establishment and expansion of the Chinese S&T system in the 1950s and early 1960s provided an important legacy, a model of technological innovation that would remain influential in the Chinese government’s policies for several decades. This legacy was most significantly grounded in the emphasis on a strict division of labor in the innovation process, between research institutes on the one hand, and production enterprises on the other. The resultant fragmentation of technological innovation in China left the Chinese economy with a stagnating level of technology in most of its industries, and created a continuing headache for the leadership (e.g., Liu and White 2001; OECD 2007). Policy-makers such as Deng Xiaoping and Zhu Rongji showed a strong awareness of this issue in the 1980s and 1990s, and they attempted to reshape the state’s role in the innovation system, seeking to engage market forces to produce a more dynamic and effective system for acquiring, assimilating, and developing new technology. The policies pursued have often been ambiguous; thus, they reflect the shifting coalitions between proponents of policy cultures that combine ideological persuasions with the advocacy of strong interest groups (Baark 2001).

The initial reforms of the S&T system in the 1980s aimed to increase the usefulness of the existing research organizations and the state’s investments in these organizations by encouraging the commercial exploitation of their research results. The idea was that the creation of opportunities for commercialization of research would enable Chinese enterprises to access a vast pool of technologies, creating new economic growth. In fact, however, Chinese enterprises were mostly looking for ways to import foreign technology, and often did not have the capabilities to utilize technological inputs from Chinese research organizations. The Open Door policy launched simultaneously with the S&T policy reforms helped enterprises access to advanced technology from overseas, and the expanding technology markets in China were soon dominated by such transfers.

The reform of the institutional framework for commercialization of research results opened up another influential avenue for introducing

advanced technology to China—namely, the growth of innovative spin-off high-technology entrepreneurship. Such enterprises emerged in the 1980s in the northern Beijing suburb of Zhongguancun, and since the 1990s have proliferated in most major cities in China, notably in the High and New Technology Development Zones that were created by central or provincial government authorities (Segal 2003). Several prominent Chinese high-technology enterprises such as Lenovo, Founder, and Huawei originated from this new wave of entrepreneurship. The zones provide evidence of the range of policy instruments that the Chinese state has utilized to promote innovation and commercialization of technology. On the one hand, they provide infrastructure such as land, buildings, and various services for firms in a cluster, or through “incubator” buildings during an infant industry phase, in a way that would be practiced in many industrialized economies. On the other hand, many zones—in particular, those established at a provincial or local level—will provide land, state-owned bank loans, and other resources at a heavily subsidized rate, and target specific industries. Such support demonstrates a powerful state intervention that moves far beyond the conventional basic infrastructure and institutional framework recommended by neoclassical economics.

During the 1980s, however, the Chinese government also took some steps to reduce the state's direct intervention in the economy by changing the status of planning from detailed, mandatory instructions and resource allocation to so-called guidance plans. The Five-year Plans that had previously determined the detailed, one-year planning of resource allocation gradually became more general and strategic. In 1998, the State Planning Commission was renamed the State Development Planning Commission, and in 2003 merged with other government units to form the current National Development and Reform Commission (NRDC). Although planning has assumed a strategic mission, the current 12th Five Year Plan is still regarded by domestic and foreign actors as a very influential document. Likewise, the Chinese government's “Medium- to Long-Term Plan for the Development of Science and Technology” released in January 2006 is another strategic document. It shows a combination of general principles and strategic goals, encompassing specific megaprojects that are funded and directed by the government, much in the tradition of the planning and implementation of S&T priorities that led to China's atomic bombs and satellites (Cao et al. 2006; Serger and Bredine 2007).

In addition, the Chinese government created special funding programs that encouraged research organizations to team up in consortia with other research units, universities, and/or enterprises to engage in bidding for major projects to carry out advanced research and development. The first program

launched was the National Key Technologies Program, which formed a component of the five-year plan schedule. Another important initiative was the National High Tech R&D Program (better known as the 863 program), which provided generous funding for projects that could “leap-frog” development in strategic, advanced technology areas such as IT, biotechnology, and new materials; this program was formulated on the initiative of Chinese scientists who had been instrumental in implementing major defense projects (Feigenbaum 2003). From 1986 to 2005, this program financed research that generated approximately 120,000 publications, 8,000 patents (including both domestic and foreign patents), and 1,800 national and industrial standards. In 1997, a National Basic Research Program (known as the 973 program) was created to provide additional funding for fundamental research—an area of essential importance for future solutions to technical, economic, and social problems that had received meagre support for many years. Basic research had received less than 5 percent of government funding for S&T, and despite the adoption of the 973 program, basic research remains generally a low priority item in comparison with the R&D that serves industrial or agricultural development. Another important change in the planning and funding of technological development in China has been the growing importance of local initiatives by provincial, municipal, or city governments. For many new initiatives, there is an explicit requirement of co-funding by a variety of central and local authorities and, in recent years, with participation of enterprise or international funding sources.

Thus, the institutional context and governance principles of planning—and particularly the planning of S&T—have undergone ambiguous reform. Some elements of state planning have retreated to a more hands-off stance of guidance, while other elements retain a governance model of strong state control. This ambiguity characterizes many of the key initiatives undertaken as part of the Medium- to-Long-Term Plan for the Development of Science and Technology. One of the megaprojects, the development of new-generation broadband wireless mobile telecommunications, is strongly associated with China’s attempt to develop and commercialize its indigenous third-generation mobile communication standard TD-SCDMA.

Nevertheless, since the 1990s, the Chinese government has intensified its efforts to encourage innovation in response to market demand, and to strengthen the role of the enterprise sector in China’s innovation system. As mentioned above, Chinese enterprises were traditionally not expected to undertake research and development, but were only supposed to implement the technologies that they received from research organizations or foreign suppliers. Some enterprises did engage in “reverse engineering” to imitate foreign machinery and equipment, and eventually became quite adept at process

engineering; but this approach did not work well with more advanced and complex technologies. The flow of foreign technology that followed the Open Door Policy and the growth of foreign direct investment during the 1990s required substantial investments in assimilation, which had further effects of encouraging R&D efforts. Other policies, such as the Patent Law adopted in 1985, were also contributing to a new environment for technological upgrading and innovation efforts in China. The decade of the 1990s witnessed a gradual increase in the funding of R&D by Chinese enterprises, and at the turn of the century, these investments increased substantially. Chinese firms accounted for 42.9 percent of the country's R&D spending in 1997, and this figure rose to 60.3 percent in 2000 and reached 73.4 percent in 2010—a ratio equivalent to those of advanced industrialized countries such as Japan and the United States (Wu 2012). Several factors may have encouraged this trend. Firstly, in the late 1990s the Chinese government introduced tax incentives for high-technology enterprises and specifically started to provide “super discount” tax deduction of 150 percent for R&D investments. Therefore, currently R&D tax incentives are estimated to provide around half of the Chinese government's support for business R&D, with the other half coming from direct subsidies (OECD 2013, 206). Second, a restructuring of the Chinese S&T sector at the end of the 1990s transformed many state-owned research organizations into enterprises that continued to engage in R&D. Third, the challenge of competition brought on by China's entry into World Trade Organization (WTO) acted as a strong motivation for large Chinese enterprises to bolster their R&D capabilities. A consequence of this shift was to establish firms as a new core actor category in the Chinese innovation system, a result that fulfilled the explicit ambition of the CCP Central Committee, which had declared in 1999 that it was essential to establish an innovation system that would achieve the industrialization of S&T achievements. Thus, both funding and performance of R&D in China today is dominated by the enterprise sector (Springut et al. 2011).

Foreign organizations have become a new and increasingly important actor in the Chinese innovation system. In particular, a spectacular development has been the establishment of a large number of R&D laboratories set up by multinational companies (MNCs), including major firms such as Microsoft, Intel, and Nokia. At the early stage, such research units were primarily set up to help MNCs monitor key trends in the Chinese market and to respond to requests by Chinese officials for a stronger commitment to adapt or further develop technology for the domestic Chinese market. Increasingly, however, these R&D units have been set up to take advantage of rich supply of skilled Chinese engineers and to engage in product development aimed at global markets (Sun et al. 2013). The Chinese government has consistently

attempted to use access to the Chinese labor force or the domestic Chinese market as a bargaining chip in attracting advanced technology and know-how for upgrading of facilities in China. Thus, the most vital function of foreign direct investment and joint ventures in China has been the transfer of know-how, while the transfer of capital has played a less important role (Bai et al. 2010).

The above description of some of the most significant policy instruments that the Chinese state has utilized to shape the national innovation system to help the Chinese economy catch up with the advanced industrialized economies indicates some success in following a developmental state model. However, there are many additional elements and levels of complexity that need to be considered in order to provide a full account of the particular form of innovation governance pursued by China. For example, it is necessary to recognize that the Chinese innovation system exhibits local and regional variations, partly because considerable discretionary financial resources have become available to municipal or provincial governments. This has resulted in different emphases in the promotion of technological development, R&D, and high-tech entrepreneurship in Beijing, Shanghai, and Guangdong, as demonstrated in the study of IT industry by Breznitz and Murphree (2011). Given that regional authorities have become increasingly able to create new infrastructure for high-technology industry, independently finance R&D and technological development, provide special incentive for foreign investment, and attract overseas talent, the influence of the state on developmental choices is often demonstrated through local decisions. Of course, this phenomenon has also created competition among regions, causing considerable overlap in production (e.g., in the auto industry), but also room for specialization and deepening of the industrial value chains (e.g., in the solar photovoltaic panel industry in Jiangsu Province). General statements and statistics relating to China's innovative capability often gloss over these important regional variations, and frequently also ignore the stark contrasts between the advanced capabilities in the eastern coastal provinces and the weaker innovation environments of the central or western provinces in China.

Finally, it should be emphasized that policy tensions and competition do not merely shape the way the Chinese innovation system exhibit regional differences, but are also manifested in the fragmentation and potential conflicts that have characterized relations between sector ministries and other central government units in China. For example, Liu et al. (2011) provide a detailed analysis of 289 innovation-related policies formulated and implemented during 1980–2005, and 79 policies formulated for implementation under the Medium and Long-Term Plan for the Development of S&T. The

results show that during the early period, many policies were formulated and implemented by individual ministries without close cooperation from other ministries, but during recent years more coordination has been achieved.

China has thus been engaging in active policy learning, as indicated in the latest OECD review of the country's innovation policies. This review depicts a process where early policies aimed to increase the effectiveness of the existing S&T organizations and their transfer of technology to industrial enterprises have been supplemented by policies which more actively seeks to strengthen and engage the universities and enterprises as innovation actors (OECD 2007). It was the reorientation toward a more comprehensive perspective of innovation, and more attention to issues of institutional infrastructure and the dynamism of actors and networks—which are typical of the innovation systems perspective—that created the conditions for a real diversified and developmental approach of the Chinese state to the promotion of innovation and technological upgrading in China. In addition, the Chinese government became more adept at integrating policy initiatives across sectors and performance areas (for instance, coordinating intellectual property rights protection with trade and industrial policy), mobilizing funding for specific programs while encouraging various public and private actors in the market to pursue their own competitive advantages in ways that would support the overall strategic direction.

### **Concluding Remarks: New Challenges**

This brief chapter has provided an overview of the ways that the Chinese state has been active in shaping the innovation system, and thus to mobilize S&T in its developmental efforts. It is an important area of research, and the present chapter should be seen as a first step to analyze the ways in which this developmental experience has unfolded. However, I would like to argue that an analysis of the developmental state as applied to China should pay attention to two vital aspects.

First, the concept of technocratic state intervention for the sake of economic development drawn from the experience of East Asian economies closely resembles the concept of an entrepreneurial government in innovation systems thinking, reflecting the role of the state as selectively intervening in markets to promote transfer or development of technologies that can yield competitive industries in the economy. It is possible to trace many of the sources of inspiration for Chinese innovation policies to international organizations (such as the OECD) or academic background of Chinese policy-makers that were inspired by overseas debates or experience with promotion of high-technology industries (such as Silicon Valley). While the



experience of East Asian developmental states was important during the early days of reform in the 1980s, they declined in their impact after 1990.

Second, I believe that it is vital to recognize that the starting point for China's developmental experience in the 1980s was significantly different from that of, for instance, Japan, Korea, and Taiwan. China arrived, one could argue, from the opposite end of a developmental state experience; namely, with an over-regulated and inefficient economy run directly by an over-interventionist state. In many ways, the legacy of imperial and early communist China had already endowed Chinese society with extremely interventionist models for powerful state regulation of economic activities. This tradition of strong state control reached its apex during the period when China imported the institutions of socialist planned economy and its approach to planning and concentration of S&T resources from the Soviet Union. Political power struggles during the Cultural Revolution also regimented intellectual and scientific activities to an extent that nearly eliminated the basis for S&T work. So, when China started to reform its economic system under the leadership of Deng Xiaoping, the challenge was to dismantle the stifling influence of the state in the detailed, day-to-day activities of research and development, and instead to increase the role of markets and engage various actors in strategic initiatives through more subtle policy instruments.

The influence of the Chinese state remains very powerful even today and the call for promotion of "indigenous innovation" (which would be more accurately translated as "sovereign innovation") would appear to exacerbate this trend. Insistence on the promotion of indigenous innovation in relation to the Medium- and Long-Term Plan for the Development of S&T has created controversial debates at home and abroad, and this particular policy priority may not be feasible in a globalizing world (Liu and Cheng 2011). Nevertheless, there is no doubt that China has managed to create an environment for innovation that has succeeded in combining rapidly improving home-grown capabilities and infrastructure with foreign technologies and knowledge—an "absorptive state" that enables the economy to exploit and further develop technology globally (Bound et al. 2013).

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## CHAPTER 9

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# The Post-Socialist Path of the Developmental State in China

*Alvin Y. So*

By the end of the 1970s, the economic success of the East Asian newly industrializing economies (NIEs), especially Taiwan and South Korea, was increasingly interpreted as dependent in important ways on the active involvement of the state. Amsden (1985, 1989) and Wade (1990) pointed to the central role of the state in the rapid industrialization of Taiwan and South Korea. Soon after, a new developmental state paradigm, which argues that all successful cases of “late industrialization” have been associated with a significant degree of state intervention, emerged to challenge the neoclassical, neoliberal vision of East Asian growth in terms of economic benefits of trade liberalization, private enterprise, and a restricted role of the state (Öniş 1991).

However, the literature on the developmental states in East Asia seldom includes post-socialist China in its discussion (see Woo-Cumings 1999; White and Wade 1984), presumably because the Chinese post-socialist party-state cannot be possibly labeled a developmental state. This exclusion may be justifiable in the 1980s and even in the 1990s. However, in light of the very rapid economic development of China in the first two decades of the twenty-first century [with an average gross national product (GNP) growth rate of over 10 percent], it seems necessary to reexamine the crucial research question of the role of the post-socialist party-state in China’s economic development.

In this chapter, I first present the general characteristics of the developmental state in capitalist East Asia. Then I will examine how China’s post-socialist state is similar to (or different from) the developmental states of its East Asian neighbors. After that, I will examine the various high-tech initiatives

of the post-socialist state in promoting an indigenous innovation state. At the end, I will discuss the implications of the case of post-socialist China on developmental state research.

### **The Capitalist Path of Developmental State in East Asia**

Although there are different variants of the developmental state in capitalist East Asia, the East Asian development states generally share the following characteristics:

#### ***Normative Commitment and Outcome***

By definition, a developmental state is one in which its bureaucratic elites put the goal of economic growth (defined in terms of growth in GDP, productivity, and competitiveness) as its highest priority. In a developmental state, bureaucratic elites single-mindedly pursue economic growth even if this target can be attained only at the expense of other important developmental objectives, such as equality, welfare, democracy, human rights, and environmental protection.

Moreover, although many states aspire to be developmental, only a few will succeed at the end. In this respect, we will not know whether a state is developmental until *after the fact*, that is, after the East Asian state has achieved rapid economic growth and is labeled as an NIE several decades later. For example, in the 1950s and 1960s there was always a doubt whether the industrialization drive made by the South Korean Park regime was real or not. It was only in the 1980s after South Korea had become an NIE that researchers began to label South Korea as being a developmental state.

#### ***The Nature of State Bureaucracy***

In the East Asian literature, the developmental states are said to operate with an ideal typical Weberian bureaucracy. Evans (1989) points out that the concentration of expertise and technical competence in the bureaucracy through meritocratic recruitment, and the provision of opportunities for long-term career rewards were central to the bureaucracy's effectiveness.

A rigorous standard of entry into state office not only ensures a high degree of bureaucratic capability, but also generates a sense of unity and common identity among the bureaucratic elites. Hence developmental state bureaucrats are imbued with a sense of mission and identify themselves with national development goal that is derived from their positions of leadership in society. Following this bureaucratic logic, individual maximization must take place

via conformity to bureaucratic rules rather than via exploitation of individual opportunities.

Highlighting the quality of meritocracy, technical competence, internal coherence, and corporate identity, bureaucrats are seen as the most important agents in the developmental state. In East Asia NIEs, bureaucrats are given sufficient scope to take initiatives and operate effectively. It is often said that the politicians “reign” while the bureaucrats “rule” (Öniş 1991). The objective of the political elite is to legitimize the actions of the elite bureaucrat agencies and make space for the latter’s actions.

### ***Mechanism of State Intervention: Industrial Policy***

Strategic industrial policy is the central mechanism of the developmental state model. In the governed market theory of Wade (1990), the superior economic performance of East Asian economies is to a large extent the consequences of very high levels of state investment, more investment in certain key industries than would have occurred in the absence of state intervention. The state “guides” or “governs” the process of resource allocation so as to produce a different investment profile than would result under a free market system. The set of incentives, controls, and mechanisms to spread risk, which may all be gathered under the banner of strategic industrial policy, are supported by specific political and institutional arrangements pertaining to both state bureaucracy and private business.

Through this strategic industrial policy, the developmental state has performed a strategic role in taming domestic and international forces and harnessing them to national economic interests. Rapid industrialization per se has been the overriding consideration, as opposed to maximizing profitability on the basis of current comparative advantage.

A high degree of selectivity has been the hallmark of industrial policy. The state heavily subsidized and directed a selected group of industries and subsequently exposed them to international competition.

The developmental state uses a dual policy of carrot and stick in its intervention. On the one hand, the state makes it known that sufficient investment would be forthcoming in the strategic sectors. Thus the market was guided by a conception of the longer term rationality of investment formulated by the state elites. In this way, the developmental state has provided a stable environment within which the corporations could undertake long-term risks.

On the other hand, the developmental state has also specified stringent performance requirements in return for the subsidies it has provided. The state will not hesitate to discipline the corporations in the strategic sector if they fail to meet the stringent performance requirements. The discipline

exercised over the strategic sector involves both rewarding good performances and penalizing poor ones. The developmental state has deliberately refrained from bailing out firms that were badly managed in otherwise profitable industries.

In addition, extensive restrictions have been placed on the capital account. Investors have been subjected to controls on capital flight and remittance of liquid capital overseas. Regulation of the financial system represented a central pillar of East Asian industrial policy. In Korea, for example, all commercial banks until very recently were owned and controlled by the developmental state.

Furthermore, a well-defined technology policy has been an integral component of the development state's broader industrial strategy. Technology has been acquired through investing in foreign licensing and technical assistance. Massive import of foreign licenses has been conceived as the principal means of attaining technological independence.

Finally, the state's fiscal policies have complemented its highly interventionist industrial policy. Expenditures from the budget have been directed almost exclusively to long-term investment. The state has also invested heavily in education and human capital formation. Yet the welfare state function has been virtually absent. The developmental state has assumed no responsibility outside the domains of production and capital accumulation.

The extraordinary degrees of monopoly and control exercised by the state over the financial system plus the extreme dependence of individual conglomerates on bank finance in the earlier phases of industrialization have been instrumental in eliciting compliances with the requirements of strategic industrial policy.

### ***State–Business Relationship***

Underlying the political and institutional requirements of effective state intervention in the form of strategic industrial policy are two central features associated with the developmental state, namely, (a) the unusual degree of *bureaucratic autonomy* and (b) *public–private cooperation*. It is the coexistence of these two conditions that allows the developmental state and the bureaucratic elites to devise independent national development plans and to translate them into effective policy action.

In the absence of bureaucratic autonomy, public–private cooperation would easily degenerate into situations in which state plans are directly reducible to private interests. Thus, a crucial research question is: How bureaucratic autonomy was acquired in East Asian NIEs in the first place



and why it was subsequently directed to developmental goals as opposed to the predatory forms of behavior so common in other third-world states.

In addition, researchers should not overlook the public-private cooperation because it is the key to understand the effectiveness of the developmental state in policy implementation. Öniş (1991) explains that public-private cooperation helps the bureaucrats to elicit consent for their strategic policies, to negotiate and renegotiate their developmental plans, to organize and coordinate society, and to mobilize resources for long-term development.

### *Historical Origins*

For Meredith Woo-Cumings (1999), the Cold War has shed light on the difference between what Ronald Dore called the “drifter states” in Latin America and the “purposeful states” in East Asia: The difference is the “will to develop.” The Cold War and the complex legacies of the Pacific War in East Asia led to a series of crises in Korea and China, which provided compelling motives for these divided nations to undergo intensive national mobilization that was unthinkable in the Latin American context.

The genius of South Korea and Taiwan was in harnessing very real fears of war and political instability toward a remarkable development energy, which in turn could become a binding agent for national economic growth. In this sense, the Cold War has imparted a sense of urgency to the developmental project in the divided nations. South Korea and Taiwan wanted to use the developmental project as a means to reunify their nations and to liberate their fellow citizens from the domination and exploitation of communist dictators, and they knew that they had to carry out this developmental project as soon as possible before the communists could spread further in East Asia.

The relative autonomy of the East Asian developmental state was also a historical product of the devastating Pacific War and the Cold War. This is because the wars led to the destruction of the power of the radicals and the Left, the weakening of the former power holders (including the landlords and the capitalists), and the curtailment of the power of organized labor plus other popular groups. With all the existing classes and social movements weakened after the war, they were not able to compete with the bureaucrats for power and control of the societal resources. Thus the developmental state was blessed with a much larger degree of freedom to pursue its own version of developmentalism.

In short, the East Asian developmental states are characterized by their commitment to promote economic development at all costs and by their

very successful record in becoming NIEs in the late twentieth century. The bureaucrats are construed as the most important agency in promoting the late industrialization of East Asia because they have meritocratic recruitment and a strong corporate identity. Strategic industrial policy, extraordinary degree of control over the financial system, and the dual policy of carrot and stick are the hallmarks of these developmental states. In addition, underlying the effective intervention in the form of industrial policy is an unusual degree of bureaucratic autonomy and public-private cooperation, which allow the bureaucrats to elicit consent for their industrial policies, to negotiate and renegotiate their developmental plans, and to mobilize resources for long-term development. Finally, these developmental states are a product of the Cold War, which imparted a sense of urgency to the developmental project in the divided nations of Korea and China.

As such, how can the above perspective of the East Asian developmental state shed new light on the mode of operation of the post-socialist party-state in China?

### **The Post-Socialist Path of the Developmental State in China: Similarities**

To begin with, the Chinese Communist party-state has shared many common features with their East Asian developmental state neighbors, including normative commitment to developmentalism, autonomy and capacity, and active intervention in the economy.

#### ***Normative Commitment to Developmentalism***

The Chinese party-state made economic growth as its highest priority. It set up a series of five-year plans and GNP growth targets; it single-handedly focused on development to meet GNP growth targets, despite the fact that these targets could only be met at the expense of other important goals, such as social equality, democracy, and environmental protection.

For example, once the party leaders set up a target GNP growth rate of 10 percent, the recruitment, promotion, and merit increase of national, provincial, city, township, and county officials are judged on whether their regions could attain this targeted 10 percent growth rate. This explains why local officials are so eager to initiate new development projects in their territories; such projects would not only bring revenue and jobs to their region, but they themselves would get handsome merit increases and advancement in the post-socialist state bureaucracy.

### *Autonomy and Capacity*

China has strong state machinery and a high degree of bureaucratic autonomy. At the beginning of the reform period, although a new cadre-capitalist class had emerged when state officials were asked to promote economic development at the local level (So 2003), this cadre-capitalist class had failed to capture the central state. Thus, the central party-state can still uphold the moral high ground of state socialism, going after the capitalists for tax evasion and the breaking of environmental laws, standing on the side of the workers by strengthening labor laws, and standing on the side of peasants by cutting rural taxes and relocating more resources to the countryside. In return, the central state blames local officials for corruption and causing social unrest at the local level. The central state is highly autonomous in the sense that it is not “captured” by vested economic interests at the local level. The old generation of capitalists was largely destroyed in the Communist Revolution and during the Cultural Revolution. The nascent capitalist class that has just emerged with the market reforms of the 1980s–1990s is too weak and too dependent on state patronage to pose any challenge to the central state authority.

The Chinese state has the capacity to carry out its developmental plans. Since it owns the banks and controls the financial sector, it has powerful policy tools at its disposal that makes the cooperation of indigenous business more likely: access to cheap credit, protection from external competition, and assisted access to export markets are all levers that the Chinese state can use to ensure business compliance with governmental goals.

### *Active Intervention in the Economy*

Like other developmental states in East Asia, the Chinese state has actively intervened in the economy. The state has become the engine powering capital accumulation. Aside from debt finance and infrastructure construction, the Chinese central state also develops plans for strategic development, decrees prices and regulates the movement of capital, underwrites research and development (R&D).

On the surface, therefore, China’s post-socialist developmental pattern bears closer resemblance to the developmental states in East Asia than to the neoliberal states in the West. China has strong state machinery, a high degree of state autonomy, and a strong capacity to carry out its developmental goals. The post-socialist state robustly intervenes in the economy through developmental planning, deficit investment, export promotion, and strategic industrialization. However, China also exhibits many striking differences from the paradigm of the development state.

## **The Post-Socialist Path of the Developmental State in China: Differences**

Despite the above similarities, there are also many striking differences between the developmental states of East Asia and the post-socialist state in China.

### ***Historical Context***

First of all, they emerged under totally different historical contexts. China started its post-socialist reforms at the end of the Cold War, when tensions had died down considerably. Thus the post-socialist state could no longer harness the very fear of war and external invasion toward its national development project.

### ***Strategy of Development***

In the post–World War II era in the 1960s–1970s, East Asian developmental states were poised to promote *labor-intensive industrialization* as their strategy of development. They were subsequently dubbed the NIEs because they were very successful in building new industrial factories and in transforming low-productivity farmers into urban factory workers.

The situation was quite different at the end of the twentieth century. China's post-socialist state not only needs to promote labor-intensive industrialization but also to move up the global commodity chain, increase the technological component in production, and to capture more value in the global production chain.

In addition, the new technologies that began to spread in the globalization era were also different. Electronics, information technology (IT), computerization, and telecommunications all emphasized the value of decentralized innovation and endogenous technical change going on within enterprises. This is an approach quite alien to the requirements of central developmental state planning, which tolerates little decision-making initiatives and generates few incentives to innovate from the local personnel.

### ***Different Entry Points***

The East Asia developmental states' task is relatively easy compared to that of the post-socialist state in China. They already had a market economy linked to the capitalist world economy. The East Asian developmental states only needed to provide a better institutional framework to nurture the market.

However, the party-state in China in the late 1970s inherited a planned socialist economy totally insulated from the capitalist world economy for over two decades. Thus, the post-socialist state not only needed to reintegrate into the capitalist world economy (through imports, exports, and direct foreign investment), it also needed to reinvent anew the market institutions, the private sector, and capitalists from the existing socialist economy.

### *Nature of the State Bureaucracy*

In East Asia, the developmental states are said to be close to the ideal-typical Weberian bureaucracy: they have clear lines of authority; they are highly competent and professional; the bureaucrats are recruited through meritocratic examinations; and they operate in accordance with rules and established norms.

The post-socialist state is a historical product of the Leninist party-state of the Maoist socialist era. Breznitz and Murphree (2011) point out that the Chinese bureaucracy is not only vast and complex but pervaded by numerous cross-allegiances and competing lines of authority. These exist across domains, such as telecommunication technology; within the same agency; between the national, regional, and local layers of bureaucracy; and between the local and central branches of the same bureaucratic organizations. Not surprisingly, it is unclear which organization has final authority over specific domains; and it is not even clear who is in charge of whom at each level of the bureaucratic structure. This unwieldy construction is then further muddled by the communist party's infusion into every nook and cranny of both the bureaucratic system and industry. In telecommunications, for example, the interaction of policy, party, research, and economic actors form a multifarious, integrated, and overlapping structure.

Added to this is the persisting problem of *corruption* within the Party and the government. As Howell (2006) explains, this problem undermines any attempts to create a more effective, meritocratic, and capable administration—a key element of a developmental state.

### *Industrial Policy*

In East Asia, industrial policy is the hallmark of the developmental state model. In post-socialist China, however, developmental policies are characterized by *structural uncertainty*. As Breznitz and Murphree (2011) explain, structural uncertainty is defined as an agreement to disagree about the goals and methods of a policy, a condition leading to intrinsic unpredictability

and to inherent ambiguity in implementation. This ambiguity leads to some tolerance of multiple interpretations and implementation of the same policy. Therefore, structural uncertainty is an institutional condition that guarantees the tolerance of a plurality of behavior in a specific domain, wherein none of the actors will know in advance the appropriate ways to conduct themselves.

From the first moment of reform in 1978 to the present, China's central leaders have never laid out detailed reform plans. Instead, they used vague terms to authorize regional and economic actors to experiment in certain policy or economic areas. Regional/local leaders needed to decide whether to implement any changes at all. Authorities that opted for reform had to develop a particular interpretation of the ambiguous pronouncements made by the communist leadership and the central government. They also had to decide what actions the leadership actually desired and permitted. High uncertainty was further augmented by the fact that the time frame of the reforms was left unspecified, and changes in policy came unexpectedly and not infrequently.

Breslin (1996) uses an "an ideology of balancing" explanation to make sense of the structural uncertainty in post-socialist China. Policy-making in China is always incremental and back-and-forth because central decision-makers chose policy options that ensure no unit or actor lost too much, rather than those policies that are the best for China as a whole. In other words, rather than choosing the best policy, decision-makers choose the "satisficing" policy—the one that does just enough to satisfy and suffice. With regional/local units left to develop their own reforms, the result of this fragmented decision-making process is a number of unconnected, incoherent, and at times contradictory, policy reforms. Unable to dominate events, the central government has had to scramble repeatedly to "put out fires" and prevent disastrous outcomes. As a result of this preoccupation with short-term problems and solutions, the post-socialist state elites are unable to formulate a consistent program of economic development like the developmental states of East Asia.

### ***Central–Local Relationship***

In East Asia, the developmental state is assumed to be referring to the central state. All accounts of developmental states focus their analyses on central policy elites, particularly in the economic domain. Such an approach usually excludes any examination on the local states, presumably it is assumed that local states are inconsequential to the realization of central objectives and that they will automatically comply with the directives from the central bureaucracy.

In post-socialist China, the high degree of decentralization makes it increasingly difficult to conceptualize the state as a homogeneous actor. Unable to steer growth from the center, the Chinese state from the early 1980s onward gradually decentralized information, policy powers, and authority to local states. Local states can retain a greater portion of their revenues and mobilize resources outside of the state budget through foreign investment, foreign loans, and various administrative fees, and thus less dependent on the central state. The drawback of this fiscal decentralization strategy is that it has become much harder for the central state to enforce national policy, to direct national economic development in a coherent way, and to redistribute resources across regions and social groups.

Without effective central levers of control and redistribution, heightened localism fuels intense rivalry in different localities, resulting in unbalanced and uneven development. Globalization of economic development also contributes to the emergence of hyper-rivalry among the local states. Local government increasingly undercuts each other in the preferential policies and incentives they offer foreign capitalists. This intensive competition has on one hand promoted local economic growth and prosperity, but on the other hand undermined the capacity of the central state to direct national economic development, and in particular to address growing popular dissatisfaction with rising inequalities, growing exploitative working conditions, and environmental degradation.

In sum, the post-socialist state in China has shown some striking differences from its developmental state counterparts in East Asia. The Chinese state is bifurcated between the central state and local state; its developmental policies are characterized by structural uncertainty, depending on how the local/regional leaders interpret them; its state bureaucracy is highly complex, pervaded by numerous cross-allegiances and competing lines of authority; and there is a persisting problem of corruption within the Party and government ranks.

Given the above negative traits deviated from the East Asian developmental states, given the task of development is now more complicated in the globalization era, and given the social support it has now is less than the developmental states had in the Cold War period, how could the post-socialist state still manage to develop China from a backward third-world country to an economic power house in the capitalist world economy? In order to illustrate the successful developmental process of the post-socialist state in China, the following section will examine how the state deals with the challenges of catching up to global production, especially how China achieved technological upgrading and thus moved up the value chain.

## The Challenge of Catching Up: Technological Upgrading and Moving Up the Value Chain

China's very rapid growth rate is the result of the deepening of its involvement with export-oriented manufacturing. However, by the 2000s, the Chinese leaders began to recognize the limitation of this export-led industrial growth and regarded this strategy as insufficient (Appelbaum and Parker 2011).

First of all, much of the industrial production going on in China today involves merely *industrial processing*. Semifinished or finished components are brought in from overseas locales, usually in nearby Asian nations, assembled into finished products by Chinese workers, stamped as "made in China," and then shipped out to markets in North America and Europe. For example, starting in the 1990s, China's strongest export growth has occurred in electronics, computers, and telecommunication equipment. However, it must be pointed out that all the things associated with advanced industry and high-tech products—the knowledge, the innovation, and the sophistication—are embedded in the imported components, which for the most part are made outside China by non-Chinese companies.

Second, following this line of argument, Chinese industry, particularly in export-oriented sectors, exhibits extremely high levels of *foreign investment and ownership*. In 2008, foreign-invested enterprises accounted for 55 percent of China's total exports. Especially in China's higher tech and higher value consumer product sectors (DVD players, TVs, high-end electronics, microwave ovens, etc.), foreign-invested firms accounted for almost 90 percent of exports in the mid-2000s (Steinfeld 2010, 85).

Third, as a result of foreign domination in the export sector, the bulk of profits remained with the transnational that undertook manufacturing in China, but the degree of technology transfer—especially with the most advanced technologies—had proven to be quite limited. These foreign companies reap substantial profits, but the Chinese take is extremely small, and is shrinking further as energy, labor, and commodity prices rise. Take the 30-GB iPod example: Xing and Detert (2010) reported that for every iPod sold in 2006, Apple makes a profit of US\$321.4, while Foxconn—the Taiwanese subcontractor/manufacturer in Shenzhen (China)—makes no more than US\$6.50.

Consequently, Cong Cao (2004) contends that China is doomed to remain mostly an assembler and processor of foreign technologies, forever trapped in lowest value-added activities. Researchers for the Organisation for Economic Co-operation and Development (OCED 2006) also concluded that while the Chinese IT industry is enormous, it is not innovative in terms of novel-product creation, remains dependent on imported high-value



components, and is fully controlled by foreign transnationals, even in China's most advanced regions.

How then could the post-socialist state break China's dependence on foreign technology, overcome the challenge of foreign domination in the export sector, move up the value chain in industrial production, and catch up with the West in technological development?

### ***State Initiatives to Promote High-Tech Development***

The Chinese post-socialist state has been keen to promote science and technology (S&T) policy as the national development strategy since the mid-1980s.

In March 1986, the National Hi-Tech Research and Development Program (generally known as the "863 Program") was launched. Implemented during three successive five-year plans, the 863 Program provided grants on a competitive basis for applied research in designated sectors. The 863 Program aimed to bridge China's gap with the world frontier in a select few new high-tech areas, such as biotechnology, electronic, and information and communication technology.

In 1988, the post-socialist state launched the National Torch Program (*huoju jihua/guihua*), which aimed to promote the commercialization of Chinese R&D, that is, the diffusion of new technologies to production and markets (Baark 1991). Heilmann et al. (2013) point out that the Torch Program was characterized by decentralized institutional and policy experimentation, by an enterprise-dominated financing scheme as well as by a long-standing inclusion of non-state small and medium-sized enterprises in its incubator activities. A major ingredient of the Torch Program was the establishment of *high-tech zones* (HTZs)—often referred to as "science parks," "research parks," "technology parks," or "S&T industry parks"—where most of the new- and high-technology commercialization efforts were expected to take place.

However, Heilmann et al. (2013) report that the Torch Program has experienced a mission drift: although the original goal of the Torch Program was aimed at promoting domestic R&D and linking it to industrial production, this goal was later drifted to foreign direct investment (FDI) acquisition and export business. In other words, the Torch Program has unintentionally become a strong magnet for FDI and it further consolidated China's dependence on foreign technology and foreign investment.

In response to this mission drift, the Chinese party-state subsequently in 2005 put forward a "Medium and Long-term Scientific and Technological Development Plan Guidelines for the period 2006–2020" (hereafter

abbreviated as MLP). The MLP is aimed at fostering high-tech development with the ultimate goal of achieving “indigenous innovation” (*zizhu chuangxin*) capabilities that reduce China’s dependence on foreign firms for both employment and technology. In its 15-year plan, China is effectively pursuing industrial policies designed to make China a high-tech world player, by aiming to be at the forefront of world technology development, intensifying innovation efforts, and realizing strategic transitions from pacing frontrunners to focusing on “leap-frog” development in key high-tech fields in which China enjoys relative advantages. In addition, the MLP called for China to invest heavily in R&D in advanced technologies, so that China could become an “innovation-oriented society” by 2020, and a world leader in S&T by 2050 (Appelbaum and Park 2011).

Given China’s limited resources, the MLP concluded that China should concentrate on its public investments where a high payoff was deemed most likely. Four “Science megaprojects” (including nanotechnology, reproductive biology, protein science, and quantum research) were therefore singled out as key areas for funding, along with 13 “engineering megaprojects” (including advanced numeric controlled machinery, basic manufacturing technology; control and treatment of AIDS, hepatitis, and other diseases; drug innovation and development; core electronic components, high-end genetic chips, etc.), and eight “frontier technology programs” (including advanced energy; advanced manufacturing; aerospace and aeronautics; biotechnology; information; laser; new materials; and ocean).

When the global financial crisis reached China in November 2008, the party-state quickly put forward a four trillion yuan (roughly US\$586 billion) Stimulus Package, with “S&T innovation and industrial structure adjustment” identified as one of its ten investment areas. The stimulus package directly channels 9.3 percent of its funds into this technological area, with some of the fund channeled directly into the MLP (Valigra 2009; So 2012).

Another key state initiative in high-tech pursuit is the 2009 “Thousand Talents Program.” The communist party-state has long been active in encouraging overseas Chinese scientists and researchers to return to China. The state has set up a new inter-ministry team to help returnees manage such issues as permanent residency, urban registration, medical treatment, and school enrollment of children. The aim is to ease the process of resettling in China for citizens or for long-term residence for those holding foreign citizenship. Among other things, employers must provide favorable working conditions for the returned entrepreneurs, scientists, and researchers, and allow them to assume leadership positions. In addition to livelihood benefits such as “Permanent Residence Status for Aliens” and/or multiple entry-exit visas good for 2–5 years, employers must find the spouses of the returnees a

job and guarantee their children's admission to top schools. They are free to settle in any city of their choice, receive a one-time subsidy of RMB one million, and are entitled to medical care and social insurance, including pensions, medical insurance, and work-related injury insurance. They will receive housing and food allowance, subsidies for home leave, and education allowance for their children, all tax free. Their salary, based on consultation, should be reasonable in light of their previous salary overseas.

### *Internal and External Obstacles to China's Technological Development*

Despite the above initiatives from the post-socialist state, China still faced the following internal and external obstacles in its pursuit toward an indigenous innovation society.

To begin with, the post-socialist state is highly complex, bureaucratic, and fused with the communist party. This one party-state can stifle the very innovation that party leaders have made central to its various "indigenous innovation" initiatives.

Moreover, China's universities and laboratories also suffer from a hierarchical structure that stifles innovation and creativity. Furthermore, the lack of a clearly defined property rights regime is a serious obstacle for China to foster the development of a high-tech economy (Breznitz and Murphree 2011). In such an environment, researchers and firms refrain from committing to extensive, cutting-edge R&D, which is deemed both high risk and long term. This is because they are unsure how much of the fruits of their high-tech innovation they would be allowed to retain in the future.

Aside from the above internal obstacles, China also faces serious external obstacles in its march to becoming a high-tech power. For example, China's MLP initiative and its push to develop "indigenous innovation" are seen by many international technology companies as a "blueprint for technology theft" on a scale the world has never seen before. The US Chamber of Commerce views the growth of China's domestic patents as "junk patents," filed by private firms and state-owned enterprises (SOEs) largely to satisfy government overseers that their funding is producing results.

China's "indigenous innovation" initiative is also criticized as a discriminatory measure against foreign products. According to a US Chamber of Commerce Report, such a "Buy-China Plan" would effectively exclude foreign competition, since few foreign-made products would meet such a requirement. The accumulation of conflict in China's foreign trade finally led to the world's largest antidumping and antisubsidy trade cases involving China's roughly US\$30 billion a year in solar panel shipments to the West in mid-2013 (Bradsher 2013).

Facing the above internal and external obstacles, how can researchers explain the progress of China's march toward becoming an innovative society? In other words, how can the post-socialist state overcome the internal and external obstacles to become an emergent high-tech power in the twenty-first century?

### *The Run of the Red Queen Explanation*

Dan Breznitz and Michael Murphree (2011), in their volume entitled *Run of the Red Queen*, convincingly explain the origins of the innovation state in China and how China's current system of innovation is institutionalized and sustainable for the medium and long term. Breznitz and Murphree's *Run of the Red Queen* explanation has the following three components:

The first component is: At the global level, *a new system of fragmented production* had emerged at the turn of the twenty-first century, making China's innovative state quite different from that of other late developers. Before the late twentieth century, the production of goods and services was mostly organized in vertically integrated hierarchical companies located in one country. The task of the developmental states in late developers (e.g., the East Asian NIEs of Taiwan and South Korea) was to concentrate on imitation, utilizing the economies of scale and scope to excel by using the latest technologies developed elsewhere. The aim of the East Asian developmental states was to develop the capabilities to excel in *novel-production innovation*, for example, they relied on national champions in the form of conglomerates that tried to master every stage of production to become true economic powers.

However, in an era of fragmented production in which each country specializes not only in specific industries but also in specific stages of production, and in which truly novel products are produced or sourced globally without being produced in the countries where they were developed, there are many modes of innovation that contribute to sustainable long-term economic growth.

As China has become the global center for many different stages of production, it has also developed a formidable competitive capacity to innovate in different segments of the research, development, and production chain that are as critical for economic growth as many novel-product innovations. China's accomplishment has been to master the art of thriving in *second-generation innovation*—including the mixing of established technologies and product in order to come up with new solutions—and the science of *organizational, incremental, and process innovation*. Thus, China's innovation capabilities are not solely in process (or incremental innovation) but also in the organization of production, manufacturing techniques and technologies,

delivery, design, and second-generation innovation. These capabilities enable China to move quickly into new niches once they have been proved profitable by the original innovator. Today, in a world of fragmented production, successful Chinese IT companies have gained global prominence by specializing in specific stages of production and a tighter industrial focus. China need not master novel-product innovation in order to achieve sustained economic and industrial growth.

The second component of Breznitz and Murphree's *Run of the Red Queen* explanation is: At the state level, China has created *two innovation systems: one national and one regional*.

In China, there are two sets of institutions that affect the behavior of Chinese economic actors. The first is the set of central government institutions that govern the national economy. These *central institutions* have been far less reform oriented than their counterparts at the provincial/local level. The second set of institutions includes those that effectively separated China into a series of *regional/local economic fiefdoms*, which both fiercely compete and cooperate with one another and with the center. These dynamics, in which each region develops a unique set of capacities, enable China to dominate at many stages of the fragmented global economy yet inhibits businesses and technical researchers from engaging in cutting-edge, and highly risky, novel-technology and novel-product development.

This central versus regional/local distinction had its origins in the era of Maoist socialism. Economic reforms in post-socialist China since 1978, however, have further decentralized decision making to the regional level. Building upon the legacy of local planning from Mao's era, reformers gradually increased the authority of local officials, albeit in a piecemeal manner, to experiment, approve projects, and seek foreign investment. Later, *fiscal decentralization* was added to *administrative decentralization*, and localities were permitted to retain a portion of their revenue. Revenue sharing in the Chinese system refers to profits from locally run SOEs in addition to locally collected national taxes. In essence, the fiscal reforms should be seen as a transfer of partial (or full) property rights from the center to the provinces.

The ability to retain local revenues with the local economy prompted cadres to become increasingly concerned with local development and the strength of local enterprises, especially since their advancement in the party-state was mostly locally controlled. This led to a deep fragmentation of the Chinese economy into competing economic blocks.

Another important impact on local institutions came from the fragmented and piecemeal nature of the reform process in the 1980s. The 1980s were a story of gradually increasing economic or market freedoms in different localities. The historical process, in which each region started its evolution at

different times under different regulations and with different endowments, critically affected the pattern of investment and the type of companies and R&D activities conducted in each region.

As localities became directly responsible for their own revenues, and the local leaders increasingly had the chance to become personally wealthy, many of them became increasingly competitive and pursued their own parochial interests, largely independent of national ones. The result has been the creation of strongly policy innovative and fiercely competitive regions/localities within China. This forced many Chinese companies to think and act locally and offered foreign multinationals the ability to play one region/locality off against another in order to secure the most favorable deal as local state elites competed to attract the largest number of foreign-investment projects in order to advance their own careers in the state bureaucracy.

All the above processes help to explain why the localities are so eager to cooperate with the central state's technological initiatives, like the Torch Program, the MLP, and the Thousand Talent Program. City and Provincial governments quickly set up HTZs; they warmly welcome local and foreign companies to invest in the zones; and they quickly identify the scientists and researchers they need in the zones in the MLP.

The third component of Breznitz and Murphree's *Red Queen* explanation is: there is the *structural uncertainty in China's political-economic system*. From the first reforms in 1978 to the present, China's central leaders never laid out detailed reform plans. Instead, they used vague terms to authorize regional and economic actors to experiment in certain policy or economic areas. Regional leaders needed to decide whether to implement any changes at all. Authorities who opted for reform had to develop a particular interpretation of the ambiguous pronouncements made by the communist leadership and the central government. They also had to decide what actions the leadership actually desired and permitted. High uncertainty was further augmented by the fact that the time frame of the reforms was left unspecified, and changes in policy came unexpectedly and not infrequently.

It is bad enough for technological researchers to work in an environment where their property rights are weak; it is immensely worse to work in an environment where these rights also keep on changing and are applied arbitrarily; worse still, even the rights of businesses to operate in certain markets are never assured and always shifting. Under such extreme structural uncertainty, the great puzzle for social scientists is to explain why some Chinese companies do any R&D at all.

Indeed, without the policy of fiscal decentralization and the strong incentive to get rich, it is difficult to explain why the local economic actors (local

officials and local entrepreneurs) are so eager to engage in any technological development at all.

This ever-changing environment of extreme uncertainty, with high risks and high gains, had a far-reaching effect on the behavior of actors. Rational actors opted to focus on securing short-term gains while trying to minimize risk. Since high-tech R&D, especially novel-product development, is both long term and high risk, the particularities of Chinese reform have kept actors from engaging in it.

The complex bureaucratic structure instills structural uncertainty in two ways. First, any action or policy implementation must satisfy multiple superiors who often have contradictory roles and preferences. Second, it is impossible for any of the entities involved to know in advance whether a specific action they take will be looked upon favorably by any or all the bureaucratic agencies that might (or might not) view it as falling under their jurisdiction. As a result, economic actors avoid taking on long-term, high-risk endeavors, preferring actions that lead to immediate, secure, positive material results.

Another feature of the Chinese political-economic system that leads to structural uncertainty is the ambiguous and ever-changing nature of the overarching goal of reforms. The reformers themselves have described the entire reform process as “crossing the river by feeling the stones.” The inability to define goals and means clearly infuses the system with a tolerance for contradictions. These, in turn, lead the vast multitude of formal institutions for the Chinese system to interpret goals and the proper mechanisms for achieving them in their own way and in accordance with the parochial interests. This uncertainty, again, incentivizes researchers and enterprises to prefer short-term economic growth above all else and to shy away from long-term, high-risk activities.

In sum, the emergence of a new global system of fragmented production, together with China’s two (central vs. regional/local) innovation systems and structural uncertainty, have combined to shape the trajectory of China’s path toward becoming an innovative state. The two parallel innovation systems have so far precluded any *novel-product innovation* or any radical technological breakthrough, but they have allowed China to thrive in *second-generation innovation*, *organization innovation*, and *process innovation*.

Therefore, China’s rapid economic growth is not a story of a developmental state carefully orchestrating its industrial policy to upgrade its innovation and moving up in the value hierarchy in the global production system. Rather, it is a story of trial-and-error economic experimentation led by subnational entities but fashioned by political contestations between conservatives and reformers at the center, between influence-wielding interest

groups with the Chinese Communist Party, and between the center and the provinces/localities. China's path toward an innovative state is, in essence, a story of how a new fragmented mode of global production in the twentieth century, a dualistic (national and local) innovation system, and structural uncertainty interact with each other to induce second-generation innovation (including organization and process innovation) without any novel-product innovation and technological breakthrough.

As such, what are the implications of the above findings for research into the developmental state?

### **Implications for Developmental State Research**

Because the above discussion is quite different from the ideal-typical traits of the developmental state, the case of post-socialist China has raised many intriguing questions for developmental state research.

First of all, in developmental state research, too much credit is given to meritocracy, technical competence, internal coherence, and corporate identity of the state bureaucracy. One of the key features of the developmental state paradigm is stable rule by a bureaucratic elite not acceding to short-term competing political demands. But the Chinese experience seems to challenge this meritocratic bureaucracy argument. The post-socialist state is highly ideological and often corrupt. So the question becomes: Is Weberian bureaucracy really an indispensable component of the developmental state?

Second, again too much credit is given to industrial policy. One of the key features of the developmental state paradigm is state capacity to formulate and to implement long-term industrial policy by targeting certain industry or sector for development. But the Chinese experience seems to challenge this industrial policy argument: The Chinese reform policy is ambiguous, moving back-and-forth and often muddling through without any clear direction where it is heading; it is also highly flexible and subject to wide interpretation by local state actors. So the question is: Is industrial policy really an indispensable component of the developmental state?

Third, can we label the post-socialist state in China a developmental state? If the answer is "yes," there may be different variants of developmental state shaped by different historical experience and different institutional legacies. Researchers need to do more in-depth study to examine how the post-socialist state emerged from a "revolutionary egalitarian state" in the Maoist period to a "developmental state" in the reform period and what impact does this post-socialist state have on China's social, political, and economic development.



If the answer is “no,” researchers need to examine why China still has such a remarkable economic development despite failing to possess the necessary features of a developmental state.

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## CHAPTER 10

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# Changing Developmental-ness of the State—The Case of China

*Rebecca S. K. Li*

### Introduction

When the notion of the Asian Developmental State is used to examine the development experience of countries in Asia, politics is often not included in the analysis. Perhaps this is because the literature has focused on authoritarian regimes where the dominant party ruled without serious political contenders. It is thus assumed that political dominance by one party that is interested in economic development automatically translates into consistent effort to promote the development agenda. With this assumption, the literature has focused on the study of state structure and capacity as the key variable to explain the success and failure of the developmental state to promote economic development. In this chapter, I would like to problematize this assumption and bring politics back into the notion of developmental state. As we will see in the case of post-reform China, even when the same party rules within the same authoritarian structure, the political will needed to push through the necessary policies waxes and wanes. This explains why supposedly developmental states sometimes do not behave as such. Rather than affixing the label of “developmental state” to regimes with a certain configuration of state structure and capacity and development policies that characterize the regime at one point, I propose conceptualizing the developmental-ness of the state as a variable in order to capture the dynamics of the evolving state–elite relations and factional politics as economic development proceeds.

When the notion of developmental state is applied to post-reform China, there has been disagreement over whether China is a developmental state. According to Baek (2005), the answer is a resounding “yes.” This conclusion

is based on the policies and strategies used by the Chinese state to promote economic development since 1978. Baek cited policies such as financial control, direct support of the state-owned enterprises (SOEs), and import substitution industrialization in heavy industry to support this argument. If one looks beyond policies and strategies, however, the answer to this question would be “no.” Howell (2006) points to a number of ways in which the Chinese state does not resemble the structure of a developmental state. While developmental state assumes high state coherence, high decentralization makes it hard to conceptualize the Chinese state as a homogenous actor which can ensure internal coherence. Furthermore, corruption within the party and government compromises the creation of an effective, meritocratic, and capable administrative apparatus. Also focusing on state structure and capacity to discipline businesses, So (2003) contends that China is definitely a developmental state. He argues that the communist legacy of a strong party-state left China with the state structure and capacity to carry out strategic economic development policies with success.

It seems the disagreement on whether China is a developmental state has to do with whether one focuses on policies or state structure and state–elite relations. The question of whether China is a developmental state assumes that developmental-ness is an attribute that characterizes a state, hence one is either a developmental state or not. Doing so, I believe, has distracted us from the fact that the developmental-ness of the Chinese state changes. Hence, the question that we should be asking is when the Chinese state is developmental and when it is not. In fact, Howell (2006) points out that the state’s behavior and politics with regard to economic development vary over time and space. Stubbs (2011) asserts that policy priorities are largely the result of an ongoing struggle between the neoliberal coalition and developmental state coalition, thus alluding to the fact that a state does not remain developmental even though it has been at one point. In this way, we can say that a more accurate answer to the question of whether China is a developmental state is perhaps “sometimes more and sometimes less so.”

In the remainder of this chapter, I will use the case of post-reform China to illustrate my argument. First, I will articulate the conditions under which the developmental-ness of the state rises and declines. Then I will use the development experience of post-reform China to examine the dynamics of the changing developmental-ness of the state. Before doing so, a working definition of the degree of developmental-ness of the state is in order. I consider a state more developmental when it implements policies necessary to promote national economic development even when these policies would hurt the privileged segments of the society with vested interests in the old economic structure. A state is less developmental when it refrains from implementing

these policies, and reluctant to encroach on the vested interests of the existing structural arrangements in the economy even though national economic development is compromised as a result.

This definition incorporates key aspects of development state—strategic policy-making to promote national economic development and the state's management of its relationship with the resistant elites. The first half of the definition emphasizes the state's proactive implementation of policies needed to bring about the outcome of national economic development. In the case study for this chapter, I focus on macroeconomic policies that deal with economic imbalances that might, in turn, hinder further development. This addresses the aspects regarding policy choices, outcome, and state capacity. The second half of the definition focuses on the dynamics of state–elite relations, thus bringing politics back into the analysis of developmental state.

### **Conditions Affecting the Developmental-ness of the State**

Since the developmental state was able to emerge in cases like Japan and Taiwan when the dominant economic elite (e.g., landowners in Taiwan) has been weakened by war (Amsden 1979; Johnson 1982), it means that when the old economic elite is weak, it is more possible for the state to be developmental, if it chooses to make economic development a priority. On the other hand, the presence of a strong economic elite with vested interests in the old economic structure will hamper the ability of the state to be developmental. With the emergence of more powerful economic elite as a result of economic development, it is less possible for the state to have full control over the development agenda as the state will have to contend with the new economic elite. The existence of powerful economic elite is, however, not a sufficient condition to prevent the state from being developmental. The ability of the state to work with the economic elite is critical, and this is where Evan's (1995) notion of embedded autonomy is relevant. The more the state is able to co-opt or contain the power of the dominant economic elite, perhaps through productive cooperation with them, the less the economic elite will compete against the state in the making of economic development policies, and the state is more likely to be developmental. Of course, the economic elite are not passive. They can also take advantage of development policies to promote their interests, thus increasing their leverage against the state.

The ability of the state to co-opt or contain the power of the dominant economic elite depends on intra-agency coordination, which determines the state's ability to discipline business leaders into complying with the state's developmental policies and strategies. The more appropriately coordinated

the key agencies for development projects are, the more effectively the state can discipline business leaders. The state's ability to extract compliance from businesses is also determined by whether the businesses depend on the state in crucial ways.<sup>1</sup> It can be the dependence on key resources, such as financing when access to alternative sources of finance is absent or limited, or on institutional infrastructure, such as the publicly funded institutions that produce expensive basic research without obvious commercial application. While the specific form of dependence changes with global economic conditions, the state needs to remain relevant in its ability to support businesses in ways only governments can.

Coordinating agencies and ensuring the state's relevance to businesses require a clearly articulated set of priorities regarding economic development, which necessitates a political system that allows the elites to work out their priorities. In the study of the East Asian developmental state, this factor is often treated as a given due to the dominance of a particular political party, such as Singapore, South Korea, Taiwan, Japan, and China, which dictates the agenda for economic development. In India, it is often argued that the commitment to liberal democracy has rendered it a failed developmental state (Chibber 2002). But Wong (2004) argues that democratic transformation in countries like Taiwan and South Korea actually made these developmental states more adaptive. We also need to remember that authoritarian regimes are not automatically successful developmental states. Hence, the issue is not whether the political system is democratic or authoritarian. Rather, it has to do with whether the system makes it possible for the key political factions to agree on, either by consensus or by force, a coherent set of economic development priorities and the strategies used to achieve these goals. Authoritarian regimes are not guaranteed to succeed as deep ideological differences can also divide the leaders into political factions that fail to either work out a compromise or give rise to an absolutely dominant faction. Hence, when politics is highly factional, it is more difficult for the state to be effectively developmental. When a particular ideological and political faction is dominant and succeeds in concentrating power, it is easier for the state to be developmental. A crisis, such as the threat of war or global financial meltdown, often helps focus minds and allows one faction to rise to dominance. This is why the developmental state in East Asia has historically arisen from the aftermath of wars.

To summarize, the developmental-ness of the state is affected by three factors: (1) the strength of the state relative to the economic elite; (2) the ability of the political process to produce a dominant ruling faction or coalition that can articulate and pursue a coherent set of development priorities; and (3) the capacity of the state administrative apparatus to implement development

policies and work with the economic elite. The stronger the state is politically in relation to the dominant elite, allowing the former to co-opt the latter, the more developmental the state can be. The more the political process allows a certain faction or leader to dominate over others, the more developmental the state can be as such political dominance can insulate the bureaucrats more from competing political pressures. The greater the state capacity, through the recruitment of professionals, interagency coordination, and effective command of its relations with business leaders, the more developmental the state can be.

### **The Rise and Decline of Developmental-ness of Post-Reform Chinese State**

#### ***Late 1970s to Late 1980s: Rising Developmental-ness of the Chinese State***

When Deng took power in 1977, China was a desperately poor country. Its agricultural productivity plummeted as collectivization deprived farmers of incentives to increase agricultural yield as decisions for what to grow and how much they could expect to earn from their harvest were centralized. Low agricultural productivity led to perpetual shortages as well as a stagnant rural economy with a labor force that was both unproductive and underutilized (Naughton 2007). The decentralization of economic decision-making power to the local government and the accompanying decollectivization of the agricultural sector were necessary to improve incentives to increase agricultural productivity and to allow local officials to devise strategies that could take advantage of local conditions to maximize investment and stimulate economic growth in rural China. Decollectivization, which returned responsibilities and rewards of agricultural production to the households, allowed farmers to keep their harvest after meeting the quota to be sold at market price in order to increase their household income. This motivated farmers to be more productive, and the resulting increase in per capita productivity freed up the labor force that could be used in Township and Village Enterprises (TVEs) established with the support of local officials who had been empowered to find ways suitable for local conditions to promote economic growth.

The implementation of decollectivization and decentralization of economic decision making indicates an increase in the developmental-ness of the state. Not only did this involve taking power away from central planners, rural economic growth also meant that food prices may rise for urban dwellers that had previously enjoyed many privileges at the expense of rural

residents. Furthermore, Deng's reform policy also broke with the doctrine of complete state ownership and control of the economic enterprises and allowed private entrepreneurs to establish enterprises and township and village government officials to work with entrepreneurs in establishing TVEs. These enterprises focused on the manufacturing of consumer goods that were often in short supply, of poor quality, or completely neglected by the state-owned sector. They became competitors of small SOEs, leaving the weaker SOEs behind in the competition for lucrative sectors such as new consumer goods<sup>2</sup> (Naughton 2007). Again, this was a remarkable development given the SOE's privileged and dominant status in China's centrally planned economic structure prior to the beginning of Deng's reform. Hence, it is another indication that the state was being developmental by relaxing the restriction on private enterprises and private-public joint ventures. As a result of these policies, rural-urban income gap declined mainly as a result of rising rural income and TVEs made significant contributions to China's GDP growth in this period, thus addressing the imbalance of China's economy had kept rural residents poor and unproductive. The income growth of rural residents, besides expanded consumption, also meant increased investment in children's education and healthcare which is crucial for future economic development that requires more and more skilled workforce.

How do we explain the higher degree of developmental-ness of the Chinese state during this period? In the late 1970s to early 1980s, there was no economic elite present to compete with the state, and this allowed the state to be more developmental. The communist revolution and the collectivization that followed obliterated the landed elite and other economic players outside the party-state. The decade of political mobilization and the resulting economic stagnation prior to 1978 left the supporters of Maoist economic doctrine significantly weakened. By the time Deng took power, the Chinese state enjoyed a great deal of autonomy and was relatively free to experiment with un-doctrinaire policies to promote economic development, even if these policies encroached on the vested interests of the existing economic structure. Furthermore, the political faction within the communist party who advocated central planning was weakened by the poor performance of the economy in the 1970s, allowing Deng Xiaoping to emerge as the dominant political leader. His dominance allowed him to insulate the bureaucrats who were experimenting with various ways to decentralize economic decision making from political influence. Deng's political dominance was, however, not absolute as his conservative colleagues were capable of mobilizing against Deng at the first sight of trouble, such as price inflation, hence compromising Deng's ability to push through his economic development policies (Vogel



2011). Since the privileged segments whose interests were adversely affected by these policies were not decimated, they could still be mobilized by Deng's political adversaries, rendering the articulation of a clear set of policies more politically challenging. The developmental-ness of the Chinese state during this period was moderate at best.

### ***Late 1980s to Mid-1990s: Declining Developmental-ness of the Chinese State***

The developmental-ness of the Chinese state declined during the period after the political crisis in 1989. In terms of policies, there was a retrenchment from the policies responsible for economic development in the previous decade. Policies that encouraged private enterprises that fueled much of the dynamic growth in the 1980s were halted and small private entrepreneurs found themselves to be political targets. Instead of promoting national economic development, the growth of small private enterprises and TVEs that were the main source of rural employment responsible for raising rural wages and narrowing the rural–urban income gap was suppressed by policies that discriminated against them (Huang 2008). As a result, the reduction in the rural–urban income gap stopped and the growth of nonfarm rural employment slowed as overall economic growth decelerated (Naughton 2007, 210; Huang 2008, 116).

What brought about the decline in the developmental-ness of the Chinese state in this period? The old elite such as the vest interests of the state-owned sectors and conservatives who favored central planning seized the opportunity presented by high inflation and the student protests in late 1980s to fight back politically against Deng (Vogel 2011). The growing difference between Deng and Zhao over political reform also weakened Deng politically, forcing him to take a more conciliatory stance with his political opponents. The fact that Deng had to engage in his famous Southern Tour in 1992 to mobilize his supporters and allies in the southern provinces shows that his opponents had gained power in the capital. The decline in Deng's dominance over his political opponents hindered his ability to pursue the development strategy he and Zhao had put together. Frustrated by his inability to pursue his economic development policies from Beijing, Deng took the extraordinary step of going around his colleagues in Beijing, hoping to get the provinces in southern China to lead the country in economic development. Hence the decline in developmental-ness in this period was caused mainly by the failure of the political process to generate a leader who could exert dominance over his political opponents, thus allowing him to pursue a coherent set of development policies.

***Mid-1990s to Mid-2000s: Rising Developmental-ness of the Chinese State***

From mid-1990s to mid-2000s, the developmental-ness of the Chinese state grew to a level higher than that in the 1980s. During this period, the Chinese state restructured the SOEs and the state-owned banks. These policies were critical for national economic development and proved effective for taking China to the next level of economic development that lifted hundreds of millions of Chinese out of poverty. The fact that these policies were implemented despite politically powerful vested interest in the existing economic structure renders the state in this period even more developmental than that in the 1980s.

By the mid-1990s, it was clear that the state needed to take on the SOEs in order to promote national economic development. Under the socialist system, the key function of SOEs was to provide employment to urban residents. Along with job security, SOEs provided healthcare, pensions, schools for children of employees, and housing, as well as low-price access to commodities that were otherwise difficult to obtain (Naughton 2007, 117). SOEs were responsible for the cost of employee benefits regardless of their profitability. Since the cadres who ran the SOEs were not evaluated based on the profitability of the SOEs, many were managed without serious consideration for efficiency and cost-effectiveness. As a result, most SOEs were running huge losses, dependent on repeated bailouts by the state. Not only were these losses draining the state of precious capital needed to invest in infrastructure projects to support economic development, these poorly run SOEs were draining resources and talent away from other segments of the economy. The continuation of the SOE structure as it was in the 1990s allowed SOEs to hoard raw materials needed by producers in order to make a profit, thus raising the cost of production and making the supply of raw materials unnecessarily volatile. Most university graduates were still assigned jobs to SOEs and stayed in these jobs for the benefits, such as housing, that came with these jobs even though they would have been more productive if it were possible for them to work in better-managed companies.

The most significant component of the SOE restructuring was the closure of smaller and failing SOEs. The closure of failing SOEs freed up raw material and talent sorely needed by other segments of the economy and state resources that could now be invested in infrastructure projects to support economic development. The fact that it resulted in the layoff of many SOE employees, a relatively privileged segment of the pre-reform era also indicates a rise in developmental-ness of the state in this period.

The other part of SOE restructuring, which involved turning the remaining state-owned firms in strategic sectors, such as telecommunications and energy, into corporations capable of being listed in international stock markets, was intended to introduce new capital into the system and to improve management and corporate governance. These SOEs were devoted to development projects under the guidance of the state to promote national economic development. According to McGregor (2010), the Chinese Communist Party (CCP) controls the appointment of CEOs to these SOEs who understand clearly the priority of fulfilling their political duty to the party over their duty to shareholders' interest in maximizing profit and shareholder value. The effect is really is not too dissimilar to the cooperation between the American state and corporate elites before the economic restructuring in the United States in the 1970s which expected corporate CEOs to put their duty to provide employment and economic prosperity to the American society above maximizing shareholder value (Reich 2007). This is equivalent to the cooperative state–business partnership that often characterizes developmental states. For instance, large SOEs such as China Mobile had to commit to constructing and maintaining its mobile phone network to serve all regions, including the sparsely populated and thus less or even unprofitable areas. Similarly, railroad companies had to construct rail networks to serve remote areas. Oil companies had to agree to price control to provide affordable energy for manufacturers and consumers to help control inflation and raise the competitiveness of Chinese industry. These are corporate behaviors that put their social responsibility of promoting national economic development above maximizing corporate profit and shareholder value.

By keeping domestic and foreign private enterprises out of these sectors and giving monopolies or duopolies to SOEs, the latter could use the capital invested in their sector to build the necessary infrastructure and acquire critical technology and expertise, both of which enable these SOEs to dominate the domestic market and potentially grow big and capable enough to become globally competitive. This is a similar strategy used by East Asian developmental states such as Japan and South Korea in order to nurture domestic corporations by allowing them to prosper in the domestic market first so that they can eventually conquer the global market and be less vulnerable to foreign competitors when the domestic market is finally opened to foreign investment. Part of this strategy is to set up more than one corporation in each sector to introduce some competition. The state also maintained control of banks which allowed it to influence the enterprises by providing them with financing. Banks were urged to make loans to SOEs that needed capital to invest in projects that may not be profitable in the short run and thus would not have qualified for other forms of financing. The state also

undertook many large scale infrastructure projects, including the construction of a national network of expressways and a large number of dams to generate hydroelectricity as well as airports and ports to facilitate the growth in export and domestic trade.

The restructuring of the financial system, which was basically made up of the banking system that provided capital to enterprises, is the second policy that contributed to the rising developmental-ness of the Chinese state in this period. Its implementation highlights the increase in the capacity of the Chinese state during this period, especially in the form of greater interagency coordination, professionalization, and insulation of the bureaucrats from political influence that contributed to the state's ability to be developmental.

A functioning financial system is essential for national economic development by allocating capital to places in the economy where most value can be created. The financial system in the 1990s was definitely not doing that. Subordinate under the local government, state-owned banks were used to make loans to SOEs even though they were failing and not competitive and, very often, unable to repay their loans. Lending decisions were political rather than economic decisions as the government was expected to bail out the failing SOEs or absorb the losses caused by nonperforming loans made by the banks. The result was a banking system saddled with a huge amount of nonperforming loans, making it practically bankrupt were it not for repeated bailouts from the government (Walter and Howie 2011). The ailing banking system which was almost the only source of capital for the economy was a major obstruction to national economic development. Hence, establishing the institutions necessary for these banks, especially the four biggest state-owned banks,<sup>3</sup> to function properly in order to allocate capital to the productive segments of the economy was essential.

The restructuring was undertaken by Zhu Rongji who was promoted to a leadership position in 1992 after his success in controlling inflation at the local level. Zhu strengthened the People's Bank of China (PBOC), China's central bank which until then had little authority, giving it autonomy and institutional power to implement a series of changes in an attempt to change the way the state-owned banks operate. The idea was to make lending decisions more professional and less influenced by local government officials who depended on loose bank credit to generate local economic growth which was in turn crucial for their advancement in the political system. It is this aspect of the policy that renders it developmental as it is what was needed for national economic development and was implemented even at the expense of an existing vested interest—the local government officials. Capacity of the administrative apparatus to implement this policy clearly improved after the mid-1990s as Zhu recruited staff based on their expertise in central banking.

Zhu's direct involvement in the professionalization of PBOC insulated it from political influence from vested interests of the existing structure, giving it space to experiment with and design innovative ways to carry out bank restructuring (Bell and Feng 2013). One of their most important projects was to find a way to take nonperforming loans off the balance sheet of the four biggest banks so that these banks could once again function as healthy financial institutions to provide capital for economic development.<sup>4</sup> Not only did the PBOC become more professional, Zhu's dominance of the bureaucratic apparatus allowed him to get various agencies such as the Ministry of Finance (MOF) to work together with the PBOC and agencies regulating the security and banking sectors as well as the agency managing the foreign reserves, albeit not willingly at times, in a more coherent manner so that it was possible to pay for the purchase of nonperforming loans by Asset Management Companies (often known as "bad banks") (Walter and Howie 2011). The other aspect of bank restructuring was the institutionalization of lending decision making. The idea was to get the state-owned banks to make lending decisions by assessing the credit worthiness of the business and the soundness of the proposed project which affects the likelihood of loan repayment. When the banks can operate this way, the financial system can finally direct capital to enterprises because they are well managed and their projects are economically productive, henceforth contributing to national economic development.

The restructuring of China's banking system turned the four biggest state-owned banks into healthy enough financial institutions to be listed on overseas stock exchanges so that they could gain access to the global capital markets. As the decision-making process of granting bank loans became more institutionalized, the tendency for excessive lending to be succeeded by overly restrictive lending, which fueled the volatile cycles of drastic rise and decline in inflation in the 1980s, also subsided (Naughton 2007, 442). The state's fiscal health improved significantly as it was no longer burdened by bailing out loss-making SOEs and absorbing the banks' nonperforming loans and as inflation was under control, it was able to undertake large infrastructure projects, such as the network of high-speed railways and expressways and hydroelectric power plants, needed to promote national economic development. The fact that the restructuring was implemented even at the expense of local officials<sup>5</sup> who had vested interests in keeping bank credits loose is another indicator that the developmental-ness of the Chinese state grew significantly during this period.

What made the rise in developmental-ness of the Chinese state possible in the decade after the mid-1990s? The dominance of the Jiang–Zhu coalition allowed them to articulate a coherent set of development priorities. These priorities are: (1) inflation control by restricting bank credits and

getting the economy out of the volatile swings of overheating and crashing to provide an environment for enterprise growth and wealth accumulation; and (2) improving the central state's fiscal health by restructuring the state-controlled sector of the economy in order to focus the state's resources on strategic sectors that are crucial for national economic development, such as energy, telecommunication, finance, and transportation.

The political dominance of the Jiang-Zhu coalition over other factions also increased the capacity of the Chinese state during this period. Zhu Rongji's success in inflation control earned him approval from senior leaders such as Deng Xiaoping and Chen Yun,<sup>6</sup> giving the administrative apparatus under his control credibility crucial for fighting against political pressure to dilute the policies to restructure the state-controlled system (Shih 2008). Zhu's political clout insulated the bureaucracy from political influence by the vested interests of the old economic structure, enabling agencies like the PBOC to implement policies to restructure the banks and SOEs as needed so as to increase the effectiveness of these policies. With this enhanced capacity, the state was able to engage in productive cooperation with businesses not dissimilar to that found in Japan and South Korea. The state's ability to discipline businesses by providing them with resources crucial for their success made it possible for the state to work with businesses to develop themselves in ways that also promoted national economic development. For instance, the state nurtured large SOEs by protecting them from foreign and domestic competition. The state also used its foreign office to help secure lucrative projects and investment opportunities overseas, especially Africa, for these SOEs (Michel and Beuret 2009). Zhu's effort to streamline agencies in his campaign to restructure the banks and large SOEs into national champions also helped improve interagency coordination. Along with the recruitment of professionals with genuine expertise in their area to crucial agencies as the PBOC, the state's capacity for effective implementation of policies was greatly improved (Bell and Feng 2013).

During this period, the state was also relatively successful in co-opting those who were privileged and had their interests vested in the old economic structure. In the restructuring of small SOEs, the managers of these SOEs were allowed to buy these enterprises. Since they were the most familiar with the actual worth of these SOEs, they or their family and friends were often able to own the enterprise by paying well below what they were worth. Hence, these cadres who had much vested interest in the old system were able to profit financially from the SOE restructuring. As for the SOE workers, many of whom were laid off or forced into early retirement, they were given lots of assistance to transition from their secure employment into the private sector. The housing reform turned former SOE workers into well-off property

owners when they were allowed to purchase highly subsidized housing from their work unit as the SOEs were privatized. The real estate market boom that followed raised the value of their apartments, putting these former SOE workers well into the emerging middle class due to the wealth created by their highly valuable assets. As a result, even though these former SOE workers had lost their secure employment and status they had enjoyed in the old system, many were spared the fate of absolute downward mobility as a result of the lay-off from their SOE job and maintained a relatively privileged position as compared to those entering the private sector from rural China.

In addition to not alienating the old elites, Jiang also allowed new elite aspirants, such as private entrepreneurs, to join the Communist Party in 2002. Doing so gave these emergent elite opportunity to benefit from the networking in the ruling party even though the state's economic development policy continued to discriminate against private entrepreneurs by keeping them out of the most lucrative segments reserved for the SOEs and by favoring SOEs in bank loans, thus forcing private enterprises to borrow at much higher interest rates from shadow banks (Tsai 2002; Huang 2008; "Shadowing Banking in China" 2014). Dickson (2008) found that private entrepreneurs were mostly quite eager to join the CCP in order to take advantage of the networking opportunities and Tsai (2007) also found little interest among private entrepreneurs to challenge CCP rule. These findings suggest that Jiang's strategy to co-opt the new economic elite outside the state-owned sectors has been relatively successful.

### ***Mid-2000s to the Present: Declining Developmental-ness of the Chinese State***

Since the early 2000s, the Chinese state became less developmental again. The state was reluctant and unable to implement policies needed to promote further national economic development as growth return per dollar of capital investment began to decline and growth in real income slowed as a result of inflation. One of the overdue policies was financial liberalization that includes the liberalization of bank interest rate. The state control of bank interest rate has kept interest rates below inflation for depositors to ensure profit for banks while they provided cheap loans to SOEs. The state mandate for banks to lend to SOEs meant the shortage of credit for private enterprises that were forced to borrow from private sources at exorbitant rates. Meanwhile, low-income savers saved more and consumed less in order to obtain the desired interest income. More affluent savers either risked their savings with underground banks<sup>7</sup> or helped create an asset bubble by investing in real estate in cities to protect themselves against inflation as there are few investment

alternatives that yielded above inflation.<sup>8</sup> Urban dwellers, in turn, were priced out of the market and found their income lagging behind housing prices. This does not only generate social instability but also slows economic growth as an increasing portion of people's income are taken up by saving and housing costs, leaving them with little disposable income to stimulate consumer demand needed for China's economy to grow and to end the dependence on capital investment that was generating diminishing returns and excessive capacity. Even though the state has repeatedly expressed its determination to stimulate domestic demand and increase the proportion of consumption in GDP growth in order to ease the pressure on sustaining high level of capital investment to maintain GDP growth, the effort has largely failed. From 2001 onward, the proportion of GDP growth in consumption has remained largely unchanged (Tong 2012, 102). To maintain GDP growth at a politically acceptable level, set at 8 percent in China, a decline in exports had to be made up by capital investment, most of which financed by bank loans, further distorting the imbalance in the economy (Naughton 2007, 452). One of the obvious ways to rebalance the economy and promote national economic development is to liberalize bank interest rate. With savings deposits as the main source of capital for banks, they will compete for deposits by offering higher interest rates (Walter and Howie 2011). That is, in fact, what happened in the underground banking system that is unregulated by the state. The higher interest earning freed up a greater portion of most ordinary Chinese people's income for consumption, thus raising their living standards and creating employment opportunities in the process.

Bank interest rates, especially deposit rates, have not been liberalized because the interests of those benefiting from a low-deposit interest rate would be adversely affected. SOE executives, their business partners, and investors have a strong preference for the financial system to remain unchanged. If interest rates are liberalized, it would mean the end of cheap loans as banks would raise interest rates for depositors to compete for deposits, which will either result in higher lending rate or higher lending standard for banks to ensure loan repayment. SOEs rely on cheap loans and lending preferences to maintain their competitive advantage over private and foreign firms. SOE executives and major holders of SOE stocks, who happen to be other SOEs, would be hurt by interest rate liberalization (Walter and Howie 2011, 187–89). Local officials and developers benefit from high land and real estate prices resulting from the lack of investment alternatives for savers. The fact that these vested interests were not challenged in order to implement an obvious policy solution needed to promote further economic development is another indicator that the developmental-ness of the state has declined during this period.



Why has developmental-ness of the Chinese state declined since the mid-2000s? Hu Jintao and Wen Jiabao, who took over the leadership positions from Jiang and Zhu in 2002, did not have adequate political capital and influence to establish dominance over other the established political factions. The resulting contentious factional politics jeopardized the political leaders' ability to articulate a clear set of policy priorities. State capacity declined as a result of Hu and Wen's relative political weakness. Zhu's retirement left the PBOC and other agencies crucial for further restructuring of the banking system increasingly exposed to political pressure to ease up their policies (Shih 2008; Walter and Howie 2011). The interagency coordination made possible by Zhu's emphasis on administrative streamlining began to break down and turf wars between agencies began to intensify. An important example involves the struggle between the PBOC and MOF over the control of the state-owned banks and the management of China's foreign reserves called the *Huijin*. The control of *Huijin* was crucial for PBOC to continue making banks more accountable. When its control was taken over by MOF, PBOC, the agency, most empowered to restructure the banks, no longer had the resources to implement its policies (Walter and Howie 2011; Bell and Feng 2013). Meanwhile, the agency, the State-owned Assets Supervision and Administration Commission (SASAC), charged with the supervision of the large SOEs, the so-called national champions, was unable to regulate these SOEs. The refusal of the large SOEs to comply can be illustrated in a couple of examples. First, the large SOEs refused to pay dividends to SASAC even though the SASAC is the state agency that owns the large SOEs (Walter and Howie 2011, 170). The fact that Xi Jinping had to decree the large SOEs to remit dividends when he took power in late 2012 indicates the severity of the problem. Second, the national oil companies that were supposed to support state energy policies refused to cooperate when their profit margin was affected by the state's oil price control (McGregor 2010, 63). The breakdown of the state-business relationship has to do with the rise in the SOEs' power relative to the state due to the economic and political strength they gained from the previous round of economic development as well as the decline in state capacity.

### *Future Developmental-ness of the Chinese State*

I have illustrated that the developmental-ness of the state, instead of being a fixed characteristic of the state, rises and declines with the changing balance of power between the state and economic elite and the dynamics of competing political factions which in turn shapes state capacity. To end this chapter, I will assess the likelihood for the developmental-ness of the Chinese state to rise again.

Several changes have pointed to the possibility of the Chinese state becoming more developmental. First, the CCP has centralized party education since mid-2000s in order to instill more ideological uniformity within the party cadres (Shambaugh 2008). This would help minimize the strength of factional politics that arise from deep ideological differences. Second, there have been efforts made to rationalize the functioning of government bureaucracy. The highly competitive job market rendered it possible for the government to recruit highly trained graduates of prestigious universities, potentially increasing the professionalism within the state administrative apparatus necessary for rational planning and higher degree of interagency coordination. Third, the new party leader, Xi Jinping, may possess sufficient political capital to exert dominance over opposing factions within the party in order to set forth a coherent set of developmental goals and strategies, which will be necessary for increasing the cohesiveness of the state administrative apparatus and the state's capacity to instill internal discipline, rendering it possible for the state to direct resources in a way that promotes long-term growth even at the expense of short-term gains in some regional or industrial segments.

This does not mean that the recently announced reform measures will automatically make the Chinese state highly developmental again although there are signs that things are moving in that direction.<sup>9</sup> Much depends on how successfully the interests of the dominant elites are co-opted and/or contained. It is quite possible that the long anticipation of these policy measures was used by the dominant elite to transition themselves into the advantageous positions to emerge when these policies are finally implemented. There are signs of that this was indeed the case as an increasingly number of princelings have transitioned themselves into financial sectors, such as private equity, in recent years which would allow them to have established themselves by the time policies liberalizing the financial sector are implemented and feed these new financiers with huge influx of capital to manage. This is one way through which dominant elite is incorporated by the state into a productive partnership to promote national economic development. The elite segments that stand to lose significant power and influence and are not incorporated effectively by the state are, however, unlikely to retreat easily, and hence policies to promote national economic development, if implemented, can bring about another round of state–elite conflict which can pose serious challenges to the state's attempt to coordinate policy implementation.

## Conclusion

In this chapter, I started out by arguing that being developmental is not a fixed characteristic of the state. I proposed to conceptualize the developmental-ness

of the state as a variable and used the experience of post-reform China to illustrate how the developmental-ness of the state can rise and decline over time. I am, however, not suggesting a cyclical theory of rising and declining developmental-ness of the state. There is nothing inevitable or impossible for any of the causal factors affecting developmental-ness of the state to change. It is possible for vested interests to become entrenched and even very powerful, so much so that it becomes very difficult for the state to be developmental. In fact, this is the kind of scenario portrayed in Pei's book (2006). Even when the old elite are too powerful for the state to be developmental, however, it is possible for the power balance to shift quite suddenly, perhaps as the result of an external shock, such as a war or global financial crisis. Hence, rather than seeing the developmental-ness of the state as a constant or changing in a particular pattern, such as a cycle, the proposed theory aims at making sense of past changes as well as attempting to predict future changes in the developmental-ness of the state.

### Notes

1. After the financial crisis in 1997, many asserted the end of developmental state. They argue that in the age of globalization, businesses no longer rely on the state for cheap financing as they can access capital worldwide (Pang 2000). This implies that businesses, especially large firms and business groups, no longer rely on the state for access to capital and preferential loans, which in turn means that the state cannot hold them to state industrial policies, thus rendering it more difficult for the state to be developmental. In other words, we can extract a condition under which a state can be developmental. When the state is capable of providing cheap capital to businesses that have no access to capital otherwise, the more developmental the state can be. The more businesses can access to cheap capital outside of the state, the less developmental the state can be as there is less leverage the state has over businesses to compel them follow the state's industrial policies (Kim 2005). With globalization, as large firms pursue transnational expansion, their interests shift from national economic development, previously pursued in cooperation with the state, to their own profitability, which may involve reallocating investment to other countries (Kim 2005). This means that as economic elite become more involved in the global economy, enabled by increased mobility of capital which involves policies of liberalizing capital flow and the transnationalization of these corporations in order to be globally competitive, the more powerful the economic elite will be (more leverage over the state, no longer subordinate to the state), the less developmental the state can be.
2. Naughton (2007) points out that the TVEs, especially those set up in the sub-urban areas, actually benefited small SOEs as they served as subcontractors for SOEs, improving the SOEs' profits. While it might have been helpful for these SOEs in the short run, their reliance on TVEs only highlights the low viability of

their continued existence as SOEs, which ultimately made them more vulnerable politically.

3. The four biggest state-owned banks are Bank of China, China Construction Bank, Industrial and Commercial Bank of China, and Agriculture Bank of China.
4. Details of PBOC's institutional development and professionalization can be found in Bell and Feng (2013).
5. Local officials depended on loose credit to provide capital for local projects as they competed with other locales to deliver the highest GDP growth in order to be promoted in the system. Furthermore, their friends and families often owned the businesses responsible for the local projects.
6. Chen Yun was a CCP elder from Deng's generation who had enough political clout to keep Deng in check in the 1980s (Vogel 2011).
7. Trusts that offer returns as high as 10 percent, way above the low cap imposed by the government on deposit interests, are popular with savers (see "Shadow Banking in China").
8. Returns on the stock market had been very low due to distortions created by the state (see Walter and Howie 2011 for details).
9. In 2013, the PBOC liberalized the lending interest rate charged by the banks. It is possible that this is the first step toward liberalizing deposit interest rates but there are reasons to be skeptical. Removing the floors on lending interest rate would be welcome by lenders, mostly SOEs, who will benefit from cheaper loans as banks compete for their business. With a lower lending interest rate, raising deposit interest rates squeezes the banks' profit margin even more, prompting them to raise lending interest rate. Hence, there will be much greater resistance to liberalizing deposit interest rate (V.V.V. 2013).

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## CHAPTER 11

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# Is India a Developmental State?

*Rahul Mukherji*

This chapter challenges the notion that development can occur only within a classic developmental state. It will briefly describe the conception of a classic developmental state. Thereafter it will argue that the literature is correct to typologize India as a nondevelopmental state. Where the chapter will take issue with notions of the developmental state is in arguing that development is possible in a so-called embedded particularistic state as well (Herring 1999). An “embedded particularistic” state is conceptualized as one where the state lacks the autonomy to pursue its will because of the power of oppositional vested interest that stands in the way of the state.

The Indian state inhabits a social world far more penetrated by powerful social actors than many others in Asia such as Taiwan, South Korea, Singapore, Japan, or perhaps even China. This characteristic of state–society relations, however, does not render the state any less significant in the case of India’s development (Bardhan 2010). This chapter argues through two significant cases in India’s economic evolution that the Indian state is significant both when it succeeds and when it fails. State capacity, in the end, is a product of two major characteristics—first, does the state have the right ideas that will help pursue its goals? Second, can the state insulate itself from vested interests that stand in the way of pursuing these ideas? I find that ideas within the Indian state often reach a tipping point before major state-level initiatives favoring growth or welfare can be advanced. This is largely due to an endogenous movement in ideas within the state. The Indian state has the propensity to resist exogenous threats under external pressure during moments of vulnerability. The next section will contend that development is largely the story of endogenous ideational change driven by puzzles over past policies. It is a

story of gradual change because of the social power of interest groups ranged against it.

India today is a substantial case of development within a plural polity. An economy that grew at about 3.5 percent during the import substitution era (1956–1975), it began to grow much more rapidly since the 1980s.<sup>1</sup> In this millennium, the economy grew at a rate greater than 7 percent when the major economies of the world began to dip. This occurred despite what many people have described as India’s “policy paralysis” between 2009 and 2014. Even though China’s economic size is much larger than India’s, India’s growth rates equaled China’s for the first time in 2014/2015.<sup>2</sup> Many believe that while China’s growth rates might dip after many years of the most rapid economic growth in history, India is poised for a takeoff. Moreover, Tarun Khanna and Yasheng Huang have pointed out that this growth has occurred with a much lower level of investment (Huang and Khanna 2003).

Years of rapid economic growth have increased inequities in India and China. Both the countries have begun investing heavily in welfare. This chapter will show the import of developmental ideas within the state and its capacity to implement them as substantial harbingers of growth and welfare in India. In addition to the story of India’s growth, the chapter will draw attention to the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) as two schemes that are especially significant for advancing well-being in India.

## The State

How does the Indian state fit within the paradigm of the developmental state? The scholarship in comparative political economy, which has an older lineage than the “developmental state” literature, deems that the US and the British states have been more penetrated by social actors than Germany, Italy, France, or Japan (see Katzenstein 1977). But even the US state has been viewed as one that secured autonomy from vested interests when it came to welfare policies or for pursuing a policy of wealth maximization. Stephen Krasner, for example, argued persuasively that even the relatively weak US state in the 1970s was able to maintain autonomy from its most powerful adversaries—the oil multinationals when it came to the issue of Middle East policy. Since, Middle East and oil policy were significant for the growth and national security of the United States, this was an important concern. But US oil multinationals were powerful. Krasner argued that the needs of national economic growth and security diverged from those of the multinationals. The US state, especially the Office of the President and that of the Secretary of State, was able



to insulate itself from these very potent interested actors in the formulation of US policy toward the Middle East (Krasner 1978).

The “developmental state” literature is constructed on this very idea that the state must be treated as a conceptual variable (see Nettle 1968). It is in direct opposition to the classical Marxist or even the pluralist view of the state—conceived as the executive committee of the bourgeoisie. Lenin, following Marx, derived imperialism directly from the nature of monopoly capital (Lenin 1996). Helen Milner, a scholar in the pluralist tradition, argued persuasively that those sectors in France and the United States that were dominated by export-oriented and multinationalized production systems successfully pressured their respective governments to keep their borders open to trade. That the comparative political economy literature generally agreed that the state in France was considered to be more autonomous of societal pressures than the state in the United States proved insignificant for Milner’s thesis. Capital ruled over policies in both the states. What mattered for policy was how capital resolved its conflicts of interest (Milner 1989).

The development state is a descendent of the state autonomy literature described above, which had evolved in a democratic context since the 1960s (see Skocpol 1985). It is ranged against both the classical Marxist and the pluralist view of the state described above. East Asia’s development was puzzling for political scientists and sociologists when the “world systems” approach was ascendant in the 1970s. The “world systems” approach had adjusted Lenin’s imperialism to the postcolonial setting. Decolonization notwithstanding, it was argued that a new form of neocolonial exploitation would enable the rich developed countries of the world to exploit postcolonial states through a well-specified mode of exploitation of the world’s peripheral economies by the powerful developed economies of the center. What was really worrisome for political scientists and sociologists was that Asian and Latin American economies had begun to take off in a manner that was puzzling for the world systems approach. It is this puzzling development that led scholars ranging from political scientists such as Chalmers Johnson to sociologists like Peter Evans to conceive of the “developmental state.”<sup>3</sup>

Let us consider the example of Peter Evans’ work. Evans transformed himself from a dependency theorist inspired by the *world systems* approach to a leading scholar of the developmental state.<sup>4</sup> His substantial contribution, *Embedded Autonomy*, shows the way to engage with India as a developmental state. For Evans, the classic developmental state was both embedded and autonomous. It was embedded in the sense that the state maintained very important ties to capital. These ties help the state to understand the long-term needs of capital. But the state was also autonomous of capital. This autonomy from capital enabled the East Asian state to discipline capital

in a manner that made it competitive in the world economy (see Evans 1995).

It so turns out that that the classic developmental states in his schema—South Korea, Taiwan, Japan, and Singapore—were either authoritarian or states clearly not in the classic liberal mold. Brazil and India, for Evans, were middling states. Some sectors appeared to be embedded autonomous but not others. “Embedded autonomy” was a type of domestic structural argument that sought to explain why countries like India did not grow in the past. It could not explain why India has embarked on a period of rapid economic growth with substantial increase in welfare expenditure.

### **The Indian State and Development**

How then can we think of Indian development in light of these theoretical frameworks? The suggestion of failed “embedded autonomy” or Pranab Bardhan’s powerful thesis of the “dominant coalition” of farmers, industrialists and the professional class in India standing in the way of the state’s development agenda, are clearly relevant in the Indian context. Bardhan writing in the 1980s, for example, had discussed the power of farmers who succeeded in obtaining subsidies that were detrimental from the long-run developmental perspective. These propensities remain. The Indian farmer has successfully garnered subsidies such as free electricity and fertilizer and did not pay taxes. No amount of economic deregulation since 1991 has made a dent on the capacity of the Indian farmer to extract these benefits. Significant elements within the industrial class, though more globalized today than in 1991, often resist competition arising out of global economic integration. China can therefore negotiate free trade agreements with greater ease than India. And, the Indian professional class, though more globalized in India’s corporate sector than the one that Bardhan conceptualized in the 1980s, is hardly a persuasive lobby for change promoting competitiveness.

If the state is so penetrated by social actors in an “embedded particularistic” India, why should we consider the state as an important actor? And, how does development in India occur, nevertheless?

Society-centered approaches mentioned above possess significant explanatory power. They tell us why India moves slowly. For example, the power of the Indian farmer can explain why India’s power sector remains unreformed. The Indian farmer has successfully resisted electricity tariffs in many states. Chief Minister Reddy’s first major decision upon assuming office in 2005 was to abolish the electricity tariff in Andhra Pradesh. This populist decision nullified former Chief Minister Naidu’s concerted and substantial efforts to engender financial discipline in the sector. And, the populist approach

cemented the chief minister's political clout. He was reelected again in 2009. Electricity has a direct impact on industrial and economic growth. If a majority of consumers do not pay, then neither agriculture nor industry can benefit from high-quality and reliable power generation. This example demonstrates how good politics often comes in the way of good economics because of the clout of large and powerful constituencies that can organize themselves. Ashutosh Varshney called this phenomenon "mass politics."<sup>5</sup> Farmers are a large and organized voting lobby that can defeat the technocratic vision of the state.

State-oriented explanations do not negate the power of Bardhan's dominant coalition or the view that the Indian state lives in a world that can be characterized as "embedded particularism." If class analysis, or the power of dominant social actors, explains why institutions and policies get locked in, we need to look at ideational contestations within the state and how moments of autonomy are produced to understand how development occurs, nevertheless.

I have argued that ideas within the Indian state are very important for establishing an institutional and policy trajectory in the foundational moments. Let us take a few examples of hegemonic moments for policy formulation. Historical research has demonstrated the direction of the state's role in policy-making in the immediate aftermath of the Indian independence in 1947. That the Indian capitalist class supported the Indian nationalist movement for independence is well known. Indian business was pleased with gains made from the rising demand for commodities during World War II but was also aware that colonialism discriminated against it. Leading industrialists such as Ghyanshyamdas Birla, Prushottamdas Thakurdas, Jehangir Ratanji Dadabhoy Tata, Kasturji Lalbhai, and Shri Ram enjoyed excellent relations with the leaders of the Indian nationalist movement. The doyens of Indian industry had great expectations from an independent Indian state.

These expectations were not met. The socialist compromise favoring import substitution that emerged since 1948, and especially around 1956, when the second Five-Year Plan was announced, contradicted significantly issues raised in the famous "Bombay Plan" of 1944, which portrayed the interests of Indian industry (Kudaisya 2014; see also Kudaisya 2002).<sup>6</sup> It was the dominant or hegemonic ideas inspired by the Indian state's evaluation of socialism within a democratic framework at a time when the USSR and China had taken the socialist route that Sudipta Kaviraj called the "passive revolution" (see Kaviraj 1997). This passive revolution was an ideational revolution within the Indian state that carried with it a significant transformatory potential.

Ideas within the Indian state held by its bureaucrats and technocrats serve a very powerful political and social purpose. These ideas get locked in and develop a path-dependent life of their own. The idea of import substitution in India was so powerful that it ruled policy and institutions from the time of independence in 1947 till the mid-1970s (see Mukherji 2014a). When these ideas ruled, both the Indian business class and the international donor community had to adjust to this policy wisdom. The business class at first worried about industrial licensing and stringent state guidance. Thereafter, it learned to play the game of import substitution. Powerful industrialists directed more attention toward maintaining excellent relations with the party in power in its quest to garner industrial licenses than in the promotion of innovation and competitiveness (see Kochanek 2007). The state was rather focused on directing economic self-reliance. So adjusted was the business class to the comforts of a protected state-directed economy that it lobbied against the promotion of competition even when the World Bank pressurized India to devalue the Indian Rupee to promote exports in 1966 (Mukherji 2014a). The World Bank had opined that promoting exports was essential for generating resources for India's development. And, the country was vulnerable before the donor community at a time when it did not possess enough foreign exchange resources to import food grains that were essential to avert a famine (Mukherji 2014a).

The Indian state remained convinced about import substitution till the mid-1970s. When the World Bank forced India to devalue the Rupee under pressure in June 1966, India's response was not to buckle under pressure. India devalued the Rupee only momentarily and made some cosmetic policy changes, only to revert back to a more stringent version of autarkic development between 1969 and 1974. The state thus responded to foreign pressure by intensifying its efforts to garner economic self-reliance. Banking, wheat, coal, and various other sectors of the economy were nationalized. The Monopolies and Restrictive Trade Practices (MRTP) Act of 1969 regulated large Indian business corporations more stringently than before. The Foreign Exchange Regulation Act (1973) reduced the maximum permissible foreign equity in an Indian firm from 51 percent to 40 percent (Ganguly and Mukherji 2011, 63–70; see also Panagariya 2008). Post-1969, India looked rather illiberal compared to the regulation of Indian and foreign business before that period.

These significant examples demonstrate that the state in India gets locked into certain policy and institutional trajectories. These lock-ins develop a path-dependent life of their own. They are significant because they can shape the nature of the business class rather than be shaped by it. Moreover,

pressures from the global arena cannot easily dislodge institutional frameworks that have normative appeal and political support.

### **The Tipping Point Model and India's Globalization**

The puzzle then remains. If policy ideas get locked in, how do they get locked out? How does policy and institutional change occur in India? I have argued that counter-ideas also evolve in the making of economic policy. These counter-ideas result largely from puzzlement with past policy. To give one example, if import substitution was supposed to engender growth and reduce poverty, this framework would lead to certain expected policy results. If policies did not produce desired results, this would generate the space for new and different ideas.

I have argued that the Indian model is a tipping point model of economic change. Counter-ideas within the state evolve over a period time in a slow moving fashion. These counter-ideas are often not very well publicized in the media because they do not bring substantial sudden and drastic newsworthy change. They can, however, be scrutinized by scholars and is quite apparent to technocrats. Slow moving and almost imperceptible change becomes the harbinger of drastic change much later when the system has moved substantially toward change.

The tipping point model is the earthquake model of change. Tectonic plates move gradually over a long period of time. What appears like a sudden earthquake is the result of a long drawn and gradual process that leads to a dramatic result after a sudden threshold has been reached. If seismology evolves as a more precise science, it would be possible to predict the precise point when this threshold has been reached. Even though earthquakes cannot be predicted as precisely as cyclones, seismologists were not surprised that a massive earthquake shook Nepal on April 25, 2015. Given that the Indian tectonic plate's integration into the Asian landmass has resulted in the world's highest mountain ranges such as the Himalayas and the Karakoram range, this plate movement continues to build pressures that result in such an earthquake every 75 years. The last earthquake occurred in 1934, and seismologists believed that there still exists more pent-up pressure that can lead to a few more rumblings. I find the earthquake model or the tipping point model dominates economic change in India.

The literature on economic change, on the other hand, accords substantial import to exogenous shocks as the harbinger of change. Such is the popularity of this line of argumentation that "punctuated equilibrium" has become more popular than the more endogenously driven Darwinian evolution in political science. Stephen Gould and Niles Eldridge had argued that Darwinian

evolution somewhat resembled the nineteenth-century liberal world, whereas change was rather more rapid during externally induced critical junctures (Gould and Eldridge 1977). A critical juncture occurs when a short-term external impact produces long-term changes in the system.

A few examples of critical junctures will clarify this point.<sup>7</sup> A good example is a hypothetical meteor that may have struck the earth and killed all the dinosaurs. If one believed in this story, then a relatively short-term external impact changed the trajectory of evolution by exterminating dinosaurs. Another example would be an International Monetary Fund (IMF) initiated program at the time of externally induced balance of payments crisis. Let us assume that an oil price shock produced a balance of payments crisis and vulnerability with respect to the IMF. If the IMF's coercive powers at the time of a crisis driven by its lending capacity transformed the course of economic policy and institutions around the time of a balance of payments crisis, this would also constitute a critical juncture and a time of punctuation like the dinosaur example mentioned above.

The tipping point model that dominates the Indian experience is rather different from a punctuated equilibrium model driven by a critical juncture. This model derives explanatory power from slow moving endogenous rather than sudden exogenous shocks. Exogenous shocks may be necessary but they are not sufficient in the tipping point model. To give one example, if a bridge collapsed after a car went over it, would you infer that the car was the reason for the collapse of the bridge? Or would one draw the inference that the bridge collapsed because its structure was undermined to such a great extent that it only needed the advent of another car to collapse?

### *India's Tryst with Globalization and Deregulation*

I have argued that India's engagement with globalization and deregulation was akin to the story of a collapsing bridge led by the last car that went over it (Mukherji 2014a). It resembles Peter Hall's narrative regarding the birth of neoliberalism in Britain building on first- and second-order changes favoring monetarism within the British technocracy, which reached a tipping point with the arrival of Margaret Thatcher (Hall 1993). India's dramatic globalization occurred after a severe balance of payments crisis in 1991. The severity of the crisis in 1991 resembled the crisis of 1966 discussed above. This time, India's large and sustained fiscal deficits arising out of populist policies had made the country vulnerable to a foreign exchange shock. When the Gulf War in 1990 raised the price of oil, this external shock that was no more significant than the previous shocks made the Indian state vulnerable to the pressure of foreign multilateral donors. Moody's downgraded India's credit

rating in October 1990. Foreign commercial banks withdrew from India. And, even nonresident Indians with significant deposits took their money out of India. India was on the verge of a default in April 1991, with just two months of foreign exchange left. It is during such times that the state comes under the sway of the IMF.

Should we infer from the narrative above that India's globalization and deregulation substantially initiated in 1991 was the result of IMF pressure? I have argued that while foreign pressure at the time of a balance of payments crisis, like the last car that went over the bridge, was necessary, yet the singular reason for the paradigm shift in Indian policy was substantial change in policy ideas within the state favoring deregulation and globalization. India had weathered balance of payments crises in the past. This time, the substantial reason why the Indian state did not make a tactical retreat and engaged more wholeheartedly with the idea of engaging the global economy and private and foreign companies arose from the conviction that policy and institutions needed drastic course correction. The movement of policy ideas had reached a tipping point within India. The balance of payments crisis aided the Indian state to strategically deploy IMF pressure to silence domestic opposition to reforms.

A number of iconic policy initiatives reveal that ideas critical of state intervention and import substitution came to slowly dominate the policy community in India since 1975. These ideas were reflected in policy resolutions such as the Industrial Policy Resolution of 1980, policies pertaining to information technology in 1984 and 1986, significant initiatives in the telecom, auto-components and pharmaceuticals sectors, and in various reports of the Government of India (see Mukherji 2014a, 66–74).

A reading of some of the reports of the Government of India from the late 1970s is instructive. The reports made a number of critical and constructive suggestions that were hard to implement (Mukherji 2014a). First, they argued unambiguously that export promotion was necessary to finance India's development. Second, these reports conceded that resources spent in the Indian public sector had not earned substantial returns. The problem was too much government and political interference in the working of publicly owned corporate entities. It was therefore suggested that public sector companies be made autonomous of political interference and be allowed to run on commercial considerations. This was easier said than done. To give just one example: when workers of the government-owned telecom company MTNL serving the metropolitan areas of Delhi and Mumbai were given a bonus of Rupees 100 in the late 1980s, the workers of the Department of Telecommunications (DOT) serving the rest of the country united in protest. Such was the power of the 450,000 workers that the DOT within the Ministry

of Communications requested the Prime Minister to dissolve MTNL and merge it with the rest of DOT. It was not easy to govern public assets along corporate lines in the 1980s (Mukherji 2014a, 113–14).

Third, foreign investment began to be viewed as essential for technology transfer and for garnering managerial expertise. Last but not least, even though the Rupee remained substantially overvalued in the 1980s, it was allowed to gradually depreciate in a manner that would not raise a hue and cry (Mukherji 2014a, 68–9).

A number of policy initiatives suggest that policies in the 1980s were moving ideas toward a globalization and deregulation tipping point in 1991, even though the paradigm shift in policy change had to wait for the balance of payments crisis. First, most industrial sectors needed a license before production could commence. This stipulation was removed for some sectors such as information technology, auto-components, and pharmaceuticals. Second, the MRTP Act stringently regulated all Indian companies valued at Rupees 200 million and more. This bar of largeness was raised to Rupees 1 billion, thus releasing a large number of companies from the clutches of MRTP.

A final example exemplifies how ideas counter to import substitution and state direction had come to dominate the policy community by the end of the 1980s. In 1990, Prime Minister Vishwanath Pratap Singh and his adviser and economist Montek Singh Ahluwalia went for a trip to Malaysia. Prime Minister Singh was so impressed with Malaysia's development that he sought Ahluwalia's advice on how to emulate the Malaysian experience. This suggestion inspired Ahluwalia to write a paper within the Prime Minister's Office regarding the shape of the adjustment process required to resuscitate the Indian economy (Mukherji 2014a, 66–74). A reading of this chapter reveals that the Indian policy establishment had a good idea of what needed to be accomplished. It was waiting for an opportunity in the form of a crisis to achieve these goals.

July 24, 1991, should be regarded as the tipping point in Indian economic policy when counter-ideas opposing import substitution and state control came to dominate Indian economic policy. That was the day of the major earthquake in Indian economic policy, building on the tectonic shifts over the last decade and a half. The Rupee had been devalued considerably earlier that month. On July 24, two important policy documents—the budget and the Industrial Policy Regulation together transformed the trajectory of Indian economic policy. Industrial licensing was abolished in almost all industrial sectors. This meant that industrialists could now invest wherever they wanted without the interference of the government. The foreign equity limit in most industrial sectors was raised from 40 percent to 51 percent and to 75 percent



and 100 percent, respectively, in some industrial sectors. The MRTP Act was abolished (Mukherji 2014a, 74–6).

I have argued that these policy initiatives came from the state rather than the Indian business class. The Indian business class subsequently gained from these policy changes. Many large Indian companies like the Tata group have taken advantage of these policies and become significant multinational companies. But on the eve of the deregulation and globalization transition there was no push from Indian industry. The Federation of Indian Chambers of Commerce and Industry was opposed to these changes. The Confederation of Indian Industry, which was nurtured by Prime Minister Rajiv Gandhi in the 1980s, was divided. They followed rather than led the government in executing policy change (Mukherji 2014a, 89–92).

Indian industry largely acquiesced to substantial policy change because they too were vulnerable. Import substituting Indian industry was heavily import dependent. And, imports demanded foreign exchange. Pleasing the IMF to secure foreign exchange was critical for Indian industry as well. Industry would have welcomed a more cautious tactical retreat to IMF to garner resources followed by a reversion to the past. But the Indian state played a powerful role in making international vulnerability a strategic asset to deal with domestic opposition to reforms. This kind of a strategic game at two levels—first between the state and the IMF, and second, between the state and the business class—is a classic example of synergistic issue linkage in the two-level game literature pioneered by Peter Evans.<sup>8</sup>

The Indian state, which comprised largely of Prime Minister P V Narasimha Rao and technocrats led by Finance Minister Manmohan Singh, led a unified assault to create an impactful tectonic shock. Dr Singh opined that this occurred because there was an idea to pursue “whose time had come.”<sup>9</sup> This was a very different ideational milieu from 1966 when the idea of state-driven import substitution had driven the policy community. The Prime Minister was convinced, and he lent valuable support to the technocrats in the Ministries of Finance and Commerce led by the Finance Minister (Mukherji 2014a, 76–7).

My research finds that policy change in India is aided by a particular bureaucratic-technocratic cum political synergy. Policies often succeed when the bureaucratic-technocratic establishment is convinced and has a coherent line, which is convincing to the political establishment. The bureaucratic-technocratic establishment often knows what to do. Sometimes when it is capable, it also knows how to perform functions that will achieve the desired goals. But without the support from the political executive, the bureaucratic-technocratic community cannot insulate itself from opponents of the reform process. In a subsequent section, I will demonstrate how this

bureaucratic-technocratic political synergy worked in the spectacular implementation of the MGNREGS in the Indian state of Andhra Pradesh in India.

The stabilization cum structural adjustment undertaken by India was substantially home grown. It helped that policy ideas within the Indian government had moved considerably in the direction of the Washington consensus by 1991. The situation in 1991 was quite unlike the one in 1966 when the government was opposed to globalization and deregulation. But the government still executed largely its own views on structural adjustment. The government did not amend labor laws. Public sector assets were largely left untouched. And, the fiscal deficit was controlled for the first year and then allowed to rise again. It was understood that a poor country like India cannot undertake orthodox IMF style bitter pill austerity within a democratic framework.

The balance of payments crisis was necessary but not sufficient for explaining India's tryst with globalization and deregulation. What was critical was the manner in which ideas within the Indian state had moved from supporting import substitution with stringent state control to supporting globalization and deregulation. These new counter-ideas had reached a tipping point around 1991. A crisis driven by India's own fiscal condition was waiting to happen just like the last car that crosses a bridge that is about to collapse under the weight of its structural faults. But the fundamental reason for the collapse of import substitution in India was that it had far outlived its utility. Policy-makers were convinced that import substitution was holding back the country's growth. They could therefore take advantage of IMF pressure to discipline capital in favor of accepting competition and global economic integration, while at the same time giving them greater freedom to compete in the world economy.

### ***The Mahatma Gandhi National Rural Employment Guarantee Scheme in Andhra Pradesh***

We now shift our attention from substantial change in policies and institutions favoring growth to shifts in investments favoring human well-being. MGNREGS is one of the world's largest employment guarantee schemes. Schemes like MGNREGS, if implemented properly, can change the course of welfare in India. Political scientists have reported that welfare programs like MGNREGS, when implemented properly, can enjoy good electoral consequences as well (Yadav and Palshikar 2009). This is a dire necessity because India today is not only one of the most rapidly growing but also among the most poverty stricken economies in the world. The scheme's successful

implementation in Andhra Pradesh is another saga of ideational evolution within the rural development bureaucracy, which benefited from a supportive and protective chief minister in Y S Rajasekhra Reddy (2004–2009). Ideational evolution and implementation capacity within a capable bureaucracy played a significant role in convincing Chief Minister Reddy of the center-left Congress Party about the developmental and positive political impact of the scheme in Andhra Pradesh. And, the political bureaucratic synergy was essential for the capable bureaucracy to be insulated from the vested interests ranged against the act.

MGNREGS was born as the result of an act of the Indian Parliament in 2005, building upon the experience of a large number of employment guarantee programs in India. The difference between the earlier programs and MGNREGS was that Parliament enacted a powerful right to work in 2005, by which every Indian citizen in rural areas had a right to work for a 100 days every year. Programs can be initiated and withdrawn. However, an act of Parliament that gives every Indian citizen a right can only be overturned in the Parliament through another enactment, which is a near impossibility. MGNREGS is therefore more stable than all other poverty alleviation programs of the past. It also constituted a more substantial investment in poverty reduction than programs in the past.

MGNREGS has been criticized for poor performance in many states. That poverty stricken states such as Bihar, Odisha, and Uttar Pradesh have low-labor participation rates suggests that large farmers and the construction companies, who are the enemies of MGNREGS, are successfully able to thwart MGNREGS implementation in these states. The large landowning farmers are opposed to MGNREGS because this scheme has the propensity to raise wages among the jobless rural poor where it is implemented successfully. And, farmers and construction companies are both politically powerful constituencies that benefit from poor rural wages.

Moreover, MGNREGS is supposed to create both employment and rural public goods. When the poverty stricken rural poor demands work, the work assigned to them ranges from water harvesting schemes, to rural roads, to conversion of nonarable lands into cultivable areas. Critics of the program argue that this work not only makes farming expensive by raising rural wages, it does not produce durable assets. Opponents of the program therefore argue that the program should be given up.

Success in implementing MGNREGS in some states like Andhra Pradesh suggests that the state had evolved an unusual capacity to deal with the powerful opponents of the poor. My research with Himanshu Jha suggests that while the quality of assets produced by MGNREGS in rural Andhra Pradesh was poor, money is reaching the poor and making a real difference in

livelihoods.<sup>10</sup> That Andhra Pradesh has some of the most impressive participation rates is borne out by the statistics presented by the government and leading economists working with survey data.<sup>11</sup>

The substantial research puzzle, therefore, is why did MGNREGS succeed so spectacularly in Andhra Pradesh? We find that the critical reason for the successful implementation of MGNREGS in Andhra Pradesh was the presence of a very capable bureaucratic-technocratic community within the Department of Rural Development in the Government of Andhra Pradesh. Rural development was an important department which attracted competent officers with substantial commitment. One such officer, K Raju, who was the principal secretary of the Department, would play a leadership role in creating the winning architecture in Andhra Pradesh.

The Department under the stewardship of Raju conceived an implementation strategy that convinced Chief Minister Reddy of the Congress Party that it would be worth his while to expend substantial political capital to insulate this program from powerful landowners and construction companies. Reddy was not easy to convince. The earlier Food for Work Program of the previous government led by the Chief Minister Chandrababu Naidu of the regional Telugu Desam Party was so ridden by corruption that some analysts believe that this had been electorally detrimental for the party in the 2005 elections. Reddy was therefore concerned that MGNREGS implementation in Andhra Pradesh should not suffer the fate of the earlier Food for Work Program. Chief Minister Reddy's conversion depended in large measure on the ability of the rural development bureaucracy to provide the chief minister with a convincing plan with a high probability of successful implementation.

What were the elements of this architecture? The first substantial element of this architecture was the creation of an office concerned with Social Audit, Accountability and Transparency (SAAT). This office was an interesting case in institutional evolution. Its director was a social activist who worked for the Mazdoor Kisan Shakti Sangathan (MKSS)—an NGO that pioneered the art of public hearings and had played a critical role in the enactment of the right to information in India.<sup>12</sup> Public hearings are rural congregations where some persons with access to government data draw people out to enquire whether there is a match between what the data suggest and the real utilization of funds. The SAAT governing board invited well-known social activists such as Aruna Roy and Harsh Mander, who had struggled to strengthen rural local democracy through the process of public hearings. And yet SAAT was located within the government and came under the jurisdiction of the Department of Rural Development.

The Department of Rural Development in Andhra Pradesh was aware of the role that nongovernmental organizations (NGOs) could play in

promoting accountability. The Department had even experimented with organizations such as Action Aid and MKSS to organize public hearings that could expose corruption. In the end, the government needed to standardize methods and make NGOs work within government rather than allow them to protest about it. Society was thus brought into the state through the formation of SAAT.

The SAAT in Andhra Pradesh has become a model corruption regulator that audits not only MGNREGS but other programs as well. SAAT's auditors go from village to village knocking doors. The right to information was incorporated within MGNREGS. SAAT auditors possess information about MGNREGS work provided by the government. They check whether what the government claims is really what the people have been provided. The office has been rather efficient at holding public hearings and in exposing corruption. Sometimes the corrupt have also been brought to book as a result of these efforts. We found SAAT's data to be quite credible when we conducted random field visits in Andhra Pradesh.

The second element of the MGNREGS architecture was the creation of a financial software that enabled workers to directly access funds provided for their labor. One of India's leading information technology firms, Tata Consultancy Services, provided a valuable financial software that could track the movement of funds to various parts of the state. This software was provided free of cost. Funds were not directly devolved to the heads of village governments, as had been mandated by the act. India's elected village governments located in rural Andhra Pradesh were consulted but the public work project was brought to a village by a low-level bureaucrat called field assistant. The field assistant would bring a project like the construction of a rural road to a village. Workers who needed jobs would then organize themselves into groups of 20 workers. At the end of the work, wages would be paid directly to their post office accounts. Subsequently bank accounts were also opened and provisions were made to deliver funds directly to the bank account. And, the financial transactions software tracked the flow of funds within the state.

This methodology of disbursement was significantly different from the traditional disbursement model suggested by the right to work enacted in 2005. The legislation had mandated that work in rural areas be conducted through village-level governments. The Department of Rural Development in Andhra Pradesh, on the other hand, went with the view that rural India was the den of caste oppression. It is here that the social hierarchy of caste is most significantly manifested. Giving funds to local governments, therefore, could mean significant siphoning of funds for privileged sections of society. The problem was averted by discussing projects with village governments but placing a government official for sanctioning and bringing projects. Moreover, no

funds were disbursed to village governments. These were sent directly to post office or bank accounts of workers.<sup>13</sup>

This innovative proposal of the Department of Rural Development was a winning idea. Chief Minister Reddy hesitated initially but was finally convinced about the value of this plan. That the Department of Rural Development in Andhra Pradesh under Raju had successfully implemented other programs such as those concerning women's self-help groups lent weight to the department's proposal. Once convinced that the program would have a positive developmental and electoral impact, the chief minister gave his fullest political support. He dubbed it as his "Ayyappa"<sup>14</sup> program—one that will not be polluted by powerful vested interests in the landowning and construction sectors of the economy.

The support of Chief Minister Reddy was as important as the bureaucratic-technocratic capacity to conceive of innovative ways of dealing with rampant corruption. If the bureaucracy had ideas but no political support—its plans would have come to naught. This is because the landed and construction companies were very deeply entrenched in Andhra politics. We even interviewed a formal rural development minister who opined that MGNREGS was a waste of resources that would despoil Andhra Pradesh's agricultural potential. But the chief minister was strong and he provided the political support to insulate the bureaucracy from the enemies of the poor.

### Lessons

What lessons about the role of the Indian state in economic change can we draw from the two cases discussed above? First, we find that be it the promotion of welfare or the onset of growth-oriented policies, the ideational orientation of the technocratic-bureaucratic elite is very important for understanding institutional and policy change in India. Neither the substantial onset of globalization and deregulation nor the successful implementation of MGNREGS in Andhra Pradesh would be possible, if the technocratic-bureaucratic elite did not have good plans that could be implemented on the ground. Second, we find that bureaucratic rationality is ineffective in the absence of powerful political support from the executive. In the absence of such support, no matter how refined are the plans, they can be despoiled by vested interests ranged against the proposed changes.

Finally, ideational evolution within the state can take two different forms. The first is a tipping point model where counter-ideas get consolidated. This change dynamic was most evident in India's tryst with globalization and deregulation in 1991. Ideas counter to import substitution, consolidated themselves since 1975, and reached a tipping point in 1991. Since India is

not a classic developmental state, changes in the bureaucratic-technocratic rationality alone may not be sufficient. Powerful vested interests stand in the way. Substantial changes in ideas that shape the policy rationale may be aided by exogenous shocks that are commonplace in the economic life of a country. But these shocks, by themselves, are less significant for understanding policy and institutional change, than the threshold of ideational change achieved within the bureaucracy. These shocks are akin to the last car that crossed a bridge before its collapse. The collapse of a policy bridge has to be understood more in terms of how its structure was fundamentally undermined rather than the last car that went over it.

The second logic by which ideas within the state engender change is the path-dependent dynamic. MGNREGS implementation in Andhra Pradesh followed this logic. The Department of Rural Development had consolidated years of experience and commitment to reach a stage where it had the capacity to think more innovatively than other states about the logic of MGNREGS implementation. This enabled the department to make the best use of the advent of a central level act in 2005, when the bureaucracy found a willing chief minister.

These two cases reveal that India is not a classic “developmental state” that can easily discipline social actors ranged against it. This is due to the fact that it cohabits a rather powerful society around a relatively weak state and a democratic political system. This weakness of the state with respect to social actors, however, should not confuse us into thinking that the way the Indian state thinks does not make a substantial impact on how policies and institutions change. It is this paradox of a relatively weak state that may have discouraged scholars from investigating carefully the nature of the state and its relationship with social and economic change in India.<sup>15</sup> India forces us to think about how development is possible in a democracy where the state needs to build a substantial consensus before making bold departures from the past, or for consolidating the past with ever more bold initiatives.

## Notes

1. India's growth beyond the 1980s surpassed 6 percent. On India's growth trajectory see Nayar (2006).
2. India grew at 7.4 percent in 2014/2015.
3. The late dependency scholarship of Fernando Henrique Cardoso is less critical about the notion of dependence of the developing world on the developed world. Cardoso could visualize some autonomous roots of progress even in a dependent relationship. See Cardoso and Falleto (1979).
4. For Evans's early work, see Evans (1979).

5. On power sector reforms in Andhra Pradesh see Mukherji (2014a, 147–180). On mass politics, see Varshney (2007, 146–69).
6. For the opposite view that the Indian state was more captured by the capitalist class, see Chibber (2003). In this author's opinion, Kudaisya's view is rather more historically well researched than Chibber's.
7. For an understanding of critical juncture, see Pierson (2002) and Krasner (1984).
8. For synergistic issue linkage, see Putnam (1988), Mitra (2004), and Mukherji (2014a, 98).
9. Finance Minister Singh expressed this view on October 6, 1995 at the Gabriel Silver Memorial Lecture at Columbia University titled: "Development Challenges in the Post-Cold War Era."
10. The analysis in this section draws heavily from Mukherji and Jha (2014) and Mukherji (2014b, 123–35).
11. See for example Dutta et al. (2012) and Jha et al. (2010).
12. MKSS translated into English is the Organization for the Empowerment of Workers and Peasants. Its founder Aruna Roy played a critical role in the enactment of the right to information in India. This legislation enacted in 2005 gives every Indian citizen access to any government information that is not connected with national security. It is a very powerful act that is making an impact on transparency and accountability in India.
13. This was not a foolproof methodology. We found in our field visits in Andhra Pradesh that workers had been paid for projects not undertaken. In some cases, there had been substantial payment delays. In others, workers closer to the field assistant had benefited owing to ethnic considerations or party affiliation. Despite these drawbacks, this method of paying workers directly without intervention of village governments would have had a positive impact on disbursements.
14. "Ayyappan" is a very powerful Hindu deity. About 30 million people visit the Ayyappan temple in Sabarimala in the state of Kerala every year. They do various austerities before going for a glimpse of the deity in Sabarimala. Invoking "Ayyappan" was a way of suggesting that MGNREGS would not be touched by the powerful opponents of MGNREGS.
15. For a broader view of the role of ideas in development, see Mukherji (2014b).

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## CHAPTER 12

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# Indian State and Its Capitalist Growth: Success of a Democracy with Multiple Challenges

*Anil Kumar Vaddiraju*

### Introduction<sup>1</sup>

The Indian society is currently undergoing a period of rapid changes. The first and most fundamental change is economic growth. For decades prior to the 1992 liberalization, the Indian economy has grown at no more than 3.5 percent per annum. Since the reform, it has started to grow on average at no less than 6 percent a year.<sup>2</sup> This, as is widely acknowledged, has heightened both social and spatial inequalities.<sup>3</sup> The second change pertains to population growth and demographic transformation. Today in India almost 50 percent of the population is young, between the ages of 16 and 40. That means nearly 600 million people<sup>4</sup> will be registering or have newly registered to vote. They will be searching for fulfilling jobs, sustainable livelihoods, adequate housing, among other matters.

Above all, given the growth in the population at the younger age, there will be an increase in demand for educational services in both the rural and urban areas. In fact, people in India have also shown a heightened awareness of the importance of education, which is reflected in part in the rise in literacy as well as enrolments in schools and even colleges. The demand for education is not confined to quantity, but also quality, so that it is rapidly out-stripping

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the available educational infrastructure. Coupled with the privatization of education, this has resulted in quantum growth of privately run schools in all parts of India.

As a consequence of the economic and demographic transformations mentioned above, there also occur considerable social changes, particularly in terms of attitudes toward older social institutions, not only caste, but also gender and family, accompanied with all its intermittent backlashes.<sup>5</sup> Finally, and not any less importantly, there is also the rise in political expectations and assertion by backward regions, maltreated minorities, lower and middle sectors of rural society, and various ethnicities. This has led to increasing calls for increased affirmative action or separate statehood within the union to secession from the Indian nation-state itself. The present Union government elected in 2014 which is both neoliberal and Hindu conservative is hard pressed to manage a nation undergoing such profound changes.

### **Economic Growth and Inequality**

One important consequence of the recent growth upsurge in India has been the increase in social and economic inequality. India has 36 percent of its population living under two dollars a day. That means broadly more than 420 million people live below the poverty line. This occurs at the same time that the number of billionaires in India increases. As an economist observes:

According to Forbes magazine list for 2007, the number of Indian billionaires rose from nine in 2004 to 40 in 2007: much richer countries like Japan had only 24, France 14 and Italy 14. Even china despite its sharply increasing inequality, had only 17 billionaires. The combined wealth of Indian billionaires increased from \$106 to \$170 billion in the single year, 2006–7.

(Bhaduri 2011)

The above quotation clearly shows the increasing inequality and social disparities in India. Pranab Bardhan, citing a study by the National Council of Applied Economic Research of India, says that the Gini coefficient for India is about 0.535 in 2004–2005, which almost places the country in the range of the Latin American countries (Bardhan 2011). This simply explains the extent of inequality that now exists in India. An important feature of India's recent economic expansion is that it is a jobless growth.<sup>6</sup> The private sector has been retrenching workers, increasing forms of casual employment, outsourcing essential tasks to contract providers, and at the same time pressing for increased productivity from the fewer and fewer number

of regularly employed workers. This has been true of long-existing private sector companies and corporate conglomerates such as the Tata group or Bajaj group, which in earlier times were known for providing forms of employee welfare. All the above is being done to remain internationally profitable and to withstand the competitive pressures of global companies and multinational corporations. This indicates that the growth in formal, regular employment is not at all commensurate with economic growth.

The extent of economic growth has also increased economic expectations from all social and economic sectors of the country. Bardhan (2011), for example, cites a survey which shows that 80 percent of the children from farming families today do not want to remain in the agricultural sector. In addition, the highly consumer-oriented capitalism that exists in India today has been propagated by consumerist digital television, fueling people's aspirations and drastically transforming the notion of what constitutes a good life. When this is coupled with the harsh reality, which refuses stubbornly to yield to their aspirations, severe social and political discontents emerge. Inequality is after all a relative concept and, in the race for better living standards, every section of the society and the desperate individuals within them only look onward and upward, but never to the less well-to-do or the past and traditions on cues for behaviors.

India's current economic growth is also characterized by its vast urban-rural disparity. Specifically, while the urban, service sector employs only a minuscule workforce out of the entire working population, it contributes to nearly 55 percent of India's GDP. The recent growth has thus widened the gulf between the city and the countryside. This divide is not only spatial but also social, economic, and cultural. The lifestyle and living standards of the city are conspicuous by their absence in any average Indian village. Often in backward states like Orissa and Bihar, rural areas are not even 100 percent electrified. Orissa is one state which still lives in darkness with its rural areas having attained the lowest level of electrification. The states of Bihar and Uttar Pradesh are only slightly better. Interestingly, the State of Orissa is also next only to the capital city of Delhi to have the most "reformed" electricity sector.

In short, India's economic growth has been accompanied by a sharp urban-rural divide, with the cities exhibiting conspicuous consumption at the same time that the rural areas suffering from adverse terms of trade in agriculture, lack of proper roads, sanitation, schools, public healthcare, and even safe drinking water. Indeed, the problem of rural-urban divide exists even among the fast-growing states, and the chasm seems only to be widening day by day.

### Interstate and Interregional Disparities

The economic growth that is taking place in India is only confined to some locations, particularly the States of Gujarat, Maharashtra, Karnataka, Tamil Nadu, and Kerala. It is notable that three of these states, namely, Karnataka, Kerala, and Tamil Nadu, are in the South. States in the Northern and Eastern regions of the country such as Uttar Pradesh, Bihar, and Orissa had not seen much development and are the most backward areas of the country. Since economic growth has not taken place to the same extent across the states, regional and interstate inequalities have been on the rise since the start of the reform period (Dholakia 2011). While there are different estimates of the growing disparities, all agree that inequality has increased.

While seasoned economists squabble over whether further growth will make all states uniformly rich or whether the inequalities will only increase, the experience so far is not positive or encouraging. Regional disparities have clearly increased in India, the major cause of which has been the economic reforms. This is bad news for the country and even more so for the poorer inhabitants of all states. Migration, which has been sought by some of the underprivileged population, can hardly solve the problem. Poor migrants to richer states live in even poorer conditions in the place of their destination and also become economic competitors to the local poor, leading to tensions that often take an ethnic turns.

Significantly, not all Indian States<sup>7</sup> are equally endowed with mineral deposits, forests, and natural resources. States in the eastern region, from Odisha to Chhattisgarh, Jharkhand, are resource rich; and by the same logic also attract huge foreign and domestic investment. This investment in mining and minerals has led to large-scale displacements and devastation of the lives of local and indigenous populations. Most of these areas consisting of indigenous people are declared as “scheduled areas” under the constitution, and are to be governed under a local government Act called the Panchayat Extension to Scheduled Areas (PESA) Act.<sup>8</sup> Under the PESA Act no land or resource can be acquired by the government or private sector without the full consent of the local people. But this law is weakly implemented in practice; acquisition of land and resource in breach of the law was rampant. As a result, all these areas have also been havens for Maoist movements, which advocate the waging of armed struggle against the Indian state and its machinery. In some of these areas, Maoists literally run a parallel government. The attempts of the Indian state to reach the populations affected both by state-led investment projects and Maoist violence through development programs and poverty alleviation measures have largely been in vain.

Consequently, battles between the Maoist guerrillas and the state paramilitary forces are a common occurrence in these regions. As the Indian government encourages the States to attract more investments into these areas, an increasing number of bitterly violent battles break out between the Maoists and the Indian state, both the Union state and its federal constituents. While there are isolated episodes of resistance to large-scale investment projects all over the country,<sup>9</sup> the violence is often bloody in the eastern region of the country, known as the “red belt” of India. Armed struggle aimed at the state is not new in India, but it has taken a more pungent turn after liberalization reforms, specifically in the eastern region of the country. Therefore the Indian story of growth is not all peaceful but is marked with bloodstains.

### Rapid Urbanization

Closely related to income inequality and interregional disparity in India is the issue of rapid urbanization. The growth of population in the metropolises, which are bursting at the seams, means that their physical infrastructure is woefully inadequate to the growing demand. However, small and medium-sized towns are also failing to provide the infrastructure needed for their residents. These small- and medium-sized towns are what have come to be known as the “census towns.” That is to say, their population increases rapidly from around 10,000–30,000, thus allowing them to be categorized as towns, according to the 2011 census. This kind of urbanization has changed the earlier scenario of a predominantly rural society into what is predominantly a “wannabe urban society,” which is also reflected in the large-scale migration to nearby towns and cities, thus resulting in a rapid rise of the informal sector and slums. Although the overall urban dwellers constitute no more than 35 percent of India’s total population,<sup>10</sup> the *urban mindset* has almost certainly reached more than 35 percent of the people and perhaps even 50 percent of the overall population.

Regarding urban growth, we need to note that economic growth has been largely confined to the major cities, particularly state capitals and the wider metropolitan areas. Although small towns and “census towns” are also emerging,<sup>11</sup> they do not experience the same extent of economic growth. As a result, there emerges a pull from metropolises for jobs, education, and livelihoods, which can safely be called “metropolitan pull.” Together with the regional disparity mentioned above, the spatial concentration of service sector, informal sector, and manufacturing sector in and around the metropolitan cities has resulted in large movements of migration from backward regions of the country, for example from Orissa, Bihar, and Uttar Pradesh to major metropolitan areas or states such as Maharashtra, Karnataka, Kerala, and Tamil Nadu.

This has resulted in extreme shortages of housing and related amenities. The migration of populations has also led to increased social and political tensions. This happens when the locals feel that the migrants are taking away employment or other opportunities.

### **Rapid Social Change**

In today's India no one can ignore the changes that are happening to its society. For once, there is a steady and continuous decline throughout the entire country of the "great Indian extended family," with the nuclear family emerging as the most preferred norm. At the same time, there is a steady reduction in the fertility rates, so that families nowadays often consist of no more than two children. While there are no strict laws on family size in India, attitudes toward family and older social institutions, norms, and practices are changing rapidly, as more and more women seek education, rewarding employment, and freedom from familial norms and social restrictions. Economic growth is only one of the prime drivers of these changes. Changes in the demographic composition of society; the exposure to international media, Internet, and cable TV; and the widening career opportunities for women to find work all have a role to play in rapid social change. This phenomenon is not just a middle-class one, nor is it limited to urban localities. However, as one sees this change, it is necessary to note that the rapid decline of older social institutions, norms, and values, does create a certain situation of crisis both for individuals and societies, before a convincing new pattern of society emerges. It is also unmistakable that with commoditization and monetization of every aspect of life, the economic burden on the family as a social unit is increasing except for the extremely well-off sections and the upper classes. Oftentimes, both spouses have to work outside the home; this affects even the so-called middle class, which has not always been the case. And of course, the entire family going to work to make both ends meet has always been the situation of working class, then and now.

Social scientists in India are reluctant to talk about, but the social change the nation is undergoing also includes the dimension of sexual revolution, with changing attitudes toward notions of sex and its enjoyment, thus affecting social relations and the family. Indian civilization has never been prudish, and the norms around social regulation of sex have become increasingly liberal. This includes even a movement within urban India for the legislation of lesbian, gay, bisexual and transsexual (LGBT) rights. With the increasing penetration of the Internet and cable TV, even rural India is not immune to these changes.



When it comes to social change, we have to note that even in the backward states like Orissa, Bihar, and Uttar Pradesh, there is a systematic decline of the upper castes even from land and political power and the gradual assertion of the middle layers of society, the backward castes, and even the bottom of society, the ex-untouchables or *Dalits*. Social and political assertion of numerically preponderant middle and lower castes in society has seriously altered the social structure and intercaste relations even in less developed Bihar and Uttar Pradesh. That is, in multilayered and hierarchical Indian rural society, the top castes, such as *Brahmins*, *Bhumihars*, and *Rajputs* have suffered a decline in land ownership and political dominance. Whereas the middle castes such as *Yadavas*, *Kurmis*, *Kapus*, *Kammas*, *Lingayats*, and *Vokkaligas* (irrespective of their local caste names which vary from one state to the other) have increasingly been acquiring land and economic, social, and political power. In addition to this, the ex-untouchable Scheduled Castes (*Dalits*), who happen to be at the bottom most rung of Indian rural society, have awakened to their plight, and have been asserting their rights both against the middle and upper castes. This has obviously made an already complex society even more complex and sometimes even more volatile. Intercaste clashes and violence between the different castes are common and in this the *Dalits* or Scheduled Castes often become victims as the upper castes do not tolerate their raised status. Therefore, today's rural Indian society is unlike that which existed at the time of Independence, a society that more or less accepted the traditional hierarchical social order. The point is that the earlier hierarchical caste order is increasingly being questioned and is under attack. This change took place in the more advanced south India long ago and is happening currently in the north.

At the very bottom of the Indian society, the Indian village, with its age-old social, economic, demographic, and political practices, has been undergoing significant changes. The decline of *ancien regime* in terms of social structures and political power is conspicuous.<sup>12</sup> Indian sociologists have long considered the village as Indian society in microcosm, with its very intricate relationships of caste and status, as well as relationships of societal dominance, state power, and even the more elevated and nobler values. All this, however, has rapidly been changing since the onset of economic reforms and liberalization. At the root of this social change is the economy. Agriculture, which is the basis of Indian village/rural society, has never reached the projected growth rate of 4 percent since the reforms began. The near stagnation of the rural economy, which is also severely vulnerable to rainfall and natural calamities, meant that large sections of the rural, village population lacked economic means to participate in economic growth.

When the natural calamities such as deficient or excessive or unseasonal rainfall occurs, with market price fluctuations of input and output superimposed on these, the agricultural cultivators have been committing suicides. The suicides of farmers have been happening all over the country since the mid-1990s and the death toll has been large in the fast-growing States of Maharashtra, Andhra Pradesh, and even in Punjab, the economically richest state and the “food bowl” of India.<sup>13</sup> Not only farmers, but also the rural nonfarm sectors such as artisans, particularly weavers, of famed Indian cotton and silk cloth, have been committing suicide as far afield as Tamil Nadu or Andhra Pradesh to Uttar Pradesh. This grim scenario does not add up to “development”: it is havoc wrought partly by nature, in the case of farmers, but primarily by capitalist economic growth. Added to this, the opportunities for the rural population outside of agriculture have been few and far between. The manufacturing sector has itself been growing at 2.5 percent or less, and the rural population in India is hardly skilled or trained enough to take advantage of whatever manufacturing growth that is taking place.

### The Federal Dilemmas

One factor directly related to the economic reforms is that it is not only the Union government which is carrying out economic reforms, but also the States. Under the broad rubric of the economic policy of the Union, the states have been encouraged to attract capital and investment. As a result, two aspects have come to the fore since the reforms: one, the States have become powerful economic agents within the federal structure; and two, the regional disparities *within the states* have grown considerably. The political outcome is that many backward regions within Indian States want their own statehood in the Indian Union. This is because statehood is often seen as the only way they can achieve better economic and political outcomes within the Indian Union. This is a crucial problem of representation in India’s democracy. Although the formal structures of representation are same, (a) backward regions within large states feel that they are not properly represented in development matters, or, their voices are not heard; (b) the existing political structures have paid more attention to the regions that are developing or developed, because they have developed in the first place; and (c) in order to better represent their needs and grievances before the Union government, statehood is an imperative. Otherwise the people of backward regions within the states feel that they will continue to be neglected by the brethren who wield power. Added to this are the pressures to catch-up-with-the-Joneses; many times genuine grievances surfaced when people found that, compared to the other regions

within a particular state, they have been relatively deprived in terms of the lack of assistance in times of drought, or total neglect of irrigation or industry.

The Indian states today want more freedom within the Union to manage their own fiscal and economic affairs without the center having a say. In other words, while the *de jure* structure of federal relations remains, there is a clear *de facto* assertion of the states vis-à-vis the center. The Indian Union government now realizes this and more federal freedom in economic and fiscal matters is increasingly being considered.

It is not surprising that, in the scenario sketched above, there are a number of claims for smaller states. Protest movements calling for smaller states take place frequently.<sup>14</sup> While the promise of freshly reconstituting a “States Reorganization Commission” was promised by many previous Union governments, the idea itself has been put on the backburner. However, as of now the two major political parties, the Bharatiya Janata Party (BJP or the Indian People’s Party) and the Indian National Congress (INC), at least notionally agree that there is an emergent need to have smaller States out of the huge states that exist now. There are many other parties which are enthusiastic supporters of this, and some who are not. However, this still remains the Pandora’s Box of India, which the successive Union governments are reluctant to open.

The Indian state also has the burden of maintaining social cohesion for the simple reason of the nature of the ethnic diversity in the country, particularly as regards religious diversity. The minority populations become insecure and/or made to become so, whenever a Hindu-right wing government comes to power, or more often, when it is trying to come to power by constructing and destructing communities with delicate religious identities at stake, by not so delicate means,<sup>15</sup> at any level—center or the states. The construction and destruction of communities range from subtle grouping or identifying of communities as separate communities, to conducting systematic violence against some communities in order to polarize the two and galvanize support and sympathy of the other religious community. The process may or may not happen; but so far, the history of political violence in the country shows that deliberate attempts to polarize between the Hindu majority community vis-à-vis Muslim and other minority communities have often been made, resulting in communal riots and brutal violence. This is a very complex phenomenon in itself, with deep roots in the painful and difficult Indian historical past. Therefore we cannot do justice to the entire issue in a chapter like this for reasons of space. The present government which is a Hindu-majoritarian government will face serious problems, unless it moderates in its treatment of religious minorities. When the nation was founded, the constitution adopted a version of secularism known as *Sarva Dharma Samabhava*, that is, *equal treatment of all religions*.<sup>16</sup> This is different from another notion

championed by the then Prime Minister, Jawaharlal Nehru, which is known as *Dharma Nirapekshata*, that is, *indifference to all religions*. Therefore under the constitution, all religions have to be treated with equal respect. And whenever this did not happen, it led to violence and bloodshed. Therefore Indian diversity which is of multiple religions, languages, and ethnicities, among other things, is organized in a complex mosaic, and this mosaic requires careful, delicate treatment by both the Union and the states. Any attempt to run roughshod over this diversity has only meant trouble for the society and the state.

### The Future

Can the Indian state pursue economic growth irrespective of all the above? This is likely to be extremely difficult in a country that consistently faces challenges on multiple fronts. First, the very assumption that growth alone will lead to the reduction of poverty or illiteracy is doubtful at best and dubious at worst. Economic growth since the early 1990s has led to the emergence and consolidation of a 300 million strong middle class and the increasing gap between the richest and the middle class and the middle class and the bottom 600–700 million population. So far as the political class is concerned, the reforms have led to rampant rent-seeking behavior resulting in scams that amount to billions of rupees. The present BJP government-led National Democratic Alliance (NDA) was elected in 2014. The ten-year rule preceding that was done by INC-led United Progressive Alliance (UPA-I from 2004 to 2009 and UPA-II from 2009 to 2014) and the entire UPA tenure was rocked by one corruption scandal after another in the ministries and departments. Significantly, large-scale licensing and regulation are still in the Union government's hands after all the liberalization measures. Examples include the second generation (2G) telecom spectrum allocation, the allocation of state-owned coal blocks, or even the conducting of the Commonwealth Games. Rent-seeking behavior with regard to the above has involved hundreds to thousands of millions of rupees of corruption and rent seeking, which have led to billions of rupees in losses to the state exchequer. Although many of these cases are still under judicial investigation and the extent of the losses to the state is as yet unclear, the Comptroller and Auditor General (CAG)'s office, which keeps the accounts of all the Union government affairs, has published devastating official reports on the UPA government. All these cases have not only made headlines in the media but have also led to the eventual electoral downfall of the UPA and the INC. In this particular way, perhaps, the Indian voter and democracy have shown great maturity in not allowing a government to continue in power once it has faltered. The present regime

at the center, however, intends to pursue growth at all costs, with as much transparency and as few scandals as possible. This process will have to face the multiple challenges of maintaining social cohesion in the country apart from the challenge of delivering genuine development.

It is difficult to say whether the Indian state is a developmental state. It is surely a capitalist state, pursuing capitalist development, in a complex democracy and a multilayered society that is only known for its proverbial diversity. The word “developmental state” was used in earlier times in the developmental literature to describe a state that takes upon itself almost all, or majority of, the tasks of development and well-being. This notion of a cradle-to-grave welfare state is *passé* so far as India is concerned. What we have currently in place is an increasingly neoliberal state that is replacing its welfare functions with a market-oriented outlook of service provision. Market and its solutions are replacing the state in nearly all economic and social aspects of life in the country. The current government’s slogan “more governance and less government” means precisely this. Governance as a concept means inviting more and more non-state actors into the functioning and services of the government. These could be civil society actors from nonprofit or private market players or international agencies of all kinds (Bevir 2011). Since the present government has declared its hostility to civil society and nonprofit outfits,<sup>17</sup> the remaining actors it highlights are the for-profit corporate sector, market players, and international agencies, the latter of which operate for super profits. These processes of “governance” have already entered health, education, and other social sectors. A state that advocates these kinds of policies can hardly be called a “developmental state.” A close companion word for the concept of “governance” is neoliberalism, and that is what is presently taking place. If the Indian state is pursuing development it is clearly capitalist development under the circumstances of global financial capitalism. The Indian state is hard pressed to do this amidst all the variety and diversity of issues it confronts. Maintaining a semblance of social cohesion is one such issue. Whether the Indian state succeeds in its singular pursuit of free-market capitalist development, amidst all these challenges, we can only wait and see.

## Notes

1. The arguments of the chapter were presented in a rudimentary form with the title “Can Indian state ensure social cohesion?” at an Indo-Swiss Seminar organized by the Indian Council of Social Science Research (ICSSR), Institute for Social and Economic Change (ISEC), and Swiss University scholars delegation at Bangalore, India, during the second week of September, 2014.

2. The longer view of the Indian growth story is convincingly provided by Deepak Nayyar (2011). Economic growth since 1991 has been huge and unprecedented since Independence, though growth rates per se do not adequately capture the qualitative difference that growth has entailed. Detailed discussion of various reforms carried out up to 2004 and the multifaceted debates on the politics of Indian economic reforms can be found in Jos Mooij (2005).
3. In India, 86 percent of the total *workforce* of 460 million—out of the total population of 1.2 billion—is in the agriculture sector. This sector is either stagnating or declining. The informal sector's total figure in the Indian economy is roughly 90 percent of the population, which includes agricultural workers and the urban informal sector. While the services sector alone is growing at faster pace since the reforms, employment in the industrial sector, which is the locus of much hope and expectation, has on average grown at around 3 percent since the reforms and thus failed to absorb much of the rural work force. Most of the rural migrants from the agriculture/rural sector become what Gunder Frank once called, the “flotsam and jetsam” of the cities. Within the urban informal sector, the fastest growing segment is the construction sector, which constituted nearly 50 percent of the urban informal workers. The *workforce* of this sector is made up mostly by migrants; they labor under conditions lacking in security and they also possess little or no social, economic, or political capital that can help to advance their positions in the future. I thank my colleague Indrajit Bairagya for this information (personal communication).
4. For these figures, I thank my colleague Professor K. S. James, who is a professional demographer (personal communication).
5. These backlashes range from divorce to increasing instances of rapes and atrocities against women, as more and more women enter the public domain in search of education, employment, financial, and social independence with their increasing visibility in society. Of late, the media has been increasingly reporting and focusing on these issues.
6. On some of these issues, since the author of this topic is no economist by training, he can refer to two articles that deal with the issue; these are written by (a) Santosh Mehrotra et al. (2014) and (b) Suryanarayana and Das (2011). Both these articles are in the *Economic and Political Weekly*. I am thankful to my colleague Meenakshi Rajiv for providing Suryanarayana and Das's reference and also to Indrajit Bairagya for the article by Santosh Mehrotra et al.
7. In this chapter, I use the word “State” with capital “S” to denote the federal constituent unit of the Indian Union. Whereas the word “state” is used to mean Indian state in more generic sense as is referred to in the discipline of political science, for example, developmental state, welfare state, republican state, neoliberal state, and so on.
8. The PESA law was enacted in 1996, five years later the initiation of reforms along with other local government reforms which came in 1993. These were brought as the Amendments to the constitution: one for the rural areas (73rd Amendment); one for the urban local governance (74th Amendment); and the

PESA law for Scheduled areas which are predominantly populated by often forest dwelling indigenous people.

9. For example, there is resistance to South Korean steel manufacture company POSCO in both Karnataka (in a district namely, Dharwad) and in Orissa. Whereas in Karnataka the company left the State not to invest, in Orissa the company held on and faces stiff opposition from local communities and Maoist groups. This could partially be because the company can make heavier profits out of the rich natural resources of the eastern region State of Orissa.
10. These are broad figures. Finer figures put Indian urban population at 32.5 percent and rural population at 67.5 percent. I thank my colleague Kala S. Sridhar for these figures in a recent personal communication. A succinct and latest summary of the current Indian urban scenario can be found in Annapurna Shaw's *Indian Cities*. Cities in India only consist of 32.5 percent of the total population but their contribution to overall Gross Domestic Product of the country is more than 50 percent. At the same time, the 67.5 percent of rural population (out of a total population of 1.2 billion) contribute only 18 percent to the national GDP. That is to say, a smaller number of urban dwellers produce more value and receive more income, while the more numerous rural population produce less value and receive fewer income.
11. A clear *qualitative* account of these small towns at the district level and below can be found in R. N. Sharma and R. S. Sandhu's *Small Cities and Towns in the Global Era: Emerging changes and Perspectives*. India has some 550 district towns and many more *taluk* towns that lie below that level. Most of these small towns are neglected and in poor conditions.
12. The changes in Indian village society are amply brought out by Surinder Singh Jodhka in his edited book *Village Society: Essays from Economic and Political Weekly*.
13. It is difficult to provide exact statistics on farmers' suicides but important books on the topic that provide sufficient information are written by A. R. Vasavi (2012), Deshpande and Arora (2010), Narsimha Reddy and Srijit Mishra (2009). This author himself has written a paper on farmers' suicides in Telangana and coordinated a national seminar on farmers' suicides in India in 2005. Some of the papers of this seminar were compiled by K. C. Suri and published in a Special Issue of *Economic and Political Weekly*, one of the leading journals of Indian social science.
14. The latest and 29th State to be formed within the Indian Union is Telangana; it was formed out of the earlier State of Andhra Pradesh. There are demands for forming the State of Vidarbha from the currently existing Maharashtra, Bundelkhand, Poorvanchal, and Harita Pradesh from Uttar Pradesh, Coorg and Hyderabad-Karnataka from Karnataka, Magadh and Bhojpur States from Bihar, and so on. Not all demands are made equally vociferously; and they may also change over time. Different demands exist in different states of mobilization and articulation. But it is undeniable that there are many dormant, and no so dormant, demands for smaller size of States.

15. It is no mere exaggeration to say this because the recent attacks on churches in Delhi, Mumbai, and various other places and earlier long history of religious violence are but grim reminders of the delicateness of the Indian social fabric and its subcontinent-sized civilization. If we see the *longue duree* of Indian history, the society has always lived on the principle of tolerance epitomized by the saying “live and let live.” This often is periodically violated in different parts of India today.
16. This concept of a secular polity and state policy was put forward by M. K. Gandhi at the time of Indian Independence and was finally incorporated as, and continues to be, the official state policy till today. Nehru’s concept of the state being indifferent to all religions, and not to concern itself with religion at all, was not adopted as official state policy. There are active debates in India on these matters (Bhargava 1998) and whenever a Hindu religiously oriented government comes to power these debates take more salience in media and public sphere.
17. The recent deportation of Greenpeace activist Priya Pillai from a London-bound flight, with a “look out” notice being served upon her, and also serving of notices to Ford Foundation in India, while at the same time bringing all civil society organizations in India under increasing surveillance, clearly demonstrates the present government’s hostility toward this social sector. In India, the Home (Interior) Ministry regulates the nongovernmental organizations (NGOs) and the recent steps by this ministry certainly do not portend that the “Governance” agenda includes these NGOs.

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