

# UNDERPOWERED

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## ELECTRICITY POLICY AND THE STATE IN INDIA, 1991-2014

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# Abstract

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How has the Indian state changed with economic liberalization? While many scholars have explored the altered party politics and class basis of the liberalization-era state, few have studied its transforming internal organizational forms and functioning. This thesis aims to provide an empirically grounded answer to this question. To do this it uses the lens of electricity: the sector lies at the heart of contemporary capital accumulation, state power, and distributive politics, and has witnessed almost a quarter-century of institutional reforms since 1991.

In the sector, new or reworked organizational forms—such as imported regulatory agencies, corporatized state-owned enterprises, and public-private partnerships—have been grafted onto the older statist system in a process of *institutional layering*. Favouring state-business collaboration and prioritizing rapid economic growth, this mode of state operation is distinct both from a liberal, market-oriented state and from India's older state-led mode. It combines state intervention and selective adoption of parts of the Washington Consensus template to produce a reinvented mode of power governance that I term *state capitalism 2.0*.

India's new state-market hybrid is not a functional alternative to the older models, however. The layered process through which it has emerged means that it is *distinctively dysfunctional*. Organizations have emerged in an ad hoc fashion, each shaped and reshaped by multiple collective interests, while existing organizations are rarely destroyed. The resulting layered amalgam institutionalizes contradictory state strategies, co-optation by competing interest groups, and a dualistic system of services and subsidies. Consequently the sector's performance remains poor.

As a result, developments in the Indian power sector suggest that the state's 'pro-business' transition has been painful and incomplete. At least in this sector, the Indian state remains simultaneously more indispensable, more ambivalently pro-business, and more chaotic than much theory might suggest.

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*All Souls College, Oxford*

*July 2015*



Electrical energy is something more than a commodity; it is the very life blood of the industrial nation which must flow abundantly and without interruption if the nation's strength and well-being are to be preserved.

—Indian National Congress Planning Committee, *Power and Fuel: Report of the Sub-Committee* (1949), p. 71  
(quoted in Coleman, 2014: 467)

Big Bang reforms in robust democracies with multiple actors and institutions with the power to do, undo, and block, are the exception rather than the rule. India today is not in crisis, and decision-making authority is vibrantly and frustratingly diffuse.

Not only are many of the levers of power vertically dispersed, reflected in the power of the states, policy-making has also become dispersed horizontally...

... [Instead] India needs to follow what might be called '*a persistent, encompassing, and creative incrementalism*'...

—Ministry of Finance, *Economic Survey 2014-15* (2015),  
vol. 1, p. 2 (emphasis in original)

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# Abbreviations

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Please excuse this bevy of eye-glazing acronyms but...

—Michael West, ‘Alphabet Soup Obscures Facts on Power Prices’,  
*Sydney Morning Herald*, 17 September 2012

APDRP	Accelerated Power Development and Reforms Programme (originally the APDP, then restructured to become the R-APDRP)
APP	Association of Power Producers
Aptel	Appellate Tribunal for Electricity
AT&C losses	aggregate technical and commercial losses
BHEL	Bharat Heavy Electricals Ltd
BJP	Bharatiya Janata Party
CAG	Comptroller and Auditor General
CBI	Central Bureau of Investigation
CCGT	combined cycle gas turbine
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CPSE	central public sector enterprise
CSS	central sector scheme
CVC	Central Vigilance Commission
discom	distribution company (sometimes called a ‘disco’ in the global North)
DVC	Damodar Valley Corporation
EGoM	Empowered Group of Ministers
ERC	electricity regulatory commission
FDI	foreign direct investment
GAIL	Gas Authority of India Limited [see glossary endnote]
GDP	gross domestic product
GoI	Government of India
GoM	Group of Ministers
GSPC	Gujarat State Petroleum Corporation
GW	gigawatt
IAS	Indian Administrative Service

IDFC	Infrastructure Development Finance Company
IEA	International Energy Agency
IFC	International Finance Corporation
IMF	International Monetary Fund
IPP	independent power producer
IPPAI	Independent Power Producers Association of India
KG Basin	Krishna-Godavari Basin
kWh	kilowatt-hour
LIC	Life Insurance Corporation of India
MoEF	Ministry of Environment and Forests
MoU	memorandum of understanding
MW	megawatt
NDA	National Democratic Alliance
NGO	non-governmental organization
NHPC	National Hydroelectric Power Corporation
NTPC	National Thermal Power Corporation
ONGC	Oil and Natural Gas Corporation Limited
PFC	Power Finance Corporation
PMO	Prime Minister's Office
PPA	power purchase agreement
PPP	public-private partnership
PwC	PricewaterhouseCoopers
RBI	Reserve Bank of India
REC	Rural Electrification Corporation
RGGVY	Rajiv Gandhi Grameen Vidyutikaran Yojana (rural electrification programme)
RIL	Reliance Industries Limited
SBI	State Bank of India
SEB	State Electricity Board
SERC	State Electricity Regulatory Commission
SEZ	special economic zone
SMC	State mining corporation

SOE	state-owned enterprise <sup>1</sup>
T&D	transmission and distribution
transco	transmission company
UMPP	ultra mega power project
UPA	United Progressive Alliance

### ***A note on company names***

Just to thicken the alphabet soup, several power and energy companies now go formally and almost exclusively by their acronyms. These include state-owned corporations like GAIL and NTPC, alongside private conglomerates like AES, BSES, and GVK.

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<sup>1</sup> In India these are often called public sector undertakings (PSUs) or, more recently, public sector enterprises (PSEs). However, when not referring to central public sector enterprises (CPSEs) specifically, I use the more internationally familiar term SOE: I see no need to reinforce national exceptionalism.

PART 1  
INTRODUCTION

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# 1

## Reinventing state capitalism

While old forms of state intervention may be discredited and cleared away, new interventions often emerge to take their place. *The state also rises.*

—Jonah D. Levy (2003: 2)

### Changing states

In the face of global critiques of its competence, the state remains the central political unit in today's world—but it has not gone unchanged. This thesis contributes to analysis of the state's multidimensional transformations in recent decades,<sup>1</sup> transformations which are not abstract but concrete and highly context-dependent. In particular, it examines fundamental institutional changes and continuities in one of the two largest and fastest-growing countries of the global South, India, which have occurred during the economic reform era of the last three decades. Its analytical contributions are threefold: on the *process* of institutional change, its *dimensions* and *extent*, and some of its key *consequences* in terms of administrative dysfunction.

How has liberalization changed the Indian state? The power sector, lying at the heart of distributive politics and capitalist accumulation, provides a useful lens on this question. I use power sector evidence to suggest a revised account of India's partial and painful economic reform process. Constrained by pre-existing interests, reform has proceeded not through displacement of

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<sup>1</sup> For a snapshot of this literature, see Leibfried et al. (2015).

older statist organizations but through a process of ad hoc institutional layering—or organizational creation without much destruction. The result of this piecemeal process is a dysfunctional state-market hybrid system, in which the state remains both indispensable and incoherent. This chapter provides the theoretical context for this contribution, explains the value of the power sector as a case study, and outlines the thesis’s threefold core arguments.

***The state is dead. Long live the state!***

The mainstream narrative’s contours are well known. From the 1970s, states across the world faced a series of existential crises—not only of economic policy, but a crisis of the system of administration and government itself. Impelled by the decline of the interventionist Keynesian welfare nation-states in the global North and the Fordist economic system that had created them, the state fell from theoretical and practical favour. The notion that the state was either the captive of social forces or an agglomeration of predatory bureaucrats moved from the academic margins to the mainstream agenda.<sup>2</sup> Neoclassical economists and international financial institutions increasingly advocated state retrenchment and a turn to competitive markets.

In line with these tenets, many state-owned enterprises (SOEs) were privatized and regulation nominally cut back as several economies in the global North ‘liberalized’ their economies. The so-called ‘Washington Consensus’ came to dominate international development discourse and international lending. Structural adjustment programmes and related reforms—including reducing fiscal deficits, cutting subsidies, import and investment liberalization, privatization, and deregulation (Williamson, 1990)—were rolled out across much of the global South. Within the state, a ‘global’ paradigm shift was replacing the centralized, hierarchical bureaucracies of the mid-century with performance-oriented ‘new public management’, imitating the private sector (Osborne and Gaebler, 1992).

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<sup>2</sup> Mainstream political science was dominated for much of the twentieth century by theories with little space for the state. The behavioural revolution in American political science sought to apply quantitative, methodologically rigorous theories to comparative political phenomena, focusing on individuals as the appropriate focus of analysis. Systems theorists construed the state as a simple input-output ‘black box’ processing societal preferences (Almond and Coleman, 1960; Easton, 1965). The influence was unidirectional: economy and society influenced political institutions, not vice versa. In rational choice analysis—behaviouralism’s most successful offspring—policy became merely ‘a vector diagram in which a series of pressures are brought to bear on the state, which then moves in the direction it is pushed by the strongest societal forces’ (Krasner, 1978: 26).

Observing these changes, many scholars in the 1990s concluded that the state had diminished, becoming ‘hollow, or defective’ (Strange, 1995: 57). Its authority had been overextended, leaked away ‘upwards, sideways, and downwards’ to global capital and local powers—or even ‘just evaporated’.<sup>3</sup> To neoclassical economists and Marxists alike, countries were converging on a single global trajectory in which the market—and private capital—appeared triumphant. Some went as far as to proclaim the ‘end of the state’ (Ohmae, 1996).

Of course, state analysis did not go gentle into that good night. The state’s premature obituaries were being contested almost as they were written. Even as ‘neoliberal’ advocacy of state rollback moved into the ascendant, a minority challenge was beginning to dispute the notion that economic development required no state, drawing on both historical and contemporary evidence. From the late 1960s, Marxist authors had begun to rediscover the potential of autonomous state action in Marx’s canon (Miliband, 1969; Poulantzas, 1973).<sup>4</sup> By the late 1970s the mantle was taken up by ‘neo-Weberian’ historical institutionalists, whose studies of social ‘revolution from above’ in history—from Meiji Japan and Kemalist Turkey to the French, Russian, and Chinese Revolutions—emphasized the importance of state elites in capitalist development (Trimberger, 1978; Stepan, 1978; Skocpol, 1979). By 1985 this already had the status of a research agenda: ‘bringing the state back in’ (Evans et al., 1985; Krasner, 1984).

This revival’s equivalent in international development scholarship was the developmental state. In practice scholars had long recognized the state’s crucial developmental role, especially for ‘less advanced nations’ (List, 1885; Gerschenkron, 1962). A similarly ‘neo-Weberian’ literature began to draw attention to the great economic success stories of the twentieth century: Japan, South Korea, and Taiwan. These states possessed sufficient autonomy and administrative capacity to spearhead an ambitious programme of economic growth (Johnson, 1982; Amsden, 1989; Wade, 2004; Woo-Cumings, 1991, 1999). Unlike advanced liberal-democratic states, developmental states were intensively involved in the market, setting ‘substantive social and

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<sup>3</sup> The quotation also comes from Strange (1995: 56), cited by Evans (1997: 65) as representative of globalization theory and ‘the discourse of eclipse’ of the state.

<sup>4</sup> The *fons et origo* of Marxist theories of relative state autonomy lies in Karl Marx’s *Eighteenth Brumaire of Louis Napoleon* (2000 [1852]). Barrow (1993) and Aronowitz and Bratsis (2002) provide useful surveys of the marxisant literature.

economic goals' for the private sector (Johnson, 1982: 19). In this literature the state directs the market, and is very much the senior partner in its close interactions with business.

By 1990 the newly industrialized countries of East Asia provided 'the major ideological rallying point' for critics of the Washington Consensus (Radice, 2008: 1153). They helped to ignite a renewed focus on institutions even within mainstream development economics and international financial institutions.<sup>5</sup> From the vantage point of the mid-2010s, the theoretical decline of the state now appears a brief blip. The notion of a global teleology of state decline missed the point. Surveying the literature today, it is clear that states and markets constitute one another, and *the state is here to stay*.

### *The state after statism*

The image of the developmental state has been complicated by subsequent history, however. Virtually no state, however large, interventionist, or successful, has remained immune to global critiques of state efficiency, high modernism, and the closed economy.<sup>6</sup> Even the classic developmental states of East Asia have changed almost beyond recognition from the 1960s to 1980s heyday studied by Johnson, Amsden, and Wade. If the fall of the Soviet Union sounded the death knell for planned economies, the celebrated success stories of state intervention were faltering by the 1990s, just as they were encouraging a revival of institutionalism among development scholars. The classic developmental state model appeared to have worked for industrial 'catch-up' away from the technological frontier,<sup>7</sup> but Korean and Japanese firms began

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<sup>5</sup> Even by the early 1990s, the Nobel Prize in economics went to institutionalists, including Ronald Coase (1991) and Douglass North (1993). The 'Post-Washington Consensus' from the 1990s onwards has witnessed an 'almost revolution' in the face of such evidence, admitting that institutions and politics matter (Carothers and de Gramont, 2013)—albeit frequently in the depoliticized and mechanistic tropes of 'social capital' and 'good governance' (Harriss, 2002). Seminal figures in this 'almost revolution' include ostensibly heterodox economists like Joseph Stiglitz, World Bank chief economist from 1997 to 2000, and later Dani Rodrik. On the limits of their departure from the Washington Consensus, see Jomo and Fine (2005).

<sup>6</sup> Such critiques came from both the neoclassical right and the left. See, for example, the strong resemblance between Scott's (1998) celebrated call for a turn to practical, localized *metis* and Hayek's (1945) claim that the decentralized open market provides information far more accurately and efficiently than could ever be matched by a central planner.

<sup>7</sup> The classic developmental state literature, at least its 'economic school', focused narrowly upon development as a particular phase of catch-up industrialization and, within that, on a narrow notion of industrial policy as trade policy and directed finance (Fine, 2013). The state protected infant industry by coordinating resource allocation and technological learning (while using some market-conforming instruments to hone and discipline these industries), and insulating nascent private 'national champions' from foreign competition by controlling external

to struggle in high-technology markets, appearing ‘too inflexible to cope with rapidly changing informational industries and decentralized “post-Fordist” industrial structures’ (Ó Riain, 2000: 157).

There thus appeared both economic and political rationales for stepping away from the classical model. International financial institutions, transnational corporations, and financial markets put pressure on administrations in the global South to move towards the so-called ‘Washington Consensus’ on liberalization and state rollback. The rise of the post-Fordist service-led economy and new international trade agreements meant an increasing prominence for competition and the private sector as the motors of innovation and efficiency gains. At the same time, democratization and consumerism altered the relationship between citizens and state. Though produced in part by the very financial liberalization of these formerly protected economies, the 1997 Asian financial crisis dealt the classic model a further blow as close state-business links, formerly considered ‘developmental’, were recharacterized as incestuous cronyism (Hall, 2003).

Many states in emerging economies—and, indeed, the iconic ‘classic’ developmental states of South Korea and Taiwan—consequently recalibrated their modes of intervention to incorporate some Washington Consensus-type governance reforms and enhanced global opening.<sup>8</sup> Since 2000, Brazil’s ‘hybrid paradigm’ has combined the ‘*prima facie* incompatible economic frameworks’ of developmentalism and neoliberalism, with the state maintaining a key role even whilst initiating privatization, liberalization and deregulation (Ban, 2012: 320; Morais and Saad-Filho, 2012: 789). China, too, has embarked on a process of market transition and governance reforms, including enhanced regulatory apparatuses and divestiture of some state holdings (Yang, 2004; Wang, 2006; Hsueh, 2011).

More than this, even the ostensibly liberal-market states of the global North appear to be converging on forms of ‘state activism after statism’ (Levy, 2006). A number of scholars have pointed out that (then-)successful Northern states, including Ireland, Israel, and the United States,

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entry into the market. It strictly controlled, coordinated, and directed foreign direct investment (FDI) and foreign aid.

<sup>8</sup> Reforms in South Korea included deregulation, financial liberalization, and (after the Asian financial crisis) IMF-imposed austerity and the attempted restructuring of the state-*chaebol* banking nexus, on one hand, and the expansion of democracy and welfarist policies on the other. For differing interpretations of the combination of developmental state and neoliberalism across East Asia—whether the relationship is asymmetric or forms a creative hybrid—see Park et al. (2012).

intervene in somewhat familiar ‘developmental’ fashions to support private-sector innovation (Ó Riain, 2000, 2004; Breznitz, 2007; Block, 2008). Even theorists of neoliberalism acknowledge that the state’s role remained key: far from the layman’s understanding of a private-sector-driven model of economic deregulation, ‘[t]he most basic feature of neoliberalism’ has more recently been seen to be ‘the systematic use of state power to impose (financial) market imperatives, in a domestic process that is replicated internationally by “globalisation”’ (Saad-Filho and Johnston, 2005: 3). European ‘regulatory state’ scholars argue that such systematic intervention in ever more spheres of life marks a more significant trend than neoliberalization itself: the contemporary market-oriented state ‘is a colonizing state with its own utopian projects quite as ambitious as those that characterized’ the old dirigisme (Moran, 2003: 6).

The response to the 2008 economic crisis, in which states intervened to prop up banks and big business, only served to confirm this convergence. ‘The free market is on the ropes,’ wrote Peck et al. (2010), quoting French president Nicolas Sarkozy: ‘Self-regulation, to fix all problems, is over. Laissez-faire is over.’ Commentators began to write of crisis-induced ‘postneoliberal’ transformations and ‘the rebound of the capitalist state’.<sup>9</sup> Attention fell on large emerging economies—especially Brazil, India, and China—for the variegated alternatives they appeared to offer to outright liberalization (Schmalz and Ebenau, 2012).

Yet these are not the old states of ‘high-modernist’ dirigisme. The neoliberal critique of the state, informed by the old model’s crises in the 1970s and 1980s, has reshaped state structures and modus operandi. Literature from China, Brazil, and the global North suggests that many successful contemporary states increasingly operate *in overt partnership with business*, not in opposition to the market. Contemporary states committed to economic development have developed *hybrid state forms that fuse elements of statism with liberalization*. If the classical developmental states undermined the dichotomy of market and state through their ‘embedded autonomy’ via close state-business links (Evans, 1995; cf. Mann, 1993), this new brand of activist state extended this embeddedness still further.

Such hybrids are not identical, however. ‘Liberalization’ is a crude category which ‘obscures more than it illuminates’, eliding varied and often unlinked initiatives with quite

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<sup>9</sup> These are, respectively, the titles of a special issue of *Development Dialogue* edited by Brand and Sekler (2009) and of *Globalizations* edited by van Apeldoorn et al. (2012).

different socioeconomic impacts (Hall and Thelen, 2009: 22). In reality, there has been no ‘uniform slide toward Anglo-Saxon-style liberalization’, but a set of much more differentiated changes that depend in part upon older political-economic histories (Thelen, 2014: 1). *Historical context matters*. A particular form of state-market fusion has occurred within India, then, as we shall see—but the processes and impacts of this institutional change are peculiar to India’s complex institutional context. This peculiar path-dependent fusion, in which the state’s role is writ large, forms the subject of this thesis.

### **The Indian state in the liberalization era**

The contours of debate in India broadly followed the global trajectory sketched above. By the 1980s, with the state facing a ‘crisis of governability’ (Kohli, 1990), anti-state critiques had become pervasive in Indian scholarship (Pedersen, 1992). Theorists of different stripes increasingly depicted Indian bureaucrats as a self-interested dominant class. For neoliberal public choice theorists the Indian bureaucracy was a textbook case of the public sector’s innate flaws (Krueger, 1974; Bhagwati, 1982). Marxisant scholars found equivalent inspiration in Hamza Alavi’s (1972) ‘overdeveloped “superstructure”’ of the postcolonial state in Pakistan and Bangladesh, in which the state emerged as a powerful interest in its own right. The influential interpretation of Pranab Bardhan (1984, 1989), consciously unifying these public choice and ‘structural’ strands, exemplified this trend: his third dominant proprietary class of rentier ‘professionals’ included (senior) bureaucrats (see also Rudra, 1989).

Such critiques increasingly found their way into Indian policy circles (Shastri, 1997). The ‘intermittent incremental liberalization’ of the later 1970s and 1980s gave way to a ‘paradigm shift’ from 1991-2 onwards, with a stuttering but significant shift to embrace liberalization across many sectors of the economy (Nayar, 2009).<sup>10</sup> Neoclassical economists and business commentators were quick to claim that India’s higher economic growth rates in the 1990s, and especially those from

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<sup>10</sup> While liberalization is popularly dated to 1991, the rise in growth rates predated ‘big bang’ liberalization and did not accelerate after 1991 (Nagaraj, 2000, 2003; Rodrik and Subramanian, 2004; McCartney, 2009). The ‘mainstream consensus’ (Khan, 2011: 42) within academia thus emphasizes the acceleration of economic liberalization towards the end of the 1980s, and attributes India’s higher growth rates to this, while maintaining that the deeper reforms of the 1990s were essential to sustain growth (Panagariya, 2004; Virmani, 2005). More heterodox scholars locate the start of liberalizing policy reforms even earlier, in the early 1980s or even the late 1970s (Nayar, 2006; Das Gupta, 2007).

2003, were down to new pro-market policies as the Indian state was ‘gradually moving out of the way—not graciously, but kicked and dragged into implementing economic reforms’ (Das, 2006: 3; Srinivasan and Tendulkar, 2003; Panagariya, 2008).

On the opposite side of the political spectrum authors agreed that the importance of the state was waning. The Marxist scholar Prabhat Patnaik argued that nation-states were ‘being reduced to the role of helpless spectators’ (2003: 21), Neera Chandhoke that the Indian state ‘is now represented as just one of the many agencies, organisations, or associations that dot the [political] landscape’ (2003: 2958). This conclusion was broadly supported by a substantial body of poststructuralist and anthropological literature which argued that the idea of the sublime, unitary state was a myth.<sup>11</sup> In reality, ‘the state’ was a chaotic agglomeration of agencies and individuals, its boundaries with society irretrievably blurred at the local level (Gupta, 1995; Brass, 1997; Fuller and Bénéï, 2001; Jeffrey, 2002; Harriss-White, 2003; Price and Ruud, 2010; Piliavsky, 2014).

### ***Beyond the dichotomy: the ‘pro-business tilt’***

However, political-economy scholars were quick to note that the claim that the state in the new higher-growth India was retreating in the face of the market rested on flimsy foundations. The rise in growth rates predated ‘big bang’ liberalization and did not accelerate after 1991 (Nagaraj, 2000, 2003; Rodrik and Subramanian, 2004; McCartney, 2009). Even the reform process itself owed much to the state, not simply unleashed animal spirits: the reforms were primarily led by domestic policy entrepreneurs—a ‘change team’ (Waterbury, 1993)—within the state, in the face of some business resistance (Shastri, 1997; Jenkins, 1999; Nayar, 2003; Kirk, 2011). Regional variations in the growth rate provided an additional explanandum: if the character of the state matters so little, why did the ostensibly pro-market turn have such different regional effects (Ahluwalia, 2000)? Informed by the wider literature on the developmental state, Indian political-economy scholarship therefore swiftly moved to trouble the state-market opposition.

Perhaps the most popular interpretation today suggests that the Indian state has not become more pro-market, but *pro-business*, especially in India’s most successful provincial States.

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<sup>11</sup> The shared theoretical touchstones of this literature are Abrams (1988) and Mitchell (1991).

As Atul Kohli put it, in an interpretation gripping in its parsimony and whiff of conspiracy: ‘India’s economy has grown briskly because the Indian state has prioritised growth since about 1980, and slowly but surely embraced Indian capital as its main ruling ally’ (2006a: 1251).<sup>12</sup> At least in its broad strokes, the notion of India’s ‘great transformation’ into a market-oriented, pro-business, and elite-dominated society has received substantial support from other scholars.<sup>13</sup>

This literature generally acknowledges that the state lies at the heart of India’s political economy. The ‘pro-business tilt’ concept dissolves the division between state and market. Contra ‘pro-market’ strategies that support new entrants and consumers, its defining strategy is *active state involvement* to support ‘established producers’, for example through “price distortions” like subsidizing exports and holding down wages (Kohli, 2006: 1252-3).<sup>14</sup> Indeed, there is wide consensus in India around the neo-Weberian claim that state organizations and policies structure the competition between societal groups (Skocpol, 1985). Interest groups—including both ‘dominant proprietary classes’ (Bardhan, 1998) and marginalized groups (Chatterjee, 2004)—mobilize to access the state for influence and resources. State influence helps to structure even the informal economy nominally existing outside its control (Harriss-White, 2003). Despite the bureaucracy’s many failings, anthropological evidence suggests that the state also retains a paradoxically preeminent place in the popular political imagination (Gupta, 1995, 2012; Parry, 2000; Fuller and Bénéï, 2001; Hansen and Stepputat, 2001; Corbridge et al., 2005; see also Khilnani, 1997). As Jos Mooij argued, the state’s ‘central role in social change, politics, and policymaking’ is still ‘an obvious empirical reality’ (1999: 44).

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<sup>12</sup> Kohli was drawing on Rodrik and Subramanian (2004), who had argued that the reforms of the 1980s were pro-business rather than pro-market, but that the reforms were more important in signalling a shift in the state’s attitude than for their content (in turn challenged by Khan (2011)).

<sup>13</sup> See Corbridge and Harriss (2000); Rodrik and Subramanian (2004); Chatterjee (2008); Evans and Heller (2015); and Gupta and Sivaramakrishnan (2011a); and on the particular regional forms of the pro-business state, Sud (2012); Roy (2013); and Murali (2014). Qualified support for the pro-business interpretation extends beyond this list. ‘The working assumption’ of a workshop of notable political-economy scholars in 2013—including Kohli, Pranab Bardhan, Vijay Joshi, Mushtaq Khan, James Manor, R. Nagaraj, Pallavi Roy, Kunal Sen, Alpa Shah, Aseema Sinha, Louise Tillin, and Michael Walton—‘was generally that there is a meaningful distinction to be upheld between “pro-business” policies and “pro-market” policies’ (Tillin, 2013: 21). Some high-profile neoclassical economists closely associated with liberalization have rejected the distinction: see Srinivasan (2005: 232) and Panagariya (2008: 17-19). In retaliation, Kohli accused them of ‘obfuscating important analytical issues or, worse, providing an ideological cloak for what are clearly class issues’ (2012: 94).

<sup>14</sup> The notion of ‘price distortions’ clearly references Amsden’s (1989) celebrated claim that the developmental state’s successful economic strategy rested on ‘deliberately getting relative prices “wrong”’.

*The state's understudied internal transformations*

This thesis, then, does not seek to reinvent the wheel: it is already widely acknowledged that the Indian state continues to play a substantial role in the economy. But the state's internal characteristics—as a changing structure and a set of actors—remain empirically underspecified.

Most scholars of the 'pro-business tilt' concentrate on its *pro-business* side: on its class basis, the types of businesses that have tended to benefit, and the new forms of their lobbying and influence. These are important questions, of course, and this thesis contributes to addressing them. But when the state features it is through macro-sociological concepts such as the 'technocratic apex' (Kohli, 2012) or the changing 'political settlement', 'a sustainable equilibrium of institutions and organizations' (Khan, 2011: 34; Roy, 2013). There is little in-depth engagement with the state's changing organizational matrix.<sup>15</sup> Indeed, the above discussion showed that Kohli's claim that the Indian state now resembles 'east Asian models' (2006a: 1252-3; 2012: 220) not only underplays the particular context of Indian reforms, but the reference point is anachronistic: those same 'east Asian models' have themselves substantively changed.

This relative silence on the state's changing organizational morphology is not unique to pro-business scholarship. In fact, institutionalist studies have generally been

little pursued by development scholars working on, or in, India, at least since the days of [Gunnar] Myrdal and [A.H.] Hanson in the 1950s and 1960s... For all the many analyses which have been developed of the Indian state there is still not a great deal of work which explains *how and why different bits of the state apparatus—or organizations in the private and the voluntary sectors—actually work.* (Harriss, 1998: 303, emphasis added)<sup>16</sup>

This institutionalist deficit has persisted despite the dramatic proliferation of literature on liberalization. Existing scholarship on this transition has concentrated on societal interest groups or non-state institutions like political parties. With some exceptions, such as federalism, the serious study of executive government and state transformation in India remains neglected: 'While a great

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<sup>15</sup> Khan criticizes Kohli for an overly simplistic notion of state-society relations and 'the absence of a strong institutional and policy framework' (2011: 27-9), while Kohli himself acknowledges that his conception neglects the study of institutions and governance (2012: 77). Kohli argues that this omission is excusable because institutions informed the context of many of his earlier works—but these works are now several years old (Kohli, 1989, 1990) or focus on a century-long timeframe rather than liberalization (Kohli, 2004).

<sup>16</sup> There are, of course, exceptions, although many are rather dated. These include Kapur and Mehta's wide-ranging collection on Indian institutions (2005), as well as works on parliament (Morris-Jones, 1957), the office of prime minister (Manor, 1994), the cabinet (Mathur and Björkman, 1994, 2009), and the Indian Administrative Service (Potter, 1996; Das, 1998, 2010). There also exist substantial literatures on decentralization, the 'local state' and federalism, as well as analyses of particular bureaucratic phenomena, notably the 'merry-go-round' of civil servant transfers (Wade, 1982, 1985; De Zwart, 1994; Banik, 2001).

deal of energy had been expended on debating the effects of liberalization, very little [scholarship] actually dealt with the changing nature of the state in India' (Gupta and Sivaramakrishnan, 2011b: xiv).<sup>17</sup>

In line with Harriss's call 'for more analysis "of institutional structures that mediate between individuals and their historical environments"' (Harriss, 1998: 305), this thesis opens up the state to examine its transforming internal morphology and functioning during the liberalization era. The thesis thus seeks to extend contemporary theories of the pro-business state to examine the changing liberalization-era state itself. My differences with this pro-business scholarship will become clearer below, when I review the overarching concept of state capitalism (pp. 24-29). Fundamentally, I argue that we cannot understand India's liberalization-era political economy by looking at its liberalized or private-dominated segments alone: their characteristics and evolution are inseparable from the statist 'sediment' upon which they are layered, and which they have in turn helped to reshape.

### **The case study: the power sector, 1991-2014**

To do this—to explore 'the "state" side of the pro-business state'—whilst retaining a more manageable focus, I use the lens of the notoriously troubled power sector between 1991, popularly dated as the beginning of major electricity reforms, and the election of the new BJP-led government in 2014. The power sector provides an ideal lens on the political economy of contemporary India and the ostensibly pro-business state for (at least) four reasons.<sup>18</sup>

First, and most significantly, electricity is *the* key input for contemporary capital accumulation, alongside capital, labour, and land, so much so that it has become 'effectively...a structural feature' of capitalism today (McDonald, 2009: 3-7). Electrification ranks alongside the wheel, agriculture, writing and printing in its dramatic and manifold impacts on human existence—and on the environment. Directly or indirectly, electricity is now centrally important to virtually the entire economy and almost every aspect of human development. Electricity use and economic

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<sup>17</sup> Gupta and Sivaramakrishnan are both anthropologists; after making this observation, their own edited collection concentrates on popular perceptions and the everyday state rather than the institutional perspective presented here. Similarly, see Fuller and Bénéï (2001).

<sup>18</sup> Further details of the Indian electricity supply industry's physical and technical dimensions are provided in Appendix 1.

growth are intuitively linked. The World Bank's widely referenced *Doing Business* rankings, for example, use access to electricity as a key measure of business constraints. Across South Asia inadequate electricity supply is *the* biggest problem businessmen report facing, and it has become a major target of industrial lobbying (Ahmed and Ghani, 2007: 11). We might therefore expect that a state undergoing a 'pro-business tilt' would alter policy to favour big business consumers hit by both internationally uncompetitive electricity costs and, more importantly, low quality of supply.<sup>19</sup> There are precedents for such dramatic reforms in India.<sup>20</sup> The question of how far the 'pro-business tilt' has extended recurs throughout this thesis, as discussed above.

Second, as this suggests, electricity is fundamental to distributive conflicts, including the proliferation of 'populist' subsidies, 'pro-business' policies, and the politics of natural resource mobilization. In India this notion has flourished in the shorthand for popular demands at election time: *bijli, sadak, pani*, 'electricity, roads, water'. Many existing studies of classic, 'democratic', and 'new' developmental states have concentrated on issues of 'elite politics', such as exchange rate and trade reforms and investment liberalization. In contrast, power liberalization is like inflation: in Varshney's (1998) terms, an economic issue that has become issue of 'mass politics', debated both within the state's pro-business 'technocratic apex' and on the streets. To use power reforms as a lens thus moves away from a disproportionate focus on the low-hanging fruit on the liberalization agenda, to 'second-generation reforms' in which the tensions between the democratic and pro-business components of the state are at their most fraught.<sup>21</sup>

The sheer order of magnitude of the subsidies that the sector has consequently come to bear (see Chapters 3 and 8) and the sector's financial turmoil reinforces its importance as an object of study. Agricultural power subsidies form the single largest burden on some State budgets; in Karnataka, for example, in 2005 nearly 50 percent of State spending went to cover power subsidies, compared to 4 percent budgeted for education and 1 percent for health (Joseph, 2010: 504). Partly—but not wholly, as Chapter 8 shows—as a result of these subsidies, by 2011 the sector's total debt nationally had reached some □3.5 trillion (US\$77 billion). This reinforced

<sup>19</sup> As had been suggested as early as a World Bank survey in 1962 (King, 1967: 229-231), industrial consumers appear to prioritize quality rather price concerns (see also Joseph, 2010: 509).

<sup>20</sup> The power sector is frequently contrasted with the far more successful (and centrally controlled) telecoms sector on this front (Mukherji, 2004; Panagariya, 2008; Haldea, 2011; Kale and Mukherji, 2013).

<sup>21</sup> Second-generation reforms are more structural and often more sectorally specific (Jenkins, 1999: 335). They include privatization and public sector retrenchment, which have been 'largely unborn' in India; see Kale (2002).

fears of a more general banking crisis and prompted a ₹1.9-trillion bailout programme, the second in a decade. The opportunity costs are clear: it ‘equalled one percent of India’s GDP, and more than the entire GDP of Nepal. Had there been no bailout, these funds could have been used to set up some 15,000 hospitals and 123,000 schools’ (World Bank, 2014).

Thirdly, electricity and the state project have been inextricably bound together for more than a century. Its expansion went hand-in-hand with the expansion of state power. It is no accident that Michael Mann (1984, 1993) terms the state’s growing ability to penetrate and shape society ‘infrastructural power’. This link between electric and political power has been recognized across the world. In Lenin’s famous formula, for example, electricity was *the* key ingredient of communism alongside the soviets (Lenin, 1965). In India Nehru (citing Lenin’s formula) argued it could take ‘peasants...out of the old ruts and superstitions’ (1989 [1934]: 848)—but Gandhi, fearing mechanization, warned of the dangers inherent in such centralized power (cited in Kale, 2014a: 28).<sup>22</sup>

Finally, turning to the contemporary state, the power sector has witnessed almost a quarter-century of institutional reform and restructuring since 1991 to recalibrate the state’s role. This makes the power sector an ideal lens through which to examine the reshaping of the state, especially because, as an industry formerly considered a natural monopoly best left to the public sector (see Chapter 3), the ideological effects of the pro-market turn have been especially dramatic. Crucially, too, there exists an inbuilt yardstick with which to compare India’s progress: the ‘global standard’ for power sector reforms which spread in the global North in the 1980s and 1990s, propagated by the World Bank as a standard ‘template’ or ‘blueprint’ in the global South from 1993 (World Bank, 1993b; see also Chapter 4).

Contemporary observers have also recognized that the failure of power reforms might be read as a commentary on the difficulties of the Indian state and the reform process more generally. For political-economy scholars, the sector has been seen as an archetype of Indian democracy’s inability to find long-term solutions for collective action problems (Bardhan, 2006: 8-9). For more policy-oriented writers, as *The Economist* (2012c) warned: ‘The danger is that it [the energy situation] becomes a metaphor for the whole economy’ and ‘the muddle-through

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<sup>22</sup> For contrasting discussions of the relationship between electricity, the state, and ideologies of progress and national development with reference to India, see Coleman (2008) and Kale (2014a: Chapter 2; 2014b).

approach of the past two decades of boom'. Accordingly, electricity featured heavily in the 2014 general election campaigns, providing evidence of both 'crony capitalism' and 'policy paralysis'. For all these reasons, Arvind A. Subramanian (2012) compared electricity to the Dandi Salt March of 1930: 'Is power, or rather the power sector, today's salt—emblematic of both the pessimistic outlook and promise of India?'

Chapter 2 further explores the selection of this case, and examines the dangers of extrapolating from a single sector—no matter how significant—to draw more general conclusions. It is undoubtedly an unusual lens to select. After all, electricity is not commonly seen in the global North as 'political': 'As you know, infrastructure is not a sexy or glamorous topic,' as then New York City mayor Michael Bloomberg began his Senate testimony (2008)—perhaps because it is so taken for granted in developed countries.<sup>23</sup> The historical and political role of electricity remains 'strikingly important but mostly unacknowledged' (Coleman, 2008: 15; Morton, 2002: 62). It is generally neglected by political scientists and mainstream international development scholarship, instead treated as a depoliticized and technical policy area to be left in the hands of electrical engineers and energy economists. The power sector thus 'falls between two stools', with many academics feeling they lack the technical knowledge to contribute, while technicians often lack the macro-level view necessary for economic or political analysis (Dagli, 1971: 3). Critics might also well point out that the electricity sector in particular is unusual—it was traditionally state-controlled even in much of the global North.

My claim does not rest on the representativeness of the power sector, however, but its very uniqueness and complexity. The view from the power sector is not the *only* possible perspective on the contemporary Indian state—but it provides a valuable and unusual lens. Existing interpretations have largely founded their theories of the state on extrapolations based on surveys of India's industrial and trade policy, or on social policy.<sup>24</sup> Yet electricity is arguably more central to India's economy, society, state, and politics than either of these. While an interpretation of the Indian state based on evidence from the power sector cannot entirely displace the more

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<sup>23</sup> Major power failures are so unusual in the United States that there exists a monograph on seminal American blackouts (Nye, 2010). In contrast, the world's four largest-*ever* blackouts all took place in South Asia between 2001 and 2015.

<sup>24</sup> For examples of the former, see Evans (1995), Pingle (2000), Sinha (2005), Kohli (2012), and most other developmental state literature. For examples of the latter, see Gupta (2012), Chatterjee (2004), and most welfare state literature.

familiar arguments derived from industry and social policy, as Chapter 2 explains, they open up a dimension of the state that is often neglected by scholars extrapolating from these quite different sectors. The conclusion, Chapter 8, returns to the question of the applicability of conclusions based on the power sector to India's political economy more widely.

### **The thesis's three-pronged argument**

The Indian state remains crucial in the twenty-first century, but it has not survived unchanged. The key question that I seek to answer is: *How have the institutions of the Indian state changed in form and functioning between 1991 and 2014?* In answering, the thesis makes three central and interrelated arguments:

**Argument 1, on the *process* of liberalization in India:** Political-economy constraints make sweeping change impossible: path dependencies constrain reform. The power sector is therefore not simply witnessing sweeping deregulation, but a more complex process of *institutional layering*. Rather than destroying old institutions, new institutions are layered atop the sediment of the old, with which they interact.

**Argument 2, on the *type* of state that has begun to emerge over the past two decades through this process:** The type of power system that is emerging from this process is a *state-market hybrid*. There is thus a continuity in outcomes: the state retains a leading role, though its partnership with big business is increasingly overt. This *combination of continuity and change* is best analysed as reinvented state capitalism, or *state capitalism 2.0*.

**Argument 3, on the *implications* of this emergent type:** The layered processes by which this 'state capitalism 2.0' has emerged create their own sources of financial and administrative *dysfunction*.

A recent handbook on the transformations of the modern state highlighted three main categories within the analysis of state transformations: their *determinants*, *dimensions*, and *intensity and extent* (Huber et al., 2015). As we shall see, the arguments presented here make contributions to all three. The following sections expand on each of these arguments.

### Argument 1: the 'layered' process of liberalization

*Political-economy constraints make sweeping change impossible: path dependencies constrain reform. The power sector is therefore not simply witnessing sweeping deregulation, but a more complex process of institutional layering. Rather than destroying old institutions, new institutions are layered atop the sediment of the old, with which they interact.*

#### *India's 'very special type of gradualism'*<sup>25</sup>

How has institutional change occurred within the Indian state over the last quarter-century? In the Anglo-Saxon archetype that has done so much to shape subsequent literature, liberalization is widely seen as a *deregulatory* process by which market institutions displace statist institutions (Thelen, 2014: 12-13)—although even in Britain and the United States, this process is never complete.<sup>26</sup> Indian 'liberalization' bears only a passing resemblance to this notion of sweeping deregulation, however.

India's trajectory of liberalization has long been recognized as gradual (Ahluwalia, 2002). Privatization has been extremely slow. Between 1991 and 2008 the central government divested itself of majority ownership in a mere 14 companies, mostly hotels (Pratap, 2011: 178-9). In contrast, even in famously *étatiste* France the Jacques Chirac government managed to privatize 22 large enterprises in only 15 months between 1986 and 1988. Many state-owned enterprises thus linger on into the liberalization era. Private players have entered newly opened sectors *in parallel* with these existing organizations.

<sup>25</sup> Montek Singh Ahluwalia, quoted in Jenkins (2004: 348).

<sup>26</sup> See, for example, Pierson's (1994) influential work on the resilience of welfare state institutions in the privatization era.

The most influential account of this gradual liberalization is the notion of ‘reform by stealth’, Rob Jenkins’ (1999) celebrated argument that policymakers get around the constraints of democracy by using backdoor tactics (like ‘skilful delay’, unorthodox sequencing, strategic silences, and dividing and buying off opposition). Yet Jenkins’ interpretation only examines half of the picture: the reformed half. We cannot understand the successes of backdoor reforms in isolation from the vast sediment of the state system they leave behind—and, as Jenkins’ more recent work on special economic zones acknowledges, there are clear limits to reform by stealth (Jenkins, 2011; Jenkins et al., 2014). The interpretation presented here instead relocates the liberalized segment of the economy where it belongs: in the context of the economy as a whole.

Other scholars, often those looking at the state at a more granular level of detail through the lens of different policy areas, have observed the persistence of different types of organization and modes of state operation in the liberalization era. Their analyses often stop at noting the perplexing contradictions within the policy system, however. Is the Indian state ‘pro-business’, predatory, as indifferent and bureaucratic as ever, or—as many scholars argue—all these things together? In his recent book *Red Tape* (2012), Akhil Gupta describes a ‘pluri-centred’, ‘multilevelled’ morass of agencies. Nor is this a complexity that strikes only anthropologists. Nikita Sud (2012: 6) argues that its incarnation in Gujarat, at least, is a ‘multihued lattice’ to be unpacked, an ‘analytically protean entity... also (but never just) a unit’, which no single ‘theoretical prototype’ can neatly describe. Aseema Sinha (2011) similarly beseeched us to develop a ‘more complex’ picture of the state—multi-levelled, interactive, and relational. Jos Mooij (1999) argued that the state is ‘Janus-faced’, simultaneously ‘developmental’ and ‘predatory’. This type of eclecticism is hardly a satisfactory answer, however: it merely describes symptoms or pathologizes and dissolves the Indian state, rather than interrogating processes of institutional change and their origins.

Instead I provide a distinctive analysis of the gradualist dynamic of institutional change within the Indian state as a process of institutional *layering*. The notion of layering also helps to explain another striking and little-studied phenomenon: a number of scholars note that Indian policymaking is characterized by ‘the sheer proliferation of programmes’ (Harriss and Jeffrey, 2013: 514; Gupta, 2012)—and, we might add, a proliferation of ministries. Few have directly

interrogated the causes of this proliferation as an institutional phenomenon. How are we to explain the Indian state's increasing bureaucratic complexity at the very time when notions of state retrenchment have advanced in the country? This thesis aims to provide some theoretically informed answers.

### *Institutional layering*

To explain this fragmentary emergence, the following chapters employ concepts developed in historical-institutionalist analyses of gradual institutional change.<sup>27</sup> More specifically, I draw on a subdiscipline of historical institutionalism which moves away from the older focus on the 'big bang' of punctuated equilibria and 'critical junctures' (typically in the form of crises), in which policy and institutions alter in abrupt, convulsive bursts (e.g. Krasner, 1984).<sup>28</sup> Institutional change in the power sector, as we shall see, has been *gradual*, *incomplete*, and often *endogenous*. A number of historical institutionalists—among them Kathleen Thelen, Wolfgang Streeck, Stephen Skowronek, Paul Pierson, and Eric Schickler—have described the modes of such gradual institutional changes, which, as in power sector liberalization, go 'beyond continuity' but stop well short of revolution (Streeck and Thelen, 2005). This loose-knit group has developed several concepts which provide a bridge between the notions of institutional stability, incremental change, and punctuated equilibria. The most important concept here is *layering*.

I use layering (in contrast to *displacement*) to refer to a dynamic of gradual institutional change whereby new or renegotiated organizational elements do not supplant or eliminate the old,

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<sup>27</sup> While these concepts originally developed out of empirical studies of institutional change in the global North—notably on American political development and the changing welfare states of Europe—they were later developed as categories to analyze *generally* typical processes of institutional change and applied to several Southern contexts too. See especially the essays collected in Mahoney and Thelen (2010).

<sup>28</sup> The three main 'schools' of institutionalism (historical, sociological, and rational choice) are all stronger at explaining continuity—with change either negligibly minor or coming through dramatic exogenous shocks (e.g. war)—rather than incremental, endogenous institutional change. Alongside the older historical-institutionalist focus on path dependency, sociological institutionalism has tended to focus on the perpetuation of norms, again with the source of change typically viewed as exogenous. Even the more sophisticated branches of rational choice institutionalism—such as the Nobel Prize-winning 'institutions-as-rules' theories of Douglass North and Elinor Ostrom—are functionalist (Peters, 2012: 60-5). Institutions are self-enforcing equilibria 'in which each player's behaviour is a best response. The inescapable conclusion is that changes in self-enforcing institutions must have an exogenous origin' (Greif and Laitin, 2004: 633). All three institutionalist camps, then, emphasize stability, continuity, and structural constraints—producing what Orren and Skowronek (1994) have called an 'iconography of order'. In contrast, the heterodox historical-institutionalist literature on gradual institutional change that I draw on here rejects 'teleology, organic growth, linearity, progress' and functionalism, instead stressing the importance of path dependence and contingency in shaping institutions (Orren and Skowronek, 2004: 78).

but are grafted onto them (van der Heijden, 2011). ‘[I]nstitutional development often involves superimposing new arrangements on top of preexisting structures intended to serve different purposes’, wrote Eric Schickler (2001: 252) of the US Congress. This was broadened into a more general theoretical tool by Kathleen Thelen, who defined layering as ‘the partial renegotiation of some elements of a given set of institutions while leaving others in place’ (2003: 225).<sup>29</sup> This thesis correspondingly provides an account of ‘liberalization’ in India not as a steady process of deregulation toward an ideal-typical liberal-market economy, but as a form of improvised ‘patchwork’ (cf. Skowronek, 1982).

Deregulatory ‘Anglo-Saxon’-style liberalization involves the explicit dismantling of older institutions through direct assault (Thelen, 2012: 147). In contrast, the layered liberalization in the Indian power sector has often been more marked by compromise and continuities, conditioned as it is by political resistance and contestation. This dynamic ‘do[es] not necessarily imply any direct and comprehensive attack on organized interests, but only the enlargement of certain areas of the economy within which market forces and associated relations of authority and control are able to operate more freely than in others’ (Goldthorpe, 1984: 329; Thelen, 2012).<sup>30</sup>

For this reason, layering often creates a *segmented system*, in which the market-oriented segment is introduced in parallel to the older statist system, and gradually encroaches upon it. The practical result in the power sector has been the creation of a layered and improvised state-market hybrid. Over time, though, layering can theoretically lead to fundamental, if messy, change:

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<sup>29</sup> Layering also resembles the sociological concept of ‘sedimentation’, a process of institutionalization that is usually truncated only gradually in the face of changing environments and poor performance (Tolbert and Zucker, 1996: 184). In later works, Thelen has given slightly narrower definitions of layering which suggest that it refers merely to tinkering at the margins of existing institutions rather than introducing new institutions alongside them (Mahoney and Thelen, 2010). I use the broader earlier definition, in line with Schickler’s work, to capture the notion of institutional creation without destruction that is so striking in India, in contradistinction to ‘displacement’, which I take to mean ‘active political dismantling’ of pre-existing institutions (Thelen, 2014: 13). So, for example, the entrance of independent regulatory agencies according to international models is reminiscent of ‘displacement by invasion’ (Streeck and Thelen, 2005: 21), but such institutions have been coopted rather than supplanting the indigenous system, as we shall see (see also Dubash and Morgan, 2013a), an outcome better captured by the concept of ‘layering’ than ‘displacement’.

<sup>30</sup> Goldthorpe was describing the related process of ‘dualization’, typically associated with the division of the labour force into a core of privileged, unionized ‘insiders’ and a growing mass of ‘outsiders’ denied many of the benefits that accrue to the core. A somewhat similar, but inverted, dynamic can be seen in the power sector: rather than leaving intact a set of state-supported elites, power sector reform has left the state-owned residual to decay, though again a new market-oriented zone profits, as Chapter 6 in particular argues. However, I prefer the term ‘segmentation’ to ‘dualization’: the division between ‘inside’ and ‘outside’ is not as neat as the latter suggests.

the introduction of new elements set[s] in motion dynamics through which they, over time, actively crowd out or supplant by default the old system as the domain of the latter progressively shrinks relative to that of the former. (Streeck and Thelen, 2005: 24)

Organizations from the older dirigiste era have not been displaced by market organizations. Many have proved ‘sticky’, surviving into the quite different conditions of the post-1991 age, while private players have entered *in parallel* with these older organizations. At the same time these older organizations have themselves altered, as they are strategically deployed to new ends or are altered by slippages in the face of a changing environment. Alongside the broad concept of layering, I later employ several related but narrower concepts to describe some of these specific dynamics; they are explained in the text itself.

### ***Why layering? Path dependence and sequencing***

If layering describes the dynamic, what is the fundamental social mechanism? *Why* has change taken this gradual, incomplete, and contested form, with much evidence of institutional inertia and ‘stickiness’? The answer is complex and has varied across time and space, as the following analytical chapters show, but broadly the explanation I present is informed by the *path-dependent nature of political institutions*.

Once created, institutions often become not only self-enforcing but self-reinforcing. They exhibit ‘increasing returns’ or ‘positive feedback processes’ which raise the costs of policy change (Pierson, 2000, 2004). Interests who benefit from the status quo create obstacles to destroying old institutions, while it is difficult to create coherent constituencies supporting sweeping change with rewards far in the future. In the case of Indian electricity, the power-sharing arrangement between the centre and States not only creates formal veto points which make sweeping change difficult to secure, but the political economy of power developed over time so that this dynamic became self-reinforcing: the power of rich rural farmers with ‘wet’ agricultural holdings, who particularly benefit from electricity subsidies, increased, as did the political patronage networks around the electricity system. Given these constraints, the possibilities for institutional innovation are ‘bounded’ (Pierson, 2004: 142-44). The historical Chapter 3 is therefore crucial to my argument,

as it outlines the dynamic constraints present by 1991 which would channel subsequent institutional revisions along particular paths.

These high barriers to displacing existing institutions conditioned the sector's gradualist and uneven process of institutional reform. Because '[e]stablished institutions create constituencies for their preservation', it is 'typically easier to add new institutions than to dismantle preexisting ones' (Schickler, 2001: 252). Given the path-dependent constraints outlined in Chapter 3, then, the process of institutional change is often *accretive*: while older institutions survive, they are supplemented by incremental changes which may be cumulatively transformative.<sup>31</sup> In the Indian power sector, my case study, the central leadership, unable to destroy or displace pre-existing organizations, has superimposed organizational innovations upon the older system. With the state stretched to the limits of its capacities, new and reinvented institutions and policies were introduced on an ad hoc basis to meet immediate demands. This is not to say that fundamental revision has not been attempted in the power sector—the 2003 Electricity Act was an attempt at just that—but its implementation has been largely unsuccessful, and so institutional reform has been enacted through the more subterranean processes outlined here.

Sequencing and the passage of historical time is crucial in this analysis (Pierson, 2004). Different institutions owe their origins to different times during which different social coalitions dominate; so 'institutions, both individually and collectively, juxtapose different logics of political order' (Orren and Skowronek, 1995: 306). Once new organizations are created, however, different interests attempt to colonize them and direct them towards their own ends, which then offer increasing returns: so, for example, independent regulatory agencies superimposed on the pre-existing system have often been coopted as new forums within which pre-existing political conflicts are negotiated (Chapter 5). Each institutional change in the power sector has thus been shaped and reshaped by competing collective interests (cf. Schickler, 2001: 12). Furthermore, '[a]doption of a series of changes intended to promote one type of interest typically will provoke

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<sup>31</sup> The chapters themselves show that there are some differences within this overall dynamic. For example, central public sector enterprises have somewhat lower barriers to *internal* change than State-level utilities and so have seen a slightly different dynamic of *conversion* to new functions (Chapter 5). Faced with the changes to the environment caused through the layered process of reform, State utilities themselves have undergone processes of *drift*, as they are allowed to become less fit for purpose and changes are gradually forced upon them (Chapter 6).

contradictory changes that promote competing interests' (Schickler, 2001: 16). In the Indian power sector this has taken the form of oscillations between 'closed' pro-business strategies (Chapter 4) and reregulation, nominally to foster markets (Chapter 5).

As this suggests, these changes were implemented in an ad hoc fashion rather than as part of a coherent overarching strategy. The ideas informing these diagnoses and solutions were themselves a pragmatic *bricolage*, or ideational layering, of concepts drawn from different ideological paradigms (Carstensen, 2011).

Together layering and these related concepts provide the tools to assess liberalization in the Indian power sector, my case study, which the following chapters show to have been a gradual, intermittent, partial, and incomplete process. Changes to the state's organization have not occurred in line with a coherent intellectual or ideological vision, but in a contested and ad hoc fashion, with often disorderly results. The outcome of this messy process of layering is a distinctive hybrid of state intervention and the market turn, which I label *state capitalism 2.0*.

## Argument 2: state capitalism 2.0

*The type of power system that is emerging from this process is a state-market hybrid. There is thus a continuity in outcomes: the state retains a leading role, though its partnership with big business is increasingly overt. This combination of continuity and change is best analysed as reinvented state capitalism, or state capitalism 2.0.*

Through this process of layering, state intervention and the market turn have combined to form a distinctive hybrid, including both a pivotal role for the state in several key (though not all) sectors and a strong emphasis on public-private collaboration.<sup>32</sup> State activism and economic liberalization have been fused to produce a variety of new or reworked organizational forms—such as imported

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<sup>32</sup> There are several sectors in which the state's role remains less dominant. Another continuity is the sheer size of the informal economy in India, which means that 92 percent of livelihoods and up to 60 percent of contemporary GDP remain outside the strict purview of the state. The logic of state dirigisme was therefore always limited. Nonetheless, to the extent that even these sectors—including agriculture and petty manufacturing—are impacted by patterns of electricity access, subsidies, and theft and state influence on the financial system, and in turn affect the power sector's political-economy structures and financial viability, the system described below extends beyond the formal economy alone. Chapters 3 and 6 discuss the relationship between agriculture and electricity and theft as an 'informal' subsidy. Chapter 6 in particular explores the nature of India's reforms as a form of 'dualization', in which a corporate-dominated private sector coexists with this wider residual.

regulatory agencies, corporatized state-owned enterprises, and the iconic public-private partnerships. As explained below, this I call *state capitalism 2.0*. This hybrid is not in static equilibrium, however, but is a dynamic system of state-market relations under constant (re)negotiation.

### ***Why state capitalism?***

State capitalism is a system in which the government enjoys persistently widespread influence in the economy. There are good reasons to deploy this term rather than coining yet another neologism, especially in the face of the uncontrollable proliferation of labels for the Indian state and for similar hybrids elsewhere in the global South.<sup>33</sup>

Using state capitalism as a framing concept recognizes the *continuities* in Indian political economy. Such continuity, such path dependence, is a key component of my argument: it lies at the heart of the layered character of the state's transformations. The fraught and oscillating relationship between state and market that characterizes state capitalism started long before 1991. Indeed, Jayati Ghosh has suggested that India's entire 'post-independence political economy can be interpreted... in terms of a drama enacted between votaries and opponents of liberalization' (1998: 295).

Following from this, I argue that close state-business relations lie at the heart of Indian state capitalism: it is not just statist but intrinsically *capitalist*.<sup>34</sup> The concept as I use it is accordingly similar to Max Weber's 'political capitalism', or more properly 'politically oriented capitalism' (*politisch orientierter Kapitalismus*). This is a system in which profit-making activity is oriented towards 'opportunities for predatory profit' through proximity to the state (Weber, 1978:

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<sup>33</sup> Scholars of Latin America, where analysis of these trends is especially well advanced, prefer 'new developmentalism', 'liberal developmentalism' or 'neo-developmentalism', foregrounding Brazil's unique emphasis on welfare provision and the explicit calls made for a return to a developmental role for the state (Bresser-Pereira, 2011; Trubek et al., 2013). However, this risks prematurely echoing the implicit success bias of classic developmental state literature (Fine, 2013). Some Chinese scholars prefer 'regulatory state', to capture the new influence of independent regulatory institutions and administrative reform (Yang, 2004; Wang, 2006), although analysis of China's 'state capitalism' is also popular (Lin and Milhaupt, 2013; Bremmer, 2010).

<sup>34</sup> While the term was originally popularized by Lenin, the celebrated mid-century definition captured this: condemning the hypocrisy of the Soviet system, it referred to 'forms of state ownership in which the original conditions of the definition [of capitalism]—centralized ownership of the means of production, leading to a system of wage-labour—have not really changed' (Williams, 1983: 52).

164-6). This expresses a fundamentally important dynamic, but the term itself is infelicitous—*all* capitalism is ‘political’<sup>35</sup>—and so I prefer ‘state capitalism’.

Building on this, my conception of state capitalism aims to capture *both* the state’s leading role *and* the nature of its links with business: state capitalism is founded on the fragile *collaboration between state and capitalists*, in which each side strives to gain and retain the advantage in a relationship which always threatens to descend into antagonism. This definition of state capitalism usefully foregrounds the state-*structural* emphasis of my perspective on the state. This thesis does not present an entirely state-centric perspective: the integration of ‘capitalism’ within the definition emphasizes both the state’s structural links with capitalism<sup>36</sup> and the permeability of the Indian policy process to societal pressures, especially those brought by heterogeneous business interests, without reducing the state and policy to a mere expression of interest group competition.

Bringing together these two strands of argument—on the importance of continuity and the ‘capitalist’ nature of this statism—fits with the influential body of scholarship that suggests that India has long had a state-capitalist regime, albeit with different organizational forms and modes of operation. In the *state-led capitalism* of the planning era’s ‘failed developmental state’, the Indian state did not enjoy autonomy. Instead it was regularly influenced by and acted to favour particular business interests (Herring, 1999; Chibber, 2003; Harriss, 1984; Khan, 2011). As the power sector genealogy presented in Chapter 3 shows, this first generation of state capitalism—‘state capitalism 1.0’—was characterized by state dominance and direct participation in electricity.<sup>37</sup>

Since 1991, when electricity became the first major sector opened to private investors, the power system has seen major alterations, which mark a shift away from this older state capitalism 1.0. But, although this opening occurred almost a quarter-century ago, even today the generation

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<sup>35</sup> It has other problems, too, including Weber’s application of the concept largely to antiquity, its vagueness, and his concern to distinguish such forms from a uniquely Western ‘rational capitalism’ (Swedberg, 1998). It is also now curiously (and off-puttingly) beloved of Cato Institute libertarians.

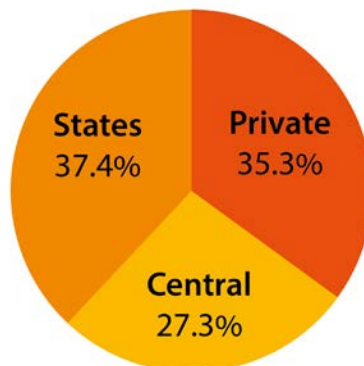
<sup>36</sup> For example, the state is dependent on economic growth for its revenues and, less directly, for its legitimacy. This becomes clear in analysis of electricity, which requires up-front investment mobilization and is implicated in the rising value of natural resources controlled by the state. In India these close bonds were reinforced by Indira Gandhi’s decision in 1970 to ban company donations to political parties without creating an alternative party-political funding system. This drove funding underground, creating a ‘network of crony capitalism and predatory extortion’ (Jha, 2013).

<sup>37</sup> Some have instead seen the first generation of state capitalism in India as colonial mercantilism, with the East India Company the global archetype of this era: ‘State capitalism dates back to the East India Company and its relationship with the British government,’ declares one recent encyclopaedia (Dieterle and Hritz, 2014: 334). Given the very limited use of electricity in India by this point, I discount this phase for my analysis here.

segment remains state-dominated (Figure 1.1). Alongside the entrance of new private players and nominally independent regulatory agencies, the sector also retains many large and powerful agencies in which the state continues as the majority owner. State-level patterns of power reform have also proven path-dependent (see especially Chapter 6). The outcome so far, as this thesis discusses, is not the fully liberalized system of the World Bank’s ‘global template’ for power reform.

The concept of state capitalism captures this continued centrality of the state. The review of Indian scholarship above (pp. 9-12) reveals the existing consensus on the state’s importance in structuring societal relations. The following chapters on the power sector reinforce and extend this conclusion: the state remains significantly more important, I suggest, than many contemporary scholars recognize. The conclusion, Chapter 8, argues that this is true not only of the power sector—though it is such a crucial sector that this alone ought to make us rethink our accounts of the state’s role—but is more widely applicable.

Figure 1.1 The public-private hybrid system: generation capacity by mode of ownership, as on 31 July 2014



Source: Central Electricity Authority data

### ***Change amid continuity: India’s state capitalism 2.0***

Rather than a firm break in 1991, as we shall see, the state has retained a key but changed role. It continues to actively mobilize resources, direct investment, and channel subsidies. More than this, the state remains *directly* interventionist. The traditional tool of central public sector enterprises (CPSEs)—state-owned enterprises majority-owned and controlled by the central government—

remains strikingly resilient despite more than three decades of critique and neglect by ruling administrations, as Chapters 5 and 8 show.

While its layered emergence has failed to displace many of these statist structures, there *have* been major changes in this state capitalism, however. The failures of this first phase of state-led state capitalism, explored in Chapter 3, created the conditions for a major shift in both policy and institutions, which would reshape both state-business relations and the state itself. There has been an important shift—at least in the power sector—away from the older dirigiste paradigm. The following chapters chart the ad hoc shift to the second, contemporary generation of state capitalism in India, *state capitalism 2.0*.<sup>38</sup>

Gone is the older emphasis on detailed planning and overt protectionism. The orientation of state activism has changed to become ‘more market-adjusting than market-dominating’ (cf. Arbix and Martin, 2010). State capitalism 2.0 places new emphasis on competition, public sector reform, and independent regulation to create a ‘hybrid form of capitalism—state support disciplined by the market’ (Musacchio in *The Economist*, 2012b). The surviving older tools of state economic intervention, such as state-owned enterprises and control of the banking sector, have also been somewhat reshaped in line with these trends (Chapter 5), although the degree of change should not be exaggerated (Chapters 5 and 6).

Most crucial is the new emphasis on public-private collaboration. Indeed, the core feature of state capitalism 2.0, I suggest, is the new fuzziness of the boundaries between the state and the private sector. This is less a result of the privatization of state functions or outright capture than the tightening co-dependence of state and business. As in the earlier phase, key big-business players remain ‘politically oriented’ in the Weberian sense. Not all ‘capitalists’ fit into this picture, but the importance of such ‘politically oriented’ players in rent-thick sectors like power grew rapidly in the wider economy after 2003 (Gandhi and Walton, 2012). Chapters 4 and 6 together show how dependent on the state such private firms are, and how their distinctive structures are in some ways a response to state structures.

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<sup>38</sup> This term originates with *The Economist* and the work of Aldo Musacchio (*The Economist*, 2012b). Nölke (2014) writes of *state capitalism 3.0*, referring to an earlier generation of mercantilist protectionism in nineteenth-century Scandinavia and the United States.

State capitalism 2.0 does not amount to a coherent or articulated project, however. Its ad hoc emergence, constrained as it is by path-dependent processes, has made it distinctively dysfunctional.

### **Argument 3: the dysfunctionality of state capitalism 2.0**

*The layered processes by which this ‘state capitalism 2.0’ has emerged create their own sources of financial and administrative dysfunction.*

Like the economists David G. Victor and Thomas C. Heller, I suggest that the “dual market” of state capitalism, ‘combining’ as it does ‘attributes of the state- and market-based systems’, is ‘not a waystation to the standard textbook model’ (2007a: 30). As they suggest, this system is ‘held in place by strong political forces’ (although these are not reducible to the self-interested bureaucratic resource maximization of their public choice paradigm). I suggest, however, that there are good reasons to believe that it is not the ‘stable equilibrium outcome’ that Victor and Heller believe (*ibid*). In the power sector, the uneasy state-market fusion of state capitalism 2.0 has so far proven unsuccessful, expensive, and contentious. Even the briefest survey would indicate that the Indian power sector continues to underperform.

Thirdly, then, the thesis locates many of the sources of this dysfunction within the layered emergence of India’s state capitalism 2.0. State capitalism 2.0 in the power sector emerged as an attempt to compensate for the failings of the dirigiste state capitalism 1.0. Thus far, however, this shift has not resolved the questions of the state’s authority and capacity to discipline and direct provoked by the older mode of governmental operations. I argue that the layered and ‘haphazard’ fashion in which state capitalism 2.0 has developed means that it is distinctively dysfunctional, fundamentally incoherent and unstable. This thesis thereby contributes to addressing two pressing sub-questions: *Is the Indian state increasingly ‘pro-business’? And if so, why is it also so prone to failure?*

The discussion below concentrates on two dimensions of this failure: its *financial* dimension (a combination of resilient ‘populist’ subsidies and apparent ‘crony capitalism’) and its *administrative* dimension (increasing policy paralysis). First, institutional proliferation has

facilitated the proliferation of rent-seeking and rents, as different interest groups are differentially able to penetrate institutions. As Chapter 6 explains, this has led to a financially unsustainable system of rents for consumers and producers, milking the old state-owned sector in order to fund both pro-business and populist rents.

A second source of failure lies in the layered structure of the state itself. Alongside the absence of creative destruction of older organizations, ‘the layering of successive innovations results in institutions that appear more haphazard than the product of some overarching master plan’ (Schickler, 2001: 15). The state as it is manifested in the power sector is therefore formed as a series of layered institutions, each of which are ‘historical composites, full of tensions and contradictions’ (*ibid.*: 267). This process of layering creates incongruities. As a result, these layers are unlikely to form the optimal solution to today’s collective problems that functionalists assume, but something more contingent, complex, and contradictory:

it produces a set of institutions that often work at cross-purposes... Rather than providing stability and coherence—as the metaphor of institutions as equilibria suggests—...institutions embody contradictory purposes, which provide for an ongoing, churning process of institutional development. (*ibid.*)

These tensions have further effects. First, they lead to increasing bureaucratic complexity and vicious turf wars (Chapter 7). Like scholars of American development, I analyse the institutional politics of the Indian state as ‘a politics distinguished by incoherence and fragmentation in governmental operations and by the absence of clear lines of authoritative control’ (Skowronek, 1982: viii). This ‘thickening of government’ means that information may fail to reach the apex of the hierarchy, decisions are subjected to long delays and multiple veto points, whilst the lines of oversight over the frontline are blurred (Light, 1995). More substantively, as Karen Orren and Stephen Skowronek put it, layering means ‘an incomplete transfer of authority’, ‘the placement of new forms of authority over old ones left in place’. It is therefore ‘likely to perpetuate controversies over exactly how much authority has shifted, over who gets to control what and how’ (2004: 128).

As Part 3 discusses, then, in the Indian power sector, the layered processes that liberalization has taken have compromised the effectiveness and stability of the overall institutional ecosystem—at least in the short and medium term. The proliferation of institutions

has compromised the Centre's ability to coordinate change, and has facilitated a proliferation of rents and rent-seeking. The conclusion, Chapter 8, returns to this question of the nature and characteristics of India's state capitalism 2.0.

## Chapter outline

The following chapter, **Chapter 2**, is methodological in orientation. It explains the rationale for the case-study-based approach and then turns to discuss the aptness and limitations of the plural methods I use to create a 'thick' description of the state in a single sector. After establishing the boundaries of the case study and the limits of the power sector as the basis for an analysis of the state, the next chapters move on to provide a substantive analysis.

### *Part 2: The forms of India's state capitalism 2.0*

**Part 2** of this thesis provides a dynamic sketch of the layered changes to the Indian state's morphology between 1991 and 2014, as they have manifested in the power sector, and the evolution of state capitalism 2.0.

These institutional changes were responses to the slow-burning crisis of the first generation of state capitalism 1.0 in the power sector and beyond. **Chapter 3** gives a genealogical account of state capitalism 1.0 in the power sector up to 1991, and the protracted institutional and policy crisis that would lead to the faltering, incremental emergence of state capitalism 2.0. This provides crucial context for future developments, informing the path-dependent processes of reform after 1991. The state-private and federal compromises enshrined in the constitution, the central government's weak authority, and the increasing politicization of power subsidies have all played key roles in constraining the possibilities for later power liberalization. The flaws of these compromises meant that some form of power reform was firmly on the agenda by the 1980s.

**Chapters 4 and 5** take up the account in 1991, and together interrogate the layered process of institutional change in the power sector. They each examine one 'side' of the evolution of state capitalism 2.0: the grafting of pro-market and pro-business organizations onto the statist system on one hand, and the attempted (and limited) reinvention of state institutions on the other.

**Chapter 4** examines the changing forms of private participation and forms of public-private collaboration in the sector. It first explores the discursive rehabilitation of private participation, before outlining the forms that the new private participation has taken, including the rise of privileged private firms (sometimes called ‘national champions’) and public-private partnerships, favoured by pro-business state strategies. Corporate preferences are also brought in throughout the policy process. The chapter concludes by examining ‘the problem of the capitalist class’: the fact that it has two faces—one developmental, the other predatory.

**Chapter 5** examines new and old forms of state activism, partially altered in the face of the market transition. These include both the reinvention of more ‘traditional’ forms of intervention (like state-owned enterprises, many now corporatized and restructured) and the creation of new, nominally independent regulatory agencies, as the excesses of pro-business ‘deregulation’ provoked a trend of *reregulation*. While the reinvention of state-owned enterprises has been in part internally driven, the regulators have been imported from templates developed in the global North, and have had mixed success in simultaneously depoliticizing and creating markets in the sector. The chapter concludes by reviewing the *limits* of state reinvention, establishing the groundwork for Part 3.

The processes of organizational reworking and creation documented in these three chapters have together created a ‘pragmatic hybrid with the state playing a stronger role in steering and guiding developments’ (Dubash, 2011: 71)—an example of *state capitalism 2.0*, as the previous chapter argued. These forms are layered atop one another—not always coherently, as later chapters demonstrate. They comprise an awkward oscillation between deregulation and reregulation, testifying to the tensions between state and market inherent in India’s evolving form of state capitalism. As these tensions suggest, India’s ostensibly pro-market state is a complex and evolving hybrid, combining state and market in novel (if not necessarily successful) forms.

### ***Part 3: The functioning of India’s state capitalism 2.0***

The second half of this thesis explores the implications of organizational layering, proliferation, and complexity in practice. The early chapters lend qualified support to the argument that the contemporary Indian state is increasingly pro-business, albeit still state-steered. But state

capitalism 2.0 is not a functional, stable alternative to the ‘global standard’ of a liberalized power sector, but a far more incoherent amalgam. Reforms to state organizations have changed the exercise of state authority, but often at the cost of state coherence.

**Chapter 6** analyses the pattern of rent distribution in the sector, the processes through which financial surpluses and natural resources are mobilized and distributed. It thereby links state capitalism 2.0 to India’s wider political economy. It argues that the system is segmented, both tolerating the continued existence of substantial consumer subsidies for wealthier groups *and* substantial producer subsidies for private power producers. The reason for this proliferation of rents lies in the layered institutional structure of the sector itself, which enables different interest groups to co-opt different agencies and tiers of the state. The chapter suggests that institutional proliferation (and not only proliferating interest groups) leads to proliferating rents, which are funded in large part through short-term exploitation of natural resources, central state-owned enterprises, and suppression of demand.

**Chapter 7** examines the state’s problems of internal control. It takes seriously the oft-noted complexity of the Indian state as a phenomenon not merely to be remarked upon but systematically analysed. The uneasy layering of organizations, institutionalizing often contradictory strategies of state intervention, has been due in part to the weakness of central administrations. They lack the ability either to destroy pre-existing institutions or to enforce decisions upon large state-owned enterprises and business interests. This problem preceded liberalization (Chapter 3), but at least during the 1991-2014 period some of this incoherence may have worsened. The chapter explores the ‘turf wars’ between ministries and other state agencies that have ensued in the context of an apparently headless state. The final section explores the opposite of the resource-maximizing behaviour manifested in these turf wars by examining the contests to minimize blame. It notes that the sector’s incoherent organization also facilitates the evasion of responsibility when policy (somewhat inevitably) goes wrong. This strategy has limits: in the closing years before 2014 the excesses of pro-business strategies and the failures of state capitalism 2.0 as a system of control prompted a regulatory backlash. State capitalism 2.0 was therefore in a form of administrative crisis by 2014, laying the groundwork for the surprising election verdict that summer.

*Part 4: Conclusions*

**Chapter 8** concludes with a synopsis of the public-private, state-market system in the power sector, its incoherence in practice, and what it can tell us about the evolving ‘hybrid state’ in India. The thesis suggests that, at least in the power sector, the Indian state remains simultaneously more indispensable, more ambivalently pro-business, and more chaotic than much theory might suggest. It thus marks a new attempt at understanding the gradualist trajectory of liberalization in India and its distinctive outcome. The chapter draws out the relevance of these findings for sectors beyond power.

Finally an epilogue, **Chapter 9**, offers a brief assessment of the new BJP majority administration that took power in 2014, headed by the ‘power-obsessed’ Narendra Modi. It reflects on the vision and initial phases of ‘minimum government, maximum governance’. Some commentators have expressed surprise at the slow pace of reform and the absence of big ‘Thatcherite’ ideas during the administration’s first months. Instead, the epilogue sees the regime’s manoeuvres in the light of administrative reforms designed to compensate for the sources of governmental dysfunction studied here. Though its effects are too early to decipher, the solution the Modi regime proposes—a combination of authoritarian centralization and technocratic delegation—promises to reform the ‘layered’ nature of Indian administration, but within the broad parameters of state capitalism 2.0.

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## 2

# The electric case study

What he soon discovers is that the ‘reality’ that anyone involved will swear to is in fact itself a construction, a fabrication, a fiction, a faked and alternate reality—and that it has been gotten together long before he ever arrived on the scene. And the Op’s work therefore is to deconstruct, decompose, deplot and defictionalize that ‘reality’ and to construct or reconstruct out of it a true fiction, i.e., an account of what ‘really’ happened...

What one both begins and ends with, then, is a story, a narrative, a coherent yet questionable account of the world.

—Steven Marcus on Dashiell Hammett’s hardboiled 1920s detective ‘the Continental Op’ (1992 [1974]: xix, xxi), as (ruefully) endorsed by Peter Evans (1979: 7-8) and Atul Kohli (1987: 6)

### **Theory and practice: an iterative relationship**

To reiterate, this thesis aims to explain the changing character of the state—that is, its form and functioning—in India during the liberalization era, a change that I analyse as a shift to a (dysfunctional) state capitalism 2.0. This chapter outlines the methodological framework of the thesis.

The epistemological foundations of this thesis are a long way away from the neat processes associated with positivist variants of institutionalism such as the rational choice or sociological schools. A key characteristic of the behavioural revolution in the social sciences was its ‘explicit concern with theory development’, modelled on the positivist general statements of the natural sciences (Peters, 2012: 12). Instead, given the comparative thinness of Indian institutionalist literature, this thesis has developed through an ‘iterative’ relationship between theory and practice (Harriss-White and Heyer, 2010: 4).

The first section explains the difficulty of studying the state, the selection of the power sector as a case study, and the limits of this choice. In order to provide a ‘thick’ description of the state’s organizations as they are manifested in this single sector, the thesis opts for methodological pluralism. The second section provides a discussion of ensuing research methods and data sources. The third section turns to the more fraught question of how the analytical narrative developed from these sources, before outlining the boundaries of this study.

### **The case study method**

How can we study the state? In a lineage drawn from the single sovereign person of the king and the social contract-based ‘Leviathan’, both popular speech and political theory frequently anthropomorphize the state and treat it as a single coherent entity (Skinner, 2009; Neocleous, 2003). Of course, Leviathan is only a metaphor. As poststructuralist scholars have argued, its coherence and clear boundaries are an illusion, a mere ‘idea’, which masks a far more complex reality (Abrams, 1988; Mitchell, 1991).

Studying the empirical reality of the state is therefore famously difficult. To paraphrase Akhil Gupta (2012: 63-6) on some of the obstacles:

- (1) The state is ‘translocal’, operating at multiple scales and geographical locales, but one cannot draw conclusions about the whole from studying any one part as conclusions are likely to vary by bureau, level, region, policy, and branch of the state.
- (2) The state is ‘pluricentred’ and the relationships between these different ‘centres’ are far from clear.
- (3) The state is ubiquitous and not discrete from society in the sources of its power and personnel, or the enactment of its functions; this risks uncontrollably multiplying possible analytical foci.
- (4) Even using ‘the state’ as a focus is to reify it, pre-empting analysis.

Any analysis of ‘the state’ must therefore be indirect and, like the blind men approaching the elephant in the famous tale, will only grasp its partial complexity.

It is necessary at the outset, then, to determine the approach on the state. As Chapter 1 outlined, the thesis deploys an *institutional* definition of the state, aiming to explore its changing morphology and modus operandi. Accordingly, following the neo-Weberian definitions offered by Kohli (1987: 21), Stepan (1978: xi-xiv), and Skocpol (1979: 29), I conceive of the state as ‘a set of administrative and coercive institutions headed by an executive authority’. My theoretical starting point is that we cannot understand the state apart from the workings of these institutions. These empirically identifiable organizations are not reducible to individuals holding public office nor the effect of societal forces.

Such a focus on state organizations has its advantages. Because organizations are relatively stable and identifiable, the study of political institutions provides an excellent platform upon which to track the state’s shifts over time (Orren and Skowronek, 2004: 79). This is not the only way to examine the changes that have occurred with liberalization, of course, but it provides a relatively clear and coherent focus for analysis.

Yet the state is not reducible *only* to its organizations, as public administration studies may suggest—the *interrelations* between state agencies and their relations with societal interests embedded in broader socioeconomic contexts are equally important. This definition is also neo-Weberian: unlike Weber, it ‘does not insist that control over coercion is either complete—centralized—or necessarily legitimate’, but is a matter of degree (Kohli, 1987: 23). Furthermore, ‘there is no reason to assume that the state normally acts as a collectivity’, nor that it enjoys total autonomy from societal influence (*ibid*; Skocpol, 1985: 19-20). As Chapter 1 explained, the following account is ‘state-structural’, retaining a primary focus on the state’s institutional change while integrating the key role that non-state actors and interest groups play into its analysis of the policymaking process.

This thesis examines a single state, that in India, and uses a single case study of the power sector to roughly delimit the lens on this complex institutional matrix. I thereby offer an account of the state that works at a lower level of abstraction than many classic state theories, and can provide an analysis sensitive to a multitude of factors—social, ideational, and economic as well as political. By the end of the twentieth century, the theories of the state debate appeared to have been fought out to near-sterility. Much of this debate took place at a very high level of abstraction,

trading in context-free universals. Today a consensus seems to be emerging that the future of state theories rests on recognition of the intrinsic context dependence of human action. It thus lies in middle-order theories and detailed empirical studies—‘more concrete, historically specific, institutionally sensitive, and action-oriented research’ into state autonomy and capacity over time, space, and policy area—rather than grand theorizing (Jessop, 2007: 77-8; Barrow, 1993: 156-7). As Harriss-White provocatively argues, ‘[W]ithout work at this level, unavoidably limited as it may be, no worthwhile account of the State is possible at all’ (2003: 75). This thesis aims to provide such a historically specific analysis, sensitive to the potential of state disunity and dysfunction, to interrogate the state directly in all its complexity.

### *The single-case approach*

Large-*N* or comparative positivist approaches are useful in order to establish causal relationships between dependent and independent variables, testing hypotheses developed a priori. This project seeks to explore something more nebulous—the organizational form and interrelationships within the state—and so requires a less conventional or positivistic analysis. This thesis thus opts for a single-country analysis of a wide-ranging set of reforms extending over more than two decades, supplemented with a genealogical survey from around 1948 to 1990 (Chapter 3), in order to examine the development of the Indian state over time.

There are several advantages to this type of single-case approach. First is what Bent Flyvbjerg has called ‘the irreducible quality of good case narratives’ (2006: 237). Parsimony is not always accuracy. While comparative research permits more latitude to isolate particular aspects of the state for study, such a single-country study permits diachronic analysis of the state with detail and coherence that is missing from context-blind large-*N* studies. The great strength of this type of analysis, as this study highlights, is that it permits study of reforms across a wide set of interrelated state agencies, next to impossible in a more comparative design. It also enables analysis of key *causes* and *consequences* of the patterns discovered therein, rather than merely ‘describ[ing] the symptoms of the problem and how frequently they occur’ (*ibid.*: 229).

Just as significant, as the third section will discuss, is that this ‘fidelity to the material’ enables it ‘to develop its own structuring’, thus capturing nuances and even unexpected results that

fall outside narrow hypothesis-testing designs (Abbott, 2001: 145). As Hans Eysenck put it, ‘sometimes we simply have to keep our eyes open and look carefully at individual cases—not in the hope of proving anything, but rather in the hope of learning something!’ (quoted in Flyvbjerg, 2006: 224).<sup>1</sup> The continuous process of revision and conversation with participants that characterizes small-*N* studies may even make them more likely to generate innovative and unexpected theories (*ibid*: 234-7). This may be especially true when studying the ‘relatively unexplored intellectual terrain’ of institutions in the global South, as the two great institutionalist scholars featured in the chapter epigraph have argued, a terrain which likely defies textbook process and necessitates a more ‘messy and eclectic’ research style (Kohli, 1987: 6; Evans, 1979: 7). The potency of the developmental state concept (see Chapter 1), which both scholars subsequently helped to shape (Evans, 1995; Kohli, 2004), testifies to the value of such an honest and enterprising case-based approach.

Reliance on a single case study is more vulnerable to the ‘black swan’ critique: that it is impossible to generalize from its findings, merely to use them deconstructively. First, of course, deconstruction is a valuable academic end. Second, the generalizability problem can be overcome by strategic case selection, whether the case is chosen to be representative, extreme, deviant, or paradigmatic (Flyvbjerg, 2006: 226). The use of the power sector is such a strategic case. Chapter 1 explained why power provides an ideal lens on the political economy of contemporary India and the ostensibly pro-business state (see pp. 13-17 above).<sup>2</sup> Electricity is so crucial to the state, politics, the economy, and conceptions of modern life in India that conclusions gleaned from this case are likely to be of relevance to studies of these four areas more widely. Chapter 8 returns to the question of the wider ‘lessons’ of this study for examination of the Indian state more broadly, while the final section of this chapter discusses the limits of the electricity case.

Based on this reasoning I therefore attempt to build a rich, in-depth case study based on examination of the state as it is manifested in a single (if wide-ranging) policy area, electricity, aiming more for contextualization and detailed analysis than parsimony and abstraction. My objective is a ‘thick’ description of the state as it is manifested in the electricity sector, as Adger et

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<sup>1</sup> Flyvbjerg (2001) also points out that a large body of education literature suggests that such ‘learning’ may be especially effective through intuitive case studies rather than abstractions.

<sup>2</sup> Further details of the Indian electricity supply industry’s physical and technical dimensions are provided in Appendix 1.

al. (2003) attempt for environmental decisionmaking. Following Clifford Geertz (2000 [1973]), such thick description treats social-scientific analysis as an interpretive inquiry rather than an observational science, in which the distinction between description and explanation is blurred. It aims for a balance between universalization and particularistic relativism—‘not to generalize across cases but to generalize within them’, in Geertz’s words (2000: 26)—by identifying ‘connections and general patterns that are characteristic of a certain context’ (Adger et al., 2003: 1095). The remainder of this chapter explains the ‘messy and eclectic’ data collection and analysis methods that this dialogue between theory and practice has birthed, before turning to the limits of the power sector case study.

### **Data collection and methods**

The first section argued for a ‘thick’ description of the state in a single policy area, a concern that was driven by the issue (the changing nature of the state) rather than methodology. This section outlines the strategies used for data collection and analysis.

Thick description, with its emphasis on pluralism, holism and interdisciplinarity, naturally suggests a portfolio of heterogeneous types of evidence, sources and material. At the same time, research into the meso-level of the state—its organizations—is perhaps especially difficult. We cannot simply read off organizational characteristics from their formal-legal forms and mandates, while their scale is such that individual interviews alone cannot capture the state’s organizational structures or the complexity of policymaking (Shore and Wright, 1997: 14). Indeed, so many individuals work within the state agencies that appear in these pages that representative coverage would be literally impossible: State power utilities alone employed 660,000 in 2011-12.

In line with these two drivers—the ‘pull’ of thick description and the ‘push’ of organizational complexity—I opted for a plurality of different sources and methods. The thesis combines and triangulates insights from elite interviews and observation of industry events with analysis of primary documents and secondary data. Such a plurality of methods, combining discursive data with secondary data on ‘material’ outcomes, is endorsed in the burgeoning subdiscipline of the anthropology of policy (Shore and Wright, 1997). Each of these methods presents its own strengths and challenges.

*Elite interviews*

I carried out formal interviews with around 30 bureaucrats, politicians, businesspeople, and other power sector observers (e.g. journalists and diplomats specializing on energy), and had informal discussions with as many again.<sup>3</sup> The purpose of these interviews was to provide an insight into the everyday discourses that policymakers use, and to open a window on the inside of institutions. While no single interviewee could capture the contours of the whole state—necessitating the use of plural methods—the interviews were useful in revealing policymaker perceptions of the state’s structure and power policy’s difficulties. The interviews were open-ended, flexible, and ‘semi-structured’ by virtue of my communicating a loose agenda for discussion at the outset of the meetings. Virtually all were carried out in New Delhi, supplemented with two more in Oxford. The informal discussions were off-the-record; I do not quote directly from this material.

Ethical considerations are, of course, an integral part of the interview experience. Interviewees gave informed consent, having been clearly informed about the purpose of the research and subsequently inviting me to meet them. (Others opted for more informal ‘chats’.) However, the interviews did not present the type of ethical challenges ‘typical’ for anthropologists. Almost without exception, the interviewees were of elite status, extremely bright and well informed, and evidently understood the research better than the researcher. This presented its own challenges. The close study of elites is an ‘exercise in political reflexivity’ (Shore, 2002; Nader, 1972). The interviews were characterized by varied asymmetries of power, and quality and depth.

As elite interviewees recommend (Ostrander, 1993: 11, 9), I carried out extensive preparation for the likely process of ‘being “checked out”’, and sketched a loose ‘itinerary’ at the outset of each interview. Some were forthcoming, *because* rather than in spite of the fact that I appeared ‘perfectly harmless’ (Gewirtz and Ozga, 1994): young, female, foreign, and (crucially) not a journalist. (For others I appeared *too* harmless: a handful of interviewees would assume at

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<sup>3</sup> This number was somewhat restricted due to the difficulty of gaining access to senior policymakers, especially in the midst of the Coalgate scandal.

the outset that I knew nothing whatsoever of Indian politics or society: ‘You may not have heard of the caste system,’ began one interviewee.)

Despite this preparation, several of the interviewees were accustomed to and adept at controlling the pace and content of encounters (many give frequent media interviews). Like Susan Ostrander, I experienced the elite tendency to “just talk”...to converse easily, freely, and at great length but not necessarily with the kind of substantive content the research requires’ (*ibid*: 21, 18). Whilst tactics to keep control of the agenda were sometimes successful (such as stopping writing if we wandered too far from the agenda), it was clear that other interviewees used digressions as an active strategy, and not, as Ostrander suggests, only as the result of ‘an accurate reading on their part of their social status and power’ (*ibid*: 22).

Some interviewees were therefore more forthcoming than others. In a non-academic account of one such fieldwork experience, I was barely exaggerating when I described one less than penetrating interview with a joint secretary in the coal ministry, within the labyrinthine chaos of Shastri Bhavan:

The bureaucrat himself was unusual. No paunch here: he was lean, with a firm dry handshake and cheekbones. He had the usual affability, though, combined with a reticence that was easy to miss at first.

‘Isn’t it difficult working within such a big and complex government?’

He smiled. ‘There are many ministries, yes, and over seventy-five ministers at the Union level. Energy policy earlier almost fell under one single ministry. Now there are ministries of power, coal, mines, petroleum and gas, renewable energy. Then the other important ones must be consulted on some such matters: the ministries of finance, railways, environment, rural development, law, fertilizers (they use gas), steel (they need coal), and tribal affairs (because of land). And, of course, the Planning Commission and the Prime Minister’s Office.’

He smiled again, showing very white teeth. ‘But we all work together very well.’

... I tried again. ‘What about the complications of federalism?’

A third smile. ‘The (provincial) states are usually very helpful. We all work together very well. More tea?’ (Chatterjee, 2013: 113-14)

As this suggests, throughout my fieldwork, the limits of interviewing as a data source became apparent, both due to issues of interviewee access and interview quality. This analysis moves away from a naïvely positivist approach to the merits of interviewing. The following analysis owes a great debt to the thoughtful analyses offered so generously by my interviewees. However, the blessing and the curse of researching the Indian power policy elite is that many of the key players are seasoned political commentators and extremely practised interviewees. Additionally,

while they were all well informed, and most were forthcoming, the information they provided of course reflected their *perceptions* of their *experiences* of realities—often on the specific aspects of the sector with which they were directly involved—rather than that ‘reality’ directly. As my attention began to shift away from the specifics of power policymaking towards the state’s transformations, a shift informed in part by these interviews (see next section), these demerits became more pronounced. As Akhil Gupta noted, the study of ‘nonlocalizable institutions’ like the state makes us ‘question the assumption regarding the natural superiority—the assertion of authenticity—implicit in the knowledge claims generated by the fact of “being there”’ (1995: 376).

I therefore attempt wherever possible to triangulate interview data with other data sources, preferably those in the public domain and readily available for crosschecking by other scholars. Some interviewees requested our conversations be treated as informal or anonymous. In keeping with the conventions of public administration literature, I therefore identify speakers only by affiliation in the text unless they are in a public setting such as an industry event. The narrative below uses interview data parsimoniously when they are not substantiated by alternative and more transparent sources (cf. Soares de Oliveira, 2007: 17). In any case, most such interviews helped to inform my overall analysis rather than definitively shaping any single aspect of it. There exist a wide range of these alternative sources.

### ***Participant observation in energy events***

In addition to the elite interviews, I attended three industry-bureaucrat conclaves on the travails of the power sector and Indian energy policymaking. Located in plush five-star hotels, these were organized by the Federation of Indian Chambers of Commerce and Industry (FICCI), a multi-industry apex lobby body; the ratings and consultancy agency CRISIL; and the Independent Power Producers Association of India (IPPAI), a lobby group for private power producers. Alongside these, I was able to watch highlights from other IPPAI events, videos of which are available on YouTube. These events provided useful insights into business perceptions of the sector’s problems and the dynamics of state-business relations. (As opportunities for propositioning interviewees they were more limited. Faced with competition from senior bureaucrats, the lanyard that read ‘PhD researcher’ was like a ‘scarlet letter’ or a leper’s bell (Chatterjee, 2013: 64).)

*'Grey literature' and quantitative data*

A third source of primary material lies in official and semi-official documents. The research benefits from the ethos of transparency—or at least document-sharing—brought in part by the World Bank's influence in the 1990s. A vast corpus of official literature is readily available, from both the Indian government (especially the central agencies) and multilateral players. The following chapters make use of a wide range of such documents. These include Five Year Plans and other Planning Commission reports, annual reports from the power ministry and Central Electricity Authority, Central Electricity Regulatory Commission evaluations and orders, audits by the Comptroller and Auditor General, SOE prospectuses, State-level reports (where available), transcripts of parliamentary debates, and the findings of specially convened 'expert' committees. These governmental documents are supplemented by reports from the World Bank and other international financial and energy institutions.

'Grey' literature, consultancy reports, international finance institutions, and others all provide sources of quantitative data, upon which they often rely heavily. Although this analysis critically examines some of the agencies that produce such data, this does not invalidate the data themselves. Nonetheless, when I draw upon such data at various points in the discussion, I do so with some caution: it is frequently somewhat unreliable.<sup>4</sup> For this reason, I use quantitative data to illustrate broad trends rather than relying on it to make fine-grained points, and triangulate with other sources of evidence before drawing conclusions (see especially Chapter 6).

*Memoirs and media commentary*

In addition to this official literature, the voice of policymakers can be heard in less formal settings. Senior policymakers have provided their own commentary, some of which provides rich material.

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<sup>4</sup> Sukhamoy Chakravarty, fresh from leading a sweeping energy policy review for the GoI, attributed India's chronic power woes in part to information failures due to sectoralism and neglect of the informal economy (1987: 40). Production statistics typically have a lag time of six months. The lack of metering (strongly resisted in many rural and residential areas) also precludes accurate data collection, although central initiatives such as the R-APDRP and the public-private Smart Force Forum are seeking technological solutions to improve this. This unreliability is greatest when data risks being unflattering to the state. The figures for theft have been especially misleading, often masked by calculating agricultural subsidies as a residual. When the World Bank pushed for improved data at the turn of the millennium, T&D losses therefore abruptly doubled in official figures.

For example, the key liberalizing power secretary (Shastri, 2005), the first chairman of the central regulator CERC (Rao, 2004, 2011), and the technocratic architect of the Electricity Act (Haldea, 2011) have published books or essay collections. They also write regularly for newspapers—and even *Economic and Political Weekly* (e.g. Haldea, 2001; Rao, 2002; also Sarma, 2013)—and have been interviewed often by the business media and (at least Shastri and Rao) on the power lobby conference and roundtable circuit. Other bureaucrats have published autobiographical accounts of their time holding high office in the energy sector (Godbole, 1996; Singh, 2009; Abraham, 2009; Parakh, 2014). The quality of such contributions varies greatly, with the genre tending perhaps inevitably towards one-sidedness and self-aggrandizement (Freeman, 2008), but they nonetheless provide useful accounts of policymaking away from the dry utopianism of the Plans.

In Britain electricity is often seen as a dull, prosaic issue. This is not true in India. Media coverage of the sector, especially by a key handful of energy journalists working for business newspapers and crusading investigative reporters published in more critical media, is often detailed and astute. There also exist several advertisement-heavy sector-specific publications, such as *PowerLine*, *PowerWatch India*, and *Power Insider Asia*, as well as useful news aggregators like indianpowersector.com. Consultancies, investment firms, the ratings agency CRISIL, and the industry lobby groups IPPAI and APP are just some of the other bodies which also produce frequent reports, although some of these are difficult to access—that is, prohibitively expensive—for non-paying consumers. More accessible are reports from academic bodies and thinktanks such as The Energy and Resources Institute (TERI) and the Centre for Policy Research. Civil society and consumer bodies, especially the Pune-based energy NGO Prayas, also provide accessible, if sometimes polemical, accounts. This rich record I use to track state-business interactions, enabling the reconstruction of the political process of reform.

### *Scholarly literature*

Finally, I draw upon the scholarly literature on the Indian power sector, and especially the subset of writings on its political dimensions. This literature is substantial, although its concerns are often rather different. Much of this provides analysis *for* policy rather than *of* policy, and focuses

narrowly on very specific aspects of the power system. It nonetheless provides a wealth of data to be marshalled into more ambitious interpretations that focus on the state.

Although most politics and international development scholars treat electricity as an important but technical area, India is something of an exception. The detail of Indian policy planning often rests in the hands of technocrats, but Indian scholars have nonetheless long recognized that power policy is emphatically *political* in its nature and implications. This thesis is able to build on a rich existing literature on specific aspects of the politics of the Indian power sector and its institutional restructuring since 1991, although this is unevenly distributed: there exists a good deal of work on electricity regulators, for example, but far less on central state-owned enterprises. Much of the best of the existing literature—including Tongia (2007) and Kale (2014a) as well as most works published before 2005—concentrates only on the first twelve years of reform up to the controversial passage of the Electricity Act in 2003. Good literature on the post-Act period, like the collection edited by Rao (2011a) and the detailed study by Kumar and Chatterjee (2012), tend towards ‘a normative commitment to the market itself’ (Kale, 2015: 34). This thesis updates existing analyses to the present.

As this discussion suggests, amassing material is not the problem. Indeed, one long-term academic observer wrote that two years’ commitment was the minimum ‘to say something new in this much debated field’ (Ruet, 2005: 37). The sheer volume of work on the power sector—and the sector’s own empirical complexity—presents its own challenge, as the chapter turns to discuss.

### **From data to analytical narrative**

The opening sections presented a pragmatic view of theory building as an iterative relationship between theory and practice, informed by realist ontological claims. The arguments presented in this thesis (summarized pp. 17-18) were developed not solely through deductive hypothesis building but by combining deduction and induction. In practice this means a ‘messy and eclectic’ process, in the words of Peter Evans and Atul Kohli above, a world away from the neat model of standard positivist studies which move smoothly from variable-based hypothesis to analysing correlation. This section presents, as far as possible, an honest account of this research process.

Like the work of ‘field economists’, this process proceeded in several stages (see Harriss-White and Heyer, 2010: 4).<sup>5</sup> The initial stage was deductive, mining an interdisciplinary body of theory on the state and policy, and mining existing secondary literature on Indian electricity. At this point my overarching research question was somewhat different—‘How are public policy decisions made and enacted in the Indian electricity sector?’—and my governing hypothesis resembled the conventional ‘pro-business state’ theory summarized in Chapter 1 (pp. 10-12). Drawing on this theory, I then carried out two periods of interviewing and archival work, primarily in New Delhi, utilizing the plural methods introduced above. During the course of this data collection, my preconceived ideas about the pro-business state began to alter, and my interest started to shift outwards from the micro-level policy process to the broader ‘meso level’ of the state’s institutions, informing the later phases of collection. Again, this shift occurred in conversation with both data and theory.

In order to organize and process the copious set of data amassed, I deployed a simple, pragmatic, and open analytical heuristic framed around a standard linear policy process model (Figure 2.1). This imposed order on an extremely complex process, enabling a systematic but flexible approach to the ‘entire’ policy process while triangulating between different types of data. This state-based model of the policy cycle is a primarily *descriptive* heuristic; it does not do much analytical work itself. However, against the data collected and presented through this heuristic, existing theories of the state could be tested, modified, and developed. As Wendy Olsen (2004) has suggested, in this inductive process, triangulation between different sources and types of data does not simply serve to validate the research findings, but to generate an ongoing ‘dialectic of learning’ in which the researcher triangulates between and revises different (re)interpretations.

Figure 2.1 The intermediate organizing heuristic, based on the ‘linear’ policy process model



<sup>5</sup> This resembles the ‘constant comparative method’ of grounded theory (Glaser and Strauss, 1967), but it is less prescriptive.

The resulting case study draws together the threads of this process into an analysis of the transformations of the state in India in the liberalization era. Like Dashiell Hammett's *Continental Op* in the epigraph to this chapter—and the distinguished institutionalists who follow him—this narrative is not comprehensive or incontestable; it does not pretend to be an exhaustive account of *wie es eigentlich gewesen*, 'what actually happened'. Nonetheless, the detailed narrative case study has several advantages (Gotham and Staples, 1996).<sup>6</sup> Firstly, it is a realist response to the virtually inexhaustible (but often dubious) available information on the Indian power sector, selecting out only 'what matters' according to the governing concept of state capitalism 2.0. Second, it is sensitive to time (although the chapters as a whole are thematically rather than chronologically divided). As Chapter 1 noted, path dependency and sequencing are important, and such temporal ordering underlies the concept of layering deployed through the following chapters. Third, it is sensitive to context, complexity, and contingency. At the same time, this is not simply narrative as storytelling but a *strategic narrative*, informed throughout by a theoretical question and constructed through a continuous 'mutual adjustment' of account and theory (Stryker, 1996). I can only hope, as Peter Evans did, that although there may be some who disagree with 'my version of the story', I present a coherent, accurate, and provocative account upon which others can build (1979: 8).

### **Boundaries and limits: what this study is not**

No such study could hope to be comprehensive. The Indian state is too complex and multifaceted for any single study to capture the entirety of interagency relations. The case study approach to the state has its limitations too, as does the choice of the power sector as the focus. This final section clarifies the boundaries of the thesis, and the limited claims that it (is able to) make(s).

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<sup>6</sup> For this reason many celebrated sociological analyses deploy narrative accounts of case studies; see for example Skocpol (1979). Even rational-choice theorists are rehabilitating case-study-based analytic narratives; see Bates et al. (1998). It is not as if large-*N* studies are devoid of narrative, of course; it is simply arrived at more restrictively and presented with greater 'rhetorical inevitability' (Abbott, 2001: 135).

*Delimiting the power sector*

Electricity is an object of extreme complexity and odd ontology. Like other infrastructures, it is ‘conceptually unruly’, being both ‘things and also the relation between things’ (Larkin, 2013: 329): it is a ‘built thing’ (a physical and technological system of pylons and wires, linked with other systems—coal production, for example), a ‘knowledge thing’ (an administrative system of bureaucratic techniques, engineers, financing, legal regulation, and computers), and a ‘people thing’ (the socioeconomic settings that structure governance and provision). The politics of electricity are thus inseparable from the politics of its inputs (e.g. natural resources with environmental externalities) and the multifaceted politics of its outputs, which cover everything from environmental concerns and equity aims to agricultural policy and industrial trajectories. Any research must contend with this complexity whilst retaining a manageable focus.

I therefore draw somewhat artificial boundaries around power sector policy. While I attempt to relocate power policymaking in the broader context of the energy sector, the politics of some fuel sources receive short shrift.<sup>7</sup> I avoid sustained engagement with the crucial debate on the relationship between energy usage and the environment, an area which is now receiving considerable scholarly attention,<sup>8</sup> and consider rural electrification—the subject of several existing studies (Bose, 1993; Shaw, 2010)—only in broad sociological terms.

Even so, this study still cannot hope to capture the empirical complexity of the state’s manifestations in the power sector, and I have therefore set further arbitrary boundaries on the types and levels of institutions that I consider, boundaries that will irritate many. This is defiantly a study of the meso-level: of state agencies and their interrelations. The focus of this thesis is on *organizations*, not on institutions more broadly construed. It therefore does not touch upon informal institutions such as social norms. Nor does it deal with the microfoundations of these institutions. The micro-level internal dynamics of the agencies discussed below do, of course, influence the course of agencies’ and policies’ development (even as individual preferences are constituted by the institutional setup). I also omit detailed consideration of some organizations

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<sup>7</sup> I grant attention to Indian energy sources in rough proportion to their proportions in India’s contemporary installed electricity generation capacity; see Appendix 1. Nuclear and solar energy, which each account for only 2 percent of capacity, therefore appear only in passing. Coal, which in practice provides 70 percent of electricity generated, features far more heavily: in many ways the power sector is inseparable from developments in the coal sector.

<sup>8</sup> For a sense of this literature’s range, see Dubash (2012).

where they are only peripherally relevant to the specific case of the power sector or where ample bodies of literature already exist. While I discuss the rise of technocrats, for example, I do not provide a detailed discussion of the civil service as it is not of special relevance to electricity policy and there are a number of existing works on this topic.<sup>9</sup> Equally, I do not treat party-political variations in any great depth, although Chapter 6 in particular notes the power–politics rent-seeking nexus that has emerged in recent years.

In three ways this work goes against the grain of much recent scholarship. First, as discussed, it deals with the state rather than with society, although it relates the two. In this it is intended to complement more society-centric existing literature—notably that on the pro-business state—rather than making a strong claim about state autonomy.

Second, although I make every effort to be sensitive to regional variation, the thesis neglects State-level politics to a degree that will appear criminal in some eyes. Once dominant, such a focus on the national level is perhaps rightly unfashionable today. The thesis attempts to view policy on multiple levels and discusses centre-State relations at length, but necessarily can only describe State-level cases with swift brushstrokes. Wherever possible I alert the reader to more detailed State-level treatments—such as those provided in the most important recent contribution to political scholarship on Indian electricity, Sunila Kale’s *Electrifying India* (2014a), which provides an admirable treatment of precisely the question of regional variation (up to 2003).

Third, this thesis does not focus heavily on policy implementation. There is much truth in the notion that ‘Policy is what it does’ (Harriss, 1988; Lipsky, 1980). However, neither policy—nor the state—are reducible purely to the micro-politics of street-level allocation. There exist many micro-level studies of policy implementation, from food distribution (Mooij, 1999), anti-poverty policy (Gupta, 2012) and gender (Fernandez, 2011), to urban planning (Sundaresan, 2013) and disaster management (Manor, 1993). Even on electricity there already exists a large literature relevant to the street-level state and frontline implementation, including surveys and studies of household electricity usage (Bose, 1993), consumer attitudes to subsidies and theft (Santhakumar, 2008), and one very valuable quasi-ethnographic study of State electricity boards (Ruet, 2005). In

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<sup>9</sup> See, for example, Potter (1996) and the oeuvre of S.K. Das (1998; 2001; 2005a, b, 2010, 2013).

contrast, this study is focused on more general processes of institutional transformation in the state's form, function, and modus operandi.

*The limits of the power sector as case study*

Even within these boundaries, such a study must contend with the 'blind men and the state' problem. Like the disaggregated elephant, the Indian state looks different depending on which element the blind scholar seizes upon. There are some key characteristics of electricity which make the state's role in the sector unusual.

The energy and utilities sectors have a strong state presence in many countries, and more recently have proven especially prone to pro-business rather than pro-market tendencies. As Appendix 1 explains, segments of the on-grid electricity supply industry, notably transmission, remain a natural monopoly and complementarity requires coordination across the network to ensure grid stability. Even in the generation segment, there also remain economies of scale in production for some thermal power sources (although this is less true than in the high noon of large-scale coal), comparatively high barriers to entry, and switching costs, all of which favour incumbents, rent-seeking, and the exercise of market power.

For this reason I have often been asked whether electricity is a 'special case' of continuing state capitalism. It is indeed unusual, and the claims I make are correspondingly modest. Two points can be made, however. First, as noted, the sheer importance of electricity means that it ought to be integrated as an empirical pillar for interpreting Indian wider political economy, like labour, capital, and land; it is not a deviant outlier but may be a deviant fundamental. Second, Chapter 8 shows that several of the key state-capitalist trends documented below can be discerned more broadly in India's political economy.

This thesis therefore does not intend to generalize about 'the state', or even the state in emerging economies; its conclusions are relevant only for India (although Chapter 8 also draws some parallels with scholarship on other major emerging economies). The forms and functioning of the Indian state vary by sector; we can therefore extrapolate about the state from power sector evidence only with caution, a point to which the concluding chapter returns. Consequently, the project does not aim to develop a generalizable model of the state in the era of market

liberalization. My objective is simply to contribute to the debate on the contemporary Indian state and its pro-business character, putting a little flesh on the bones of the state capitalism 2.0 that I posit. Nonetheless, it hopes to provide some provisional higher-order insights. By focusing on what the transformations of the power sector can tell us about the emergent state-capitalist framework, the thesis aims to contribute to the wider literature on the state in India. It does not aim to provide a conclusive summary but, as I hope the conclusion and epilogue (Chapters 8 and 9) show, attempts to remain 'open' in its engagement with the currents of contemporary research.

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PART 2  
THE FORMS OF  
STATE CAPITALISM 2.0

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# 3

## Institutional genealogies, 1948-1990

And the first step, as you know, is always what matters most, particularly when we are dealing with those who are young and tender. That is the time when they are taking shape and when any impression we choose to make leaves a permanent mark.

—Plato, *The Republic* (2003: 69)

### Legacies

The roots of India's contemporary public-private hybrid system lie in the sector's pre-liberalization history. The power sector is perhaps particularly 'a prisoner of its past' (Helm, 2004: 5): assets have long lag-times and lifespans, entrenching today's choices for decades, while environmental damage may be permanent. Institutions, too, are path dependent. Once the decision is taken to create particular organizational forms, they often become self-reinforcing. The costs of reversal rise over time, making many institutions highly change-resistant (Pierson, 2004). They therefore continue to shape political behaviour even once the initial socioeconomic conditions that prompted their creation have dramatically altered and their 'fit' with the environment declines. To understand the contested and incomplete pro-business transition, we must therefore understand how organizational change can both lag and condition societal change.<sup>1</sup>

The public-private hybrid system comprises key organizations from the older statist era which have persisted beyond 1991, atop which new organizational forms have accreted (see

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<sup>1</sup> The most sensitive analysts of the Indian power sector, Navroz Dubash and Sunila Kale, have both realized the importance of institutional 'lock-in' (Dubash and Rajan, 2001; Kale and Mukherji, 2013; Kale, 2014a; see also Shaw, 2010).

Chapters 4 and 5). The patterns of politicized resource allocation established during this period have not withered away with the state's ostensibly pro-business reorientation (see Chapter 6). This chapter provides genealogies of these crucial features—both crucial *organizations* and *patterns of resource allocation*—which have survived to constitute the contemporary system. It traces their development from the early years of Indian electricity through to the beginning of power sector liberalization in 1991. As the genealogical method suggests, this account provides not a pure history but a 'history of the present' aimed at and impelled by a diagnosis of the contemporary system (Foucault, 1995: 31), while moving away from the assumption that the developments it charts are rational, functional, or inevitable rather than contingent. The thesis explores India's dysfunctional hybrid system. This chapter is accordingly concerned to illuminate both the organizational components of the public-private system (an account continued for the post-1991 period in Chapters 4 and 5) and the state's internal incoherence and dysfunction in its inter-agency operations as it manifested in the pre-liberalization era (themes picked up in Chapters 6 and 7).

The chapter begins by providing a macro-level organizational genealogy of the sector, focusing on the role of the state versus the private sector and that of the States versus the centre. Before India's constitution came into force in 1950, the sector's incremental nationalization and the role of federalism, both compromises, were hotly contested. The second section provides a genealogy of patterns of resource allocation, patterns fostered by the provincial (State) dominance of the crucial distribution segment this formal foundational settlement had secured. The result was a system of politicized subsidies—low residential and especially agricultural tariffs cross-subsidized by industrial consumers and exacerbated by tolerance of pervasive electricity theft—that would drain the sector of resources and set the stage for restructuring and renegotiation of the constitutional settlement by the 1990s.

The third section examines the centre's struggles to correct the sector's course, reviewing efforts to combat this state fragmentation and politicization, which often took the form of attempted centralization. The Indian state's problems with organizational rivalries and complexity, so evident in the contemporary period, were visible early. The statist/private and centralized/federal contestations were complicated by the feebleness of the central planning

apparatus from the moment of independence. This implied two trends going into the 1990s. First, strategies of arena shifting were considered a means to insulate the sector from ‘politics’. Second, however, the centre’s ability to effect policy change was heavily constrained by its own weakness, by electricity’s federal governance structure, and by the increasingly powerful interests vested in the subsidy regime. The obvious failures of this statist model—state capitalism 1.0—to deliver adequate power provision presaged the policy changes of the 1990s.

### **Institutional genealogies: foundational debates**

The broad institutional trajectory of Indian electricity has frequently been influenced by external trends: it has been a ‘norm taker’ rather than norm maker (Dubash, 2011). The early history of electrification saw a variety of industry structures emerge organically (Hughes, 1983). Nonetheless, ‘electricity systems are machine-like in their nature’, requiring coordination throughout their various stages (Dubash and Singh, 2005: 5251; see also Appendix 1). In the early decades of the twentieth century a number of countries therefore opted for vertically integrated, large-scale solutions, with the role of coordinator increasingly earmarked for the state.

In the aftermath of the First World War, there began to emerge a broad international consensus across the ideological spectrum about the need for some form of state intervention in order to industrialize quickly, manage economies, and foster national self-sufficiency. Electricity formed a core component of this notion of progress. Upon taking power in Russia the Bolsheviks immediately recognized its utopian potential, and thus opted for an intensive programme of electrification under the famous GOELRO Plan, prototype for the later five-year plans. The choice of a centralized model of electrification was not inevitable, but meshed with the new regime’s desire for swift socioeconomic transformation within a top-down administrative system (Coopersmith, 1992). Lenin himself—coining the phrase ‘the commanding heights of the economy’—had declared that electrification was *the* key ingredient of communism alongside the soviets (1965: 516), a phrase ‘invoked like a mantra’ throughout the Indian debates of 1948 (Kale, 2014a: 37).

Nor was the notion that electricity was a ‘strategic industry’ confined to Russia. In Britain a new Central Electricity Board was created in 1926 to oversee capacity additions, build a

synchronized grid, and standardize voltages and frequencies in distribution. This centralizing trend was only encouraged by technological progress, which by the 1920s ‘was making large generating stations more economical’, and later by the Great Depression and the war effort (Millward, 2000: 164). Governments in Britain and France stepped into the sector through nationalization. Even in the United States, powerful interests came to a monopolistic ‘utility consensus’ in the early 1900s: private monopolies operated in noncompetitive markets, supplemented by heavy state regulation and, from the 1930s, a turn to centre-led mega-projects like the Tennessee Valley Authority (Hirsh, 2000; Chick, 2007). This emerging global consensus on the optimal industry structure—centralized, large-scale, and with an important role for the state—reached India in the years before independence.

### *Statism versus private participation in India*

Although India has been an international ‘norm taker’, the specific structure of its power sector was conditioned by its own political, social, and technical exigencies. In its earliest days under colonial rule, the tiny Indian power sector<sup>2</sup> comprised a number of small private suppliers in urban areas, with licensing largely in the hands of local governments. Even at this time, electricity was bound up with the uneven project of state-building and modernization: it first arrived in Delhi to light the coronation durbar of 1903, for example (Coleman, 2008). The first foray into legislation (on safety) dated back to 1887, but not until 1910 did an Indian Electricity Act attempt to instil cohesion into the fragmented sector through standardized licensing and safety regulations; new central departments and the office of Electrical Advisor were created to oversee the sector.<sup>3</sup> Nonetheless, these efforts stopped short of any central attempt to coordinate overall development. Licensing remained firmly in the hands of local and provincial governments, while the question of ownership remained largely untouched.

As in much of the rest of the world, the notion of a greater role for the state increasingly gained credence. By 1936 the idea of a government takeover could be mooted for the Delhi

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<sup>2</sup> Total generation capacity amounted to a mere 1,362 MW at independence, versus 173,626 MW by the end of 2011.

<sup>3</sup> Copies of the 1887 and 1910 Acts can be found at <http://lawmin.nic.in/legislative/textofcentralacts/1887.pdf> and <http://www.cercind.gov.in/IEA1910.pdf>.

utility (Coleman, 2008: 129). The colonial government provided one precedent for intervention. Spurred on in part by wartime exigencies, it stepped into the planning process, constituting a series of committees for post-war planning.<sup>4</sup> In 1941 the new post of electricity commissioner—which had existed in Britain since 1919—was created to secure war production and monitor the sector. Still, ‘into the 1940s, the central government’s role was restricted to data collection with some limited coordination functions’ (Kale, 2014a: 33-4).

For many in the nascent nationalist regime, state intervention in the sector appeared a necessity. Discussions in 1930s India turned towards comprehensive visions of a future nation-state, gradually phrased in the language of economics (Zachariah, 2005). Nationalists were aware of international currents. Nehru described the Soviet electrification programme in glowing terms (Nehru, 1989 [1934]: 848), while the Indian National Congress’s newly created National Planning Committee observed in 1938:

Social ideas regarding generation and supply of electricity have undergone a complete revolution in all countries of the world... [I]t has become a domestic and industrial necessity comparable with water supply, and is an essential element of modern life and civilisation. (cited in Coleman, 2008: 135)

Alongside economic growth, technological development would bolster the independent nation’s prestige, authority, and legitimacy (Abraham, 1998). In the face of coordination problems, the need for research and rapid learning in select industries, and to correct market failures, the state’s role seemed assured. In this process of planned, state-led development—and the concurrent process of state-building—everyone from Gandhians to businessmen agreed that electric power would play a key role.<sup>5</sup> The Bombay Plan drawn up by industrialists shortly before independence classed power as first among the commanding heights of the economy to be left in state hands (Thakurdas et al., 1944). The memorandum was reprinted and translated into several languages due to demand, and endorsed by both the viceroy and the Federation of Indian Chambers of Commerce and Industry.

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<sup>4</sup> The chairmanship of the public utilities and electricity committee was assigned to future constitutional architect B.R. Ambedkar, a significance he would retain into the Constituent Assembly.

<sup>5</sup> M.K. Gandhi and his followers, advocates of the most famous (if marginalized) Indian alternative to high-modernist development, were not entirely hostile to electricity (Adas, 2006: 273); a swift search of the Mahatma’s writings reveals a pragmatic recognition of the utility of electric lights at mass meetings (Gandhi, 1999). Nonetheless, Gandhi in an October 1931 interview warned of the dangers of such centralized power (reprinted in *Harijan*, 2 November 1934; cited in Kale, 2014a: 28). Despite this, Nehru stated that electricity made small enterprises ‘economically capable of competing with large industry’, citing Gandhi’s approval (1946: 406-7).

For the newly sovereign Indian state, electrification was therefore a prime task. Nonetheless, the role of the state was not preordained either in degree or form. Composed as it was of divergent interests, the National Planning Committee struggled to agree on the preferred degree of state intervention across the economy—though the majority agreed that key industries and public utilities should be state-owned (Nehru, 1946: 398). The years preceding and immediately after independence saw shifting debates that shaped the sector’s broad structure for decades to come: over *statism* and nationalization *versus private participation*, and over the sector’s effective *federalization* versus the attempted *centralization* that countered it (Kale, 2014a).

Electricity was one of the first issues that the Constituent Assembly addressed, and was seriously debated, with discussion of its technical, economic, and administrative aspects over the course of several days. Whether the state would take *sole* control of the sector was contentious. Though a wide variety of international examples were regularly cited in the debates (Kale, 2014a: 28-43), they did not unequivocally support a purely statist solution. British nationalization of electricity (and coal) dated only from 1947-8, while despite the creation of the huge and much-mentioned TVA, the United States resisted nationalization altogether. Many voices favoured nationalization, often on equity grounds, as rural electrification would otherwise become financially impossible. Others argued that the state lacked the expertise to run the sector. Additionally, private power companies provided a valuable source of revenues for some State administrations (*ibid*).

The final piece of legislation passed by the Constituent Assembly, the Electricity (Supply) Act of 1948, expressed this compromise. It aimed ‘to provide for the rationalisation of the production and Supply of electricity, and generally for taking measures conducive to Electrical development’.<sup>6</sup> While this enshrined state control, with direct public investment and tight regulation, it was not yet a nationalized monopoly (as is often assumed). Although the state would play the leading role, existing private utilities were to be tolerated, with decisions left in provincial hands.<sup>7</sup>

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<sup>6</sup> A copy of the Act can be found at <http://www.cercind.gov.in/ElectSupplyAct1948.pdf>.

<sup>7</sup> The degree of Nehru’s ideological commitment to state ownership has been much debated: Nayar (1989) permits ideology a substantial role in explaining the shape of India’s ‘mixed economy’ before 1991, but the state-market compromise in the power sector perhaps instead supports Khilnani’s suggestion that Nehruvian practice was ‘more improvisatory than ideological’ (1997: 76).

It took eight more years for state control to solidify. Outside the contentious Constituent Assembly debates, belief in state-led development continued to crystallize with the enactment of the constitution, the beginning of planning, and parliamentary acceptance in December 1954 of ‘the socialistic pattern of society as the objective of social and economic policy’. This culminated in the Industrial Policy Resolution of April 1956, which Indira Gandhi’s long-time advisor P.N. Dhar (2000: 99) called ‘perhaps the most important statement of economic policy’ of the pre-liberalization era. As the federal compromise shifted asymmetrically in one direction (to the States; see p. 64 below), so did the compromise marked by the mixed economy model. Produced in advance of the famous Second Five-Year Plan, closely associated with the two-sector pro-industrialization model of statistician P.C. Mahalanobis, the Resolution argued that India’s need for accelerated development under the ‘socialist pattern’ ‘require[d] that all industries of basic and strategic importance, or in the nature of public utility services, should be in the public sector’ (§6). To do so it reserved future investment in a number of ‘Schedule-A’ industries exclusively for the state. These included (*inter alia*) atomic energy, steel, railways, coal—and the generation and distribution of power.<sup>8</sup>

By the mid-1960s, India’s growing economic problems, food crisis, and dependence on foreign aid prompted a short-lived phase of liberalization in industrial policy (Chibber, 2003). Statism in the energy sector was left untouched, however, or even extended (p. 83 below). Corresponding with the increasing populism and centralism of the Indira Gandhi regime—indeed, generation capacity additions featured in the notorious ‘20-point programme’ which the regime insisted defined the Emergency (Clibbens, 2014: 31)—this nationalization came at a high point for nationalizations in the developing world generally.<sup>9</sup> Writing on energy for the World Bank, P.D. Henderson observed that ‘[t]he role that now remains for private enterprise [in India] is extremely small, and is continuing to diminish’ (1975: 37), even as regimes after 1975 began to take the first cautious steps towards public sector reform. Broadly, the state-led nature of the sector would remain intact until 1991—and even then the state’s importance proved resilient even if its role changed, as later chapters demonstrate.

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<sup>8</sup> The Resolution continued to tolerate the existence of existing licenced private units (§8).

<sup>9</sup> The mean SOE output as a percentage of GDP in India from 1975-85 was 10.8 percent, slightly lower than the low-income-country mean of 13.6 percent (Musacchio and Lazzarini, 2014: 31, 35).

### *Federalization*

Just as the 1948 Act embodied a mixed-economy compromise, it enshrined a compromise between the centre and States. The most ‘important wellspring’ for independent Indian debates was the colonial Government of India Act of 1935 (Kale and Mukherji, 2013). It included electricity on the Concurrent list, with power shared between both the centre and provincial legislatures.<sup>10</sup> This federal division of labour was carried into independent India in the 1948 Act and the constitution,<sup>11</sup> though not without much argument. During the tortuous drafting of the 1948 Act, Ambedkar (along with the illustrious scientist Meghnad Saha) highlighted the potential hazard of consigning power to the ‘Concurrent’ list, thereby institutionalizing centre-State tensions and encouraging States to hoard power. They instead recommended central control, but were overruled in the name of political compromise (Kale, 2014a: 32-6, 41).

Responsibility for the sector was therefore shared between the central and State governments. The centre formulated long-term plans, technical analysis, and project approvals—under a Central Electricity Authority (CEA), all but moribund until the 1970s—as well as leading on inter-State and international matters. Policy implementation rested with the States. The crucial institutions were the State electricity boards (SEBs), vertically integrated monopolies under the control of State governments. By 1991, they controlled almost three-quarters of generation and virtually all distribution and tariffs. Indeed, Sinha (2005: 66) claims that ‘de jure (constitutional) responsibility’ was concurrent, but ‘de facto responsibility’ for the sector lay solely with the States.

Far from inheriting a unified colonial system, regional variation in power and irrigation systems long preceded 1948 (Kale, 2014b), and throughout the 1950s the States tightened their grip over the power sector. An amendment in 1950 clarified that the Act intended ‘the electrical development of the *Provinces* of India’ (emphasis added).<sup>12</sup> Several States, already slow to establish arm’s-length boards rather than retaining electrical departments within their own

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<sup>10</sup> A copy of the 1935 Act is available at [http://www.legislation.gov.uk/ukpga/1935/2/pdfs/ukpga\\_19350002\\_en.pdf](http://www.legislation.gov.uk/ukpga/1935/2/pdfs/ukpga_19350002_en.pdf).

<sup>11</sup> The constitution’s Seventh Schedule (List III, Item 38) again makes electricity a ‘Concurrent’ subject. This division of responsibilities does not apply to many of the industries associated with electricity. Railways, coal, mining, and especially atomic energy were monopolized for the centre, confirmed by the Industrial Policy Resolution of 1948.

<sup>12</sup> The 1948 Act (with amendments) is available at <http://www.cercind.gov.in/ElectSupplyAct1948.pdf>.

administrations (Rao, 2002: 3433), moved to secure control over the SEBs. An Amendment Act of 1956 stated that: ‘In the discharge of its function, the Board shall be guided by such directions on questions of policy as may be given to it by the State Government’ (§78-A). The CEA and high courts consequently found in favour of State governments rather than the SEBs in legal cases, arguing that tariff setting was ‘a question of policy’ (Sareen, 1998: 54).

The 1948 Act anticipated that the SEBs would operate as commercial entities, and the 1956 Industrial Policy Resolution had expected the state-owned sector to generate increasingly large surpluses, becoming effectively self-funding. This swiftly proved unrealistic. The result of State government control of the SEBs was to skew tariff and cross-subsidy structure, thereby undermining the sector’s financial viability (see p. 69 below). Most SEBs came to operate as extensions of State energy ministries, relying on inconsistent payments from the State government. This was exacerbated by their reputation for lax labour discipline: the initials of the Maharashtra, Gujarat and Madhya Pradesh SEBs were joked to stand for ‘Monday to Sunday Electricity Bandh’, ‘Gupchup Electricity Bandh’, and ‘Manpasand Electricity Bandh’ (Godbole, 1996: 122-3; Abraham, 2009: 192).<sup>13</sup>

It is commonly accepted that India’s de jure federal system, at least in the first decades after independence, was in fact unusually unitary. The centre’s ability to dismiss State governments and instate president’s rule (Article 352) is regularly cited as evidence.<sup>14</sup> The power sector was a clear exception to the cliché. In any case a contradictory tendency was present from the outset: early observers often argued that the system was too *dis*united. A Ford Foundation expert claimed that the Indian government had been ‘formed in an extremely federal mould’ inherited from the Raj’s ‘divide and conquer’ logic; ‘[t]he “autonomy of the States” became a dominant doctrine, not too critically examined in structural and operating terms’ (Appleby, 1957: 54-5). Appleby’s report, much discussed within the administration, concluded that ‘the Centre is without any real powers in almost the entire field of development’; reliant on the States for all implementation, it was ‘fundamentally lacking in administrative authority’ (45, 10).<sup>15</sup> Citing

<sup>13</sup> A *bandh* is a political strike or shutdown.

<sup>14</sup> Article 360 also gives the president the power to declare a ‘financial emergency’, although this has never been used. Together these provisions amount to ‘the Union’s long arm’ (Austin, 1966: 207-16). In addition, residual authority and most revenue raising rested with the centre (186-234).

<sup>15</sup> Appleby conducted his survey in 1952-3 and first reported to the Indian Parliament in 1953. On his recommendation, the Indian Institute of Public Administration was established; Nehru served as its first

Appleby, Selig Harrison agreed that ‘India is straitjacketed to a degree found in no other important federal nation’ by the detailed constitutional division of powers, which ‘carry certain built-in concessions to the federal principle which in practice invite the [S]tates to resist central direction’ (1960: 299).<sup>16</sup> In his seminal work on India’s constitution even Granville Austin concluded a chapter on federalism by citing Appleby’s words:

No other large and important national government, I believe, is so dependent as India on theoretically subordinate, but actually rather distinct units responsible to a different political control, for so much of the administration of what are recognized as national programmes of great importance to the nation. (Appleby, 1957: 22; cited in Austin, 1966: 234)

Aseema Sinha put it even more strongly: ‘The segmented structure’ of the state from 1947 on ‘was a system “designed to fail”’, eschewing the ‘autonomous and centralized state’ necessary to meet targets in favour of accommodating regional pressures—at the cost of economic growth (Sinha, 2005: 72-3). The cliché of the unitary Nehruvian state, nowhere more patently untrue than in the power sector, may be in part an aftereffect of the Emergency rather than an incontrovertible truth.

Electricity, resting on the Concurrent list, was especially vulnerable to such vertical fragmentation. This federalization did not benefit all States or economic sectors equally. The internal distribution of resources, existing infrastructure, and industry was highly uneven, as the government recognized from the First Plan (Planning Commission, 1952: ch. 26). Policies nominally developed to address this often exacerbated the problem. The Freight Equalization Policy of 1956 for ‘essential’ goods, including coal, meant that the Bengal-Bihar coalfields lost their comparative advantage in favour of the cities and industries of the west and coast, while development of transmission grids to electrify ‘backward’ areas failed to keep pace. Nor did States tend to cooperate horizontally, even before the ‘provincial Darwinist’ pressures of the liberalization era: hydroelectricity development was retarded in the 1960s and 1970s by ‘Interstate administrative problems’ (Tyner, 1978: 102), for example, while inter-State electricity trade was

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president. Even at this early juncture Appleby worried: ‘What of the future under more ordinary leadership, division of the control of [S]tates among different parties, and a growing sentiment for “autonomous status”?’ (1957: 9). The report prompted much soul-searching within the administration (e.g. Narain, 1954): calling it a work of ‘outstanding importance’, Nehru himself read it ‘two or three times’, and the Cabinet gave it ‘much thought’ (Letters to Chief Ministers, quoted in Potter, 1994: 84).

<sup>16</sup> Federal nations also tend to have constitutions that are difficult to amend, trapping them into such a division of powers (Galligan, 2006).

initially undercut by ‘undue reluctance to depend on uncertain supplies from a neighbouring State’ (Robinson, 1968: 176).

The pre-1991 power sector therefore fell under a vertically disarticulated state. These formal institutional arrangements proved highly resistant to change—and indeed more generally formal state apparatuses in India (often inherited from colonial rule) have displayed a striking degree of inertia, helping to explain the political system’s resilience even while compromising its responsiveness (Kapur and Mehta, 2005). The non-exclusive statist and Concurrent List compromises set the legal constraints on the sector’s development, and decisively helped to shape the regionally differentiated regime of subsidies that would come to characterize the sector. As the following section shows, this federal division of labour left power policy vulnerable to interest-group colonization at the State level.

### **Genealogies of resource allocation**

Across the world the postwar years witnessed rapid expansion of physical assets within such broadly state-owned frameworks. This was accompanied by an increased emphasis on social objectives and redistributive goals rather than pure financial costs (Hughes, 1983: 464-5; Helm, 2010: 15). Consequently, electrification was expanded in geographical and socioeconomic terms beyond narrow profitability, to consumers and areas—such as isolated rural villages—unable to pay the full costs and requiring cross-subsidization. This was mirrored by a tendency towards larger and more centralized generation, often accompanied (as in Britain and France) by a major shift towards coal (Chick, 2007).

The evolving patterns of electricity allocation in India loosely mirrored this trajectory, with increasing but regionally uneven emphasis on rural electrification. As we have seen, India’s formal organizational architecture for policymaking in the sector before 1991 was characterized by vertical fragmentation. This state disunity became especially apparent through the rise of power subsidies, notably for agricultural use, prompting elite users to respond by threatening to exit the public system. Creating both winners and losers, the repercussions of these patterns of allocation continue today.

### *Scarcity*

As neoclassical economics emphasizes, the foundational premise of policy is the perpetual scarcity of resources. That India is resource-scarce has long been a key part of energy policy thinking.<sup>17</sup> The country has been in the throes of a significant fuel supply crisis for virtually its entire independent existence, worsening with oil shocks. Already by 1962, the government was increasingly concerned about the adequacy of energy supply, the first official Energy Survey confirms: India was ‘not exceptionally rich’ in natural resources, energy imports already posed a strain on foreign exchange reserves, and electricity development was a substantial component of its foreign aid requests (GoI, 1965). After the 1973 oil shock the situation worsened. Power outages were endemic. ‘It is impossible at present to forecast with confidence a date by which [power supplies] will begin to improve,’ wrote a World Bank consultant in the 1970s, ‘still less the time when shortages and restrictions on supply will become an exceptional rather than a normal state of affairs’ (Henderson, 1975: 178).

Virtually from the outset, resource scarcity, security of supply, and the energy import bill were recurrent obsessions for New Delhi energy planners, though most attention fell on oil.<sup>18</sup> India’s changing energy portfolio did little to assuage these fears. Its initial reliance on big dams shifted swiftly towards an increased role for coal. The significance of the ‘black chief’ was such that the mineral was given its own ministry: ‘No other major coal producing or mining nation can boast of a Ministry of Coal’ (Lahiri-Dutt, 2014b: 1 n1). Today three-quarters of this coal is used for power generation, and the politics of the two are virtually inseparable. It became commonplace to claim that India had the fifth-largest reserves in the world. Yet doubts were expressed early about this figure and the low quality of Indian coal. In a lecture in January 1980, shortly before the eponymous committee’s important report on the power sector was published, Planning Commission member V.G. Rajadhyaksha argued that ‘we have, contrary to the popular impression relatively small resources of even our most abundant fossil fuel—coal’, predicting that ‘we shall run out of even coal in about 50 to 60 years’ (1980: §24). The likely overestimation of

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<sup>17</sup> The *environment*, as distinct from natural resources, has been given far lower priority. Environmental quality found essentially no mention in the first five Plans.

<sup>18</sup> For the civil servant V.G. Rajadhyaksha (1980), then leading a review of the power sector, conservation and scarcity were *the* key theme. See also Chakravarty (1987: 67).

India's coal reserves has only worsened the sector's problems.<sup>19</sup> In recent years the 'coal question' has dramatically reemerged in power sector debates.

Yet, despite these recurrent woes, state-owned enterprises often appeared to operate without any logic of cost-benefit analysis or resource efficiency. As early as 1961 Nehru wrote to his chief ministers, warning:

The public undertakings that we have set up are great achievements, but they have been described by an eminent authority as 'post office socialism'... I think it means that we look upon them as we look upon the post office which should balance its income and expenditure. That is not good. The purpose of the public undertakings is to help us in increasing our resources. The profits that normally would have gone to private owners should come into the public exchequer and add to the funds available for further investment. It is of the utmost importance that this should be done and this indeed is the test of success of any public undertaking. The old idea that profit-making is a private concern and not a public concern has to be discarded completely. Our public enterprises have to be run with the greatest efficiency and the greatest profit.<sup>20</sup>

From the late 1970s central policymakers increasingly recognized that SOEs, for all their undoubted successes, could prove a major financial liability. Around the expectation that the public sector would become self-financing through internal resource generation, 'the disillusionment has been phenomenal', with performance actually declining at the end of the 1980s (Ahluwalia, 1995: 240). While central power sector utilities remained moderately profitable, Joël Ruet found as late as the 2000s that State-level utilities were operating not with any sense of cost rationality but through an obsession with proceduralism and paperwork: 'what is decided on paper counts more than what actually happens' (Ruet, 2005: 43). In operating with a 'budgetary system without allocation of money' (*ibid*: 97), State utilities were simply responding to a more fundamental problem—the politicization of tariffs.

### ***Agricultural subsidies***

Energy's perpetual scarcity necessitates the development of a concrete politics of access and allocation (cf. Schaffer, 1984: 152). No energy sector in the world functions entirely without

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<sup>19</sup> Both technology and the natural resource base may be unavoidably uncertain but, as the irresolution over coal supplies indicates, this uncertainty has been worsened by poor data. Official documents often interchangeably discuss 'resources' (all coal) and 'reserves' (the far smaller portion that it is technically and economically feasible to mine); some estimates even include coal already extracted and burnt (Chand, 2008; Batra and Chand, 2011)!

<sup>20</sup> Letter dated 27 June 1961, reprinted in Khosla (2014). The 'eminent authority' was John Kenneth Galbraith, inspecting the country in 1960 shortly before becoming US ambassador to India.

subsidies and cross-subsidies of one form or another. Most visible are cross-subsidies for particular categories of end-user, typically reducing some tariffs while inflating others to compensate. In the Indian power sector, where supply has consistently failed to keep pace with demand and the scarcity constraint is consequently all too evident, such cross-subsidization has been a longstanding phenomenon, accompanied by ‘demand-side management’ to encourage lower consumption, especially at peak times.

The overall development priorities of the Government of India have shifted over time, as indicated by tariff and subsidy patterns. Colonial electrification occurred first in large metropolises. There began a pattern of privileged electrification, favouring British settlements, public spaces, wealthier urban areas, and military-industrial uses. Industrial consumers were cross-subsidized by residential consumers (Kale, 2014a: 47). Independent India somewhat reconfigured these priorities. The early planning efforts, notably the Second Five Year Plan, at the Centre and State level accorded priority to industrialization (Planning Commission, 1956). Until the early 1970s, industrialists continued to enjoy lower tariffs than other consumers.

Such cross-subsidization was already seen as problematic. The Venkataraman Committee of 1964 criticized under-recovery through low industrial tariffs and recommended a steep target for gross return on SEBs’ capital (GoI, 1964), and in 1967 a White Paper established economic criteria for price determination and rates of return (Tyner, 1978: 100). In the midst of the fuel crisis of the early 1970s, the Fuel Policy Committee again strongly recommended tariff revision in the States to receive a higher return on investment (10 percent), a figure institutionalized in legislation (GoI, 1975).

Despite this critique of industrial subsidies, from the 1960s the Indian power sector came to be characterized by increasingly large subsidies for agricultural users; this is the single most important policy legacy of the pre-1991 era. The importance of agriculture had long been enshrined, with power bracketed in the same ministry as irrigation, and under the Central Water and Power Commission, for two decades.<sup>21</sup> The rise of concerns about food security solidified this

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<sup>21</sup> Hydroelectric projects also often involved co-benefits for both power generation and irrigation. Power appears bracketed with irrigation in the early Five-Year Plans (Planning Commission, 1951; 1952: Chapter 26; 1961: Chapter 26). After several years of ‘Plan holidays’ during the difficult late-1960s, they were separated by the time of the Fourth Plan (Planning Commission, 1970). This link appeared even earlier in some States, notably Tamil Nadu, which developed a precociously early and extensive system of irrigated agriculture (Kale, 2014b).

linkage. The Third Plan accorded agriculture a new priority (Planning Commission, 1961), while the droughts of 1965-6 and 1966-7 led to a reorientation away from universal village electrification and towards small-scale, groundwater irrigation schemes (Basu, 1995: 198-9).

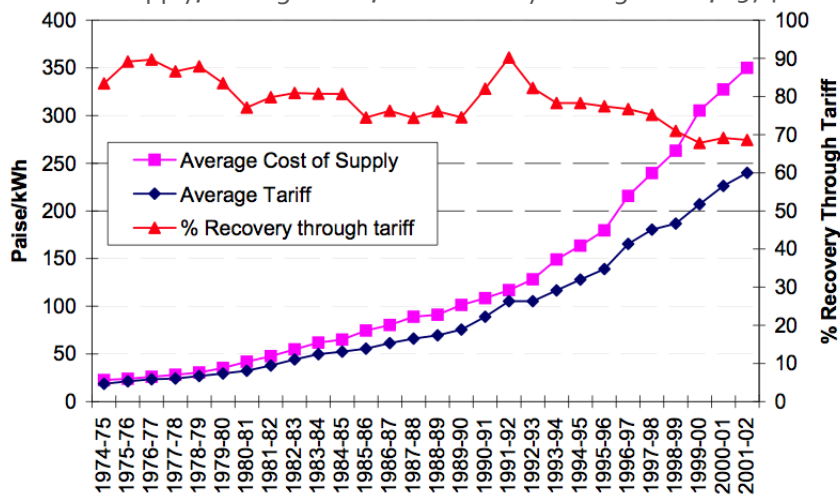
The ensuing 'Green Revolution' policies helped to spread irrigated agriculture, which in turn meant the spread of electric tubewells and pumpsets, solidifying the 'energy-irrigation nexus'. The number of electric pumpsets leapt from 192,000 in 1960-1 to over 1 million in 1968-9 (*ibid*), while electricity consumption by the agricultural sector grew at an annual average compound rate of over 14 percent between 1960/61 and 1970/71, bolstered (and partly financed) by the centre (Henderson, 1975: 165). With groundwater wells serving an estimated 75 percent of irrigated land, India became the largest groundwater user in the world, dwarfing even the United States and China, and creating a burgeoning environmental crisis (Shah et al., 2007).

These subsidies disproportionately benefited medium and large farmers, *not* small farmers or landless labourers. This reinforced the already growing power of wealthy agriculturalists, especially where irrigation and rural electrification were most successfully extended through Green Revolution policies. Such agriculturalists 'were not sharecroppers or poor peasants fighting landlords; these were "independent commodity producers"...caught up in the throes of market production, dependent on the state and capital for their inputs', including, crucially, electricity (Omvedt, 1993: 100-1). They exercised influence both through extra-parliamentary movements—electricity rates prompted farmer agitations in Punjab between 1972 and 1974, in Tamil Nadu in 1972 and again in 1977-8, and in Gujarat in the mid-1980s, for example (*ibid*: 100, 111, 262)—and increasingly within the State legislatures (Varshney, 1995).

The effects on the power sector's trajectory were swiftly felt. In the mid-1970s politicians in several States began offering free or nearly free power as an electoral sop to farmers, arguing that the cost of metering their supply outweighed the returns. Electricity theft, too, rose and was widely tolerated in the State system (see also Chapter 6). Meanwhile, targets based on 'village electrification'—which meant a village might be declared electrified with only one connection to a wealthy householder's residence—diverted the impulse towards universal rural electrification (Bose, 1993).

This pro-agriculture shift was not regionally even, as the above farmer agitations suggest.<sup>22</sup> States in which farmer lobbies mobilized or gained influence within government enjoyed higher levels of rural electrification; rural electrification in turn reinforced the growing power of these groups (Kale, 2014a). Increasingly intense party-political competition also led to downward pressure on agricultural tariffs as politicians competed to offer sops. Tamil Nadu, for example, enjoyed relatively high levels of rural electrification even before 1947, and turned early to cross-subsidization of rural electrification by industrialists. As a result it suffered from power shortages by the 1970s (*ibid*: 170). As early as 1968, Punjab turned to flat metering of agricultural power. In Maharashtra, Mumbai remained an enclave of private ownership even as State governments devoted major efforts to rural electrification (the power sector accounted for 40 percent of Maharashtra’s planned allocations by 1978). As in Punjab, metered agricultural supply (often doctored in practice) was replaced by flat-rate tariffs in 1977 (*ibid*: 62-99). Nonetheless, with significant generation capacity additions, Maharashtra’s utility was India’s largest and the only profit-making SEB by the end of the 1980s, when the State claimed to have achieved full electrification. Without the shield of private ownership, industrialists in Andhra Pradesh were less lucky: the short-term ‘effect was a zero-sum game between competing classes of consumers’, as rural electrification led to government-mandated power cuts for industrial consumers (Kale, 2014a: 149).

Figure 3.1 Cost of supply, average tariff, and recovery through tariff, 1974-2002



Source: Tongia (2007: 128); data from the Planning Commission

<sup>22</sup> Nor were the subsidies’ effects homogenous: particular segments of rich farmers especially benefited, such as coastal Andhra Pradesh and the ‘sugar barons’ of western Maharashtra, distorting crop preferences (Kale, 2014a).

This pro-agriculture shift worsened the power sector's already parlous financial condition, while the 'ideological differences over granting priorities to industry and agriculture' were supercharged by the endemic power shortages of the 1970s.<sup>23</sup> As cost recovery decreased (Figure 3.1), the magnitude of subsidies and theft threatened to cripple both the power system and State governments.<sup>24</sup> The Seventh Plan noted that the sector was characterized by 'particularly weak... [i]nternal resource generation' due to the SEBs (Planning Commission, 1985: §§10; 6.172, 6.183-5). Still the States appeared unwilling to 'tap the agricultural sector to raise resources', with unviably low electricity tariffs a key example (Chakravarty, 1987: 49, original emphasis).

As agricultural subsidies rose, State governments came in for increasing critique by the centre. The Rajadhyaksha Committee, convened to examine the troubled sector, argued that '[a]griculturalists and rural consumers as a class do not need subsidies', but '[u]nfortunately the political will to take measures, which are mistakenly felt to be harmful to agricultural interests as a whole but are economically fully justified, does not appear to exist' (Department of Power, 1980: 151, 82). It noted that the SEBs tended to be used as 'promotional agencies...under political pressures' with 'little or no control over their tariff policy' (*ibid*: 4). It blamed 'the desire of some State governments to exert a high degree of day to day control', as well as the SEBs' bureaucratic culture, 'inherited from the bureaucratic style of functioning, that most SEBs had when they were government departments' (*ibid*). Not for nothing did Madhav Godbole describe being an SEB chairman as 'the most thankless job' in the administration—second only to being State finance secretary (1996: 122).

The subsidies distorted the entire energy system. Although largely incurred due to political tariff-setting decisions by State administrations, many States did not compensate their SEBs for the lost revenue, losses that the SEBs passed to upstream companies through underpayments (see Chapter 6). The result was underinvestment in long-term expansion,

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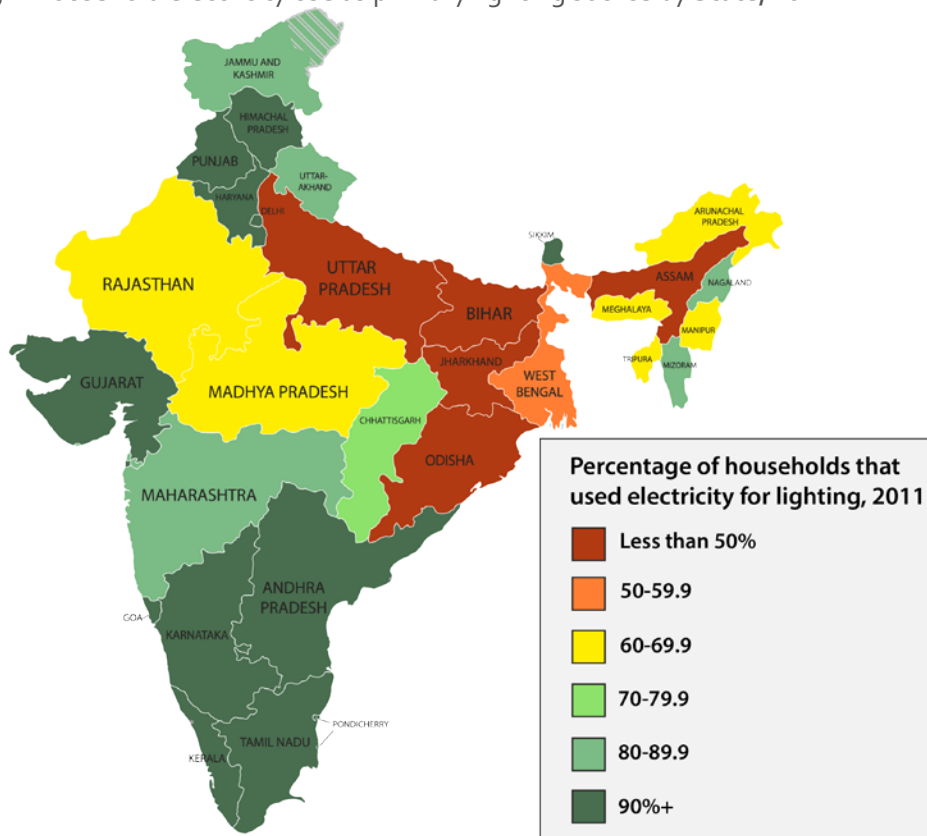
<sup>23</sup> P.M. Agerwala, *Economic Times*, 31 January 1975, quoted in Tyner (1978: 89-90).

<sup>24</sup> Whilst centrally-borne fertilizer subsidy attracts perhaps most attention, the subsidy on power is 'the largest in magnitude'—64 percent of total input subsidies in 1999-2000—amounting to approximately 1.4 percent of India's entire GDP, or 5.6 percent of agricultural GDP (calculated from figures in Gulati and Narayanan, 2003: 188, 199). Total agricultural subsidies came to 2.13 percent of GDP and 8.8 percent of agricultural GDP in the same year, which means that power subsidies came to almost 70 percent of the total (although Gulati and Narayanan admit they may have overestimated due to agricultural power subsidies being calculated as a residual, as discussed later). Farmers paid an average of only 9.35 percent of the unit cost of power supply in 2000-1 (Gulati and Narayanan, 2003: 183-4).

upgrading and maintenance of power infrastructure. This, plus increasing popular subsidies on other fuels, encouraged the substitution of short-term ‘convenience fuels’ like diesel oil and kerosene for unreliable electricity, while leaving the poor to ‘so-called “non-commercial energy”’ (Chakravarty, 1987: 67). Perhaps the only upside was that Indian coal and power technicians developed ad hoc some of the world’s most precocious energy efficiency and demand-side management strategies to compensate for pervasive load-shedding and high-ash coal: SEB staff could only manage the shortages through rationing supply.<sup>25</sup>

By 1991 cost recovery was only around 79 percent. The situation looked increasingly untenable. It was in this context that the calls for a less restricted role for the centre—and, finally, for some form of increased private participation—became increasingly vocal. If the subsidies created increasing returns for some interests in the medium term, the sector’s descent into low-grade crisis diminished these gains.

Figure 3.2 Household electricity use as primary lighting source by State, 2011



Source: Kale (2014a: 3); Gol (2011).

<sup>25</sup> Interview, USAID official, Delhi, 1 May 2012. During the 1990s he worked for the World Bank, advising on energy and power policy in India.

These regional political economies of power are path-dependent, and their effects continue to be felt into the liberalization era. On one hand, strong farmer lobbies helped to secure greater investment in rural electrification. The availability of electricity today continues to reflect this: in coal-rich Jharkhand, fewer than half of households use electricity as their primary source of lighting while in Delhi the 2011 census figure was 99.1 percent (Figure 3.2). India's increasing de facto federalization has only widened the gap between the industrial centres and some eastern States (Corbridge, 2011).

On the other hand, these strong agricultural lobbies, bolstered by increasing returns from subsidies and their own increased political clout, have also often succeeded in stymying power reform since 1991. Sunila Kale's exemplary study *Electrifying India* (2014a) persuasively argues that the States most successful in transforming agricultural production through electrification in the 'crucial decades' from the 1960s to the 1980s, even those otherwise considered comparatively industry- and FDI-friendly, were also 'the least likely to carry out market reforms in the 1990s'. The States with poor records on rural electrification (such as Odisha, the only State in which agriculture contributed less than 4 percent of GDP), meanwhile, 'were paradoxically best positioned to pursue market reforms' (*ibid*: 8).

Yet path dependence does not make change impossible. Kale's study focuses on the period up to 2003. Since this point power policy has altered in ways that suggest the constraints of agricultural interest-group politics may have been reduced or circumvented in some States, as Chapter 6 examines. Society-centric interpretations are better at explaining policy stagnation than explaining the meaningful policy change that *is* occurring. As in analyses of liberalization more generally (Geddes, 1995), they are often forced to find a role for the state to explain the *specific* timing, form, content, and evolution of reforms. Indeed, Kale concedes that at some times state agencies are able to play an autonomous role.<sup>26</sup> She attributes Gujarat's success in particular to the fact that the administration '*disciplined party and bureaucratic structures*' (162, emphasis added).<sup>27</sup>

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<sup>26</sup> While in the final analysis Kale stresses the importance of society-centric factors, her analysis is not purely society-centric, but institutionalist: it is founded on the iterative relationship between the state and the societal, the 'political' and the 'economic'. The State-level 'social alignments' that determine policy were, she emphasizes, themselves 'produced by previous eras of state intervention', just as these eras 'configured subsequent state retreat' (2014a: 7-8).

<sup>27</sup> It is de rigueur for authors on the Modi regime in Gujarat to use its power reforms to make somewhat similar arguments about state capacity (Sinha, 2010b; Sud, 2012; Jaffrelot, 2014).

Our conception of path dependence must be *dynamic*, then, able to account for such institutional change, even when (as often) it is gradual, indecisive, and incomplete.

### *Elite exit*

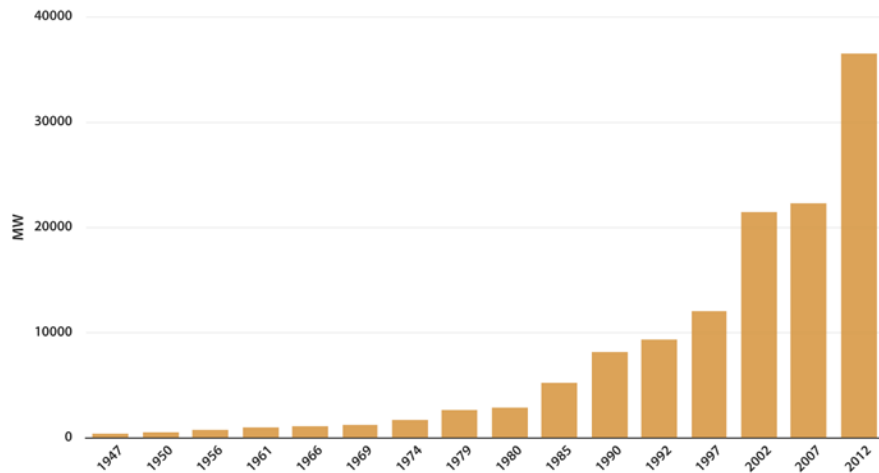
If agricultural subsidies increasingly came to define the pre-1991 power sector, business interests did not simply acquiesce. Industrial and commercial consumers gradually came to cross-subsidize the low agrarian (and residential) tariffs and endemic theft through some of the highest tariffs in the world, even as the quality of supply fell in the face of long-term underinvestment. Yet they lacked the numerical weight of agricultural interests and had yet to gain direct representation in the political system (as MPs and MLAs) in the numbers that they would after 1991 (Sinha, 2010a). Exercising their ‘voice’ therefore appeared a futile option.

As a result some elite consumers increasingly exercised their option to *exit* the state-owned system instead (Hirschman, 1970; Joseph, 2008). Industrial consumers, who accounted for almost two-thirds of total SEB sales in 1960, increasingly cut back or resorted to captive power plants, from small diesel sets to large power plants also supplying co-benefits like heat or steam for industrial processes). By 1991 the industrial share of public power usage had diminished to only 40 percent (Dubash and Rajan, 2001: 3370). The rise of captive generation was particularly pronounced in States with poor utility performance and high T&D losses—and even more strongly correlates with higher consumption from electrical pumpsets in the agricultural sector (Joseph, 2008, 2010).<sup>28</sup> While the rise of captive power plants preceded the 1990s (Figure 3.3), it was encouraged further by pro-business policies after 1991, including the allocation of coal blocks to private companies from 1993 (see Chapter 4).

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<sup>28</sup> Joseph controls for the amount of industry in any given State.

Figure 3.3 The rise of captive generation, 1947–2012



Source: CEA (2012: 53); data for 31 March each year, except 1947 and 1950 (31 December)<sup>29</sup>

Elite resort to captive generation had three major consequences. First, it accelerated the state power system’s descent into financial unviability as the SEBs’ most lucrative customers sought alternatives. Second, it weakened a powerful set of voices calling for power reform at the State level. At the same time, it facilitated the conditions for the eventual introduction of a system that permitted resale from captive plants through ‘open access’, and thereby created a two-tier half-liberalized system ‘from the bottom-up’ or ‘by the back door’, depending on scholarly perspective (Hansen and Bower, 2003; Hansen, 2008; Joseph, 2008; 2010; see Chapters 4 and 6). In this way the reforms could leverage the path-dependent development of an alternative system, layered alongside the official one, in order to challenge the precepts of the existing statist consensus.

### The responses to state disunity: the weak apex

The above sections demonstrate how the ‘concurrent’ power sharing arrangement between the centre and States in practice saw the electricity sector become locked into a regionally differentiated politics of subsidies. How far was the emerging apparatus of central planning able to impose discipline on other state agencies for the project of electrification? The first half of this

<sup>29</sup> Note that figures are unsurprisingly unreliable, due to the decentralized nature of captive generation. Some estimates put the figure today as high as one-third of total on-grid generation, which would mean more than 70GW—almost double the CEA estimate. The graph does capture the broad trends of growth preceding liberalization and accelerating despite the post-1991 reforms, likely due to the increasingly pro-business allocation of natural resources (discussed below). Today around half of captive generation is coal-fired; much of the rest uses diesel and gas.

section examines the problem of *horizontal incoherence*: the centre's weakness and inability to discipline other state agencies, as well as powerful societal interests.

Second, the section examines early attempts by the central administration to wrest back control. Even before the sector's financial performance began seriously to deteriorate, the central government did not simply accept the pro-States balance of power. In the context of the SEBs' financial weakness, it was not long before central agencies began to assert themselves, notably through the creation of new organizations. By working around the SEBs and State administrations, curtailing their room for manoeuvre and capturing new spheres of influence, the cumulative effect was an attempt to shift the arenas for decisionmaking and project implementation. This amounted to an unsystematic and largely ineffective strategy to reduce the domain of increasingly populist 'politics'. Together these dynamics—the centre's weakness, and its tendency to resort to institutional proliferation to compensate—would continue to shape the politics and political economy of Indian power well beyond 1991, and would set the stage for the crisis of control in state capitalism 2.0 (Chapter 7).

***Horizontal disunity: the declining centre and the problem of sectoralism***

In addition to the federal fissure, the state was also horizontally fragmented. The power sector is fundamentally complex: it is impossible to separate its problems from the supply (energy sources like coal and gas) or demand sides (end uses and users like irrigation). Yet in practice energy has often been treated through 'the exploitation of sectoralism' (Schaffer, 1984), creating policy silos which divorce power concerns from their cognates.

In 1952 the country had only twenty ministries. By 1978 they numbered more than fifty (Mathur and Björkman, 1994: Appendix). That these agencies were rivals rather than confederates was well known: the major ministry reorganization of April 1957 was carried out in part because of the politicking of the recently bifurcated ministries of food and agriculture against one another.

This complexity was exacerbated by several factors. First, the bureaucracy continued to expand rapidly: in 1931 the total number of civil servants (broadly construed) was 1 million, climbing to 4 million in 1953 and quadrupling to a peak of 19.58 million in 1997 (Das, 2013: 24-

5). Second, new public-sector organizations were proliferating, increasing the state's complexity and often falling under the already powerful ministries. State-owned enterprises increased in number and power, and came to have their own interests sometimes quite different to those of their line ministries (Chakravarty, 1987: 40). There also developed 'a whole array of centrally sponsored schemes which are provided for within the central budget and [primarily] carried out by central ministries', again reinforcing the power of the ministries rather than that of planning organs (*ibid.* 48). Finally, the central organization of ministries was not neatly mirrored at the State level.

The problem in the energy sector was perhaps especially pronounced, though varying over time, not least because intersectoral interactions are ubiquitous in the sector. Power was at first held (tellingly) under the Ministry of Irrigation and Power—though the two would be divorced for planning purposes by the 1960s—rather than alongside its fuel sources. Although ministerial changes were common,<sup>30</sup> power shifted most dramatically with the creation of the Ministry of Energy, which had separate departments for power and coal (and one for later non-conventional energy sources), while irrigation went to the agriculture ministry. The energy ministry's creation marked in some ways the high watermark of centralized power in the sector, although the first energy minister (and first chairman of the Advisory Board on Energy), K.C. Pant, claimed several decades later that the decision was far from strategic:

In the mid-seventies, I took over the Ministry of Irrigation and Power from an eminent engineer, Dr. K.L. Rao. Some months later, the Prime Minister decided on a reshuffle in the Ministry. She had a quiet talk with me and explained that a senior Minister, whose portfolio she was changing, wanted Irrigation also. 'No problem,' I said. 'But that leaves only power with you. We can't have that,' she said. And I became the Energy Minister looking after power, coal and non-conventional energy, a new department. (Pant, 2006: 1)

Even then, energy policy remained divided. The Department of Atomic Energy remained perpetually aloof and secretive. The petroleum ministry, now Petroleum and Natural Gas, was separated, as was the Ministry of Environment and Forests, created out of a federal department in 1985 (Pant, 2006). Yet the sectoralist division of labour had distinct effects on how

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<sup>30</sup> There were other oscillations in portfolios. In August 1954 the Department of Atomic Energy was created, under the direct control of the prime minister, for example, while in 1957 a Ministry of Steel, Mines and Fuel was created.

the energy sector's problems—and the appropriate solutions—were conceptualized. As Lok Sabha members were informed shortly before the arrival of 'big bang' liberalization in 1991:

It is interesting to note that for all the [pan-energy] studies undertaken by the Government hitherto, the initiative to set them up came from different Departments... and the focus of each of them seems to vary accordingly. The ESC [Energy Survey Committee] was set up by the Ministry of Irrigation and Power and its report was oriented towards the supply of electricity. Sponsored by the Department of Coal, the FPC [Fuel Policy Committee] highlighted the importance of coal, recommending a supply strategy based on the utilisation of coal as the substitution fuel for other forms of energy. The WGEP [Working Group on Energy Policy] was set up by the Planning Commission and had taken a more balanced view of the overall energy needs and dealt only with broader aspects of energy sector management. In terms of substance ESC, FPC and WGEP perceived energy policy in India as essentially supply, substitution and conservation oriented respectively. (Kashyap, 1990: 242)

To divorce electricity from these other concerns made little empirical sense. Often 'the reason for the power shortage has lain completely outside the power sector'—such as '[f]ailures to co-ordinate the coal, power, and transport sectors'—pointed out Fuel Policy Committee chairman Sukhamoy Chakravarty in his seminal review of India's planning experience (1987: 40).

The central administration lacked such a coordinating mechanism, required for effective and selective state intervention in complex and critical sectors such as electricity. Excepting the changing and politicized figure of the prime minister and the power with which he or she could imbue the PMO, in practice there existed no bureaucratic apparatus able to discipline the state's multiple agencies. The result was that the planning-era state was 'paralyzed and fragmented' (Chibber, 2002: 951). Almost from the outset, the central planning organs lacked the strength to discipline their own unruly ministries (Chibber, 2003; Frankel, 2005: 294; Hanson, 1966). In the Planning Commission India had installed (on paper) a 'pilot' agency along the lines recommended by developmental state scholars (Johnson, 1982; Wade, 2004). Yet the successful pilot agencies—most famously Japan's MITI—boasted real authority in directing other government agencies (Leftwich, 2000: 162). Instead in India, as Vivek Chibber points out, 'the planners were made marginal at all but the broadest level, as the ministries simply ignored them' or even colonized the planning apparatus itself (Chibber, 2002: 965).<sup>31</sup> Appleby's influential report on

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<sup>31</sup> To shore up its political credentials the Planning Commission had been colonized by the ministries: by 1966 seven of its 12 members were Union ministers, which 'made the Commission less and less independent of the thinking and the vested interests in the various ministries. The Commission became, in effect, a committee of the Cabinet—a very heterogeneous one at that' (EPW, 1967: 90).

India's public administration, for example, had pinpointed a key concern about the state's nebulous organization and the '*extended diffusion of administrative responsibility*': 'The co-ordination is far too great an extent [*sic*] co-ordination between peers and between different hierarchies' (Appleby, 1957: 9-11, emphasis in original).

The Planning Commission's position was further undermined by other centralizing developments. Although India had inherited the nominal cabinet system of British parliamentary democracy, as had happened in Britain (Crossman, 1963: 48-53), all three early prime ministers—Nehru, Shastri and Indira Gandhi—also helped to shift the administration in practice more towards a 'prime-ministerial system' (Mathur and Björkman, 1994: 16; Dhar, 2000). While the prime minister's secretariat<sup>32</sup> remained small under his premiership, Nehru's prestige and vote-winning power made him truly *primus inter pares*—at least on issues that piqued his interest. Shastri, unable to rely on such charismatic authority, increased the size of the PMO and made its head a bureaucrat of full secretary rank.<sup>33</sup> His sudden death left the consolidation of this system to his successor. Indira Gandhi famously centralized decisionmaking, even as an increasingly restive polity and the end of Congress one-party dominance in the States in 1967 weakened central power. The beneficiary was Indira's 'kitchen cabinet' of close advisors, not the Planning Commission, whose greatest influence lay in the reasonably high-growth 1950s until the mid-1960s.

By the mid-1960s scholars were discussing 'the crisis of Indian planning', 'for which the Commission—rightly or wrongly—is getting much of the blame' (Hanson, 1966; 1968: 47; Streeten and Lipton, 1968). Neither the Planning Commission nor the PMO could replace cabinet government with a robust head. The rise of competing agencies served to weaken the Commission still further, while the PMO was only as strong as the top officeholder and the National Development Council, dominated by the States, was overtly politicized. The 'deinstitutionalization' attributed to Mrs Gandhi only exacerbated this trend.

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<sup>32</sup> This was renamed the prime minister's office (PMO) in 1977 under Morarji Desai, who had vowed to divest the agency of its 'excessive power': 'All he succeeded in doing was changing its name... and reducing the staff marginally from 229 to 211' (Dhar, 2000: 116, 143).

<sup>33</sup> Shastri also attempted to circumvent the Planning Commission through the abortive creation of the National Planning Council, and to shift the locus of decisionmaking more to the ministries.

In the power sector the crisis of planning was worsened by the weakness of the Central Electricity Authority, created by the 1948 Act to provide long-term planning for the sector. Into the mid-1970s the CEA was a part-time body which ‘had only a thin administrative existence with no real staff or clear mandates’ (Kale, 2014a: 51). Many of its coordinating functions were instead taken on by the Central Water and Power Commission (Power Wing)—institutional evidence of the so-called ‘energy-irrigation nexus’ in South Asia—until this body’s demise in 1974 with the bifurcation of the Ministry of Irrigation and Power. Although somewhat rejuvenated after this point by the centralizing trends in the sector (p. 83 below), at the end of the decade the Rajadhyaksha Committee still noted: ‘While the advisory role envisaged...under the statute is all pervasive, [the CEA’s] direct executive powers are limited’ and the agency was seen by SEBs and other bodies as merely ‘a hurdle to be negotiated’ (Department of Power, 1980: 109-10). The Committee concluded that ‘there are, largely on account of the past shortcomings of the CEA, no well conceived, coherent, comprehensive and agreed policies for the development of the power industry in all its aspects’ (*ibid*: 110).

Observers called again and again for more monolithic coordination in energy policy, not through the enfeebled Planning Commission (which did nominally attempt this exercise) but through the far more effective mode of the ministry (World Bank, 1983: 62; Chakravarty, 1987: 40). As Pant, Indira’s energy minister, argued:

The point to note is that there has been no single Ministry with responsibility for and authority over the entire energy spectrum. The need of the hour is an institutional arrangement to provide a rolling master plan for the energy sector as a whole with an indicative 20-year Plan, a firmer 10-Plan, and a Five-year Plan with firm targets for each sub-sector. (Pant, 2006: 1)

It was not only the sector’s vertical fractures that were visible and well recognized long before 1991, then; the weakness of coordination mechanisms through central planning agencies led to horizontal fragmentation and incoherence. As Vivek Chibber (2003) has forcefully argued, the initial conditions that left India with a marginalized central planning apparatus and weakened power of enforcement would cast a long shadow. The roots of this central weakness lie in the pre-1991 period, but its real implications would be especially felt in power policy in the liberalization era and the incoherence of India’s evolving state capitalism 2.0. Developments after 1991 would only exacerbate the situation. The energy ministry was dissolved in 1992, its departments

becoming another set of powerful ministries with divergent interests. The result was a ‘patchwork of energy policies’, a theme taken up in Chapter 7’s analysis of turf wars in the ‘headless state’ (Ahn and Graczyk, 2012: 7; Mehta, 2013: 1). While this was a pervasive phenomenon, not confined to the power sector, its impacts were nowhere more widely felt than among the powerful multiple agencies which shared control of energy governance.

### *Arena shifting and centralization*

The centre did not simply tolerate this adverse balance of power versus the States and its own ministries. Through the creation of new agencies, it attempted to shift in its favour the arenas in which key decisions were enacted.

The centre’s first move beyond the limited administrative and data collection roles of the Raj era drew on the logic of scale through inter-State hydroelectricity projects. Most notable was the Damodar Valley Corporation (DVC) in 1948, an imitation of the Tennessee Valley Authority which also promised gains for irrigation and flood control. In this it was supported by international observers (and funded by the World Bank), who praised the DVC but suggested that such regional undertakings ‘should be exclusively carried on by the Centre, without control being shared with [S]tates’ (Harrison, 1960: 328; Appleby, 1957: 43, 60). The potential for hydroelectric centralization was curtailed by the increasingly difficult politics of large dams, however, though large-scale inter-State projects would remain a favoured central tactic into the ultra mega power policy of the 2000s.

Elsewhere in the energy sector, the centre similarly expanded its purview through the creation of national corporations. Like Britain (Helm, 2010: 16), India under Nehru had also witnessed something of a ‘cult of the engineer’, pursuing ever larger and more technical investments—notably in nuclear energy, and in a prodigious coal industry that evolved to cope with the limitations of India’s typically low-calorie, high-ash domestic coal. In 1947 planners had mooted the idea of an indigenous heavy electricals manufacturer to minimize expensive imports. In 1956 the Centre established Bharat Heavy Electricals Ltd (BHEL, which began under the unfortunate name Heavy Electricals India Ltd, or HEIL) to support engineering and equipment manufacturing for ‘core’ economic sectors, especially generation and transmission. It sold

primarily to SEBs and other state-owned enterprises, and therefore suffered from liquidity crises by the 1980s.

In the fraught political atmosphere that accompanied the Third Plan, concerns about implementation failures began to bite and new agencies were proposed to take the Nehruvian project forward (Frankel, 2005). In 1964 the *Report of the Energy Survey Committee of India* mooted reserving policy direction and new operations for a central board (GoI, 1965: 141), an idea revived in the 1970s. Regional Electricity Boards were also introduced to monitor the SEBs, and to begin inter-State power transfers. Under the Indira Gandhi administration the centre unsurprisingly moved further into the sector. The Rural Electrification Corporation was established in 1969 to help finance and promote universal access, as the States were felt to moving too slowly towards this populist goal, though this coincided with the reorientation of cross-subsidization in many States to favour (wealthy) agricultural users. In the same year India's first nuclear power plant—constitutionally under exclusive central control—came online at Tarapur, Maharashtra. A programme of priority bank lending at the end of the decade also helped channel funds to the sector.

It was with the endemic power shortages of the early 1970s—which preceded the 1973 oil shock<sup>34</sup>—and the threat of sanctions during the Bangladesh liberation war of 1971 that the centre took a substantive move into the sector. The extensive Draft Fifth Plan, written under the pressure of 1973 and with World Bank approval (Henderson, 1975: 163), presented a damning critique: 'the organisational structure as well as the financial structure of the State Electricity Boards... has been found to be inadequate for meeting the challenging needs of the 1970s' (Planning Commission, 1973, vol. 2: 126). The power shortages also appeared to reinforce the importance of the generation segment. The World Bank thus set forth the radical proposal that generation should be reserved exclusively for the centre, 'leaving distribution only as the responsibility of the States'; it conceded, however, that this would be politically and constitutionally unfeasible

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<sup>34</sup> The shortages dated from around 1972, and by 1974-5 power shortages had reached up to 60 percent in Punjab, Haryana, Tamil Nadu, and Delhi. They were attributed to slow capacity additions under the Fourth Plan, low thermal plant load factors, and poor maintenance, exacerbated by the droughts of 1972 and 1973 as hydroelectric generation was impacted. Nonetheless, the 1973 crisis hit India hard. India was a substantial importer, and the price rise impacted the overall balance of payments and international monetary reserves. It also provided a fillip to coal to compensate. Finally, in a now-familiar scenario, the centre hiked the prices of kerosene and petroleum products—only to rescind part of the tariff rise under popular pressure in the autumn of 1973 (*EPW*, 1973).

(Henderson, 1975: 164). Alternatively the centre could simply increase its scope of financing and execution, and bring in projects under central and regional control (*ibid*: 165).

The centre responded in line with this second, less radical suggestion. In 1976 the CEA was rejuvenated as a more effective body to coordinate national policy, alongside regional boards and the integrated energy ministry. (SEB restructuring, also mentioned, did not materialize.)<sup>35</sup> Through the 1970s the centre moved increasingly into the segment with the introduction of national corporations in thermal, hydroelectric and nuclear power, and energy in the Northeast. State chief ministers welcomed the move, especially in power deficit States: in 1973 the Haryana chief minister used the National Development Council to call for ‘big projects’ from the central government (quoted in Shaw, 2010: 132). (In practice these were often directed to States that the Congress regime at the centre deemed crucial to its electoral future, like Uttar Pradesh and Madhya Pradesh in the late 1970s [Narayan, 2012].) Coal, meanwhile, was nationalized in 1972-3, and the gas transmission utility Gas Authority of India Limited (now GAIL) created in 1984.

The new central public sector enterprises (CPSEs), notably the National Thermal Power Corporation (NTPC) created in 1975, were designed to be exemplars of managerial and technical success in the otherwise moribund sector. NTPC was created to establish pithead power stations, with dedicated transmission lines. In a review of its lending to the Indian power sector from 1978 to 1999, the World Bank explained the rationale for its own turn away from lending for SEB-based projects and its support for CPSEs instead:

In the late 1970s, the Bank and the Government of India (GoI) believed that the center [*sic*], in addition to its planning and coordination role, could be used as a vehicle to induce power sector reform in the states. The strategy was for NTPC to become a model of modern operational practices that the SEBs could emulate. It was hoped that state governments would be motivated to increase tariffs and strengthen SEB finances when they saw what could be accomplished by improved practices. They would also need to raise tariffs to pay for electricity bought from the center. (World Bank, 1999: 2)

Favoured with Bank loans—it received almost half of all Bank power loans between 1970 and 1991 (Dubash and Rajan, 2001: 3370)<sup>36</sup>—and transferred the assets of less successful agencies like the Badarpur power plant that the Central Electricity Authority was struggling to manage, NTPC

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<sup>35</sup> The Fifth Plan itself was dramatically shorter and more tactful than the Draft, though it contained a National Development Council resolution on Power and Irrigation Systems, calling on power systems to ‘cover working expenses [*sic*] and yield reasonable returns on investment’ (Planning Commission, 1976: 90).

<sup>36</sup> The Bank concluded that ‘the growth of NTPC alone clearly would not bring about the needed reforms’, however, and resumed direct loans to SEBs in 1985, with little success (World Bank, 1999: 10).

grew rapidly through the 1980s and remained modestly profitable even as most other CPSEs haemorrhaged resources (Ahluwalia, 1995: 241).

Centralization thus went hand-in-hand with moves to improve SOE management and discipline, and coincided with more general (if very cautious) liberalization of the overall economy from 1975. Foreshadowing the later emergence of state-market hybrids, both centralization and liberalization were sides of the same coin in improving efficiency whilst attempting to reduce the fiscal burden on the state.

As above, the World Bank consistently called for a rebalancing of the sector in favour of the centre, and encouraged the centre to oversee SEB finances. This theme was taken up by the Rajadhyaksha Committee, convened in 1978 to examine the sector. Reacting to the failure of earlier reports to gain traction, the Committee again proposed measures to reconfigure the sector in favour of the centre—or at least somewhat away from State politicians. While the report was far from pro-business—it discouraged industrial subsidies (Department of Power, 1980: 151)—it prioritized structural changes to restore ‘accountability’ and ‘autonomy’. It called for a streamlined CEA supported by new Regional Electricity Authorities, an independent Bureau of Electricity Costs and Prices to advise SEBs on tariffs, and internal restructuring to decentralize power and more clearly identify ‘centres of accountability’ (*ibid*: 83, 114, 154). In moving from the State to regions as the favoured unit, it proposed that the centre’s role in power generation be enlarged to 45 percent of generation capacity by 2000 and that the centre take control of all high-tension transmission lines for inter-State power flows (*ibid*: 110, 142).<sup>37</sup> The proposed vision thus combined two shifts of scale, both away from the State governments: upward to the regions, centre and CEA, and downwards to a technocratic tariff-setting bureau and to individual staff.

The World Bank was enthused by the proposed centralization; at this time it was working ‘hand in glove with the centre on this’, to the extent the States suspected a ‘plot by centre and World Bank’.<sup>38</sup> The States were unsurprisingly unimpressed.<sup>39</sup> On the back of Rajadhyaksha’s recommendations the Power Finance Corporation was established in 1986 to incentivize reform:

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<sup>37</sup> The Committee’s preferred ownership pattern for generation was also regionally oriented—the creation of Regional Electricity Generation Corporations in hydroelectric and thermal projects, replacing NTPC and NHPC (Department of Power, 1980: 111)—though this pillar, like the Regional Electricity Authorities, was never taken up.

<sup>38</sup> Interview, USAID official, 1 May 2012.

<sup>39</sup> Lok Sabha Debates, 22 November 1983.

‘Essentially the centre wanted an internal World Bank in India’, an organization able to impose financial and technical conditions, although Chapter 6 discusses the limits of this enforcement in practice.<sup>40</sup> This was followed by the establishment of PowerGrid in 1989, carved out of the transmission businesses of the existing generation CPSEs with the intention to create a national grid to bring together surplus and deficit regions. It permitted the centre a key role in transmission alongside its generation arms, again circumventing the States.

India has thus witnessed a long trend of attempted centralization in the power sector. This period of the ‘advancing state apparatus’ from the 1950s to the 1980s ‘conditioned’ the state’s retreat from the 1990s (Kale, 2014a; see also Ruet, 2003). Such arena shifting amounted to an attempt at ‘depoliticization’ insofar as it tried to shift the loci of decisionmaking and everyday project direction away from conventional public institutions, placing at one remove democratic (or populist) pressure. In this context, liberalization through restructuring and privatization—explored in later chapters—can be seen as an important variant on more traditional centralization: the central government’s attempt to dis-embed itself, ‘depoliticizing’ the compromised state system through strategies of technocracy and insulation. Of course, while it obscures perceptions of responsibility, in reality arena shifting does not make policy decisions or their impacts any less ‘political’. The proliferation of new agencies also threatened to worsen the very institutional complexity they were designed to control.

### *The limits of central strategies*

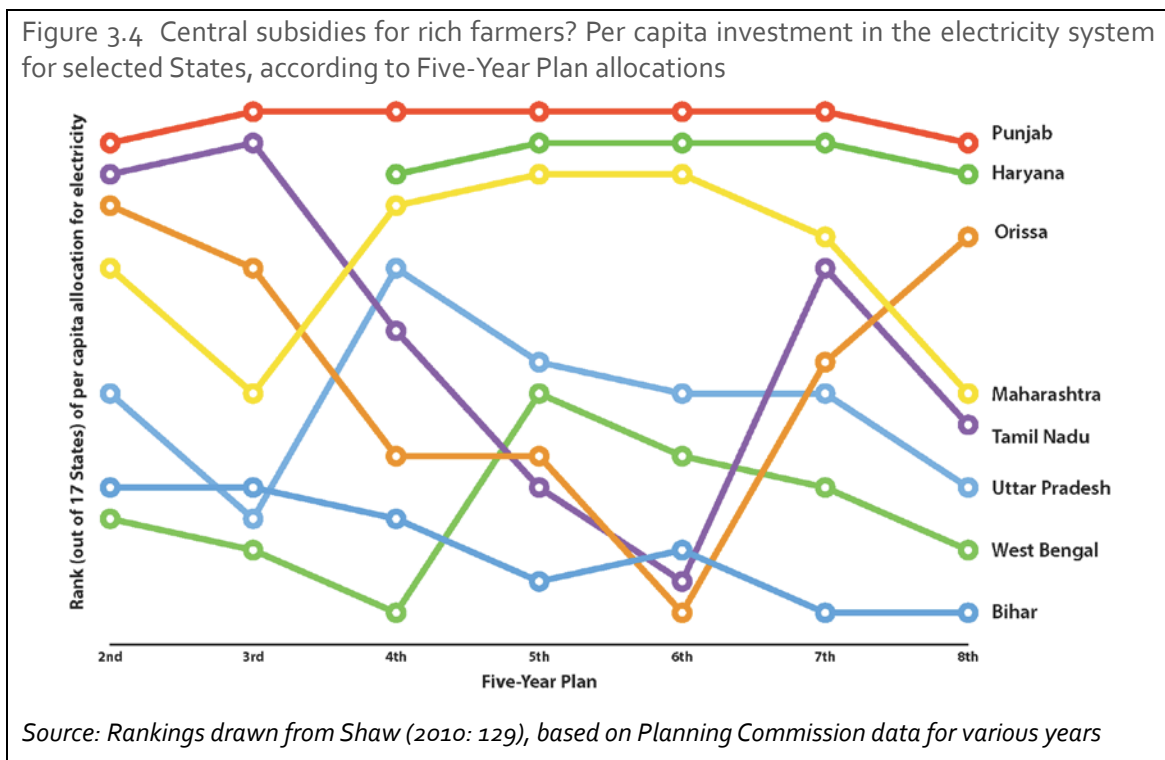
These measures did not prove successful in the face of the underlying formal ambiguities enshrined in the federal system. They failed to solve the SEBs’ problem of cost recovery, which continued to escalate (Figure 3.2 above). Nor were they the product of a coherent strategy of centralization and ‘depoliticization’.

Organizations at the state’s apex—that amorphous mass—were far from immune to State lobbying efforts on behalf of agricultural communities, often undertaken through the National Development Council. The centre retained a powerful set of financial tools at its disposal: the States may have held responsibility for the implementation of electricity policy, but the centre

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<sup>40</sup> Interview, USAID (former World Bank) official, 1 May 2012.

controlled most tools of revenue raising through taxation and duties. Finances were largely distributed through the planning mechanism as a combination of grants and loans. Yet central planners did not make systematic use of their power to distribute finance (as a combination of grants and loans) in order to incentivize improved collection for agricultural power. This is most clearly shown by the pattern of financial allocations in the Five Year Plans. The consistent beneficiaries were the Green Revolution agricultural powerhouses of Punjab and Haryana, and to a lesser extent Maharashtra and Uttar Pradesh (Figure 3.4). States with weak electricity infrastructure and low levels of rural electrification (such as Bihar, Orissa, and West Bengal) and the wealthy southern States (Andhra Pradesh, Tamil Nadu, Kerala, and Karnataka) were sidelined. In effect this rewarded the same States that had prioritized electoral sops for wealthy farmers over cost recovery.



The centre also collaborated in weakening this mechanism over the State governments' developmental trajectories. Several States had complained about the subjective and high-handed way in which central assistance was allotted. The Fourth Plan therefore introduced the Gadgil Formula to provide a veneer of objectivity in Plan transfers (Shaw, 2010: 128).<sup>41</sup> In so doing, it

<sup>41</sup> Where power projects had been begun before the Plan, the Formula mandated continuing support.

‘withdrew much of the latitude the centre had at its disposal to skew investment towards particular states’ (*ibid*: 130)—although, as Chapter 7 shows, this asymmetry was not simple or permanent.

Such decisions, which appeared to weaken central influence to the detriment of policy outcomes, were not purely the result of the de facto federalization of party politics after 1967. They also suggested a logic of risk-averse delegation, in which difficult tasks were kept at arm’s length from central institutions. Sarmila Bose found that:

While the responsibility for carrying out rural electrification is entrusted to the SEBs, the risk is borne by the state governments. As a result, in spite of the appearance of an elaborate technocratic institutional set-up for rural electrification, the entire system essentially reduces to a direct relationship between the centre and the states, and is largely located in the political domain. Moreover, the states are in a vulnerable position both politically and financially. They depend on the centre for resources and approval for a politically popular project, but while the centre reserves for itself the political control of project appraisal and evaluation, the states are the depository of both the bad loans and the local political fall-out should anything go wrong in the programme. (1993: 95-6)

This type of centre-State blame shifting, institutionalized through federalism and other strategies of delegation, persists into the liberalization era (Chapter 7).

Simultaneously the state’s expansion worsened the centre’s internal control problems. Independent India’s state rapidly expanded along with its new development missions. Despite the enlarged number of ministries and government departments at the centre (see Chapter 7), the increase in public sector employment took place only to a limited extent among the central agencies. Instead most of the expansion was concentrated in the ‘intermediate’ tiers of government, under the jurisdiction of the State governments and quasi-state organs—especially in SOEs (Pedersen, 1992: 622). In 1961 electricity employed only 220,000 public sector workers; by 1989 it was 870,000 (4.7 percent of all public sector employees). Mining, after the nationalization of the ‘sick’ coal industry under Indira Gandhi, contributed another 960,000 (*ibid*: 623-4).

While the central administration pursued tactics that aimed to shift policy arenas away from State-level agencies thought compromised by ‘politics’, these tactics were ad hoc and did not amount to a coherent strategy. Although these agencies existed under the nominal control of the centre, they also generated new powerful interest groups and bolstered the hands of the already powerful infrastructure ministries. The vast new enterprises and armies of labour created new constituencies resistant to reform, even as some politicians took advantage of the new avenues for

patronage by expanding the workforce still further. Such formal-sector, unionized workers have often been seen as a key obstacle to policy change: their livelihoods depend on public sector employment and its perks, not least of which is job stability. While Chapter 5 suggests that CPSE managers have emerged as an unexpected pro-reform constituency, the same is not true of more junior or less specialized employees: not for nothing did Rajiv Gandhi label SEBs ‘State Employment Boards’ (quoted in Ruet, 2007: 185 n9).

Arena shifting led to institutional proliferation—which complicated an already fragmentary and ‘headless’ organizational ecosystem—even as it failed to wrest the sector free from ‘politics’. The central government thus ceded power even as it sought to tighten its control over the sector. Simultaneously this ‘no-one-in-control’ system facilitated blame games to excuse the sector’s persistent and obvious failings. Already at this time, therefore, we can see the process of accretive layering that distinguishes Indian institutional politics, a layering which has often produced incoherent and fragmented governmental operations.

### **Conclusions: towards 1991**

This chapter has provided macro- and meso-level genealogies of the organizations and subsidy patterns that characterized the Indian power sector from independence until 1991. It has thereby elaborated two principal arguments. First, the failures of the state-dominated consensus of state capitalism 1.0—characterized in the power sector by state dominance with limited private ownership, and central and State control—set the stage for a more fundamental rethinking of power policy. Second, these policy genealogies continued to impact power policy well after 1991, because organizations and policies tend to be path-dependent: even after the conditions that encouraged their creation have long since altered, they create sunk costs and bolster interest groups which may organize to resist change.

The pre-1991 model was not entirely without its merits. Under these arrangements generation capacity increased over fifty times between 1947 and 1991, averaging 9.2 percent a year (Dubash and Rajan, 2001: 3369).<sup>42</sup> Nonetheless, it created an organizational structure that

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<sup>42</sup> In a large-*N* study of electricity provision, Carlin et al. find that for initially poor countries ‘exposure to Soviet-style planning’ appears beneficial over the longer term: ‘the long-run benefits of physical infrastructure and

institutionalized both vertical and horizontal incoherence through federalism, sectoralism, and weak agencies of planning and coordination; politicized electricity provision, multiplying subsidies and financial instability; and fostered a tendency to respond to challenges with arena shifting and institutional proliferation. The principal trend of change simply sought to inject an iron core into the existing statism through the increased power of the centre. Yet before 1991 institutional changes to the Indian system amounted to only structural tinkering around the margins of the sector's statist consensus rather than full-fledged revisionism. These policy reforms were not successful in alleviating the sector's troubles.

The power sector had thus succumbed to a multifaceted if low-key crisis by the late 1980s, a crisis that contributed to a wider questioning of the statist consensus in India. It was officially regarded as troubled well before the balance-of-payments crisis of 1991—indeed, from at least the early 1960s. The sector's persistent failure to match rising demand assured it a longstanding place on the decision agenda, reflected by the power sector's prominence in pre-liberalization World Bank loans to India. By the end of the 1980s there was also 'a rising sense of crisis in the availability of energy', including in the power sector (Lahiri-Dutt, 2014b: 19), while the SEBs' losses grew substantially over the decade and 'became the new focus of critique' (Kale, 2014a: 55). That the sector required structural reform was evident, as in the Rajadhyaksha Committee's calls for major restructuring (Department of Power, 1980), although the sector's main problems and the mooted solutions were still often framed as technical and managerial (Kale, 2014a: 55).<sup>43</sup>

The magnitude of this crisis was such that the self-perpetuating structure of state-society relations embedded in the governing formula of state capitalism 1.0—in which the state dominated and proposed to extend power to all Indians—increasingly appeared to have reached an impasse. The Emergency of 1975-77 witnessed a new emphasis on 'productivity', discipline, and work to counter political instability and labour unrest (Clibbens, 2014). Against the Nehruvian model of the state as entrepreneur, the Janata Party government too had put forward a distinctive

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human capital substantially outweighed the long-run economic costs of static inefficiencies and weak innovation incentives' (2013: 134).

<sup>43</sup> This is true of the Pollyannaish summary of the power sector presented in Kashyap (1990), a collection of pamphlets produced internally by the Lok Sabha to inform parliamentarians about various national policies. Criticizing the sector's internal resource generation, the Seventh Five Year Plan also offered largely technical solutions.

programme of political and economic decentralization, but consensus broke down with the resurgence of farmer agitations under Charan Singh, which once again often took the form of protests over electricity tariffs and supply. This was perhaps the high watermark of competition between industrial and agricultural capitalists, and a confirmation of the Nehruvian state's crisis.

The stage was therefore set for a systemic shift away from state capitalism 1.0. As early as the mid-1970s the national administration began its first tentative recalibration towards business. Indira Gandhi's return to power in 1980 witnessed a modest rhetorical pro-business turn, extending under her son Rajiv (Rodrik and Subramanian, 2004). Private participation—though not privatization—came under serious discussion by national and State-level policymakers for the first time (see Chapter 4), bolstered by the concerns for improved infrastructure voiced by increasingly vociferous segments of the big business community. The statist consensus was far from simply disintegrating, however. As late as 1990, Rajiv Gandhi stated that the private sector was unlikely to act as a viable substitute because infrastructure 'does not pay back—our people are too poor. So I think the government will have to be in the infrastructure' (quoted in Padgaonkar, 1990: 11).

The following chapters take this account forward beyond the 'boundary' of 1991. Institutional change is possible—although, as the following chapters show, it tends to be messy, gradual, incremental, and structured by path-dependent formal institutional structures and interest-group politics. Nonetheless, the state-dominated, federally shared system has proved resilient beyond the onset of liberalization. The formal power-sharing arrangement between centre and States would be very slow to change. Agriculturalists enjoyed increasing returns from their subsidized power, bureaucrats from their large central enterprises. The weakness of the centre's coordinating mechanisms would only become more pronounced as States and ministries extended their autonomy.

The next two chapters begin to document the reinventions of the pre-1991 'statist' organizations in the liberalization era, atop the sediment of which new pro-business and regulatory organizations have been layered. In this process of reinvention, the lineages of the pre-1991 power sector—state dominance, the federal compromise, the weak centre, and the proliferation of subsidies—would continue to play a constitutive role, constraining and channelling the direction of future reforms.

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## 4

# Private participation: grafting on business and the market

The private sector is called upon to perform the function of the state... because the state was incapable... *So eventually what you transform yourself is from a private entity into the state itself.*

—Interview, CEO of private Delhi discom, 15 May 2012

### **The public-private-partnership state**

Chapter 3 demonstrated that before 1991 independent India's power sector was marked by two crucial compromises: between the centre and States, and between public and private ownership—albeit with the balance tilted heavily towards public ownership. It showed that the power sector has long been considered troubled, in large part because of its politicization at the State level. The national administration attempted to counter this through reforms at the margins of the sector, typically through centralization. Nonetheless, the sector's technical performance remained poor and its financial health deteriorated. The result was a prolonged policy and institutional crisis of state-led electric state capitalism 1.0, which laid the groundwork for structural change in power sector governance.

Electricity was therefore the first major sector selected for liberalization in 1991 and 'the most important industry to be thrown open to private investors' (Jenkins, 1999: 19). This chapter examines the series of policy changes that have brought private agencies—that is, privately owned

corporations operating for profit—into the industry. It makes two arguments: first, about the dynamic of institutional change, a process of ad hoc institutional layering; and second, about the nature of this change as a key example of ‘state capitalism 2.0’.

Chapter 3 outlined the path-dependent political structures that had developed in the power sector by 1991. They would continue to constrain the reform process, limiting the possibilities for sweeping institutional displacement and instead channelling reforms along more gradual and piecemeal lines. Throughout this chapter, I show that the process of private entry has therefore been one of institutional layering upon the pre-existing statist system (and related institutional change within the statist core, discussed in the following chapter). Private power interests have entered—but thus far private participation has *supplemented* rather than supplanted state agencies’ central role in the sector through forms of formal and informal public-private collaboration, in striking contrast to the ‘global template’ for reforms outlined below.

The account of its layered emergence indicates that this change was not the result of an ideological project to reshape the state, but the product of a series of ad hoc, opportunistic, and reactive decisions. Nonetheless, the face of state capitalism 2.0 analysed here marks a significant difference with the pre-1991 period. Today there is a new emphasis on the contributions of the private sector as a partner in the development enterprise and a provider of efficiencies and market discipline. The state was never definitively the senior partner in state capitalism 1.0,<sup>1</sup> and it has voluntarily relinquished much of its dominance in electricity in order to incorporate private sector capital into the expensive infrastructure sector. Attracting private capital has often become an end in itself in the sector, however, leaving some policies vulnerable to exploitation.

Yet, as the following account shows, the dynamic of private entry fits within a broadly state-capitalist paradigm. The system is still *state-driven*, if not state-led. Private power players have often been the beneficiaries of ‘pro-business’ tactics that favour established producers, rather than ‘pro-market’ strategies that support ‘new entrants and consumers’ to bolster open competition (Kohli, 2006a, b, 2012). While the failures of the state system have driven some elites to private

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<sup>1</sup> In developmental state literature, the state is the senior partner in a ‘developmental’ alliance that unites the political and economic elite in the long-term national interest, as is argued for the classic East Asian cases (Leftwich, 2000: 160-1; Johnson, 1982; Evans, 1995) and more controversially for the Indian software industry by Vibha Pinglé (2000). Unlike the classic developmental states—and China from 1979, sometimes grouped with them—in India the rise of big business preceded the consolidation of state power and authority (Kohli, 2012; Tillin, 2013). As Chapter 1 argued and Chibber (2003) and Das Gupta (2007) show, this more symmetric relationship between state and business is a *continuity* in independent India’s history.

solutions, since 1991 this private participation has relied heavily on state support of diverse kinds, and has been dictated by the vagaries of state policy and favour. The institutional forms of private participation reflect this. First, private firms have moved into the sector largely through varying forms of *public-private partnership* (PPP), usually on a build-own-operate basis, from the independent power producers of the early 1990s to the ultra mega power projects (UMPPs) of the mid-2000s. Informally, too, the structures of firms that have been shaped by and flourished within the partially liberalized but state-centred electric supply industry often blur the distinction between public and private.

This chapter begins by examining the origins of private participation in the power sector. The next four sections each discuss a phase of power reforms, focusing on private participation. The sixth section draws together these threads of analysis, examining the oscillations of power policy between pro-business and pro-competitive measures, and the types of state-dependent but policy-distorting firms that have arisen to take advantage of these. The concluding section takes a first aggregate look at the outcome of this layering: the older statist system now coexists with a zone of (state-supported) private participation.

### **Welcome, business: opportunism over ideology**

This section begins by outlining the benchmark for convergence on ‘liberalization’ in the power sector: the ‘global template’ of radical restructuring, competition, and privatization pioneered in the United Kingdom. If the reforms in England & Wales were motivated by ‘market fundamentalist’ ideology, perhaps primarily so (Rutledge, 2010),<sup>2</sup> the entrance of private participation in India was instead informed less by a long-term vision than short-term exigencies. Examining these initial moves towards private participation shows the pragmatic and incremental nature of Indian power reforms, which underpinned the emergent state-capitalist system’s lack of ideological commitment or coherence.

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<sup>2</sup> I refer to ‘England & Wales’ as this forms a grid system distinct from Scotland and Northern Ireland.

*The 'global template' for power reform*

For most of the twentieth century, electricity's unique physical characteristics (see Appendix 1) and its perceived industrial and social importance meant that in much of the world it was considered a natural monopoly best left in the hands of the state. This consensus persisted into the 1980s. The World Bank—the largest external provider of capital in the global South, with power the single most important component of its spending—continued to endorse state direction (World Bank, 1983). Agreement that electricity was a textbook natural monopoly was so strong that even the American deregulation guru Alfred Kahn said: 'I am worried about the uniqueness of the electricity markets... It may be the one industry in which [vertical integration] works well' (quoted in Dubash and Singh, 2005: 5251).

Nonetheless, in the global North the consensus on state intervention more generally had begun to fray by the 1970s, even as nationalizations in the global South peaked and India created several key central energy SOEs (Chapter 3). By the 1980s, policymakers in the North began looking at alternatives to the state monopoly model.

This critique found fertile ground in the electricity supply industry. In Northern power sectors, the long trend of productivity improvements and increasing economies of scale had plateaued by 1975, setting the scene for demands for deregulation (Hirsh, 1989, 2000). Such demands were thrown into sharp relief by the oil shocks of the 1970s and the global liquidity crisis of the early 1980s.

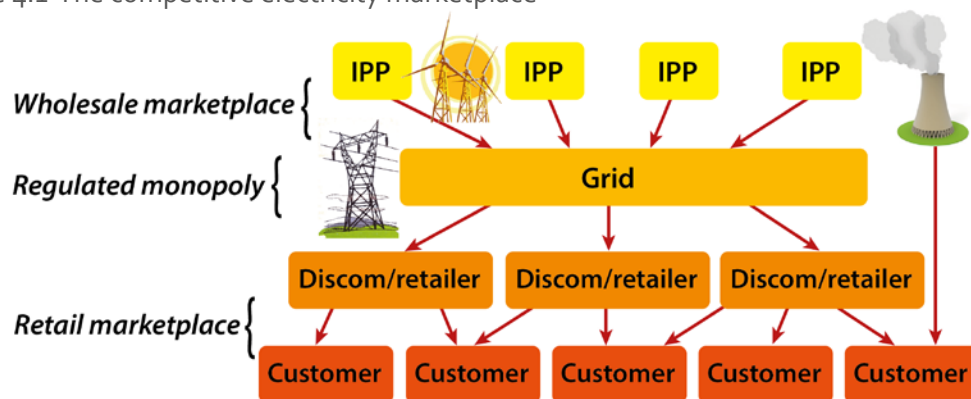
A radical new model was pioneered in England & Wales, turning the post-war statist model 'on its head' (Helm, 2010; Chick, 2007).<sup>3</sup> By 1989 a new UK Electricity Act provided a radically new framework for privatization and restructuring, facilitated by technological change—combined cycle gas turbines and computerized dispatch—and the availability of cheap, abundant energy from the North Sea oil and gas fields. In 1990 twelve new regional transmission and distribution companies were sold off, as were majority stakes in the generation companies National Power and PowerGen the following year (Newbery, 1999: 202-3, 25).

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<sup>3</sup> Pinochet's Chile was unsurprisingly an even earlier mover, introducing electricity reforms in the early 1980s, but these were slower and less far-reaching than the British moves (Joskow, 2000). New Zealand, perennial forerunner of British liberalization, also started early.

Its introduction in Britain was haphazard, but across the 1990s a basic programme of liberalization was emerging as other governments followed suit—Norway, Sweden, Australia, California, Argentina, and Poland, for example. Although there were national and regional variations,<sup>4</sup> the project typically revolved around *institutional restructuring* and the introduction of *competition*. The latter replaced nationalization and statutory monopoly as the guiding principle, and was seen as the solution for most of the electricity sector’s problems, from high tariffs and unsustainable subsidies to unwieldy and inefficient monopolies (Figure 4.1).

Figure 4.1 The competitive electricity marketplace



The model included the following basic measures (Sen, 2014: 1):

- (a) Introducing independent power producers (IPPs)
- (b) Corporatizing state-owned utilities to create separate legal entities, and commercializing their functions
- (c) The enactment of legislation
- (d) Establishing a transparent regulatory framework, primarily through the introduction of independent regulatory agencies
- (e) Unbundling vertically integrated monopolies into competitive (generation, retail supply) and non-competitive (T&D) segments

<sup>4</sup> Norway was unusual: it already had a well-established regulator and a relatively decentralized structure even before liberalization, and so its reforms instead introduced competition without privatization (Magnus and Midttun, 2000). That the introduction of competition was more radical than mere private ownership is clear from the fact that several countries had earlier opted for private-owned systems with little difference in performance from state-owned systems; even India had stopped short of full nationalization, as above. Again, this reinforces the notion that liberalization and decentralization, *not* privatization, was the core of the international template (Newbery, 1999)—although this was not the lesson that many Indian policymakers took.

- (f) Divestiture of state ownership at least in most of the generation and distribution segments, and ‘establishing a market in which electricity is traded at arm’s length’ (Bacon and Besant-Jones, 2001: 4), enabling full wholesale and retail competition through the introduction of open markets in finance and through ‘open access’ to the physical grid infrastructure.

The state’s role was confined to providing broad direction ‘while giving up the roles of operator and investor’ (*ibid*). It continued to provide a regulatory framework—‘So regulation is dead: Long live regulation,’ as one contemporary commentator remarked.<sup>5</sup>

The transition was therefore multidimensional: from large coal plants to a ‘smaller is better’ model, national to foreign and private ownership, monopoly to competition, and a service for all citizens to a market commodity (though some cross-subsidization remained) (Patterson, 1999). Nowhere has the transition been seamless or uncontested: the restructuring it requires

reverberates through the entire physical and institutional structure for electricity. It transforms the criteria for planning, finance, choice of technologies and fuels, regulation, system operation and management, and indeed the nature of business to be transacted. Such a tangled confusion of transitions cannot hope to be smooth. (*ibid*: 126)

The model was replicated across the global South, both because of the demonstration effects of its Northern successes and the financial and managerial crises that affected many Southern electricity supply industries. From 1993 the World Bank developed its own similar template (World Bank, 1993b), and both the Bank and the IMF imposed such reforms as a condition of power sector lending (Henisz et al., 2005). For a decade power sector liberalization became international ‘motherhood and apple pie’ (Xu, 2004: 11). It was marketed as a ‘global standard’—as its advocates sometimes explicitly termed it—and a readymade panacea for power sector woes.<sup>6</sup> Yet in India the outlines of reform were only partially informed by this template. Domestic factors have continually reshaped its reception and prescriptions.

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<sup>5</sup> A *Business Week* columnist, 1997, quoted in Hirsh (2000: 261).

<sup>6</sup> The World Bank denied that its template was meant to be taken as internationally prescriptive, especially by the 2000s as its flaws became obvious. However, the Bank’s influence was key in spreading the market model across the global South (see Chapter 5, and the discussion of the ‘Odisha model’ on p. 122 below).

*Enter the private sector in India: short-termism and private finance*

By the 1980s, the prospect of some form of *direct* private participation in electricity was under serious discussion in New Delhi.<sup>7</sup> Of course, there were precedents. Private participation had continued in key areas of the country and, though legally only small, licensed standby units were permitted, captive power plants had been a fact of life for industrialists in some States—notably Gujarat—even before 1991 (Figure 3.3 above). The Rajadhyaksha Committee Report observed that there was already ‘much debate’ about opening the generation segment to more regular private participation, but concluded that the existing case-by-case consideration ought to continue (Department of Power, 1980: 25-26).

Upon taking office, in July 1988 the new power minister, Kalpnath Rai (Congress, Uttar Pradesh), who in September 1991 would introduce key amendments to the 1910 and 1948 Acts, wrote to all Union ministers and MPs soliciting their opinion on the sector’s condition. Rai’s final (and rather leading) question read: ‘What would be your suggestions for enlisting the support of private sector for raising of resources and management and technical know-how for augmentation of power generating sources and power systems?’ (reprinted in Department of Power, 1989: 14).

The politicians’ responses, circulated for the conference of State power ministers in January 1989, were revealing. Some remained suspicious. Rajya Sabha member Bir Bhadra Pratap Singh (Congress, Uttar Pradesh) noted presciently that directly or indirectly ‘the bulk of the money will invariably come from the Government’, but ‘the emphasis would shift to expansion in areas where maximum profits can be made’ (*ibid*: 265). More respondents were tentatively positive. For most—including M. Arunachalam (Congress, Tamil Nadu), C. Madhav Reddy (Telugu Desam Party, Andhra Pradesh), and J.P. Javali (Janata Dal, Karnataka)—the private sector offered the chance of raising resources in a context of scarcity (*ibid*: 53, 86, 161). B.S. Engti, Minister of State for Planning and Programme Implementation, noted that the Cabinet had recently approved in principle the notion of the private sector establishing power plants for this reason (*ibid*: 66). Others suggested it could bring improved management or ‘greater competitiveness’. As Minister of State for Parliamentary Affairs Sheila Dikshit (who would later

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<sup>7</sup> Drawing on conversations with ‘a range of informed insiders’, Rob Jenkins claimed that ‘[t]he notion of electricity generation...in the hands of private enterprises was considered unthinkable by many Indian business professionals, intellectuals, and bureaucrats in the late 1980s’ (1999: 19, n. 20). In fact the notion of private involvement in the sector was firmly if discreetly on the table by 1988, as above.

forge close relationships with private distribution companies as chief minister of Delhi), put it: ‘After all the Public and the Private Sector should be complementary to each other and neither should feel threatened by the other’s presence’ (*ibid*: 76).

The respondents did not all welcome the idea of private participation, and did not consistently raise the question of foreign capital which would become so central in 1991. Nonetheless, their letters show that there was broad consensus that the power sector was in dire straits (Dubash and Rajan, 2001: 3371), and by 1988 public dialogue about private participation had begun.<sup>8</sup>

The private sector’s role was to be limited: most respondents agreed that transmission and distribution should rest with the state. The power ministry’s presentations did not mention anything as controversial as privatization. The private sector’s role was in the generation segment, whether through captive generation (perhaps selling any surplus) or in the provision of financing. As these 1988 opinions suggest, for most policymakers the primary rationale for private participation was not a fundamental rethinking of the sector’s structure, but a much shorter-term focus on resource mobilization.

This was only reinforced in 1991 when ‘all hell broke loose’.<sup>9</sup> While senior policymakers acknowledged the sector’s longer-term problems with tariff setting and resource mobilization, the critical context for reform lay outside the power sector itself in the proximate balance-of-payments crisis. The economic growth of the 1980s had come at a high cost. It relied heavily on an expansion of public investment and current expenditure, both on ‘development’<sup>10</sup> and spiralling ‘non-developmental’ expenditure like that on agricultural power subsidies. The state proved to lack the enforcement capacity for increased revenue collection or rolling back unproductive rents, and its fiscal situation deteriorated, especially as oil prices rose during the Gulf War (McCartney, 2009). The exigencies of short-term fundraising dominated the first phase of reform: as Bhaduri and Nayyar (1996) suggest, initial liberalization was primarily crisis-driven.

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<sup>8</sup> As had the first steps towards reform: the Central Board of Direct Taxes issued an instruction dated 21 September 1989 which declared that equipment supply by multinational companies for turnkey power projects would not be liable for tax if the title was transferred outside India, for example. In 1989 the Goenka group was permitted to buy up shares in privately owned but moribund Calcutta Electric Supply Co., now its flagship enterprise, which may appear surprising in a communist-run State.

<sup>9</sup> Interview, USAID official, Delhi, 1 May 2012. In 1991 he was working for the World Bank on energy in India.

<sup>10</sup> This economic growth was paralleled in the power sector by an expansion in capacity addition, one of the few times that India came close to achieving its Five-Year Plan target.

By 1991 the country was facing a serious balance-of-payments crisis and turned to the IMF for an emergency loan. Led by P.V. Narasimha Rao, the new minority government that took power in June that year ushered in a ‘first generation’ of economic reforms. In July the power sector was publicly declared to be of particular concern for the new government. The deeper causes of the sector’s crisis were well known at the top tiers of the state: Finance Minister Manmohan Singh pinpointed low tariffs for farmers and transmission losses as the cause (*Times of India*, 1991). Yet the balance-of-payments crisis became the lens through which the dilemmas of the power sector were reframed. Not mismanagement but *scarcity*—of finance and generation capacity—was the overriding concern. The solution selected in October 1991, the IPP policy, ill fit the sector’s more fundamental problems, but stressed the need to access capital, especially foreign finance. Thus the concern with a ‘paralyzing scarcity of financing’ was foregrounded by Rai when introducing the amendment of the 1948 Electricity (Supply) Act in Parliament to permit the entrance of IPPs (Kale, 2014a: 54).

This scarcity-based rationale had a tenacious grip on New Delhi worldviews. It still had support a decade later from a technocrat who otherwise ridiculed the 1990s reforms: ‘It was inevitable that the government had to seek private investment in infrastructure... It should be obvious that a sustainable development of infrastructure through public resources is a pipedream’ (Haldea, 2011 [2003]: xiv, 55-56). This concern with increasing generation capacity—the ‘mono-input’ vision (Ruet, 2007: 186) or ‘pouring more water in the leaky bucket’, in one commentator’s memorable phrase (see epigraph, Chapter 6)—has been a hallmark of Indian power reforms. It even overrode the long-term worries about energy security: electricity, typically treated as a ‘strategic’ sector in many countries to be kept under tight state control, was opened to private and foreign capital.

This crisis-driven logic reemphasizes the inaccuracy of treating the sector’s creeping liberalization as the enactment of a coherent or ‘developmental’ vision. It was instead driven by short-term concerns and reactive policymaking. For much of the period from 1991, as we shall see, India’s state capitalism 2.0 evolved not as an ideological project but through similarly ad hoc and opportunistic policy responses. In the power sector this prompted a deeply problematic initial

solution—the decision to allow, and even woo, IPPs—with long-term consequences for private participation.

### **Phase 1: Private participation in generation—the IPP policy, 1991-1996**

Before the consolidation of the World Bank ‘global template’, opting to bring independent power producers (IPPs) into the generation segment through long-term power purchase agreements (PPAs) was a common move across the world in the 1980s and 1990s. The model was loosely the 1980s United States, one of relatively few countries to resist the postwar allure of public ownership. In the aftermath of the 1973 oil crisis, legislation compelled utilities to buy from unregulated IPPs able to provide cheaper power. This challenged electricity’s natural monopoly status and incentivized new, decentralized technological choices. In so doing, it weakened the old rationale for a regulated natural monopoly and so opened the door for more far-reaching reform (Hirsh, 2000). The IPP model gradually spread: China and the Philippines followed in the late 1980s, and dozens more developing countries in the 1990s.

The introduction of IPPs would later be explicitly recommended by reform advocates as the first stage of liberalization, ‘showing the benefits of private investment and management’ without a direct attack on the state monopoly system, as full-fledged privatization would have been (Bacon and Besant-Jones, 2001: 5). Yet in reality the IPPs were typically not a systematic attempt to imitate the template that had been developed for the quite different conditions of the global North. Despite the older diagnoses of the power sector’s deeper flaws (Chapter 3), in 1991 total restructuring along the lines of England & Wales was not seriously discussed.

Instead the IPP policy appeared the result of ‘opportunistic political consensus’, as Joël Ruet (2005: 180) suggests, in which recourse to private investment helped to secure World Bank loans, defer the financial burden for a legislative term, and create rent-seeking opportunities, especially by bringing in much-needed foreign direct investment (FDI). ‘The case for private power is straightforward,’ the economist and government advisor Kirit S. Parikh publicly declared, ‘[f]oreign private power is even more desirable as it would truly bring additional resources’ (quoted in Uniyal, 1994). India’s IPP policy explicitly courted FDI, much coveted as the new metric of success in the era of globalization. This was made clear by reduced duties for imported

generation equipment; a provision that Indian financial institutions could lend no more than 60 percent of the total debt for projects (Lamb, 2006: 12); and the centre's decision to allow automatic approval for foreign equity participation in generation projects without consulting the States (Sáez, 1998: 211).

In ending the state near-monopoly in the sector the IPP policy was symbolically radical. This was not 'reform by stealth' (Jenkins, 1999). The revolutionary nature of the IPP policy was less downplayed than played up, propagated with great fanfare at least to some audiences, with international visits and English-language newspaper coverage. The Eighth Plan, which labelled power one of three 'priority sectors', itself claimed that the sector's opening amounted to 'major changes in policy'. The centre was optimistic that this signal would be received by foreign investors: the targeted investment amount was predicted to be generously exceeded (Planning Commission, 1992: §8.6.59). This worked for international financial institutions: the IMF produced a stopgap loan and the World Bank agreed to lend again to India.

Yet for a year after the October 1991 amendment, and despite diplomatic efforts, 'nobody came' (Parikh, 2001: 1463). In 1992 Enron approached with a project that the finance ministry recognized as expensive but cleared in the hope that it 'would give a signal to the world that India is open',<sup>11</sup> arguably leading to other bidders benchmarking their bids on this inflated estimate (Parikh, 1997: 221). Nonetheless, it showed that India was ready to offer attractive terms. Policies and clarifications to provide a variety of generous incentives quickly followed, including tax holidays, central counter-guarantees, a guaranteed minimum rate of return of 16 percent, and central fast-tracking for eight showcase projects (Dubash and Rajan, 2001; Shahi, 2005: 36-7). Thanks to these generous sops, India eventually received more than 200 IPP proposals from almost all the major global power players (Upadhyay, 2000: 1023).

The problems swiftly began to become apparent, however. Most projects never materialized—barely 5,000 MW of the proposed 100,000 MW—nor did the promised FDI (Sáez, 1998). The IPPs failed to supply more than a tiny fraction of India's new energy needs, and their power was often expensive. Financial losses, theft, and technical losses continued to swell, while the State governments' financial situations only worsened with their expensive new contracts.

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<sup>11</sup> Conversation with Finance Secretary Montek Singh Ahluwalia, cited in Parikh (1997: 214).

Of particular concern were the opaque Memorandum of Understanding (MoU)-based contracts through which projects were granted, which led to accusations of favouritism and corruption. SEBs had been given increased powers to negotiate agreements in August 1994, and in September the capital expenditure cap above which CEA concurrence was required was lifted to ₹1,000 crore. However, few projects were awarded through competitive bidding. Instead, State politicians pushed through deals, often with unseemly haste. In Andhra Pradesh, for example, the chief minister immediately approved the award of contracts to a company known to be close to the chief minister, GVK Industries (now a successfully diversified conglomerate), and to a second small company represented in India by his own son (Kochanek, 1996: 165-66). Sudha Mahalingam argued that politicians and bureaucrats' 'unprecedented support' for the policy was primarily down to the vast rents on offer (2005: 204).

The secretiveness and profligacy of the deals provoked local opposition movements and party-political resistance, especially against foreign-funded IPPs, including against a \$660-million AES project in Odisha, a \$700-million Siemens project in Gujarat, a General Electric project in Karnataka and, most famously, Enron's Dabhol project in Maharashtra. 'For the first time since India reopened its doors to foreign investment in 1991', wrote *The Economist* (1995), 'a populist backlash is raging.' Foreign investors would not quickly forget the Maharashtrian government's repeated attempts to renegotiate the Dabhol power purchase agreement; eventually the project earned the dubious distinction of becoming India's only cancelled private power generation project.<sup>12</sup>

The combination of both the policy's failures to improve power supply and well-publicized rent-seeking destroyed its legitimacy. By the late 1990s, there existed 'a broadening consensus among both former and functioning bureaucrats that the IPP policy was very "flawed"', although 'the "most promising option at that time"' (Dubash and Rajan, 2001: 3372). Substantive critiques of the policy, and the sector's overall organization, began to emerge among technocrats at the centre (Parikh, 1995; Ahluwalia, 1997). The Ninth Plan conceded that the government had

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<sup>12</sup> For detailed interpretations of the Enron scandal, see Government of Maharashtra (2001), Mehta (2000), and Purkayastha and Prashad (2002). Across Asia IPPs were coming under similar pressure to renegotiate PPAs, although even among a host of failures Dabhol was an especially visible and dismal example. By the late 1990s the IPP market had collapsed, and Northern investors discussed the problems in terms of Raymond Vernon's (1971) classic 'obsolescing bargain' model in which, after an initially favourable agreement, bargaining power shifts to the state as the multinational company's fixed assets in the country increase; see Woodhouse (2006). Foreign investor confidence in Indian electricity has never really recovered.

underestimated the difficulty of bringing private capital into infrastructure, and that existing policies needed to be ‘urgently corrected’ (Planning Commission, 1999: §1.19).

Moreover, the IPP policy left the sector’s fundamental structure largely untouched, and in many ways appeared to be only an incremental change, bigger on rhetoric than substance (Bhattacharyya, 2007). It neglected distribution and did virtually nothing to tackle the underlying fundamental weaknesses of the SEBs—or even exacerbated them by selling ‘champagne power to a customer whose budget does not even extend to beer’, as *The Economist* (2001) described Enron’s project. As they were the sole buyers, the utilities’ financial weakness discouraged private investors. Longer-term measures to address distribution were politically difficult and promised only slow returns, while low-cost managerial reforms appeared insufficient to signal commitment. ‘[T]he lure of the IPP policy’, by contrast, ‘was that it offered a way around the difficult politics of the sector’ (Dubash and Rajan, 2001: 3381). This early phase of reform was little more than business—and politics—as usual, mere ‘piecemeal changes in the name of reform’, as the Electricity Bill architect later wrote (Haldea, 2001: 1389). Private generation had merely been introduced *in parallel with* the public sector, a layering that worsened state utilities’ finances and left foreign investors nursing burnt fingers all across Asia.

At the same time the policy had brought in private capital on highly favourable terms—*too* favourable. The result was a turn towards regulation—the centre circulated a model concession agreement to standardize contracts, facilitate transparent competitive auctions, and reduce discretion; mandated the Power Finance Corporation (with World Bank assistance) to act as a technical consultant; and made competitive bidding a condition for receiving CEA clearances—and towards imitation of the ‘global template’ for reform. India’s first serious experiment with private participation in the power sector had led to painful lessons about privatization without competition, about deregulation without reregulation, and about the private sector itself.

## **Phase 2: State-level attempts to privatize distribution, 1996-2003**

As it became obvious that the IPPs left the underlying problems of the sector untouched, reform advocates argued that liberalization had not gone far enough. Gajendra Haldea lamented the ‘Dabholisation’ of the sector, in which ‘the incumbent players’ protected the role of state-owned

middlemen (2011: 178). The technocrat and academic Kirit Parikh, himself part of the 1995 Dabhol renegotiation committee, drew 'lessons for power policy':

[S]uch controversies can be avoided by permitting the private plant operators to sell power directly to consumers [i.e. open access]. Then the government does not have to come in at all and the politicians and bureaucrats are kept out... Thus, the main lesson from the Enron controversy is we need more privatisation and not less. (1995: 2546; 1997: 227-8)

Yet the first period of attempted *fundamental* reform arrived on the agenda quietly, and with some ambivalence from the centre. These State-level experiments recognized that the calamitous state of Indian electricity in fact owes much to poor management and distribution rather than simple undersupply, and therefore brought structural reform which aimed to improve the monopsonistic SEBs' parlous financial health. At the same time they too would bring out the fraught dynamics of public-private interactions in the sector.

### *Odisha*

Under the guidance of international consultants and especially the World Bank, the unlikely pioneer Odisha—a poor eastern State—experimented with restructuring and regulation. While Odisha's was not the worst-performing utility, as a small, poor State with often strained links with the centre, it was financially vulnerable. International lenders, hitherto a substantial source of funds for expanding the electricity supply industry, were imposing strict new conditions for any loans. As the Odisha SEB told researchers, international lenders were increasingly like 'an unofficial consortium', so if the Bank refused assistance other agencies were likely to refuse too (quoted in Thillai Rajan and Anand Ram, 2000: 97). Nonetheless, facing the threat of State bankruptcy, Odisha's chief minister Biju Patnaik appeared committed to the reforms (Dubash and Rajan, 2001: 3377). In November 1993 he formally approached the Bank about the State's willingness to attempt power reform.

As we have seen, by 1993 there existed an international solution looking for an Indian problem. The Bank template was ambitious and purportedly universal:

*The Bank will aggressively pursue the commercialization and corporatization of, and private sector participation in, developing-country power sectors.* (World Bank, 1993b: 16, emphasis in original)

This time the panacea was to be *privatization* of the SEB monopolies, alongside the introduction of independent regulatory commissions (discussed in Chapter 5). The SEBs were to be unbundled (de-integrated into generation, transmission, and distribution segments), with each segment to be ‘corporatized’ and given autonomy to encourage efficiency. Finally the segments would be privatized, first in generation and later the key segment of distribution itself.

With heavy participation and funding from the Bank and expensive advisors from international consultancies (including PricewaterhouseCoopers, KPMG, and Credit Suisse), Odisha began the process of restructuring around 1993. Nonetheless, the process proved both painful and less fruitful than expected. T&D losses remained extremely high, while the newly privatized distribution companies were using the state-owned transmission company (transco) as a free bank, in turn weakening its ability to contract for new capacity. The American multinational AES dramatically pulled out in 2001, and a damning official report claimed that the sector was now much worse than it had been under the SEB (Government of Orissa, 2001).

The Odisha experience was to have a lasting impact. It ‘frightened off investors from distribution’,<sup>13</sup> and—so some argued—‘exploded the myth of superiority of private sector managerial skills’ (Rao, 2003; Mahalingam, 2002). It also contributed to the World Bank’s declining influence (see also Chapter 5), leaving the Bank ‘chasten[ed]... [A]fterward it gradually softened its position that “privatization of distribution was a *sine qua non* of Bank engagement” in [S]tates’ power sectors’ (Kirk, 2011: 127). Odisha thus offered the first major indication of the difficulty of applying the ‘global template’ in India.<sup>13</sup>

The outcome was mined for lessons. Commentators argued that the model itself was flawed. The critical problem, argued the architect of the later Electricity Act, was that it was a single-buyer model. It unbundled the SEB only into a string of monopolies, and leaving Transco as both monopsonist and monopolist—‘a perfect recipe for delivering high cost power to the consumer’ (Haldea, 2001: 1389). Privatization alone was therefore inadequate. There was a crucial missing ingredient. Odisha had sought to imitate other countries’ reforms, notably the UK

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<sup>13</sup> For detailed treatments of the Odisha experience, see Dubash and Rajan (2001: 3375-81), Thillai Rajan and Anand Ram (2000) and, for a more richly historical interpretation, Kale (2014a: 100-135).

Electricity Act of 1989, without its most fundamental principle. In this mere structural ‘tinker[ing]’, ‘*competition* is conspicuous by its absence’ (*ibid*). The stage was therefore set for the centre to move back in with legislation.

### *Delhi*

Against that ‘template’, the other lesson from Odisha was to ensure ‘ownership’ of the reforms. The second State to take on distribution was Delhi, where privatization was much more indigenously led.<sup>14</sup> In 1997 the chronically underperforming Delhi Electricity Supply Undertaking, which had often fallen prey to interference by the city’s municipal corporation, was dismantled. A new board was formed with a more arm’s-length relationship to the municipal government, and finally auctioned off to private companies in three parts. Only two bidders remained by the end of the bidding process, Tata and Reliance (which had just bought BSES). Nonetheless, the Delhi power situation has since seen major improvements, especially in theft reduction, a pillar of the city’s profit-sharing privatization arrangement.<sup>15</sup>

The strange character of public-private politics in the power sector is nowhere more obvious than within the three private Delhi discoms. The state has not entirely relinquished control. It holds a 49 percent stake in each discom. In 2012, the board of BSES Rajdhani, one of two discoms owned by Reliance Power, included four members from the government—the State’s chief secretary, power and finance secretaries, and the chief minister’s principal secretary—and only three from Reliance. Tariff rises also have to be negotiated with the State regulator, creating frictions (see Chapter 5).

The company and the government generally enjoyed a ‘very good working relationship’, however.<sup>16</sup> Although the State government’s representatives’ ‘ability to act’ on the business’s needs ‘is very limited’, said its chairman, they broadly tolerated the company’s need to prioritize profit:

They wear different hats [and] behave like any other board... So we do not look upon this as an obtrusive presence. Let me put it this way: as the CEO of the company, I’ve

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<sup>14</sup> There were other experiments, notably in Andhra Pradesh, UP, Haryana and Rajasthan (Dubash and Rajan, 2001: 3381-2), but these faltered in the wake of the Odisha experience.

<sup>15</sup> The discoms brought in electronic billing and metering technology alongside old-fashioned raids, although early meter-reading errors provoked a furious response among middle-class residents (Coleman, 2014).

<sup>16</sup> Interview, chairman of Delhi discom, Delhi, 15 May 2012.

never had to face a direction from the board which goes contrary to business sense...  
Virtually we've been left free to work.<sup>17</sup>

Nonetheless, the chairman argued that the discom cannot turn a profit because they were expected to further the government's social objectives and cross-subsidization. Brought in to compensate for the government's own failures, '*eventually what you transform yourself is from a private entity into the state itself*,' he went on (see chapter epigraph):

And I'm going beyond my brief as a CEO of a company to look at it as part of a socially inclusive agenda that all of us need to advance... [But] you cannot ask me to keep on serving you, without giving me the means to serve you.<sup>18</sup>

Despite the private discoms' protests, they are in practice strikingly unpopular with Delhi's citizens, many of them middle-class 'proponents of privatization', who argue that they remain monopolies with opaque finances and overly close relations with the electricity regulator (Coleman, 2014: 258). Their odd public-private position leaves them vulnerable to populist political intervention along these lines. The city's Aam Admi Party governments in 2014 and 2015, elected in part on a promise to bring down electricity bills, demanded that the discoms' accounts be subjected to audit by the Comptroller and Auditor General (CAG) in the same manner as public companies. It appears, then, that citizens and politicians alike recognize them as hybrids: in the popular imagination they appear to combine private greed with a structural place in the public sector hierarchy.

Aside from these ambivalent exceptions and a handful of smaller experiments (discussed below), today no other State has privatized distribution. Private participation in transmission remains even lower, only around 3 percent in 2015, and has faced similar problems. In the early 2000s state-owned PowerGrid embarked on the first joint venture in transmission, a build-own-operate-transfer project with Tata Power. Costs escalated rapidly. As PowerGrid's then managing director wrote, this was a 'salutary lesson for many people. Blind faith in the private sector or in its ability to enhance efficiency and reduce costs was obviously not advisable' (Singh, 2009: 56). The second phase of electricity reform therefore drew to a close with private participation in most of India confined to an uneasy coexistence with the state sector in the generation segment. The

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<sup>17</sup> *Ibid.*

<sup>18</sup> *Ibid.*

institutional forms that such participation was taking were also public-private hybrids in which the state, and the sector's older political settlement (Chapter 3), continued to play a crucial role.

### **Phase 3: the Electricity Act and its limits, 2003-2012**

The reactive mode of policymaking in the Indian power sector continued. Both the IPP and Odisha model policies were labelled a 'cure worse than the disease' (Mahalingam, 2005; Dixit et al., 1998). The diagnosis of the sector's problems had also shifted: the World Bank had put pressure on for *real* levels of theft and losses to be publicized, doubling the official figures almost overnight from 19.8 percent in 1992-3 to 33.98 percent by 2002 (Planning Commission, 2008: 351). Calls increased among sector specialists and international observers for the centre to step in with legislative action to consolidate some of the innovations of the 1990s while putting the sector on a more rule-based and competitive footing. The national government passed delayed national legislation on electricity regulators in 1998 and, under the more stable National Democratic Alliance administration formed in 1999, finally stepped back into the fray with a draft Electricity Bill presented to chief ministers in February 2000.

#### *Open access*

The Electricity Act represented the high watermark of reform in India, projecting 'a bold and beautiful vision of the Indian power sector in its mature state: competitive, effective and cost efficient' (Sankar, 2004: 839). Recognizing that State-level cooperation was critical, it incorporated three years of consultations—although the Bill's main contours had already been drafted in advance. The 'soul' of this vision was open access, 'a right to non-discriminatory use' of T&D networks so that multiple players could freely enter (Kumar and Chatterjee, 2012: 189). As such it is the key mechanism for facilitating competition and choice both for generation companies and consumers (*ibid*).

Even after distribution was recognized as a gaping hole in the reform process, politicians and technocrats have struggled to reform the segment—it was simply too politically unpalatable. In 2003 the World Bank consultant Sumir Lal produced an informal discussion note (reprinted as

Lal, 2006) in which he drew on Rob Jenkins' (1999) research to explicitly advocate *stealth tactics* in Indian power reform. Even as he was writing, open access strove to take advantage of the layered and path-dependent character of the power sector and the coexistence of both private power and the statist system to leverage reform by the back door (Joseph, 2008, 2010).

Such backdoor reforms began before 1991 with increasing tolerance of captive power production. Increasing numbers of industrial and commercial consumers opted for captive generation from the 1980s on, despite its greater cost (see Chapter 3). Recognizing this, the Rajadhyaksha Committee recommended permitting larger-scale captive generation 'on a selective basis' in energy-intensive industries badly affected by power cuts, such as steel and aluminium plants (Department of Power, 1980: 25). This offered an opportunity to leverage reform, increase private investment, and bring in competition. During the 1990s the principle of selling surplus power on the grid was first discussed, and in 1997 captive plants owned by third-party IPPs were permitted to sell power to industry on paying concessional duties, although they still required consent from SEBs on a case-by-case basis (Abraham, 2009: 256).

This backdoor reform was replicated on the national scale through the Act's provisions, which also delicensed captive power. It amounted to a pragmatic attempt to institutionalize the exit option, while also putting pressure on SEBs as their most lucrative customers abandoned them (Joseph, 2008; 2010; see also Chapters 5 and 6). In this way layering can help to establish an alternative parallel system that competes with the old, encouraging defections to this new logic while working around powerful veto players. Over time this may lead to fundamental change as the older system stagnates (Streeck and Thelen, 2005: 22-24; Mahoney and Thelen, 2010: 16-17)—although in much of India this has yet to happen.

While last-minute lobbying behind the power ministry's closed doors had removed any binding time-cap for open access's introduction, the Act was swiftly amended to mandate open access for large consumers (>1MW load) within five years (i.e. by January 2009). In practice, however, the attempt to institutionalize this backdoor tactic proved too much for most States.<sup>19</sup> Open access has still not been implemented across most of the country. After 2009 some States risked regulatory fines to use the provisions of the Act itself to resist open access, afraid as many

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<sup>19</sup> The implications of this regional variation are discussed in Chapter 6.

were of losing their SEBs' most valuable customers. Several applied such high surcharges to exit the sector as to make the policy unviable, while others used the Act's notorious 'Section 11' to declare a virtual state of emergency.<sup>20</sup> Others directed their State load dispatch centres to block sales by generation companies on the market or outside the State (Kumar and Chatterjee, 2012: 174-188, 196). Although the Union power and law ministries have attempted to claim greater control over these provisions, the centre's ability to impose its will on the States remains limited both by the Act's formal provisions and informally, as later chapters discuss.

In the face of this State-level intransigence, the focus has shifted to geographical layering, cherry-picking foci that may be financially viable. Most striking is the privatization of city distribution networks through 10-15-year PPP franchises, as permitted under the 2003 Act. The most celebrated was pioneered in Bhiwandi, a powerloom-heavy town close to Mumbai. The franchisee both acts as an intermediary between the distribution licensee (which controls the distribution infrastructure in a given area) and its consumers, in charge of metering, billing, collection, repair, and consumer service. The contract means that the franchisee internalises the risk based on bill collection; as in Delhi the *raison d'être* for the model is to rein in these losses and thereby make profits. The model has since been rolled out even in States with large farmer lobbies, especially where there are very high levels of T&D losses, including Agra and Kanpur, UP; Gwalior, Sagar, and Ujjain in Madhya Pradesh; and in Muzaffarpur, Bhagalpur, and less successfully Patna (where bidders were found wanting) in Bihar. Private power firms have also concentrated on special economic zones, more insulated from the vagaries of State-level politics (Jenkins, 2011: 53), a pattern of geographical segmentation analysed in Chapter 6.

As this suggests, private firms have themselves often favoured local monopolies with guaranteed rates of return over open competition. Mumbai, one of the exceptional zones which had preserved private participation in distribution throughout India's independent existence, has seen a similarly ambivalent relationship between privatization, state intervention, and competition. In the 1910s, existing licensees successfully blocked the entrance of direct competition from Tata

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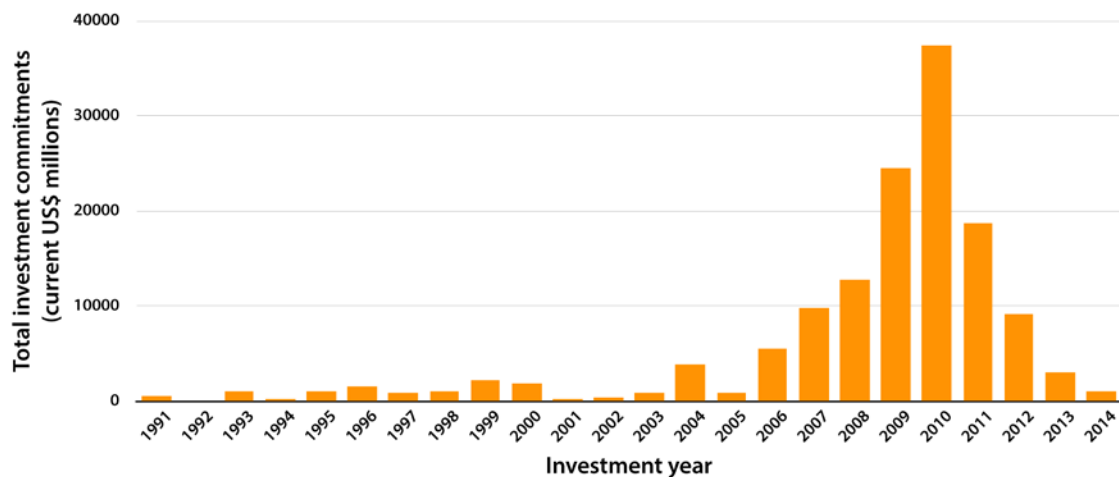
<sup>20</sup> This clause gives power of direction back to the State government in 'extraordinary circumstances' that can be interpreted quite widely. Industry lobbies have waged a multi-year battle against it: indeed, one of the industry events I attended was devoted almost entirely to its flaws and prospective amendments. The original Act also required cross-subsidies to be eliminated, but a 2007 amendment ensured these would instead only be progressively reduced (Kumar and Chatterjee, 2012: 192).

& Sons (Kale, 2015: 31). A century later, Reliance Power similarly protested the entry of Tata Power in 2010 to compete for consumers in the Mumbai distribution system, complaining of ‘cherry-picking’. As this shows, private firms have sometimes been almost as hostile as public utilities to competition, raising doubts that ‘competition in retail supply will ever be more than a very marginal phenomenon in India’ (*ibid*: 32).

### *Generation redux: public-private partnership*

Into the Electricity Act era, in India as in many other developing countries, state-business cooperation in the generation segment remained the cornerstone of private power participation. By the twenty-first century varying forms of PPP had become ‘the default option’ in Indian infrastructure (Pratap, 2014). According to the World Bank’s Private Participation in Infrastructure Projects Database (2015), electricity saw the largest investment in PPPs of any sector in India, accounting for 345 projects and cumulative investment of US\$139 billion between 1990 and 2013 (Figure 4.2).

Figure 4.2 Private participation in Indian electricity projects, 1991-2014 (\$US millions)



Source: World Bank Private Participation in Infrastructure Projects Database; only includes data for first half of 2014.

In the face of continuing resistance to distribution reforms, into the 2000s the focus remained on new projects rather than privatization. Up to 2014, 329 of India’s 350 energy PPPs were greenfield projects (*ibid*). Significantly, however, the sector had moved beyond the opaque MoUs of the IPP era—or what Electricity Act drafter Gajendra Haldea called ‘the Contract Raj’

(2011: 244). After the Act there were broadly four ways in which capacity addition could take place: (1) *contracted capacity* through PPAs, with utilities inviting bids for procurement; (2) *merchant capacity*, private generators hoping to sell on short-term markets; (3) *captive capacity*, large users establishing plants for their own use, possibly selling excess on the open market; and (4) *public-sector capacity*, typically earmarked for state-owned discoms (Gadag et al., 2011: 4).

In 2005 the power ministry carried the market project further. In place of cost-plus MoU tariffs, it notified competitive bidding guidelines in accordance with the Act's mandate.<sup>21</sup> Within five years, over 42,000MW was contracted, and in 2011 the competitive bidding route was made mandatory for all new capacity contracted by discoms (Gadag et al., 2011: 5). These efforts were superficially successful: capacity additions went up sharply during the Eleventh Plan (2007-12), with private players contributing substantially for the first time (Table 4.1). The tariffs revealed through competitive bidding processes generally appeared competitive with state-owned alternatives (Gadag et al., 2011).

Table 4.1 Installed capacity addition during the Eleventh Plan (MW)

Type	Target				Actual (% achieved)			
	Central	State	Private	Total	Central	State	Private	Total
Hydro	8,654	3,482	3,491	15,627	1,550	2,702	1,292	5,544
Thermal	24,840	23,301	11,552	59,693	12,790	14,030	21,720	48,540
Nuclear	3,380	—	—	3,380	880	—	—	880
<b>Total</b>	36,874	26,783	15,043	78,700	15,220 (41%)	16,732 (62%)	23,012 (153%)	54,964 (70%)

Source: Planning Commission (2013a: 136), drawing on CEA data

Despite this success on paper, often these PPPs proved a 'Faustian bargain', possessing not only technical and managerial flaws but also coming at a high political cost (cf. Flinders, 2005: 216).<sup>22</sup> PPPs have generally had mixed success in India, with high-profile failures like the Delhi airport metro. But the 'systemic problem' with the form is concentrated in the power sector, argued Haldea, also the architect of India's PPP framework (quoted in *The Economist*, 2012d).

<sup>21</sup> There are two major categories of such procurement. In Case-1 procurement, the developer has full freedom to determine the project's location, fuel, and technology, including bidding on the basis of existing plants. Case-2 is more restrictive and usually applies only to long-term agreements (for example, for the UMPPs, below): the procurer provides the site and clearances and often specifies the fuel linkage. The appropriate regulator adopts and publicizes the tariff discovered through bidding, if it is satisfied that due process has been followed; the central regulator CERC determines the escalation rate for the tariff's variable component. For further details, see Kumar and Chatterjee (2012: 60-74).

<sup>22</sup> For critiques, see Pratap (2014) and *The Economist* (2012d).

This was most strikingly visible in the ultra mega power plant (UMPP) policy. Official documents outlined a litany of problems faced by power projects, including ‘delay in land acquisition and environmental clearances’, ‘fuel linkages, contractual problems, resettlement and rehabilitation problems and law and order problems’ (Planning Commission, 2002, vol. 2: §8.2.25). Rather than tackling these wider problems, ‘mega power projects’ were first proposed in the mid-1990s to provide a shortcut to capacity addition through streamlined economies-of-scale projects catering to more than one State, although most projects failed to reach financial completion thanks to State-level reluctance (Gadag et al., 2011: 3). The idea was revived and extended in 2005-6 with unusual proactivity from the Prime Minister’s Office, when it became increasingly apparent that the Electricity Act’s implementation was stalling and private investment was slow to materialize. With the advent of market competition therefore stumbling, the policy saw a return to the older model of long-term agreements.

The UMPPs are a mix of large-scale coal pithead and coastal power projects, each around 4000MW capacity. To be developed on a build-own-operate basis, the projects used supercritical technology for greater energy efficiency and required a capital outlay of approximately \$4 billion (Goyal et al., 2012). The nodal agency, the Power Finance Corporation (replacing the earlier nodal agency, PowerGrid, as finance took centre-stage), took responsibility for securing land, resources, and clearances in advance to expedite construction and reduce risk. To do so it created shell companies, which were then transferred to the winner of a tariff-based competitive bid. Unlike the mid-1990s IPPs, the UMPPs were (nominally) developed without any state guarantees, although successful bidders received a variety of incentives, including a decade-long tax holiday and zero duty on imported equipment.

The projects were controversial from the outset. The first winner of the Sasan UMPP, Lanco Infratech, was stripped of the project after unapproved changes to its bidding consortium. Several other winning firms appeared to secure additional benefits in the form of state assets not required by the logic of the power plant. Tata Power and RPL were permitted to retain excess land acquired for their Mundra and Krishnapatnam UMPPs, for example, while a CAG report documented central and State-level complicity in offering ‘undue benefit’ to Reliance Power, the new winner of the Sasan project (CAG, 2012: Preface, §9). First the Union power ministry had

undermined its own bidding process, repeatedly softening the conditions of the bidding documents and the minimum technical qualifying criteria, while the Department of Legal Affairs had not vetted the contract. The main beneficiary of softened bid conditions was Reliance Power. Second, apparently at the request of the Madhya Pradesh chief minister, in 2008 the centre permitted Reliance to use excess coal from the three blocks allocated for Sasan—one of which was not included in the bid proposal, and had been deallocated from NTPC—for a separate power plant, which would sell power at higher rates. The total financial benefit the CAG pegged at ₹29,033 crore.<sup>23</sup> As it pointed out, this ‘vitiated the bidding process’ by which the plant had been awarded (*ibid*).

This undermining of the competitive market-based process became a hallmark of the policy. As in the early 1990s, the UMPP policy’s focus on generation ignored critical problems elsewhere in the sector. In this the UMPPs provided a microcosm of wider private power problems. Capacity additions outpaced both upstream linkages (resource supply, chiefly the production of coal and the freight capacity to transport it) and downstream linkages (grid extensions and financial viability in the ‘last mile’). By 2012, as the fuel supply crisis began to bite, power plants stood idle without fuel, transmission suffered from chronic underinvestment—and, of course, the core of problem of the haemorrhaging distribution sector remained in most areas.

The outcomes have been generally dismal. At the time of writing, eight years on, only four of the UMPPs have been awarded and several others are stuck. More problematically, with the increasing size of projects come increasing risks and complexity of contracts. Two of the plants were struck by the rising price of imports, having signed long-term power purchase agreements that did not account for the risk of foreign *force majeure*. The firms accordingly sought to renegotiate these tariff agreements upwards, which would transfer fuel price risk from the private to the public sector (Pratap, 2013).

This attempt provoked hostility from many quarters. The UMPPs are ‘the worst of both worlds!’ one bureaucrat exploded when asked about the renegotiations: it was ‘crony capitalism’—‘Don’t buy what the private sector says! They will receive superprofits from their own coal

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<sup>23</sup> In August 2014 the Supreme Court struck down the arrangement, despite Reliance Power’s pleas that it was necessary to compensate for the unviably low tariff in the PPA.

blocks.’<sup>24</sup> Another interviewee, who had been involved in preparing state-owned NTPC’s own unsuccessful bid for the Sasan UMPP, argued that the private firms had *always* intended to renegotiate:

We were preparing NTPC for a competitive scenario... And then the bidding process started. When we looked at the results we were totally flabbergasted. We said, this is the end of the industry. Because how are we are going to afford ₹1.19 [per kWh, the ambitious winning bid by a Lanco-Globeleq consortium, later matched by Reliance Power]? For 25 years? He [Anil Ambani] is either a fool or he’s making lot of people a fool.<sup>25</sup>

In 2012, with renegotiations stalling and the fuel supply crisis biting:

It turned out that both were correct! He first made a lot of people a fool and now he himself is feeling the pain.<sup>26</sup>

This pattern of ‘opportunistic renegotiations’ in PPPs showed the hollowness of the pro-market turn (Pratap, 2013). As organizational structures in the power sector have become increasingly diffuse and privatized, the onus of accountability increasingly fell on market-minded, principal-agent-theoretic modes of accountability through measures such as competitive bidding and performance contracting (see Kearns, 2003). Yet such mechanistic, compliance-focused measures have frequently been subverted in practice. While Tata and Reliance Power’s attempts to renegotiate their UMPP tariffs met with uneven regulatory resistance (see Chapter 7), other companies have proved more successful in renegeing on agreements arrived at through competitive bidding, with the state sending mixed messages. In 2007 Lanco Infratech successfully renegotiated the agreement for its Anpara-C brownfield plant in UP, despite the protestations of rival bidders. The PPA was thus decisively weakened as a regulatory instrument.

The significance of discretion in the nominally market-based system became still more evident in the allocation of natural resources, especially the opaque allocation of coal blocks that belatedly inspired the ‘Coalgate’ crisis. After much lobbying, in 1993 the central government took the decision to allow select firms to own captive coal mines (Jenkins, 1999: 190). For almost two

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<sup>24</sup> Interview, power ministry joint secretary, Delhi, 21 April 2012. Despite previous success in the railways ministry, he was about to be effectively demoted back to his old State-level job. Similar sentiments were expressed by other interviewees, cynically drawing parallels with Reliance Industries’ underproduction from its KG Basin gas reserves.

<sup>25</sup> Interview, private sector businessman (formerly NTPC), Delhi, 11 May 2012.

<sup>26</sup> *Ibid.*

decades, coal block allocation was carried out by a screening committee on a case-by-case basis, despite the mooting from 2004 of competitive bidding as a replacement, an alternative endorsed and then retreated from by the prime minister-cum-coal minister Manmohan Singh. As a result, by 2012 the government had still not introduced its own bidding policy. This was despite the discretionary policy's clearly adverse effects, not only in creating an environment in which corruption flourished, but in developing the coal blocks themselves: many firms preferred simply to sit on the blocks. The captive allocation policy siphoned off many Coal India blocks to the private sector, 'asset-stripping' the coal major and leaving it few explored blocks from which to begin production (Rajshekhar, 2013a). Even the central administration's eventual response at first appeared discretionary, more quickly de-allocating the blocks given to small and state-owned companies and leading to complaints from senior NTPC officials (Rajshekhar and Raja, 2012).

The scale of this giveaway was such that Reserve Bank of India governor warned of the shift from 'Licence Raj' to 'Resource Raj', or from 'crony socialism' to 'crony capitalism' (Rajan, 2012, 2014a). The power sector was less of a beneficiary than government policymakers maintained. Although India's spiralling electricity demand was used to justify the policy, just 40 percent of blocks (60 percent of reserves) went to power plants; just as many went to sponge iron works. Many of the biggest power players were excluded in favour of politically connected firms with no track record in the sector. Nonetheless, two of the biggest beneficiaries were conglomerates with power interests: the O.P. Jindal Group, headed by Congress MP Naveen Jindal, and a Tata-Sasol joint venture. There was further evidence that some bids made it easier for large companies to succeed: a mere 20-day application deadline for a coal-to-oil project favoured those who had already tied up technological partnerships.

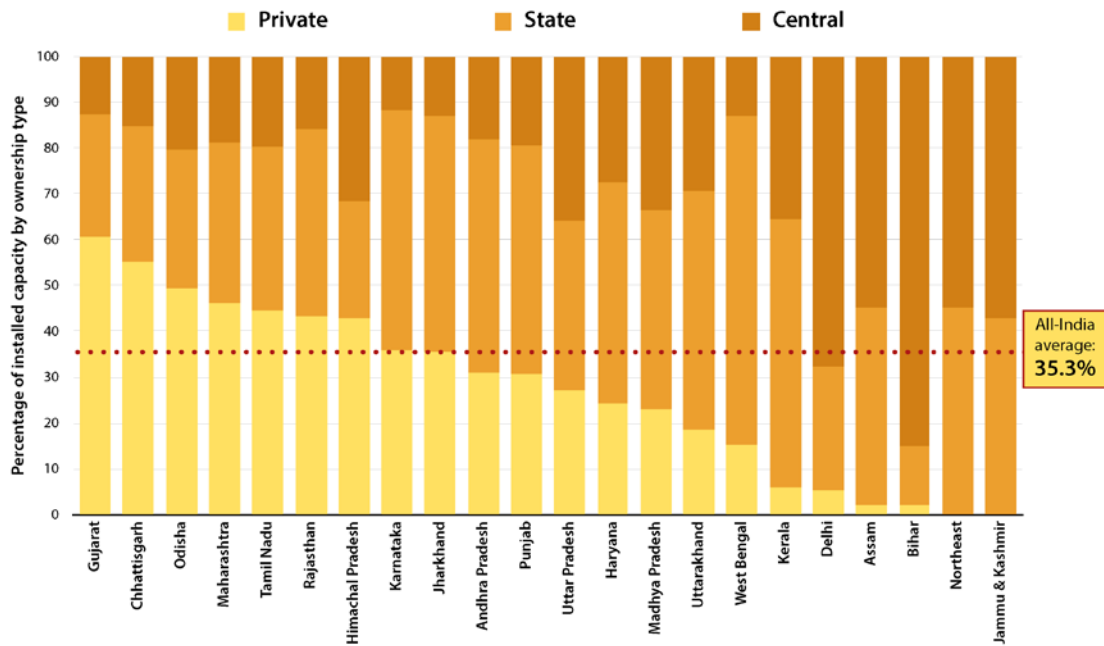
At the State level, too, select firms benefited from equally improvisatory policy tactics. State mining corporations (SMCs), awarded blocks for commercial mining by the centre, floated joint ventures in which they hold a nominal majority stake, but a private partner provides the investment and handles everyday operations (Rajshekhar, 2012d). While the state corporation is not directly using its own capital, the majority of the profits accrue to the private company: 'It can give the SMC what it wants to show on its books and the rest is squared up outside the mine,' as an Coal India ex-official explained (quoted *ibid*). Other joint ventures direct *all* the coal to the private

partner, as in the case of Madhya Pradesh SMC and a power plant for its partner Jaiprakash Industries.

Other firms were lucky enough to become merchant plants, i.e. where a major share of capacity is not tied up in a long-term power purchase agreement, but is sold in the open market. With a captive fuel supply, such projects succeed in making superprofits from short-term markets, thanks to the gap between demand and supply: prices in Indian short-term electricity markets are 'significantly higher' than those in other countries (Kumar and Chatterjee, 2012: 90). Jindal Steel & Power received nearly half its after-tax profits between 2010 and 2012 from its single power plant at Tamnar, Chhattisgarh, the country's first private merchant 'mega project'. Elsewhere in Chhattisgarh, the Indiabulls conglomerate promised an extremely low tariff for public power from its Bhaiyathan plant, on the condition that it could sell 35 percent of the electricity on open markets. While this exacerbated the huge financial losses of some State utilities (*ibid*: 91), others may even have imitated this tactic by mining the national grid itself, making windfall profits by paying the penalty charges for unscheduled interchange and reselling the power at much higher market rates (Shukla and Thampy, 2011: 119). In the context of perpetual demand-supply mismatches, short-term electricity markets and power trading, still a marginal concern, has therefore risked turning from facilitator of competition to another source of rents.

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Figure 4.3 State-wise variation in the degree of private ownership of installed capacity, as of 31 July 2014



Source: Central Electricity Authority data. Figures for the Northeast exclude Assam (listed separately).

As this suggests, State-level influence can be key. Regional variation in private ownership of generation is striking (Figure 4.3), and deserves its own book-length treatment to update Kale (2014a) for the Act era. Here I will confine myself to the observation that in the States within which private generation is concentrated, the pattern of pro-business discretion taking precedence over pro-competitive policies is even more evident than at the national level.

Gujarat, the leading private power State, has become famous for its extremely close state-business links, especially under Narendra Modi. As one retired bureaucrat observed, the State's success in attracting private capital was not due to transparent governance: 'If anything it is the level of discretion used that actually enables this ease of doing business' (quoted in Roy, 2013: 181-2). While the 1999 Gujarat Infrastructure Development Act, which set a legal framework for private investment and PPPs well before the centre had formulated such a policy, had enshrined 'competitive bidding' as a key principle, a 2006 amendment instead permitted 'direct negotiation' (Sud, 2012: 67). A number of regulatory and court decisions have since cast light on this discretion in practice. The State utility initiated bidding for three power tenders in early 2006.

Following a controversy in which the letters of intent issued to Jindal Power and PTC India<sup>27</sup> were abruptly cancelled, the Gujarat high court ruled that the public corporation's decisions

were not bona fide, but were made with a view to engineer an appearance of default so as to weed out the other successful bidders...from the arena. Yes, 'from the arena', and not 'from the competition', because there is no competition. There was and is enough power demand—to accept the power offered by the respondent—Adanis as well as by the petitioners. (*Jindal Power & Anr. v. Gujarat UVNL*, 2008)

Albeit from a much lower base of capacity, from the 2000s the resource-rich but poor eastern State of Odisha has also pursued a private-capital-dependent development strategy of 'extractive industrialization' under a strong chief minister, streamlining infrastructure clearances. Indeed, in 2009 its ratio of private to public investment was even higher than Gujarat's (4.2 times versus 3.3) (Kale, 2013: 256). Chhattisgarh has also seen a striking influx of private firms, so rapidly that fears have been raised about the 'plunder' of the State draining it of resources within 15 years.<sup>28</sup> These different trajectories simultaneously illustrate the influence of policy decisions and the importance of path-dependence. While Gujarat benefited from a long history of captive generation (Hansen, 2008), Chhattisgarh and Odisha had comparatively smaller state-owned sectors to contend with—and all three States are endowed with natural resources which entice in investors. At the same time, the State governments themselves have energetically pursued private power investment under long-term, activist chief ministers.

#### **Phase 4: The age of uncertainty, 2012-2014**

As soft power financing and coal block allocations accelerated from 2004, firms poured into the sector. Nonetheless, reform outcomes in the sector were far more geographically fragmented and limited to generation than the Act envisaged. Even the return to mega-PPPs under longer-term agreements amounted to something of an admission of the Act's failure and the need for the state to maintain a central role. The key structural problem remained: the heavy financial losses of many State utilities, the key customers for generation companies, due to persistently high levels of subsidy, underpayment, theft, and now the rising price of power procurement (see Chapter 6). In

<sup>27</sup> A PPP established in 1999 as the Power Trading Corporation, since diversifying to become a 'Complete Energy Solutions Provider' (company website).

<sup>28</sup> Interview, journalist, Delhi, 20 April 2012.

addition, ad hocist and discretionary policymaking in the sector finally provoked ‘negative feedback effects’ (Sen and Kar, 2014).

From 2011 there was a marked slowdown in capacity additions. The proximate cause was a fuel supply crisis of both domestic and international dimensions. By that year, the peak, over 70 percent of private contracted capacity (excluding the UMPPs) was dependent on domestic coal linkages from state-owned coal companies, and a further 17 percent on imported coal (Gadag et al., 2011: 10). Many firms had made their bids more attractive by promising non-escalable fuel and transport charges, making them additionally vulnerable to price and availability shifts as they were unable to pass through the full costs of fluctuations to consumers (*ibid*: 28, 34). The state near-monopolist Coal India struggled to keep pace with the rush of demand, especially as several of its earmarked blocks were handed to private players, while Indonesian and Australian policy decisions raised the price of imported coal. This was exacerbated by the fall in the rupee as growth slowed, making imported equipment more expensive.

Almost simultaneously, a governance crisis broke in the sector in the form of the ‘Coalgate’ scandal over the discretionary coal block allocation process described above. Hot on the heels of scandals over 2G telecom spectrum allocation and the Commonwealth Games, in March 2012 a leaked draft CAG report declared that the coal allocation process ‘suffered from an element of subjectivity, opaqueness and lack of transparency’, and put the loss in potential government revenue at more than \$210 billion (CAG, 2011).<sup>29</sup> The effect was to paralyze decisionmaking across the energy sector out of fear of further scandals, while firms remained uncertain of their captive block holdings until the Supreme Court finally cancelled almost all allocations altogether in autumn 2014.

Businesspeople criticized the regulatory backlash and the investor uncertainty it had caused. ‘The issue for the private sector,’ explained the CEO of one of the Delhi discoms, ‘is *who is the state*.’<sup>30</sup> Having filed a legal contribution, the lobby IPPAI held an event to protest on key issues such as ‘Safeguarding investor’s [*sic*] confidence’, ‘Sanctity of Contract—Rule of Law’, and ‘Dispensation of Natural Justice’. There was ‘a lack of clarity on the changing attitude to private investments where the lines between “*Public Good Vs Private Profit*” are getting blurred’, it

<sup>29</sup> The final report, published on 17 August, revised the figure down to a mere \$33 billion (₹1,86,000 crore).

<sup>30</sup> Gopal Saxena, CEO of BSES Rajdhani, CRISIL Power Sector Seminar, New Delhi, 7 May 2012.

warned, which were ‘reducing the private sector developers to mere contractors’ while ‘government is not letting go of the power sector in the “*public interest*”’.<sup>31</sup> The history of these issues (with ‘lessons learnt on both sides’) it bookended with ‘ENRON’ on one hand and ‘Coalgate’ on the other. Another private-sector interviewee, who had left the public sector only two years previously, instead sided with the state against what he perceived to be the excesses of a small but hugely influential fraction of private power players: ‘We regulated them as though they were good guys. They weren’t.’<sup>32</sup>

Such protests could not stem the outflow from the sector as both policymaker and private sentiment collapsed. Despite a huge central bailout of State utilities in 2012, the second in a decade, many firms shelved projects. Indian electricity infrastructure PPPs peaked by value in 2010, collapsing from US\$37.5 billion that year to \$3.1 billion in 2013 (Figure 4.2 above). Almost a year into the new Modi administration (see Chapter 9), many of these problems remain.

## The private sector and state capitalism 2.0

This section steps back from the narrative to take a more thematic look at two sets of key developments documented in the foregoing discussion. First it examines the state’s oscillating ‘pro-business’ and ‘pro-market’ policy decisions in the sector. Second, it speculates provisionally on the types of firm that this policy environment helps to shape, firms whose structures are far from the market archetype and which, it argues, might be more usefully conceptualized by moving beyond the public-private dichotomy.

Table 4.2 Installed capacity of top private power generation companies in perspective (selected corporations only)

Company	Installed capacity (MW, latest estimates available)	Controlling ownership
NTPC	44,398	Central government
Maharashtra State Power Generation Co.	11,237	State government
Adani Power	9,280	Large business house
Andhra Pradesh Power Generation Corporation [ <i>before Telangana split</i> ]	8,925	State government
Tata Power	8,747	Large business house
Tamil Nadu Generation and Distribution Corporation	6,860	State government

<sup>31</sup> IPPAI, electronic communication, 12 November 2014, emphases in original.

<sup>32</sup> Interview, private businessman, New Delhi, 11 May 2012.

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NHPC	6,507	Central government
Karnataka Power Corporation	6,499	State government
Damodar Valley Corporation	6,357	Central government
Reliance Power	5,945	Large business house
Nuclear Power Corporation of India Ltd	5,780	Central government
Rajasthan Rajya Vidyut Utpadan Nigam	5,357	State government
Gujarat State Electricity Corporation	5,008	State government
Uttar Pradesh Rajya Vidyut Utpadan Nigam	4,933	State government
Lanco Infratech	4,722	Large business house
JSW Energy (O.P. Jindal Group)	4,531	Large business house
Essar Power	3,910	Large business house
West Bengal Power Development Corporation	3,860	State government
Torrent Power	3,202	Large business house
Neyveli Lignite Corporation	2,740	Central government
Jindal Power (O.P. Jindal Group)	1,000	Large business house

Sources: company websites, operational commercial capacity only [last accessed 12 April 2015]

### *The layering of private participation*

The reform process in the Indian power sector has been marked by unevenness and compromise. The result has not been sweeping privatization or a simple state transition from provider to facilitator. It is instead ‘more accurate to describe the market as grafted on to rather than replacing the state sector, and with decidedly mixed results’ (Dubash, 2011: 69). Pro-business reforms have been introduced at the margins or in parallel with the continuation of the state-owned system.

In generation, private participation and greenfield PPPs continue to be welcomed *alongside* the state-owned system. Today around 36 percent of installed generation capacity is owned and financed by the private sector, compared with 27 percent for the centre and 37 percent for the States (Figure 1.1, p. 31). Many of the largest generation firms remain state-owned (Table 4.2).

Outside generation, private participation remains even more limited. Transmission remains almost entirely in state hands. Private entry into the crucial distribution segment has also been sluggish, outside Delhi, Odisha, and a few urban circles and SEZs, as State governments and utilities have resisted privatization or open access. This means that competing interests dominate in almost parallel domains of the power sector. The political-economy and financial ramifications of this—the creation of a *segmented system*—are discussed further in Chapter 6.

This layering has not been a coherent or strategic process, but has proceeded in fits and starts in ‘a “hit and try” (often a hit and miss) process’, policymakers reacting to the failures and fiascos of previous phases of reform (Ruet, 2007: 179). Policy has therefore oscillated between discretion and deregulation, and countermovements towards reregulation in order to facilitate competition. While deregulation is necessary to open the sector to non-state players, creating competitive markets—‘pro-market’ rather than ‘pro-business’ strategies, in Kohli’s terms, ‘open’ versus ‘closed’ deals for Sen and Kar (2014)—is inseparable from regulation. Free markets require enforcement, as Karl Polanyi (2001 [1944]) noted seven decades ago; this is especially true in a network industry such as electricity. Roselyn Hsueh (2011) has documented a similar oscillation in China, which she nicknamed the ‘liberalization two-step’; but where China has pursued this strategically across different sectors, in the Indian power sector the ‘two-step’ has been reflexive and ad hoc.

After the fiasco of the IPP policy in particular, state agencies have several times stepped back in to introduce formally rule-based modes of operation. Such ‘reregulation’ has included the introduction of model concession agreements in the mid-1990s, the introduction of independent regulatory agencies, the legislation that became the 2003 Electricity Act—which simultaneously deregulated the sector further and attempted to put it on a more regulated footing—and the introduction of mandatory competitive bidding.

As the above discussion shows, in practice these formal rules have not succeeded in extinguishing the exercise of discretion. At the central level, large firms have repeatedly attempted to renegotiate contracts after bidding has closed, for example, while discretionary coal block allocation continued until 2012. This picture is considerably complicated by the sector’s federal organization. Several States have found a discretionary approach conducive to attracting private participation into the sector. This recalls Ronald Herring’s thesis on planning-era state-business relations: that the state’s organizational complexity—its vertically and horizontally incoherent structure and the ‘nodes of discretionary authority created thereby’—invited close relations between particular state agencies and particular capitalists (1999: 321-3). Today’s state, with all its new forms of incoherence (see Chapter 7), is perhaps not so different.

At other times, a second set of ‘regulatory’ agencies have taken action. The courts and state auditors have intervened in the power sector and the related upstream energy sectors when line ministries are perceived to have failed to moderate pro-business excesses. Examples include CAG and Supreme Court scrutiny of the additional coal blocks offered to Reliance Power for its Sasan UMPP, attempted bid renegotiations for mega-projects, and most spectacularly the ‘Coalgate’ coal allocation scandal. Chapter 7 explores this regulatory backlash by agencies outside the state executive in greater depth.

The state therefore remains entrenched in the sector, although the logic of policymaking is inconsistent across time and agency. Specific types of firms have developed to survive and exploit this uncertain and state-centric policy environment—albeit not always successfully. The next chapter explores the state-owned ‘hybrid firms’ in the sector, which continue to play a key role (Table 4.2). Yet the state’s changing structures and *modus operandi* and those of private power players are *also* linked. The large private firms that have flourished in the power sector are as characteristic of state capitalism 2.0 as large reinvented state-owned enterprises.

### ***Hybrid private firms***

The key characteristics of the state-centric policy environment in the power sector from 1991 to 2014 were the great rewards and protection to be gained from proximity to the state, and the uncertainty that marked the sector thanks to changing regulation, uneven enforcement capacity, fuel supply woes, and rapid waves of investment. As the power sector gradually and incompletely opened, a particular type of firm flourished in these conditions, emerging among India’s largest private companies. Firms like Reliance Power, Adani Power, and Jindal Steel & Power are ‘hybrid’ or ‘dual’ firms (Tongia, 2007; Victor and Heller, 2007a; see also Musacchio and Lazzarini, 2014).

These firms blur the distinction between public and private, both because they have successfully captured state resources and because they protect their position in a precarious market through structures quite distinct from the archetypal private firm, including very close contact with the state. The incomplete and layered character of the power reforms has facilitated such development. Surveying the aftermath of foreign investors’ disasters with IPPs, both in India

and elsewhere in Asia, one legal analyst wrote: ‘the relationship between reform and private investment [in the power sector] may be more antagonistic than originally assumed’. The firms who benefited were those able to straddle an ‘awkward status quo, neither fully private nor within the grasp of government’ (Woodhouse, 2006: 219).

The volume of resources available—including coal, soft loans, land, contracts, and permits—and the resilience of discretion in policymaking mean that there were clear rewards to be gained from proximity to the state. While reregulation has at times reduced the rents on offer, the commitment to market competition in the power sector was belated, and far from shared by all state agencies or consistently enforced. This taps into a recent strand of analysis on favoured private firms, their close links with the state, and their preference for ‘closed deals’ (Gandhi and Walton, 2012; Sen and Kar, 2014).

Although more innovative firms were successful in the first decade of liberalization, after 2003 wealth became increasingly concentrated in rent-thick sectors like energy, real estate, and utilities (*ibid*). In the power sector the competitive bidding era did not counteract this concentration. By 2011, over half of all capacity contracted for through competitive bidding had gone to only two developers: Adani and Reliance Power (Gadag et al., 2011: 5). Nor are these firms naturally in favour of further reforms to bring more open markets (Victor and Heller, 2007a, b). As the example of Reliance in the Mumbai distribution segment shows, such firms also attempt when possible to head off competition.

In securing these resources, discretion and personal connections remain crucial in many instances. Many of the large firms in Table 4.2 have notoriously close links to policymakers. As the above discussion showed, several of these firms have benefited from political discretion, preferential allocation of natural resources, or have appeared confident that they could renegotiate contracts after bidding closed. Chapter 6 discusses these mechanisms of influence in more detail. It shows that these mechanisms again blur the lines between private and public, drawing on state personnel, including ex-bureaucrats on their boards, and directly influencing policy formulation.

There is a curious path dependence to these firms and their influence. Not typically ‘Licence Raj’ houses, their origins nonetheless date back before 1991; Indian business has remained dominated by large incumbents incorporated before 1985 (Alfaro and Chari, 2009).

Setting aside the Tata Group, which has been involved in the power sector for a century and recently appointed its first non-hereditary head, the striking pattern is that several of the new key players are second-generation family firms which began life as in non-power sectors: Reliance in textiles and petrochemicals, Jindal in steel pipes, Torrent in pharmaceuticals. In the sector, major firms often take the ‘old-fashioned’ form of multipurpose conglomerates rather than the streamlined corporations of twentieth-century American orthodoxy. All of the firms in Table 4.2 above are conglomerates. The firms first developed experience with captive plants and, having established themselves as significant players, used their existing reputation—and networks of political influence—to leverage entry into lucrative rent-thick sectors such as power, which depend on close political links. As an American consultant argued in 1998, just before Reliance took its first foray into the commercial power business with its purchase of BSES, the firm had shifted towards ‘a focus on capital-intensive industries in which success turns on the ability to get round regulators—and that, it seems, is what the Ambanis reckon is Reliance’s core competence’ (*The Economist*, 1998). Adani and Essar, both first-generation family conglomerates, overleaped this stage and began in sectors with closer overt ties to the state: commodity trading and construction. Unlike the foreign entrants of the IPP policy era, then, the power sector is not seen ‘as a sector *per se*’, but part of a wider industrial strategy (Ruet and Hussain, 2006: 144).

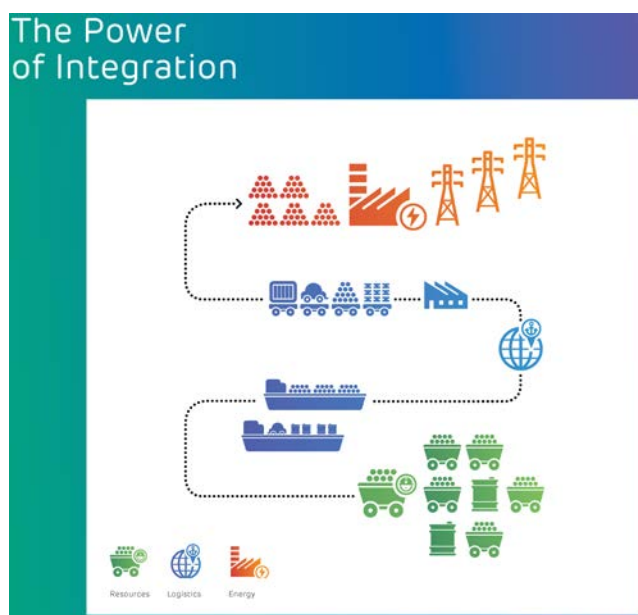
This strategy may also help to explain the curious U-shape of Indian business distribution, with many small firms, a missing middle, and a concentration of ever-larger incumbent firms at the larger end (Alfaro and Chari, 2014). The growing economy did not raise all boats equally: rent-thick sectors were especially boosted as the value of natural resources rose and the power sector boomed with rising demand. But power sector deregulation did not, of course, create a frictionless competitive market. The large capital costs of entry (or at least the need for good connections to secure soft loans) and complex process of obtaining permissions in the sector meant that well-connected large firms necessarily dominated the sector—and so for a short time reaped super-profits. The staggering success of early movers like Jindal Steel & Power then prompted a short-lived rush on the sector by aspirant firms with political contacts. As one Power Trading Corporation said, ‘every Tom, Dick and Harry came in’, including many steel and cotton companies with no commercial power experience (quoted in Rajshekhar, 2012a).

As this suggests, the policy environment in the sector has remained more or less uncertain: recall IPPAI's bookending of its narrative with 'ENRON' on one end and 'Coalgate' the other. The possibility of reregulation or popular backlashes, political disputes, and a simmering fuel supply crisis made the power sector a high-risk but potentially high-reward sector. This helps to explain the striking absence of foreign firms in the Indian power sector today in the aftermath of the Enron debacle. It took until 2010 for large foreign players to return, but several pulled back out in 2013 thanks to the fuel supply crisis (Prasad, 2013). The American firm AES and China Light & Power are two of the few that remain directly involved, and they too scaled back their investments. Faced with such uncertainty, the remaining domestic firms opted for one of three tactics: vertical integration; reducing their real exposure by ensuring their own equity was not compromised; or a combination of both.

The largest power firms have vertically integrated control of lucrative natural resources and logistical supply chains with power generation, as in the case of Adani Power's huge coal-fired plant at Mundra (Figure 4.4). In 2014 Adani Power became India's largest private generation firm with over 8,500MW installed capacity, a vertiginous climb from 330MW in 2009. If large incumbent firms were especially well placed to enter the newly opened sector thanks to their political links, this vertical integration reinforced their conglomerate structures and ensured they became increasingly energy-sector-heavy. Again, then, state policy has helped to shape these hybrid firms by offering high rates of return.

At the same time, the state's weak enforcement capacity means that some firms may actually benefit from this uncertainty in the form of discretionary benefits, as above, as they are especially well placed to access these. Finally, and like the state-owned hybrid firms discussed in the next chapter, large firms are also more likely to be able to use their political connections to ensure payments from the loss-making State utilities that are their main customers (Tongia, 2007; see also Chapter 6).

Figure 4.4 'Resources, logistics, energy': the Adani Group's vertically integrated model of operations



Source: Adani (n.d.: 30)

Although usually justified on the grounds of the national need for increased power supply, such power firms' success in capturing scarce natural resources also permit rapid monetization. For some this has come through merchant plants that sell expensive power on short-term markets, as in the case of the Jindal Tamnar plant above or through the 'traditional contractor' tactic of bidding low and, having won, asking for more funds, as for the mega plants (Mukherjea, 2013). Others were merely cosmetic entrants, however, especially as the pace of discretionary coal allocations picked up pace after 2004. There emerged evidence of firms trading or speculating on the coal blocks allocated by the screening committee, against the spirit of the initial allocations, with promoters selling or diluting their shares in the holding company (Rajshekhhar, 2012b). The attempt of the 2003 Electricity Act to place the sector on a more rule-based, competitive footing thus coincided with a contrasting trend: a short-term (and short-lived) feeding frenzy.

Similar has been the proliferation of an equally short-term and short-lived 'capital grab' tactic (Mukherjea, 2013). Power finance is often offered on extremely favourable terms, especially but not exclusively by public sector banks, that have proven open to abuse. As Chapter 6 notes, by 2012 over half of major state-owned banks had provided power sector loans equal to or more than half of their own net worth (Khurana and Banerjee, 2015: 7-8). It is well known that

infrastructure players often inflate their capital costs to secure excess bank loans which cover their own share of the equity (Jagannathan, 2014b). A Raipur-based tax lawyer specializing in power observed that many new firms never intended to establish plants, but ‘thought they would use banks to capitalize most of their investments—double their money super quick’ (quoted in Rajshekhar, 2012a). As one interviewee explained:

They get the cheap government loan for building, say, a 5MW plant. Then maybe they only build a 4MW plant and take 20 percent extra. Or perhaps they do not build the plant at all, but they put the money in a high-interest account overseas and the penalties are smaller than the interest they receive on the loan. But what can the government do?<sup>33</sup>

This may even prove self-reinforcing, with firms underbidding to win debt funding from banks, which is then channelled as equity to bid for ever larger projects (Mukherjea, 2013). Controversy has recently arisen over a prospective US\$1 billion State Bank of India loan to Adani Power for an Australian coal venture, for example, with fears that part of the loan may go to roll over debt.

Here, too, the sprawling conglomerates that have become so characteristic of Indian capitalism have an advantage in exploiting the state’s weak enforcement capabilities. Musacchio and Lazzarini (2014) recently argued that particular private-sector ‘national champions’ in which the state is a minority owner can act as instruments of industrial policy, with the state expanding firms’ investment opportunities, especially in long-term fixed assets. This is in theory the rationale for the state’s active financial involvement in promoting electric expansion. But they note that this effect is likely to be undermined for business groups (*ibid.*: 199-200, 204-5), which have complex pyramidal structures through which they are able to ‘tunnel’ away resources (Bertrand et al., 2002). The conglomerate form is dependent on the disjuncture between lines of institutional credit (awarded on the group’s reputation as a whole) and the state’s ability to pursue debts (in practice often limited to the subsidiary). Conglomerates are able to transfer loans from public sector banks through their institutions or paying inflated prices for equipment and power to other upstream subsidiaries, and then charging the state or writing the costs into tariffs—as is alleged of the Reliance-owned Delhi discoms (Purkayastha, n.d.). Until recently, conglomerates were also

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<sup>33</sup> Interview, private sector businessman (formerly NTPC), Delhi, 11 May 2012.

able to jettison subsidiaries as the need requires, indulging in wilful defaults with few penalties.<sup>34</sup>

The RBI governor warned against ‘the uneven sharing of risk and returns in enterprise’:

[P]romoters have a class of ‘super’ equity which retains all the upside in good times and very little of the downside in bad times, while creditors, typically public sector banks, hold ‘junior’ debt and get none of the fat returns in good times while absorbing much of the losses in bad times. (Rajan, 2014b)

Public banks must struggle through long appeals to retrieve even a modicum of the original loans.

Indian infrastructure is therefore ‘fond of financial engineering that has a whiff of subprime about it,’ noted *The Economist* (2011c) of the ‘dauntingly complex’ series of special-purpose vehicles and opaque accounting practices that power plants and other projects are wrapped in: ‘[t]aking six big infrastructure firms’ disclosures in their annual reports, it is possible to find no fewer than 531 subsidiaries, joint ventures or associated entities.’ These complex pyramidal structures also act to centralize corporate power and weaken the ability of minority shareholders to challenge risky or unscrupulous deals. Through holding groups and cross-holdings between subsidiaries, the core families—usually tightly knit groups—are able to work around minority shareholder monitoring or even expropriate them (Khanna and Palepu, 2000). Despite already holding a controlling stake, the Ruia brothers in 2014 initiated a hostile takeover of Essar Energy in 2014 to delist it from the London Stock Exchange in order to regain full authority. Again, then, the state’s activist role in the sector has helped to encourage the development of huge firms with opaque and unaccountable structures.

The result of this combination of heavy dependence on the state for the flow of resources and weak state enforcement is that many power firms are very heavily leveraged. The combination of the fuel supply crisis and the regulatory backlash therefore hit many hard. Several firms, including Lanco Infratech and Jaiprakash Power, began selling off plants and even the largest saw their stock values slide dramatically (see below). Along with airlines, the power sector became the key contributor to banks’ rising levels of non-performing assets and restructured loans, testifying to the overexpansion of state financing and predatory private tactics. As a result of promoter ‘misuse’, the interest charged on power sector loans rose to 13.7 percent in September 2014,

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<sup>34</sup> In 2014 the RBI ordered banks to penalize such ‘wilful defaulters’ by denying the whole conglomerate access to institutional credit should one subsidiary default, although State high courts have since challenged this in reference to the Kingfisher Group.

much higher than the RBI's 8 percent base rate and higher even than interest on household loans, noted the RBI governor (Rajan, 2014b). The level of non-performing electric debt has been called India's subprime crisis, while as the fuel supply crisis began to bite, many firms reneged on power purchase agreements with State utilities. As Chapter 6 explains, the state financial system has largely footed the bill for its earlier largesse.

That this declining performance was not due simply to the fuel supply crisis, but to the change in the degree of state discretion that these firms encountered, is evident from the chilling effect the regulatory backlash had on politically connected firms more widely. Figure 4.5 compares the performance of 75 firms contained within the 'Connected Companies Index' of the brokerage firm Ambit with the wider stock exchange. The index is constructed using a mix of objective and subjective factors, including the number of politicians on boards and the apparent use of personal connections to secure contracts. Ten of these firms are power utilities, alongside capital goods, infrastructure and construction (33), real estate (13), technology and media (13), metals and mining (4), and telecoms (2).<sup>35</sup> This trend is confirmed by other performance indices, such as the rise and fall of billionaire wealth from rent-thick sectors like power as a proportion of GDP (*The Economist*, 2014).

Similarly, the effects of the fuel supply crisis cannot explain the entire decline of power firms' stocks. While state-owned NTPC's stocks have seen a decline of around 30 percent since October 2010 and Tata Power, often regarded as more transparently governed than most private power firms,<sup>36</sup> of 40 percent, the figures for some other firms are considerably higher. Despite brief rallies when the Modi government arrived in office, Adani Power and Reliance Power have both seen slumps of around 65 percent and Lanco Infratech over 90 percent.<sup>37</sup>

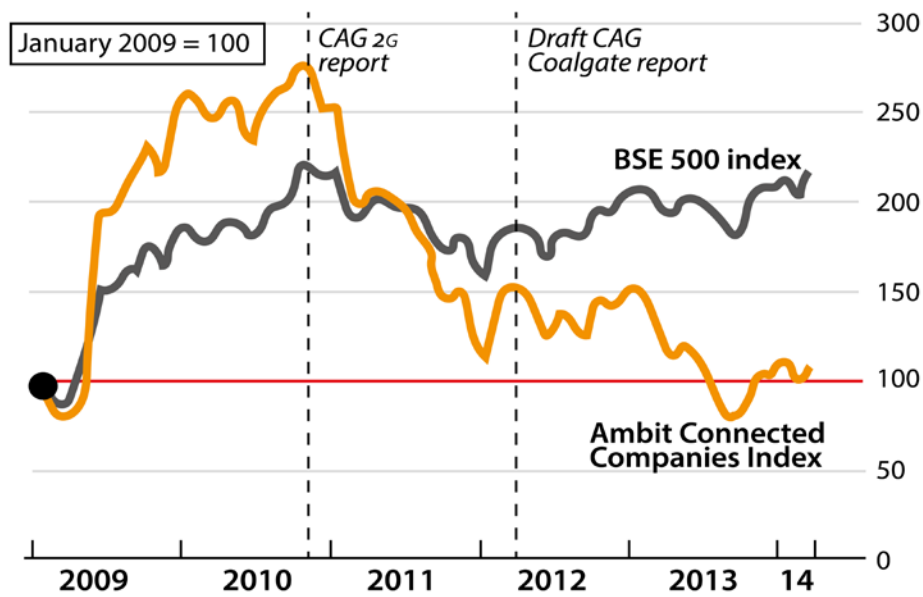
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<sup>35</sup> The conglomerate-based nature of many of these firms means that the effect on the power sector of this declining performance is likely to be magnified. The decline in the stocks of some major power players—such as Adani Power and Reliance Power (down almost two-thirds), Jindal Steel & Power (down 75 percent), and Lanco Infratech (down more than 90 percent)—track this pattern well.

<sup>36</sup> Thirty percent of Tata Power stocks are held by the promoter group (i.e. Tata Sons and other Tata Group subsidiaries), compared with 75 percent for Reliance Power and Adani Power. A considerably larger proportion of Tata Power shares are held by foreign institutional investors than in the other two firms. Khanna and Palepu (2000) suggest that such investors firstly select their investments in Indian conglomerates on the grounds of greater transparency, and secondly add monitoring value.

<sup>37</sup> Historical stock values from Yahoo Finance India, accounting for stock splits.

Figure 4.5 India's politically connected firms versus the stockmarket



Source: Ambit Group; The Economist (2014)

## Conclusion

This chapter has sketched a first dimension of liberalization as layering in the Indian power sector. Private participation has been grafted onto the statist system, rather than marking a wholesale transition in the sector in line with the global template. In this way, the sector has undergone a process of *segmentation*. Chapter 6 will unite the analysis presented here and in the next chapter to explore this segmented system, in which rents for private business coexist with an older regime of subsidies. The result is that there increasingly exists a private-sector-dominated sphere, admittedly with insecure rents,<sup>38</sup> and a financially unviable state sphere. This is rooted in differentiated access to different agencies and levels of the state by different interests, as Chapter 6 shows.

Second, the chapter introduced the most controversial aspect of state capitalism 2.0: its new role for business. The large privately owned firms explored above have conventionally been seen as the archetypal beneficiaries of an increasingly private-sector-led political economy. As the later chapters of this thesis show, this incorrectly dismisses the vast relicts of the state system and the remnants of 'populist' subsidy regimes as mere epiphenomena rather than key features of a

<sup>38</sup> The regulators and courts of course struggled to differentiate between criminal rents and more benign (if suboptimal) discretionary allocations, hence the Supreme Court's decision to revoke virtually all Coalgate block allocations.

state-centric political economy. If we locate these firms in the wider context of the reformed *and* unreformed power sector, however, I argue that they are more accurately viewed as a product of state capitalism 2.0, opportunistic, incoherent, and dysfunctional as its emergence has been. In this enterprise, both the dichotomy of state versus market and any clear-cut line between public and private are unhelpful.

In several ways, these firms' development is pathological, but this is a pathology rooted in the characteristics of the state. The inadequacies of power sector capitalists today are bound up with the inadequacies of the political system. The linkages between state and big business here resemble Max Weber's 'politically oriented capitalism', especially the subtype derived from 'profit opportunities in unusual transactions with political bodies' (Weber, 1978: 165; see also Chapter 1). As Weber noted, political capitalism flourishes where the structural separation of economic and political power is limited, as in patrimonial regimes (Swedberg, 1998: 52, 67). It is beyond the scope of this research to develop this analysis: the empirical material I collected (unsurprisingly) does not permit any systematic study of corruption, although Chapter 6 pushes this point somewhat further. I will only note that anecdotal evidence suggests that infrastructure sectors play a key role in mobilizing rents for campaign financing, with the underground political finance system's scaling up making the large firms of state capitalism more important for electioneering than ever before (Jha, 2013; Rajshekhar, 2012c).

More important for our analysis here, which concentrates on the changing institutional *morphology* of the state in the sector and its dysfunction, is the novel organizational form that these firms present in the electric supply industry. In a similar pattern to that observed by scholars of transition economies, these firms have attempted to *recombine* 'public and private resources, drawing on existing routines, practices, and social ties in the economy', as will become clearer after Chapter 6 (cf. Musacchio and Lazzarini, 2014: 65).<sup>39</sup>

This development is much misunderstood by economists who detach such firms from the path-dependent history of the state's uneven and partial withdrawal. They owe the original *political* resources for their expansion to the pre-1991 era (itself a period of often underestimated state-business closeness), enabling them to strategically exploit ambiguities in the unfinished

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<sup>39</sup> This concept comes via Stark (1996) on the very different context of economic reforms in Hungary. See also Nee (1992).

transition from a state-dominated to a market system. They owe many of the *economic* resources to the gradualness and incompleteness of the state's mobilization itself: managers with bureaucratic experience, technical personnel trained in CPSEs, cheap finance from the public sector banks, coal via the bureaucratic mechanism, clearances through PPP processes, even small state share holdings through the Life Insurance Corporation. They are not reducible to the state system, but their development in the liberalization era has been shaped by it.

In fact, even some of the governance problems that these firms face are familiar from the older stereotypes about state-owned enterprises (see Chapter 5). Such generous access to resources, which means private owners have little of their own capital on the line, weakens accountability and performance-related incentives and distorts the positive feedback loop from profits back into reinvestment. Speaking on public sector reform, government economic advisor Rakesh Mohan noted that the private sector was dominated by 'certain large industrial houses which are, in some ways, an extension of the old management system', he warned, 'financed by large scale lending' and 'large equity holdings also held (as silent partners)' by public sector financial institutions' (1995: 47). Both public *and* private enterprises might therefore require restructuring and divestment to improve management (*ibid*: 49).

At the same time, this work does not support that of theorists (many of them public-choice-oriented) who simply equate these firms and large state-owned enterprises (Tongia, 2007; Victor and Heller, 2007a; see also Musacchio and Lazzarini, 2014). To categorize these firms with SOEs rather than considering them as a separate category obscures the complex systems of rent-seeking in the sector that SOEs helped to fund (see Chapter 6). Along with the reinvented state-owned firms explored in the following chapter, then, this examination suggests that, thanks to its layered and ad hoc emergence, the evolving mixed system in the power sector possesses a *diversity* of organizational forms which blur the public-private boundary. It is to the second set of such forms that we turn now, for the state-owned sector itself has not remained unchanged through the phases of reform documented above.

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# 5

## Reinventing the state sector

Public sector enterprises are often seen as something other than business entities. They are the humble sarkari organisations with their tasks cut out in a welfare economy. But that impression is the legacy of the heydays of socialism. As India liberalised its economy, the PSEs too embraced markets and refashioned themselves as business entities. This new brand of public sector, which is already giving western developed economies and their multinationals a run for their money, has come to be called ‘state capitalism’: A paradox in terms but therein lies the challenge as well as opportunity for our government-run enterprises.

—*Governance Now*, ‘The PSU Champions Awards 2013: Celebrating the Spirit of State Capitalism’ (2013: 135)

### Reinventing state activism

Chapter 3 introduced the power sector’s convoluted institutional structures as they had developed up to 1991. The compromises that had developed over the electricity supply industry’s first century in India created multiple interests and veto points that stymied sweeping sector-wide change, including the federal power-sharing arrangement, the rise of a regime of politicized consumer subsidies, and the growth of large public sector agencies with a stake in ensuring their own reproduction. These institutional arrangements ‘structure the conditions for their own revision’, in Paul Pierson’s phrase (2004: 135). The result is that market reforms in the sector have been halting, incomplete, and regionally varied, and have given rise to many unintended consequences.

This chapter is the second of two sketching the processes of institutional (re)invention that have taken place within these constraints in the sector since 1991, and the ensuing

development of a state-market hybrid system. This chapter explores the persistence of the statist sediment, which exists in parallel with the developing private participation documented in Chapter 4. Despite three decades of liberalization and anti-state critiques, the state continues to dominate the Indian power sector. Organizations from the older dirigiste state capitalism 1.0 have survived into the quite different conditions of the post-1991 era. Instead of supplanting them, new accretions of state agencies have been layered atop them.

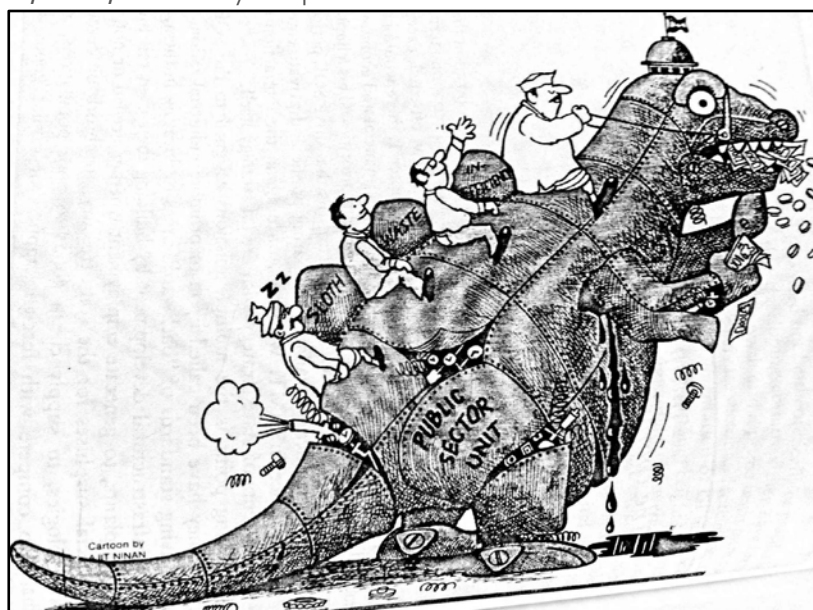
Nonetheless, this statist ‘sediment’ is not monolithic, nor has this layering left it unchanged. While the sector’s pre-existing structures have conditioned and constrained the nature of institutional change in the sector after 1991, they have not halted it. Chapter 4 explored the cross-fertilization of the layered public and private logics as private firms have gradually increased their presence in the sector. This chapter similarly shows that state organizations have not remained untouched by the rise of private participation. The ideas and practice of the market turn—competition, corporatization, and commercialization—have found their way into the public sector itself. The *interactions* between the two sets of policy logics and layered organizations, statist and private, are crucial in constituting India’s variety of liberalization, the amalgamation that I have called state capitalism 2.0. This chapter surveys this process of change within the state and its limits. It examines two quite different sets of state institutions, one set predating liberalization, the other a novelty: the resilience of central public sector enterprises on one hand, and the rise of independent regulatory agencies on the other.

The first two sections explore some of the key central public sector enterprises (CPSEs) that continue to dominate the Indian power sector. Formal organizational continuity masks internal change. Rather than being supplanted by private firms, the best have undergone a process of *institutional conversion*, as historical institutionalists have termed it. They have been adapted to new conditions and ‘redirected to new purposes, driving changes in the role they perform and/or the functions they serve’ (Thelen, 2003: 226). Large CPSEs like NTPC have been retrofitted for the market era, exposed to competition, granted greater autonomy, and endowed with at least the trappings of corporate governance. This development stands in contrast with the less successful advent of independent regulatory agencies in the sector, explored in the third section. These have

been *imported* through the initiatives of international lenders and transnational experts, and layered atop the older layers of state administration. The results have been mixed.

Through a survey of these two different processes of institutional change within the public sector, the chapter illuminates some overlooked processes of gradual institutional change that are not well captured by conventional notions of liberalization. The development of these organizations has helped to alter the state's morphology and modes of operation—but only partially. Political interference with the working of CPSEs continues, while nominally independent regulatory agencies have often been reabsorbed into the pre-existing organizational matrix and political settlement of the sector. The result is an admixture of continuity and change. Not only do state agencies remain predominant, but through these processes of adaptation some have been paradoxically bolstered in the liberalization era.

Figure 5.1 Sloth, waste, inefficiency: the public sector unit as dinosaur



Source: Ajit Ninan, *India Today*, 15 September 1991, p. 64, printed in Waterbury (1993: 108); reprinted here courtesy of *India Today*, with the cartoonist's permission

## Reinventing central public sector enterprises

Contra Bretton Woods orthodoxy, India has liberalized pragmatically without extensive privatization. Yet despite their importance, little research has explored the fate of Indian public

sector enterprises after 1991.<sup>1</sup> Their organizational mechanisms and political dynamics are little understood and often caricatured. Figure 5.1 shows the permanent stereotype that dogs them: dinosaurs guzzling cash, characterized by ‘sloth, waste, and inefficiency’ thanks to the ‘genetic flaw’ of their links with government.<sup>2</sup> Yet in the last decade—and even before this—many centrally-controlled enterprises, including some in the power sector, have in fact looked remarkably *healthy* (Nagaraj, 2015; see also Chapter 8). Many have been more profitable and more efficient than their private sector equivalents (Mohan, 2005; Khanna, 2015). How, then, are we to understand the apparent paradox of their success within a liberalizing and ‘pro-business’ polity?

These two sections review the continued existence of large SOEs in the power sector and the related upstream industries to which power is umbilically linked, notably coal, hydroelectricity, and gas. Coupled with rising commodity prices worldwide since the millennium, economic growth boosted the value of the natural resources, like coal, that legally fall under the state’s sole control. The sheer importance of natural-resource-based corporations and utilities in the stockmarket—both (nominally) regulated by state agencies—testifies to these enterprises’ continuing economic influence. In 2011 basic materials, energy, and utilities contributed 31 percent of the BSE 100 index, and the largest stockmarket giants included the upstream firms Oil and Natural Gas Corporation (ONGC) and Coal India, alongside NTPC (The Economist, 2011a).

These CPSEs have not survived into the liberalization age unchanged, however—as the very fact of their stockmarket flotation suggests. The ideas of efficiency surrounding the global template have affected their modes of operation and management, and they have been exposed to at least a modicum of competition. There exists comparatively little research on these new institutional forms, which occupy an awkward space between stockmarket darlings and continued government tools. How successful has their reinvention been? How are we to understand the ‘paradox’ of their improved performance, even as the administration’s anti-state, pro-private tilt has solidified in the quarter-century since 1991 (Khanna, 2015)?

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<sup>1</sup> An exception is the recent India-China comparative collection edited by Yi-chong Xu (2012), although it demonstrates greater sophistication in examining the better-explored Chinese SOEs than India’s and complacently assumes stability in ministry-enterprise relations.

<sup>2</sup> Planning Commission member and former CEO of ‘one of [India’s] largest state holding companies’, quoted in Waterbury (1993: 16).

To answer this question, this analysis focuses especially on NTPC, the National Thermal Power Corporation (introduced in Chapter 3). This is first because NTPC is the single largest power generation firm in India by some margin (see Table 4.2, previous chapter), and is therefore of intrinsic importance for power sector politics. Its continued importance suggests that the Indian power sector's development is characterized by 'the parallel *constitution of national "markets"* (or "market organizations") and of public national champions' (Ruet and Hussain, 2006: 115, original emphasis). Second, NTPC's status as one of 'India's largest and best-performing CPSEs' makes it a useful form of extreme case (World Bank, 2010: 6), demonstrating maximum variation from the stereotypical state-owned enterprise (see Figure 5.1 below). It thereby illustrates the diversity of CPSE forms in the twenty-first century and provides an unusually clear-cut example of CPSE conversion.<sup>3</sup> Yet, as the section after this will discuss, there are clear limits to institutional conversion even within this favourable case.

### *Experimenting with autonomy*

Chapter 3 outlined the advent of the state-led development model in the Indian power sector. Even as the size of the public sector continued to expand, central policymakers increasingly recognized that inefficient public-sector undertakings—J.K. Galbraith (and Nehru's) 'post office socialism'—could prove a major financial liability. With balance-of-payments fears and foreign aid spiralling, public-sector industries faced worsening labour relations, problems of overcapacity and underproduction, and supply shortages (Tomlinson, 2013: 152). Outside the petroleum and power sector, most CPSEs were making losses by the 1980s (Ahluwalia, 1995: 240).

Early attempts at reform focused primarily on the administrative side, with attempts to develop technical capacity and managerial incentives (Gómez-Ibáñez, 2007). As early as the 1950s, for example, the establishment of the Indian Institute of Management in Ahmedabad was designed to improve the technical calibre of SOE managers while maintaining public ownership, with assistance from American donors like the Ford Foundation, Harvard Business School, and USAID. J.K. Galbraith himself called for greater autonomy for public sector enterprises from ministerial interference.

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<sup>3</sup> On the utility of extreme cases, see Jahnukainen (2010).

CPSE expansion was itself also used as a tool to encourage improved performance by the lower-performing State-level public sector enterprises, as Chapter 3 also noted. With State electricity board performance deteriorating, the central government moved into the generation segment with the establishment of the hydroelectric and thermal power enterprises NHPC and NTPC, the latter explicitly designed to demonstrate how efficient SOE operations could be. NTPC quickly became one of India's few profitable CPSEs outside the petroleum sector. It was the World Bank's largest single borrower worldwide from 1977 to 1987, as the international lender pursued a discreet 'attempt to use a single agency to promote sector-wide reform' (1993a: 1). Under the influence of the Bank's risk-averse lending became established the pattern of NTPC demanding high front-end tariffs from its financially and managerially weak customers, the SEBs, to ensure its own debt servicing (Rao, 2004: 86). Although underpayment remained a perpetual problem, this pattern—squeezing the SEBs for better performance from above while they were squeezed for subsidies from below—would remain a feature to the present day (see Chapter 6).

Despite these efforts, the public sector's generally parlous state continued to worsen. The stage was set for a more significant rethinking of the role of CPSEs. During the 1980s several committees were accordingly established to examine public sector reform.<sup>4</sup> The economist Arjun Sengupta, chairman of one such committee and a close aide to Mrs Gandhi, was 'clear on the need for an arm's-length relationship with the political authority' in SOEs (Alagh, 2010).

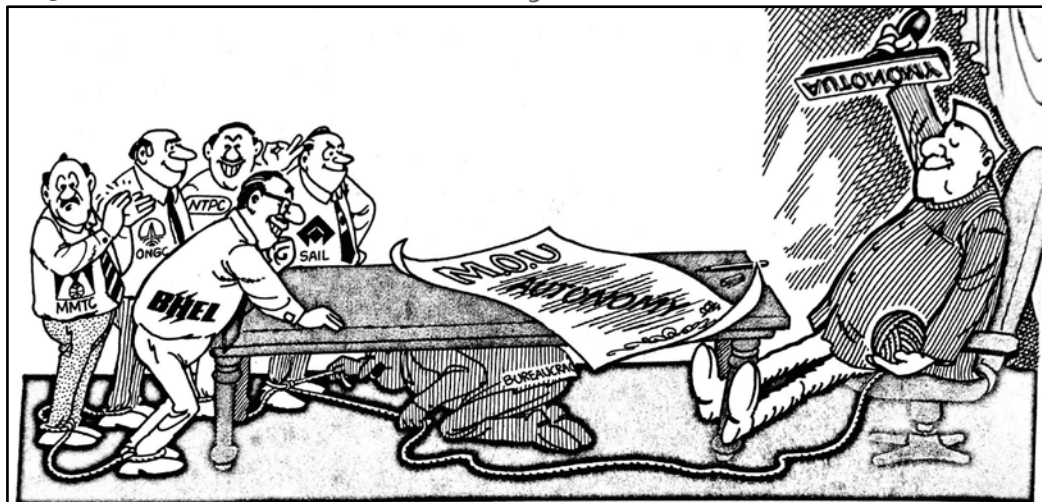
This reformism was extended under Rajiv Gandhi and his close team of internationally educated, technocratic advisors (Shastri, 1997). Although in practice his administration's liberalization programme ran into serious resistance (Harriss, 1987; Kohli, 1989), SOE reform rose on the agenda with the regime's burgeoning resource mobilization crisis. His administration agreed that a better return on SOE investment was critical to salvage public finances. Privatization was still not seriously considered, but greater autonomy and technical capacity for select enterprises was increasingly mooted. Imported from France, the Memorandum of Understanding (MoU) model purported to clarify the relationship between CPSEs and their parent ministries. Policymakers were clear that such changes 'were our own, not big bang IMF/World

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<sup>4</sup> These included the Expert Committee on Public Sector Management and Performance (1982, chaired by Muhammad Fazal), the Committee to Review Policy for Public Enterprises (1984, under Sengupta), and the Economic Administrative Reforms Committee on Government and Public Enterprise (1985, under L.K. Jha).

Bank, reform initiatives'.<sup>5</sup> Nonetheless, it had only limited success in providing further autonomy, and the state resolutely failed to shrink (Figure 5.2; Mohan, 1995; Mohan, 2005: 6-10).

Figure 5.2 The Memorandum of Understanding model



Source: Ajit Ninan, *India Today*, 15 August 1988, p. 81, printed in Waterbury (1993: 146); reprinted here courtesy of *India Today*, with the cartoonist's permission

With the opening of the economy in 1991, as Chapter 4 showed, the concern with public sector reform was subordinated to the drive for private investment. Alongside opening up trade and some industrial sectors, the initial phase of reforms concentrated on fiscal consolidation. Rewarding SOE efficiency was less a concern than simple revenue raising and fiscal containment; and in any case the automatic assumption, then as now, was that SOEs were unable to compete with privately owned rivals given questions over their efficiency. While full privatization was considered politically unpalatable, a policy of malign neglect and partial equity sales remained the key solution for public sector reform through much of the 1990s.

With short-term finance the concern, successful SOEs were neglected in favour of attention to sickly enterprises. At this time NTPC sat on large cash reserves, but without leveraging much equity (Rao, 2004: 87). After 1992 it was given little central funding, while funds went to its less efficiently managed hydroelectric sibling NHPC.<sup>6</sup> The logic was that “anyway NTPC would be able to manage” through market borrowings and internal resources’ (Morris, 2003: 23). The new idea was for the state to (reluctantly) pick up the tab for those which did not flourish in the new

<sup>5</sup> Former power minister Yoginder Alagh’s verdict on Sengupta’s proposed changes to the SOE regime, from his eulogy for Sengupta (Alagh, 2010). A form of MoU continues today, with the government and CPSEs negotiating annual performance targets upon which the firms are ranked.

<sup>6</sup> Interview, former NTPC official, 11 May 2012.

Darwinian system: ‘state funds are for the weak’ (*ibid*). The government opted to divest its holdings in other lucrative energy SOEs in order to mobilize resources. At the same time, CPSEs were often disadvantaged by the generous terms offered in the rush to attract private capital. ‘Had there been open bidding, we would have bid for much lower costs,’ a senior manager at the state-owned electrical equipment manufacturer BHEL complained later. ‘In fact, the costs per MW quoted by the foreign companies...were 75 to 175 percent higher than what we were quoting at that time’ (quoted in Ahmed, 2007: 111).

Towards the end of the 1990s, some policymakers began more assertively to expand the case for privatization, arguing on ideological rather than performance-based grounds that the state ought not to be involved in business. The Vajpayee government’s 1998-9 budget announced that the state’s equity stake could fall to 26 percent in most CPSEs, with majority ownership confined only to the ‘strategic’ sectors of defence, railways, and atomic energy. Nonetheless, even such ideologues still reserved a key role for the state in providing key physical and social infrastructure and intervening in ‘core’ sectors like power (Mohan, 2005: 15-16). In practice, the actual proceeds from disinvestment were modest and dwarfed by the finances flowing to CPSEs: between 1991 and 2008 (partial and complete) privatizations raised \$12.9 billion at 2011 exchange rates, compared with a cumulative investment in the 242 surviving CPSEs of \$91 billion over the same period (Pratap, 2011: 178-9).

### ***Conversion***

Simultaneously, efforts finally began to reshape the internal governance structures of the CPSEs. Rather than being destroyed or allowed to decay, CPSEs underwent a gradual process of ‘institutional conversion’, as the historical institutionalists Wolfgang Streeck and Kathleen Thelen have called it, as they were ‘*redirected to new goals, functions, or purposes*’ (2005: 26, original emphasis). Through piecemeal internal changes these firms were slowly retrofitted for the age of the market.

Competition itself was intended to play a key role in disciplining such firms, perhaps eventually driving them out altogether. The entry of IPPs exposed NTPC to a modicum of competition in the thermal generation segment. This enforced a degree of market discipline on

the enterprise (even if in reality the policy was again motivated more by short-term fiscal exigencies, as Chapter 4 shows). Nonetheless, although the IPP policy offered private producers disproportionate incentives and perks (much to the CPSE's displeasure; it called for a 'level playing field'), NTPC continued to expand. It, and not the much-favoured IPPs, was responsible for the majority of capacity additions during the 1990s, consolidating its status as the largest generation company in India. In these early years it was careful to retain its core focus, spinning off its transmission arm in 1993 into new fellow CPSE PowerGrid, though not without fierce turf wars over jurisdictions and personnel (Singh, 2009: 11).

At first the CPSEs unsurprisingly tended to resist competition and tariff determination via the nominally independent regulators, preferring to protect their (generous) existing rates of return (Rao, 2004: 87). Like some of the large private players introduced in Chapter 4, they have also benefited from protected rates of return—typically up to 16 percent—built into many of the long-term power contracts, providing a lucrative revenue stream (see Chapter 6). Several of the CPSEs have challenged the central regulator, CERC, in the courts after the regulator attempted to introduce rules that would cut their profits. Nonetheless, NTPC has participated in competitive bidding processes and is no longer as overtly hostile to the market turn as several scholars of large power enterprises have predicted (Victor and Heller, 2007a, b).

Efforts to enforce better behaviour by NTPC's monopsonistic customers proved more difficult. Spearheaded by the World Bank, the centre brought in a two-part tariff in 1992, designed to introduce a variable component to incentivize merit-order dispatch; this failed in the face of regional accounting practices. By 1999, a World Bank evaluation once again concluded that, despite NTPC's acknowledged efficiency, it should not make loans to the generation company because its customers, the SEBs, could or would not pay (World Bank, 1999: 8).

Alongside competition, second were measures to increase the firms' autonomy. In 1997 the Deve Gowda government created the category of 'Navratna' for nine CPSEs, 'chosen because of their potential to become global players based on their size, performance, nature of activities, future prospects, etc' (Mohan, 2005: 14). These 'nine jewels' included NTPC as well as its large upstream siblings ONGC and Coal India. As the chairman of PowerGrid explained of his company's lesser achievement, being made a 'Mini-Ratna', this was 'not a mere bauble' but 'a

once-in-a-lifetime moment of transformation' (Singh, 2009: 52). The Navratnas were given greater everyday financial and managerial autonomy from ministerial oversight, and delegated substantial powers to incur capital expenditure and enter into joint ventures for technology transfer. Their boards, which hitherto had traditionally taken only unanimous decisions (*ibid*: 27), were partially revived with greater emphasis on active directors independent from the government or firm.<sup>7</sup> Following this, NTPC embarked on a process of long-term strategic planning for the next years, bringing in private consultants to advise on plans to expand and diversify.

In 2010 NTPC was upgraded to a 'Maharatna', the new top class of large, profitable CPSEs, alongside Coal India, ONGC, GAIL, Indian Oil Corporation, power plant equipment manufacturer BHEL, and the Steel Authority of India Limited. This granted it further financial and functional autonomy—Maharatnas are able to make investments of about US\$1 billion (₹5,000 crore) without explicit government approval—with the stipulation that there must be a minimum number of independent directors on the board. PowerGrid, the Power Finance Corporation, and the Rural Electrification Corporation are all now Navratna companies, the second tier.

A third measure, the entry of minority shareholders, also nominally improved and diversified CPSE governance. In practice, however, it was motivated in large part by the state's revenue raising through divestment: the state's equity holdings tend to become more valuable with increased autonomy. Accordingly, NTPC was listed on the stock exchange in October 2004 with a very successful initial public offering (IPO) of 10.5 percent (half fresh issue, half divestment of the state's ownership): a record 1.4 million applications ensured the IPO was oversubscribed 13 times, instantly catapulting it in as one of the country's five top firms by market capitalization (*Financial Express*, 2004). NTPC's follow-on public offers were far less enthusiastically received, however, and had to be bailed out by state finance institutions like the Life Insurance Corporation of India (see Chapter 6).

The presence of minority shareholders nominally ensures that the SOEs' older objectives—employment generation, social equity, and their use as a political resource—are at least

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<sup>7</sup> In 2007, the Department of Public Enterprises created guidelines on CPSE board composition, functioning, audits to improve management, and state-board relations. This imitated a corporate governance code drawn up by the Confederation of Indian Industry, a lobby, and adopted by the Securities and Exchange Board of India for listed companies in 2000. The Department's guidelines were made mandatory for CPSEs in 2010 (Pargal and Mayer, 2014: 13-14).

nominally subordinated to the profit motive. As Surya Sethi, former principal energy and power advisor to the government, warned a cabinet committee meeting debating increasing the ONGC's subsidy burden still further, damaging both the gas firm's productivity and minority shareholders' interests, he 'would buy one share of ONGC and take the government to court' (quoted in Kaushik, 2014). A recent report found that India had the highest level of minority shareholder activism in Asia, in theory protected by Companies Act 2013 and the SEBI Code of Corporate Governance which require approval of some major decisions by a 'majority of minority' shareholders (Raychaudhuri, 2014). Most famously, the London-based hedge fund Children's Investment Fund, with a 1.8-percent stake the largest shareholder after the government in Coal India, filed a case in August 2012 against the state miner and the Government of India for selling coal to private players at below-market prices.

On paper, therefore, these SOEs enjoy a more arms'-length relationship with the central government and the imposition of greater market discipline.<sup>8</sup> As with the large firms explored in Chapter 4 these governance structures proved more opaque in practice. The government has also generally been careful not to cede control entirely: today the government's stake in NTPC stands at 75 percent (and more via its holding company, the Life Insurance Corporation). The state has retained stakes above a controlling 51 percent in virtually all CPSEs, an observation which casts its divestment drives in a somewhat different light.

### *The importance of reinterpretation from within*

In this process of conversion, labour unions and CPSE managers did not offer the powerful and consistent resistance to reform that much scholarship predicts. Instead, conversion was taken up as *reinterpretation* from within (see Hall and Thelen, 2009: 19). Rather than defecting from or dismantling the organization, NTPC staff gradually came to accept and even internalize the new competitive conditions.

While bureaucrats have often been seen as naturally hostile to liberalization, senior CPSE staff comprise an unlikely pro-reform constituency: against most expectations they are not necessarily losers from liberalization. Specialists have benefited from the declining stature of the

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<sup>8</sup> For a further flavour of NTPC's innovation in corporate governance, see Rastogi (2010).

Planning Commission and the rising importance of the infrastructure ministries (see Chapter 7), even if they serve under ‘sleepy old men without technocratic knowledge’.<sup>9</sup> The details of power sector policy remain technical. Electricity engineers, one (specialist) regulator complained, treat politicians, the media, and the public ‘as ignorant worshippers at a temple’ (Rao, 2002: 3435).

As the holders of scarce managerial and technical expertise—the ‘property’ that theoretically made them part of Bardhan’s third dominant proprietary class of ‘professionals’ (Bardhan, 1984, 1989)—the most senior and technically capable of them are readily employable in both the private and public sectors. The CPSE workforce is both ‘highly skilled’ and relatively exclusive. One-fourth is managerial and supervisory, and the average per capita annual emoluments rose from ₹325,869 in 2006-7 to ₹828,882 in 2012-13 (Department of Public Enterprises, 2013: 16). NTPC employs only 25,000 workers, although we shall see later that far from all CPSEs are as streamlined. Today such managers move across the public-private divide both pre- and post-retirement, the public sector subsidizing private sector experience and providing valuable contacts. The former NTPC chairman D.V. Kapur became a director of Reliance Industries, for example. This privileged position undercuts their resistance to reform and their sense of themselves as a wider bureaucratic class with shared interests (Waterbury, 1993: 264).

Yet despite these new employment prospects—in 2005 Reliance Energy poached NTPC’s human resources director, for example—many managers have preferred to work within rather than abandon the rejuvenated CPSEs. That year NTPC’s staff attrition rate remained only 0.4 percent and the average staff tenure 20 years, not merely because of the greater job security offered in the public sector but the major investment in training that the CPSEs offer (Gupta, 2005). It probably does not hurt that senior bureaucrats also have the greatest opportunity to benefit directly from the profits of reform. As noted above, CPSE salaries have continued to rise more rapidly than public sector wages as a whole, a feature that R. Nagaraj (2014) has argued might be considered a ‘skills premium’. The sector also continues to offer ready opportunities for accruing black income. Corruption concerns have remained a perennial issue since the hawala

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<sup>9</sup> Interview, energy adviser, Observer Research Foundation, Delhi, 14 May 2012. The retired senior civil servant Javid Chowdhury (2012) also complains that in certain ministries generalists were no longer dominant and instead a ‘exclusive sub-cadre’ of specialists had taken over bodies including the Department of Economic Affairs and the ministries of power, petroleum, commerce and industries, public enterprises, and Electronics.

scandal of 1991: the largest corrupt transactions listed in the Jain diaries that year were for the NTPC chairman; four other senior NTPC managers were also implicated.

Well aware of the alternative professional opportunities open to them, some of these managers have ideologically bought into the reform mission, internalizing it within the public sector itself. ‘Reform is a two-way street,’ wrote the former managing director of PowerGrid. ‘It was now incumbent upon me to reorient the company...[to] effect changes to respond to sectoral reforms, globalization and liberalization’ (Singh, 2009: 51-2). Such managers have been unafraid of taking on their line ministries to protect a modicum of their autonomy. NTPC, for example, used the excuse of World Bank conditionality to ‘discipline’ government departments, pressuring them to allow swift implementation without interference and to permit rational pricing of its output (Morris, 2003: 24). The ONGC chairman Subir Raha threatened to resign when the petroleum ministry tried to impose the director-general of hydrocarbons on the state-owned gas major’s board, and had a high-profile spat with the petroleum minister over the firm’s ambitious vertical integration plans.

In contrast, labour interests beyond this exclusive managerial class appear to have been somewhat outmanoeuvred. While some CPSEs, like Coal India, remain bastions of employment outside the managerial class and vulnerable to unionized strikes, overall CPSE employment has been decreasing. In March 2013 it still stood at over 1,404,000 (crucially excluding casual labour), down from 1,614,000 in March 2007 (Department of Public Enterprises, 2013: 16). The number of State power utility employees has dropped more dramatically, from 977,000 in 1998-99 to 660,000 in 2011-12, and the number of employees per thousand customers from 9.89 to 0.36 over the same period (Planning Commission, 2014: 150). Not until the late 1990s did the sector see major labour opposition to reform, and only in 2000 was the National Coordination Committee of Electricity Employees and Engineers established (Kale, 2007: 61). This fits with a more general pattern: examining three non-power CPSEs, Supriya RoyChowdhury (2003) found that, unable to articulate any ideological alternative to ‘necessary’ restructuring, public sector unions had reluctantly *supported* significant labour rationalization.

Nonetheless, the most successful State-level reform processes have taken care to win over more junior staff. The much-lauded Gujarat power reforms, for example, followed a carefully

gradualist course and sought to win over State utilities staff and bolster SEB morale before bringing in restructuring (Madhavan, 2012). Equally, in Andhra Pradesh, more famous for trumpeting market reforms than downplaying them, the administration offered rank-and-file workers assurances, negotiated terms that ‘linked performance to higher levels of compensation’, and expanded worker representation in the State’s reform policy task force. It thereby won support from all but one union of electricity employees (World Bank, 2003a: 3). Even in States more often celebrated for their pro-business reforms, then, change in the sector has relied on bolstering public utilities rather than merely demolishing them, and on winning the cooperation of public sector employees.

The reinvention of CPSEs was therefore carried forth within the organizations themselves. The importance of this domestic basis of reform becomes especially apparent when contrasted with the fate of another imported institutional reform: the arrival of independent regulatory agencies, discussed below.

Finally, the older rationale for state participation in the power sector still remained. Indian policymakers continued to conceptualize energy policy somewhat differently to their counterparts in the global North (Sen, 2014). While the classic liberalization of England & Wales relied on cheap, reliable resources and pre-existing generation assets, India lacks this resource, asset, and wealthy consumer base. Equity considerations—especially the continued existence of a large underserved population unlikely to afford the cost of supply—dictate a role for the state. India’s increasing energy import dependence also raised security-of-supply fears: in New Delhi the realization that the country has not 200 years but perhaps 40 years of domestic coal reserves is ‘[t]he single most important fact driving India’s strategic rethinking on energy’ (Dubash, 2011: 67). Indeed, faced with growing concerns over climate and with a burgeoning crisis of underinvestment, even in the global North states are turning back to more activist energy policies (Sen, 2014; Helm, 2007a, b).<sup>10</sup> Consequently the state’s continued role in the Indian power sector looks assured, even as state-owned enterprises are neglected.

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<sup>10</sup> The template, with its emphasis on short-run marginal costs, may disincentivize much-needed investments in capacity expansion—as well as renewables and backup generation, in the age of climate change (Sen, 2014). In India the concern with environmental damage is secondary to the demand for economic growth: sustainable development means development with environmental co-benefits, not the reverse. There are, however, many overlaps which has enabled the ‘bundling’ together of climate change with energy security (Harrison and Kostka,

Rather than destroying SOEs, the result of these processes has been to *convert* these firms for market competition, especially but not exclusively those controlled by the centre. Proceeding in fits and starts, by trial and error, such enterprises have begun to imitate private sector organizational forms and to enter into newly competitive economic sectors. Such a combination of reforms ‘did not absolutely satisfy free market fundamentalists’, said the PowerGrid managing director, ‘but was still a radical departure from the past’ (Singh, 2009: 50).

This marked a form of ‘ideological bricolage’, ‘pragmatically piecing together the existing stock of instruments in new innovative ways’ with little regard for the fact that state ownership and corporatization had roots in contradictory paradigms (Carstensen, 2011: 148). The apparent paradox of state capitalism 2.0, marrying the ideological victory of the market with the continued supporting role and guidance of the state, thereby becomes ideationally possible. As this shows, at least in the power sector, India’s state capitalism 2.0 has *no coherent vision or ideology*, but has instead developed through expedient and incremental modification. Like the blurred boundaries of the large private firms analysed in Chapter 4, firms such as NTPC and PowerGrid display elements of public-private hybridity—although the next section probes the limits of this change.

### **CPSEs in the liberalization era: ‘national champions’ or state tools?**

The above discussion suggests that Navratna energy companies like NTPC have been reinvented through the imposition of the trappings of corporate governance structures and exposure to (limited) competition. Some, perhaps especially NTPC, have become at least partially profit-driven and comparatively well managed. They simultaneously act as an instrument for the liberalizing and managerialist impulse, for accessing finance, and for central guidance of a key sector in a technocratic mode less accessible to populist demands.

Yet, while they are expected to behave in some respects as market players, at base they clearly owe their dominance to their former near-monopolies and political connections. PowerGrid, for example, which retains a virtual monopoly on inter-State transmission, saw ‘a 1,009 percent growth in turnover [and] a 616 percent rise in profit’ in the seventeen years before

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2012; Dubash, 2011). Energy efficiency promises both economic and environmental benefits, for example, while renewable energy may improve security of supply and cut emissions.

2009 (Vaish, 2009). Their weight and influence—the source of both their appeal and doubts for investors—lie in their complex relationship with the government and their parent ministries. These new institutional forms therefore occupy an awkward space between stock market darlings and bureaucratic instruments of the old sort. How should we conceptualize these firms, then: as national champions, old-fashioned tools of the state—or something in between?

Globally, opinions differ on the success of this retrofitted statism. Based on a case study of Brazil, Musacchio and Lazzarini (2014) suggest that the new arm's-length governance offers the possibility of solving SOEs' old principal-agent problems. Focusing instead on non-democratic regimes such as China and the Gulf petro-states, Bremmer (2010) argues that, for all their apparent conversion, state-owned enterprises and state financial corporations can never shake off their political masters and their final objectives are always irreducibly political: to preserve power for elites. As the following subsection suggests, it is possible both to underestimate and exaggerate the extent of the shift in the Indian government's treatment of its state-owned enterprises. Some of these forms dissolve the simple binary relationship between state and market, and between dirigisme and liberalization. But evidence from the power sector shows that India's state capitalism 2.0 is far from a straightforward, successful alternative to liberal-market states, or to the institutional and policy crisis of its first-generation, planning-era state capitalism (detailed in Chapter 3).

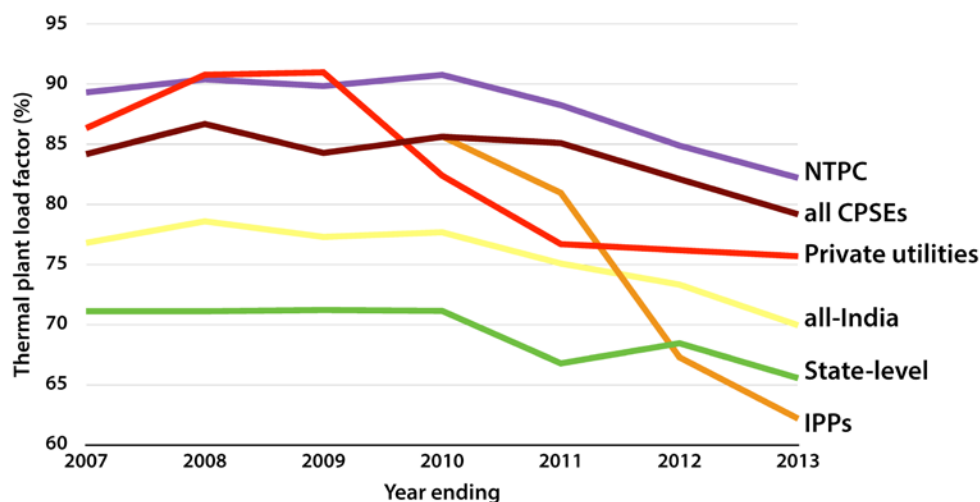
### *National champions*

At least superficially, these processes of incremental conversion have borne fruit. The reinvented CPSEs remain some of India's largest companies by market capitalization. In a written answer to the Rajya Sabha, Finance Minister Arun Jaitley confirmed that several state power corporations are among India's 10 largest firms by assets in 2015: the Power Finance Corporation, NTPC, Rural Electrification Corporation, and PowerGrid currently take the fourth to seventh spots respectively. Only two private firms made the list.

Today NTPC is India's largest power generation company, the second-largest in Asia by value, and India's second-most profitable CPSE after ONGC by net profit (Department of Public Enterprises, 2013: 13). It owns around 16 percent of the country's installed generation capacity

(more than half the total owned by central CPSEs), but generates a much larger 25.6 percent of all on-grid electricity, thanks to its high plant load factors and good access to coal reserves.<sup>11</sup> Indeed, even before the fuel supply crisis it enjoyed higher plant load factors and delivered cheaper power than its private sector competitors, suggesting it may be more efficient (Khanna, 2015: 56-7; Figure 5.3).

Figure 5.3 Plant load factors by ownership



Source: CEA data, various years (IPP data unavailable for some earlier years)

NTPC is also expanding from its core function. Although it began primarily as a generation firm, it is diversifying both upstream into solar and coal (circumventing Coal India; its repeated disputes with the coal major are documented in Chapter 7) and downstream into power trading and rural electrification. Like the large private firms explored in Chapter 4, it is emerging as a ‘vertically and horizontally integrated conglomerate’ (Narayan, 2012: 165). It also participates in joint ventures, a shift that the PowerGrid chairman described as ‘mov[ing] away from the standard PSU practice of seeing contractors as external hostiles’ to instead ‘foster healthy partnerships’ (Singh, 2009: 27).

Also like well-connected private counterparts, some of these CPSEs benefit from generous contracts and favourable access to natural resources, land, and finance—while privileged private firms also benefit from state minority stakes.<sup>12</sup> NTPC benefits from upstream linkages with the

<sup>11</sup> Figures from NTPC website, dated March 2013.

<sup>12</sup> In the midst of the financial slump of early 2013, the state-owned Life Insurance Corporation, India’s largest domestic institutional investor, bought up stocks not only in struggling CPSEs but in *private* energy champions, including Reliance Industries (\$142 million), Reliance Power (\$203 million), and Cairn India (a subsidiary of the

centrally controlled coal sector (though relations between it and its CPSE siblings like Coal India are not always smooth), access to cheap land, cheap railway freight, and cheap finance via the public sector banks and international financial institutions. Both sets of firms share an interest in pressurizing State-level utilities to pay up, threatening to deny supplies to defaulters and forcing reforms on sectors and provinces—profligate States and perhaps even the dysfunctional coal industry—that have hitherto proved slow to change. Like private players, in the 2000s NTPC secured a high rate of return and bonuses for increased capacity utilization, furthering pressurizing the State utilities (Narayan, 2012).

Are these firms ‘national champions’ akin to the biggest private sector firms, then? As Chapter 4 noted, several scholars argue that the two ought to be considered together as ‘hybrid’ or ‘dual’ firms, both publicly and privately owned national champions which have ‘emerged to occupy a space between the old state-owned system and a hypothetical “textbook” power sector that is dominated by purely private firms’ (Tongia, 2007: 113-16; Victor and Heller, 2007c; Musacchio and Lazzarini, 2014; Ruet and Hussain, 2006; Woodhouse, 2006). The difference is visible in the nature of NTPC’s conglomerate form. Several of these new subsidiaries carry forward broader national goals: NTPC very successfully supported the growth of solar power under the Jawaharlal Nehru National Solar Mission by bundling cheap coal-fired and expensive solar supply together for sale, for example. As these links with the national interest suggest, its advantages come at a price.

### *Political tools*

The other side of this relationship is far more destructive to the CPSEs, and in ways that distinguish them decisively from the ‘hybrid’ private conglomerates analysed in Chapter 4. In several respects, the degree of CPSE reinvention has been exaggerated. While the state’s everyday control may have waned, administrations continue to draw on CPSEs for social and political ends.

While the lines of control are less direct and far-reaching than the famous overlap between Party and state in China, the CPSEs’ investment prospectuses make clear that their broad

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Vedanta Group, \$150 million). It thus remained heavily exposed to the energy sector and even more so to utilities (see pp. 233-5 below).

direction is under government control, including the appointment of part-time directors on their boards (from the Ministry of Power) and their managing directors. *‘We will continue to be controlled by the GoI following this Offer, and our other shareholders will be unable to affect the outcome of shareholder voting,’* NTPC’s January 2010 red herring prospectus states, on issues such as annual plans, budgets, dividends, and capital expenditure:

The interests of the GoI may be different from our interests or the interests of our other shareholders... In particular, given the importance of the power industry to the economy, the GoI could require us to take actions designed to serve the public interest in India and not necessarily to maximise our profits. (NTPC Limited, 2010: xxviii-xxix, emphasis in original)<sup>13</sup>

This became evident as the fuel supply crisis hit, and the aggressive minority shareholders at Coal India found profit-making subordinated to the ‘public interest’. Under pressure from its minority shareholders, the coal major’s independent directors blocked a resolution to permit signing of long-term fuel supply agreements with private power firms, which would have guaranteed 80 percent of supplies under threat of a penalty. Its officials complained that private power companies simply sought agreements in order to access loans. Nonetheless, in April 2012 the government resorted to a presidential directive, which can force any CPSE to conform to government direction.

Relations with the parent ministries thus remain unclear. NTPC has signed a memorandum of understanding with the power ministry to institute its annual target setting and criteria for evaluation (it typically receives a rating of ‘Excellent’). As a result Narayan suggests that ‘[w]hile there is considerable operational flexibility in [NTPC’s] day-to-day operations, and even capital decisions, the company is still very much remote-controlled by the Ministry of Power’ through quarterly performance reviews, board members and their reports, and approvals for capital investment above the delegated levels (which sometimes even require cabinet approval) (2012: 168). The controlling line ministries have had little formal redefinition of role or responsibilities, whether as planners, regulators, or owners (Xu, 2012). In this vein the long-serving former chairman of PowerGrid claimed that his memoir, filled with tales of rumours and enemies, was

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<sup>13</sup> This prospectus was submitted to SEBI, the Securities and Exchange Board, in advance of NTPC’s February 2010 follow-on public offering.

a survival guide to the labyrinth in which public sector companies operate... [M]anaging a public sector company in India is not just about fighting off corporate rivals. It entails ducking bouncers all the time, weaving away from the sniper fire of political influence, bureaucratic interference, contractor lobbies and sundry vested interests, many of them in cabins down the corridor. (Singh, 2009: xviii)

Indeed, outside the power sector other CPSEs appear to be even more subject to ministerial interference, as in the case of ONGC and the petroleum ministry.<sup>14</sup> As the World Bank noted in an early review, NTPC had unusual advantages: ‘Being newly created, with no a priori limitations on its managers’ freedom of action’ and thanks to the Bank’s promotion ‘a status that helped reinforce the operating autonomy and political support that were so important in its developments’ (1993a: 3). Other agencies were not as lucky with either their financial means or freedom of action, as it observed, and so ‘NTPC’s managerial techniques have not proved infectious’ (*ibid.*: 2).

NTPC’s red herring prospectus nonetheless also warned that minority shareholders would not be able to regulate the firm’s dealings with other CPSEs (NTPC Limited, 2010: xxviii). Several of the state-owned energy players have formalized joint ventures. But again, the logic of these interactions in practice has often been far from the mode of arm’s-length contractual dealings. A Supreme Court advocate who had acted for PowerGrid described a disagreement between the central transmission utility and the regulator CERC: the former demanded a 16-percent internal rate of return, which of course CERC decided was far too high. Eventually both sides discussed it informally and came to an agreement because ‘both sides work for the government’.<sup>15</sup> Joël Ruet observed a similar trend of informal relations between NTPC and PowerGrid, often coordinated hierarchically through the Union power ministry, and in the role of centre-State relations when setting the locations of new power plants. In his view, then, it makes more sense to analyse the CPSEs and their interactions with each other and State utilities not as those of ‘independent corporatised companies’, but as ‘parts of a *single administered system*’ (2005: 146, 149).

Nor have the older ‘social’ and ‘political’ considerations—like provision of government revenues, employment, and social objectives—entirely disappeared. Beyond corporate profitability CPSEs continue to advance state goals and provide a source of patronage. It is well known that

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<sup>14</sup> Interview, ONGC official, Oxford, 3 May 2013.

<sup>15</sup> Interview, Supreme Court advocate for PowerGrid, Delhi, 19 April 2012.

their managing directors are appointed through politicized processes, and, reports a former cabinet secretary, ‘in most such cases the minister concerned and other politicians have a direct personal financial interest’ (T.S.R. Subramanian, Foreword to Parakh, 2014: 17). At times this has left the board of directors ‘effectively paralysed’ through slow board appointments or leaving CPSEs headless for months, as the World Bank chastised the government in October 1996 over PowerGrid (quoted in Singh, 2009: 19). Nor has public sector employment declined across the board. Coal India, the upstream behemoth upon which many power plants depend, remains famously gargantuan with 360,000 workers, and ministers still commonly use it to employ party workers (Parakh, 2014: 89, 93). This type of political interference undermines the veneer of private-sector-imitating corporate governance installed since the 1990s.

Privatization may have been politically impossible, but formal institutional continuity disguises some major changes. Under the influence of liberalization ideology and international financial institutions the structures of the SOEs have been quietly altered. On paper today the best of them, like NTPC, indicate a new, entrepreneurial, corporate mode of state intervention. But while they enjoy greater everyday autonomy, in reality these CPSEs have not been detached from ‘politics’ and at base remain government instruments of intervention, especially in priority areas and at difficult economic moments. Again, then, this emphasizes the absence of a coherent long-term project at the heart of state capitalism 2.0. It remains a haphazard and opportunistic set of developments.

Fundamentally, too, the CPSEs—especially those in the energy sector—play a key role in the politics of subsidies that defines India’s fierce competition between powerful interest groups. The energy CPSEs in particular are the essential facilitators of India’s political economy of simultaneous populist subsidies and pro-business privatization, as Chapter 6 will show. The enterprises’ surprisingly healthy profits provide a regular stream of revenues for the central government. The degree of this implication in the subsidy regime varies partly by industry sector: some industries remain near-monopolies (like coal), while others appear more oligopolistic (natural gas) and still others are quasi-competitive, albeit with market power (electricity generation). Nonetheless, throughout the energy sector, even well managed CPSEs struggle to escape the wider political ecosystem within which they are embedded. Simultaneous with the

firm's reinterpretation for the market era, the government continued to extract large dividends from NTPC, which passed on over one-fifth of its profits between 1997 and 2001 as it grew at 18 percent annually (Vishwanath, 2007: 539). It is therefore misleading to equate them with their well-connected private sector counterparts, even if both have similar interests in undermining competition and leveraging connections for asymmetric benefits.

### ***Agents of reinvented centralization?***

If they are neither purely national champions nor political tools, CPSEs like NTPC may fulfil a function somewhere between both of these. Chapter 3 showed that the power sector's problems with politicized tariffs at the State level had long been recognized. Faced with this challenge, the chapter showed that the centre attempted arena-shifting strategies through attempted *centralization*, notably through new central organizations to participate in inter-State projects (1948), electrical equipment manufacture (1956), regional coordination and rural electrification (1969), priority bank lending (1969-71), generation (1975), additional project funding (1986) and transmission (1989). This trend of arena shifting through attempted centralization has been magnified in the liberalization era to compensate for the weakness of the central control apparatus in the context of the regionalization of politics (see Chapter 7), though with equally mixed success.

Although federalism is perhaps the largest single obstacle to sweeping reform, the centre was not powerless. The declining relevance of the Planning Commission and the Five Year Plans did not simply weaken the centre's financial tools of influence. The power to levy income tax, taxes and excise duties rests with the centre, as do most broad-based taxes. It also retains 'multiple channels' through which to distribute these revenues downwards, including additional central assistance, special assistance, ad hoc grants from discretionary funds (Rao and Singh, 2005: 367), and even by using State-level agreements with international donors and private investors to harden budget constraints (Kirk, 2011). The distribution of spending responsibilities is reversed: in 2000-1, for example, the State raised only 38 percent of total revenues but incurred 57 percent of expenditure (Rao and Singh, 2005: 365). 'The central government and its agencies have immense financial leverage,' concluded a World Bank electricity review (Pargal and Banerjee, 2014: 13). Indeed, despite their many reservations about the centre's weakness under the UPA

administrations (2004-14), interviewees maintained that the centre was still broadly in control of the sector.<sup>16</sup>

The centre's broad strategy in the sector from the mid-1990s was as an increasing 'fiscal disciplinarian', attempting to harden the State utilities' and governments' formerly soft budget constraints (Rudolph and Rudolph, 2001a). The centre uses its not inconsiderable financial sway as both carrot and stick to incentivize reform compliance, in theory both rewarding restructuring and disciplining States for underperformance. As the Twelfth Plan explained:

Since distribution is entirely the domain of States, the responsibility for improving distribution lies almost entirely with State Governments. The Central Government can incentivise action in a manner which allows the States leeway for experimenting with different ways of obtaining better results. (Planning Commission, 2013a: 152)

While a climb-down from the universalizing impulses of the 2003 Act, in this context attempts at liberalization amount to form of discreet centralization, providing the centre with instruments to reorient the sector away from the older subsidy regime. In this effort, CPSEs play a key role.

The central government used its existing large finance corporations, the Rural Electrification Corporation (REC) and Power Finance Corporation (PFC), able to borrow and lend at low rates thanks to central repayment guarantees, to push for reform through their term-lending initiatives.<sup>17</sup> Before regulators became mandatory, the centre agreed to grant interest subsidies on Power Finance Corporation (PFC) loans only to States that had set up regulatory commissions, for example (Kumar and Chatterjee, 2012: 5). More recently the power ministry developed ratings according to which lending decisions ought to be made by the corporations, and created a large National Electricity Fund under the REC, again imposing reform conditionalities in return for subsidies to support State utility loans. These existing institutions were bolstered through new financial mechanisms. The day after the State power ministers' meeting on the draft Electricity Bill, 'sources close to' Union Power Minister P. Kumaramangalam told the media that the power ministry was seeking funds from the finance ministry in order to incentivize State-level change through a new central reorientation toward 'actively pursuing financial aid and participation in States undertaking power sector reforms' (Mouli, 2000).

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<sup>16</sup> Interview, joint secretary in the power ministry, Delhi, 21 April 2012.

<sup>17</sup> Although the REC was created in 1969 to accelerate rural electrification after the famines of the mid-1960s, in practice it has long funded 'many projects with only a tenuous link to rural electrification' (Tongia, 2007: 134).

This was further institutionalized through the rise of important centrally sponsored schemes (CSSs) in the sector. Such schemes were increasingly used as levers, the Rudolphs argue, bypassing State governments to deal directly with utilities and thus resembling ‘a stealth-like return to an interventionist state’ by ‘mak[ing] it possible for the center to shape state policy preferences and priorities even in fields that are constitutionally placed under state jurisdiction’, like power distribution’ (2010: 157-8). The power sector boasted two flagship CSSs, the Accelerated Power Development and Restructuring Programme (APDRP), which sought to improve utility operations through technical solutions such as computerized monitoring, and the Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) for rural electrification. The centre had long tried to incentivize performance through awards for high-performing utilities and, in the 1990s, cash awards for SEBs reducing T&D losses. The well-funded APDRP extended this, incentivizing States to cut urban commercial losses and improve distribution by linking success to disbursements. Between 2002-3 and 2006, the programme had disbursed ₹9,100 crore, although with limited success (Patel, 2008). A World Bank study found that no State had completed the Programme’s first part—establishing baseline data—in part because utilities struggled to manage the single IT consultancy firm that had won several State contracts (Pargal and Banerjee, 2014: 127-8). The two programmes were subsequently repackaged by the new BJP administration.

Through this wide control of the banking sector and power finance system, the centre has attempted to leverage moments of State-level crisis. One joint secretary in the power ministry described stymying the Government of West Bengal’s search for short-term financing around the time of a festival at which many citizens would especially notice any electricity failures, thereby forcing the populist Trinamool Congress administration to raise tariffs.<sup>18</sup> In this context, the open access provisions of the Electricity Act, 2003, also suggest a pragmatic (if largely unsuccessful) attempt to punish overly politicized laggards by encouraging their most lucrative customers to abandon the SEBs, forcing reform through crisis.

The centre also uses its substantial control of energy supplies through enterprises like NTPC to discipline State utilities, for example by threatening to cut supply. During the 1990s State utilities often ignored grid discipline to underdraw in off-peak and overdraw in peak hours; in

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<sup>18</sup> At CRISIL power sector seminar, New Delhi, 7 May 2012.

response the CPSEs threatened to regulate supply. The SEBs' accounts were held in escrow to make it possible for NTPC to retrieve funds in the event of a default. NTPC even took over the Talcher thermal power plant in 1997 after non-payment in Odisha (Rudolph and Rudolph 2001: 1547). The success of these initiatives was reflected less in improved State-level performance, however, than in the increasingly ample balances of CPSEs like NTPC and the AAA-rated state financial corporations.

The government 'cannot envisage any strategic role' for CPSEs in its development strategy, Sushil Khanna recently argued, for all their precociously impressive performance since the mid-1990s (2015: 47). The closest thing to such a strategic role lies in this intersection between the newly 'fiscal disciplinarian' state, a notion inherited from the market paradigm, and the centre's ability to use these traditional tools for leverage against the state's lower tiers and agencies. Such a patched-up workaround is characteristic of the control problems of state capitalism 2.0 that Chapter 7 discusses, exacerbated by the state's increasing institutional complexity and the excesses of the pro-business turn.

The centre's ability to harden budget constraints has been limited in practice, however. States can circumvent controls, for example through underpayments to central generation firms and market borrowing. Others use capital allocations not for investment but simply to bridge short-term cash flow problems. Until 2014, the exigencies of coalition politics meant that central discipline was applied only inconsistently in order to maintain good relations with key regional partners. The divergence between performance in different States therefore continues to widen.

More significantly, the centre's efforts to encourage accelerated power development through lending at below-market rates or where State utilities struggled to borrow from banks has risked softening budgets once more. At the extreme have been the two bailouts of 2002 and 2012 which securitized substantial debt and waived much of the rest—despite the fact that the 2002 bailout was known as the 'One-Time Settlement'. The bailouts included attempts to firm up the budget constraint through adjustments to central Plan assistance in 2002 and conditions on timely tariff revision, metering, State underwriting of missed targets, and a progressive reduction in short-term power purchase in 2012 (Chitnis et al., 2012). At base, such debt write-offs, restructuring, and payouts to coalition partners risked compromising harder budget constraints. As Surya Sethi,

former principal power and energy advisor to the central government, argued scathingly of the repeat bailouts: ‘Attaching conditionalities that are unenforceable and impractical in the prevailing political economy to key elements of the scheme’ was mere ‘lip service to fiscal prudence’ (2014: 17). Chapter 6 extends this examination of the flow of funds in the sector. While the CPSEs do act as de facto agents of centralization, this exercise is a Sisyphean one.

### **Imported independent regulatory agencies**

The second set of reimagined state agencies that this chapter considers mirrors the CPSEs’ battles for autonomization. There is a large literature on the creation of independent regulatory agencies in India, much of it on power.<sup>19</sup> I therefore rehearse this material only briefly here in order to draw out the striking similarities and differences with the way that this second reimagining of governance has played out.

Well before 1991, the public power sector’s problems were framed as a problem of the *politicization* of state agencies that ought to remain at arm’s length from the state. Chapter 3 noted that by the early 1980s central officials were already lamenting ‘the desire of some State governments to exert a high degree of day to day control’ over their SEBs, making it ‘difficult for them to function as the autonomous bodies which they were set up to be’ (Department of Power, 1980: 4).

In the first years of liberalization, as Chapter 4 showed, the need to mobilize scarce capital overrode most other reformist considerations. But by the second phase of reform and the later 1990s, ‘politicization’ re-emerged as a diagnosis. The World Bank warned of ‘the pervasive politicization of most decisions’ by State governments (1997: 4). By 2001 there was, the Tenth Plan claimed, ‘general consensus on the urgent need to depoliticise power sector reforms’ at the conference of chief ministers and power ministers, taking it outside the realm of party politics (Planning Commission, 2002, vol. 2: §8.2.19). Priya Ranjan Dasmunsi (Congress, Raiganj) made a heartfelt plea in the Lok Sabha debates over the Electricity Act, 2003:

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<sup>19</sup> See especially the work of Navroz Dubash (Dubash and Rao, 2008; Dubash and Morgan, 2013b) and for an insider’s perspective Rao (2004).

Let us [i.e. all political parties] for once decide that we can do politics in every front but in certain areas let us take a determined view that we shall not do politics and one such sector is the power sector.<sup>20</sup>

Just as old as this problem of politicization was the prescribed solution: to depoliticize the sector by delegating decisionmaking power to more insulated bodies. Just as the centre repeatedly attempted to mitigate State control of distribution by shifting the arenas of decisionmaking upwards, new agencies were created with theoretically more arm's-length and rules-based relations with political regimes. This trend was almost as old as the sector itself. The 1948 Electricity (Supply) Act mandated the formation of SEBs run by specialists and on which politicians were banned from serving, while the 1980 Rajadhyksha Committee called for the creation of an independent Bureau of Electricity Costs and Prices to advise SEBs on tariffs (Department of Power, 1980: 83).

The liberalization era has brought a new phase of such attempted depoliticization through arena shifting. At the same time as electricity policy has been exposed to greater private sector inputs, the power sector has seen a second shift in governance. As the Expert Group on Commercialization of Infrastructure Projects argued, 'Agencies combining the roles of regulator and operator make regulation ineffective and hurt competition. This must change' (1996: 18). Even as the report was belatedly published, independent electricity regulatory commissions (ERCs) were making their debut.

The ERCs' entry stands in striking contrast to the largely domestic and internal reinventions of the large CPSEs. Instead these agencies were *imported* almost wholesale from international templates pioneered in Europe and carried forth by the World Bank.<sup>21</sup> The introduction of 'transparent regulatory processes that are clearly independent of power suppliers and that avoid government interference in day-to-day power company operations' was a core part of the World Bank's global template (World Bank, 1993b: 11). The rationale was explicit: to depoliticize tariff-setting by insulating and streamlining political decisionmaking. The introduction of the pioneering Odisha electricity regulatory commission (ERC), for example, was to ensure tariff

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<sup>20</sup> Lok Sabha debates, 18 December 2003, <http://indiankanoon.org/doc/1006450/>.

<sup>21</sup> Following Castaldi and Dosi (2003: 24-5), Streeck and Thelen (2005: 21) describe similar processes as 'displacement by invasion', but in this case it exaggerates the ability of imported templates to supplant older institutions.

reform and ‘insulate Orissa’s power sector from the government’ (World Bank, 1996: Annex 5.3: 2).

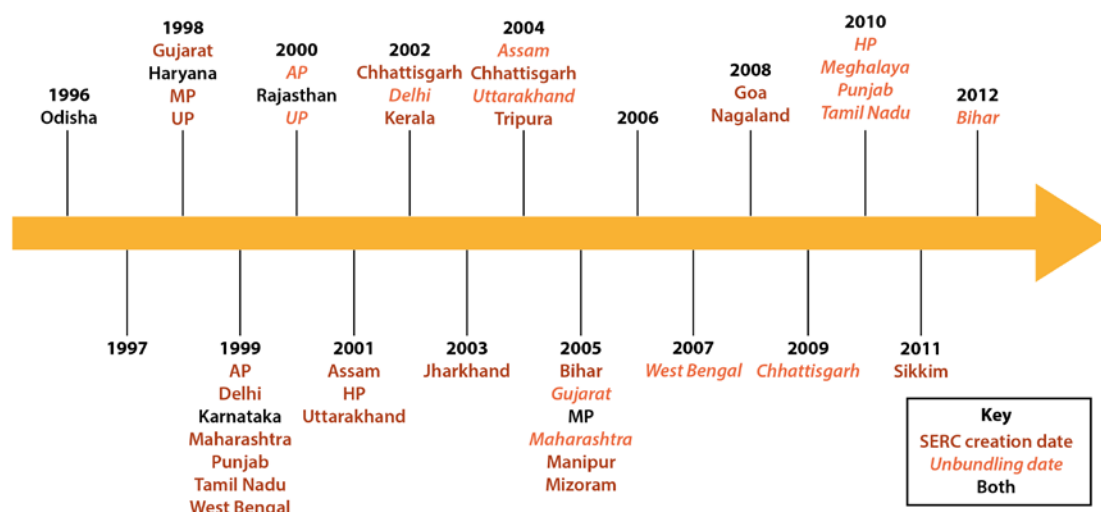
As part of the conditional template, regulators were imported ‘through the back door’, spearheaded by international intermediaries and with little domestic discussion (Dubash, 2013).<sup>22</sup> The legislation and organizational form was transplanted virtually wholesale, derived from the United States and United Kingdom. The ‘underlying presumption’ was ‘that it is indeed feasible to create an apolitical regulatory sphere simply by legislating one’ (*ibid*: 103).

The unlikely pioneer was Odisha (see previous chapter). Regulators were then gradually introduced across most other States and at the central level, and reinforced by the Electricity Act, 2003 (Figure 5.3). The 2003 Electricity Act made such regulatory commissions mandatory, and strengthened the regulatory framework by expanding their jurisdictions; and creating a national Appellate Tribunal to harmonize regulation, consumer forums, new anti-theft provisions and special courts. It mandated a gradual move to rationalized, non-subsidized tariffs by the ERCs, with preferential tariffs for renewable sources (Kumar and Chatterjee, 2012: 9-11). On paper, then, the project of ‘depoliticization’ was well advanced. Today most State utilities have introduced several of the trappings of corporatization. Virtually all have ERCs, and most utilities have been unbundled into separate generation, transmission, and distribution corporations (Figure 5.4). The majority have also brought in external auditors, sizeable boards, and executive directors.

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<sup>22</sup> Nonetheless, the former CERC chairman S.L. Rao alleged that the ‘attraction’ to one domestic constituency was clear: ‘the post-retirement senior appointments in such bodies’, which usually went to former civil servants (2011b: 25).

Figure 5.4 Timeline of sector unbundling and establishment of State electricity regulatory commissions



Source: Pargal and Banerjee (2014: 27)

As with the degree of private participation (Chapter 4), however, there is now a substantial degree of regional variation in the structure and governance of the sector and the strength of this regulatory turn. The uncritical fashion in which these quasi-judicial agencies were imported meant that in several States they were simply superimposed atop the pre-existing system, in the throes of reform. Several SERCs were therefore swiftly colonized by existing interests. Their personnel came largely from the power bureaucracy, binding them into the existing political system, while others remained heavily dependent on international consultants (Rao, 2004). Most ERCs did not provide transparent public access to their documents, as was mandated, while many were also characterized by long-term unfilled staffing vacancies. A decade on an updated survey by the energy NGO Prayas concluded that many of these problems continued (Chitnis, 2011).

With this deficit in staffing, ERCs struggled to exercise autonomy against the political administration. While they offered State politicians the chance to shift the locus of unpopular tariff decisions, in practice this strategy lacked credibility. Citizens often (perhaps rightly) failed to distinguish between the regulators and the administrations, and continued to protest tariff rises. Several ERCs were forced to creatively accommodate 'populist pressures' and moderate tariff hikes, even whilst they have taken pains to retain the 'façade' of apolitical decisionmaking (Dubash, 2013: 113, 104). Karnataka created a parallel system to circumvent the regulator by contract structures. Even Delhi's regulator, which enjoyed comparatively good relations with the

executive, was forced into creative accounting: creating a new set of ‘regulatory assets’ to defer payment to the private utilities. The central government also set about weakening the central regulator, CERC: a task force headed by Planning Commission member N.K. Singh ‘tried to reopen many issues of tariff norms already decided by the CERC and literally encroached into an area that legitimately should have been left to the latter’, wrote former Union power secretary E.A.S. Sarma (2004: 4636); he also considered the Electricity Act’s creation of a new higher-tier judicial body, the Appellate Tribunal for Electricity (Aptel) another such attempt by the political executive ‘to usurp the independence of the regulators’ (*ibid*). In the face of this political interference, regulators struggled to enforce tariff decisions or discipline political administrations.

While there were some successes, in many States the ERCs did not become an integral part of the system. The first chair of Karnataka’s regulatory agency went as far as describing the system as an ‘unwanted child’ (Dubash, 2013: 107). This contrasted strongly not only with the domestic processes of reform of power CPSEs, outlined above, but also with the far more successful acceptance of regulators in the other sector that introduced them in the mid-1990s: telecommunications. Rahul Mukherji argued that the telecoms regulator was ‘homegrown’, emerging out of ‘ideational changes within the Prime Minister’s Office (PMO) that favored regulated competition’; even then, its birth was a messy process (2004: 278). While the electricity regulators also had to struggle in a much more complex and federal institutional structure, they were additionally hampered by their foreign origins (*ibid*) and, for laggards, by their association with the central government through the Electricity Regulatory Commissions Act, 1998 (Singh, 2005: 155). In other elements of the project of reinvented State utility governance, too, compliance was often stronger on paper than in reality. Many audits are not made public, as was nominally mandatory. Only 10 of the 69 utilities examined in a recent World Bank survey had the recommended share of independent directors, and 31 lacked independent directors altogether (Pargal and Mayer, 2014: 19).

The experience therefore continued to be ‘patchy, at best’, as the *Tenth Plan Mid-Term Appraisal* put it (Planning Commission, 2005: 336). While they found some improvements in scrutiny of the sector, Navroz Dubash and D. Narasimha Rao concluded that several regulators so far suffered from their ‘schizophrenic relationship’ with the government: ‘Ultimately, the Indian

electricity regulatory experience suggests that half-hearted approaches at regulation risk allowing regulators to be absorbed back into the political morass they were intended to transcend' (2008: 330-1).

One side-effect of the failing credibility of these reforms was the declining influence of the World Bank in India.<sup>23</sup> By the mid-2000s the global standard was increasingly coming in for debate elsewhere, with as many notable failures as successes, including the California electricity crisis and the collapse of Enron. In the global South, the template was increasingly criticized for its insensitivity to local specificities; the extreme difficulty of its practical implementation; its inequalitarian outcomes; and its reluctance to admit political considerations (Xu, 2004; Dubash and Singh, 2005; Wamukonya, 2003). Several countries, including Brazil in 2001-2 and Argentina in 2004, blamed energy crises in part on liberalization.

These crises prompted soul-searching within the Bank, which acknowledged that its role had 'become less clear' as investors withdrew in the South (2003b: 2). A 2005 survey concluded that econometric evidence of reform success was weak, and that outcomes depended heavily on local institutions: 'Until we know more, implementation of reforms will be more based on ideology and economic theory rather than solid economic evidence' (Jamash et al., 2005: 1). The Government of India, a 'relative laggard' in accepting most aspects of the template, therefore ironically embraced power reforms just as they were being increasingly questioned on the global level (Dubash and Singh, 2005: 5256). From this point the World Bank's influence has only declined. The IFC interviewee noted that economic growth has opened a new variety of financial options to the central and better State governments, a competitive scenario that has further served to weaken the Bank's hand.<sup>24</sup> As the Bank itself acknowledged, 'India is large for the World Bank, but the World Bank is small for India' (quoted in Kirk, 2011: xv). The failures of this phase of reforms thus weakened a once-powerful reform constituency.

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<sup>23</sup> Interview with senior official, International Finance Corporation, Delhi, 22 June 2012. See, for example, the growing doubts expressed by Rao (2002: 3434) shortly after his retirement as CERC chair. The multilateral lenders also hesitated at a key moment: the Bank, 'initially somewhat leery of national legislation', played only a hands-off role in the Electricity Act's formulation (Dubash and Rajan, 2001: 3384). At the height of his influence as infrastructure shaper, the Act's architect blamed the lenders' 'desire to expand their lending portfolios, coupled with the need to carry along incumbents' for their unwillingness to push power reforms further towards competition (Haldea, 2011 [2003]: 62).

<sup>24</sup> Interview with senior official, IFC, Delhi, 22 June 2012.

As a means of instituting a market-oriented power system, then, the regulators have demonstrably failed in several States. Cross-subsidies and theft remain high, private participation in distribution is still limited, and while there have been some tariff revisions they have failed to keep pace with the raising price of power procurement and State utility losses have continued to mount (see Chapter 6). As a result of their uncritical importation from developed-country settings, the electricity regulators thus feature as examples of ‘isomorphic mimicry’ (Pritchett, 2011; DiMaggio and Powell, 1983): merely imitating institutional forms without necessarily replicating their functionality or organizational legitimacy. This ‘transplant effect’ is well known and is not confined to electricity regulation (Berkowitz et al., 2003).<sup>25</sup>

In this case, we see a novel set of agencies created through the efforts of a narrow and external set of interests, with ideology and international norms playing a large part. This should caution us against too deterministic an analysis of the origins of policy change as rooted in interest-group politics, therefore. But uncritical superimposing of a new layer of agencies without the power to shift the underlying bedrock of the state zone, and the political economy in which it is embedded, risks leaving those agencies open to colonization as a mere organizational offshoot of the old system. The system changes in form; its functioning changes little. In 2012 the CERC chair again declared, ‘The political economy of the sector is crucial. Utilities are nothing but extension of government... in developing countries.’ Sitting in the conference of State power ministers, which pass the same resolutions each year, ‘I feel that nothing has changed... Solutions must lie within the existing political settlement.’<sup>26</sup>

The kernels of a more fertile interaction between this layer of regulatory agencies, the older sediment of organizations, and ‘the existing political settlement’ is observed by the work of Navroz Dubash. For all the talk of transparency that went with them, the regulators’ mandate was initially aimed at creating an environment hospitable to private capital. ERCs who attempted to intercede on behalf of citizens, as when the pioneering Odisha agency refused to introduce high tariffs, much to the World Bank’s chagrin, were criticized. Yet, through their interpenetration by the older administration and other interest groups, the regulators may have begun to emerge as a new and distinct type of body somewhat different from the Bank’s envisaged logic. Dubash and

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<sup>25</sup> On a similar effect in Indian pharmaceutical regulation, see Vijay (2012).

<sup>26</sup> Speaking at CRISIL conference, ‘Breaking the Impasse’, 7 May 2012.

Rao point out that the weakness and declining legitimacy of other state institutions, ‘such as parliaments’, may open up space for a ‘democratically robust regulator’ to act (2008: 331), a point that Chapter 7 develops in a quite different context.

In doing this, though, Dubash argues that that regulators in the global South ought not benchmark themselves to the ‘*rule-based, apolitical and technocratic world*’ envisaged by Northern exemplars (Dubash and Morgan, 2013b: 279). Southern regulators necessarily operate ‘between rules and deals’, and must cope with deeply political questions about equity and allocative politics that do not apply to the same extent in the North (*ibid*). This absence of autonomy may not invalidate the agencies altogether. Instead, it potentially opens a valuable new arena for negotiation between interests, including by citizens typically excluded from power sector processes. In this way, just as the interaction between ideas of corporatization and commercialization has partially reworked CPSEs, the layering of regulators may see a similar process of gradual institutional conversion.

## **Conclusion to Part 2: the evolving morphology of state capitalism 2.0**

Despite the prevalence of anti-state critiques and market rhetoric, state activism remains resilient in the Indian power sector. Far from waning, this chapter has shown that in some ways the state’s activism has been reinforced since 1991. Yet this influence of the state is not merely the product of inertia and path dependency: it has also undergone gradual processes of institutional change. Globalization, liberalization, and the availability of financial capitalism create opportunities for as well as constraints on state agencies (Levy, 2006). Central public sector enterprises continue to dominate the energy sector and some have even flourished; the central government has new tools at its disposal even as others have fallen away; and new regulatory agencies have been introduced in ways that increase rather than reduce the complexity of the state. The resilience of CPSEs and the rise of regulation together testify to the ‘growing recognition that, at least in energy, sophisticated use of the market may need more (and improved), not less, state capacity’ (Dubash, 2011: 71).

Chapters 4 and 5 have therefore introduced two different organizational forms which share some important characteristics. Like the large private firms explored in Chapter 4, these

CPSEs owe their newfound strength in large part to their close links with the state (see also Chapter 6). These two chapters support the conclusions of other scholars of market transitions in mixed economies: it is unhelpful to think in terms of the dichotomy between public and private (Stark, 1996; Nee, 1992), although Chapter 6 troubles the notion that the two forms ought to be considered similar ‘hybrid firms’. Instead, the evolving mixed system in the power sector shows a diversity of organizational forms which blur the public-private boundary.<sup>27</sup> As Chapter 4 argued, this ‘blurring’ is a hallmark of state capitalism as it has been reinvented in the face of anti-state critiques and the increasing influence of the private sector.

This mapping of the hybrid state’s topography in the power sector is crucial to locate the state’s ‘pro-business tilt’ in the wider institutional context of the Indian state. It suggests that the Indian state is quite different to the planning-era dirigiste state or even, contra Atul Kohli’s influential analogy (2006a: 1253-4; 2012: 219-20), the classic developmental states. Instead a picture begins to emerge of a state structure that combines converted ‘traditional’ organs of state intervention with both public-private collaboration and a new layer of regulatory organs. This combination shows both the fertility of the interaction between layers of institutions, and the central administration’s inability to destroy older organizations even as new ones are created. Instead new and old agencies have proliferated, increasing the state’s institutional complexity, and prompting new forms of negotiation and conversion as institutions are prompted or forced to adapt to changing conditions and new constituencies.

India is thus becoming neither a liberal market economy nor a classic developmental state, although its structural shifts superficially resemble aspects of each. As the two following chapters demonstrate, however, the resulting hybrid—state capitalism 2.0—presents no simple, functional alternative to these more celebrated modes.

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<sup>27</sup> In the foregoing analysis we have examined two-and-a-half such forms: (1) large private conglomerates, the structure of which is moulded to the contours of state policy and which draw on political and economic resources across the public-private divide; (2) corporatized CPSEs like NTPC, exercising greater everyday autonomy than previously, endowed with the trappings of corporate governance, and arguably even flourishing in the (asymmetric) competition in which they engage; and arguably (3) the potential evolution of electricity regulatory commissions into new democratic forums (Dubash and Morgan, 2013a).

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PART 3  
THE FUNCTIONING OF  
STATE CAPITALISM 2.0

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# 6

## The segmented system: layering and proliferating rents

India's power sector is a leaking bucket; the holes deliberately crafted and the leaks carefully collected as economic rents by various stakeholders that control the system.

—Deepak Parekh, then chairman of the Infrastructure Development Finance Corporation (quoted in Ramakrishnan, 2001)

### **Subsidy flows from the leaking bucket**

The first half of this thesis explored the most significant organizational forms that have emerged in the power sector between 1991 and 2014, which together comprise the system of state capitalism 2.0. Chapters 4 and 5 showed that the state maintains a key role both indirectly (supporting private firms) and directly (through public organizations). This is not a hybrid that has functionally emerged, however, but the product of a process of layering. As state agencies are very difficult to demolish, reforms have simply overlaid new organizational structures atop the sediment of older organizations.

The second half of the thesis moves to look at some key consequences of this layered system: its failure to end endemic rent-seeking in the sector (this chapter) and the crisis of control that underlies this failure (Chapter 7). This analysis recognizes that these parallel layers of institutions—public and private—do not exist in isolation from one another. There are major

*interaction effects* between these layers of institutions. Informed by this, this chapter makes a two-fold argument. In line with the resilience of the statist system in the power sector, it notes that ‘old’ subsidies persist alongside new ‘pro-business’ subsidies, which go to some of the privileged private producers introduced in Chapter 4.

More significantly, it links this two-sided pattern of rents to the layered dynamic of institutional change established in the earlier chapters. The political constraints that have produced a gradual, layered process of institutional change have therefore also produced a distinctive system of rents. Chapters 4 and 5 explored the fashion in which private participation has been introduced largely *in parallel* with the continuation of the statist system. The following analysis shows that these layered institutional arrangements channel and segment interest group competition. But rather than leaving room for stylized ‘state autonomy’ this segmentation facilitates *differential influence on particular state agencies, levels, and segments of the electricity supply industry* itself. Different interest groups have varying abilities to influence policy across different levels and parts of this layered system, from State-level regulatory agencies to the Union power ministry, and across different stages of the policymaking process, from agenda setting to implementation. As a result of this institutional segmentation, greater big-business influence can *coexist*, albeit uneasily, with the influence of wealthy farmers and middle-class consumers.

Rather than institutionalizing a decisive pro-business turn, this fragmentary layering in the power sector has led to a form of liberalization as *segmentation*. The segmentation of the power system—and, in important ways, influence on the policy process—has created a splintered and regionally differentiated system characterized by (a) uneven private investment and influence through the different segments of the system and (b) rents for *both* elite consumers and elite producers.

This proliferation of subsidies gives rise to another key question: how is this two-sided system of rents financed? In the final section, this question brings us full circle once more to highlight the role of state intervention in funding this system. However, the dysfunctional operations of this hybrid become apparent in the actual flows of resources. It is financed through the short-term exploitation of natural resources, central state-owned enterprise revenues, government influence on the financial system, and by suppressing demand through endemic load-

shedding. In the longer term, the many failures of this leaky bucket mean that this rent-seeking system is unstable, and so is creating new constituencies for reform and a backlash against rents for private producers perceived to be egregiously generous and secured through corrupt means.

This chapter first provides a review of contemporary electricity subsidies, both consumer- and producer-side. The second and third sections explore these together, examining layered liberalization and the segmentation of influence both through the policy process and the structure of the power sector. The final section examines how the ensuing proliferation of rents is funded through short-term state intervention. The chapter concludes by pointing to the instabilities in this segmented system, looking forward to Chapter 7's analysis of the crisis of control in state capitalism 2.0.

### **The twin sets of subsidies**

This section picks up a key thread of analysis introduced in the historical Chapter 3, which outlined the regime of subsidies that came to define the sector from the 1960s (and earlier in some States). That chapter concluded by suggesting that these subsidies were path-dependent and self-reinforcing. First, in States with extensive power subsidies agriculture became increasingly dependent on electric tubewells, so that the cost of switching away from agricultural subsidies rose over time and the balance between public cost (less visible, and so depoliticizable) and private cost (always politicized) shifted. Second, bolstered by power subsidies, wealthy farmers in turn used their increased clout to demand the persistence and even extension of these subsidies.

The following discussion revisits the 'subsidy question' in the liberalization era and examines the consequences of this path dependence, before briefly reviewing the forms of producer subsidy introduced in Chapter 4. The utility of electricity subsidies—and the informal subsidy embodied in politically condoned and systematic power theft—as an indicator of wider trends is well established, both as an indicator of the relative power of different socioeconomic groups (Golden and Min, 2013) and a proxy for governance quality (Smith, 2004; Kochhar et al., 2006; A. Subramanian, 2012). Tracing the flow of subsidies (broadly conceived) allows us to examine the success of different groups in exerting control over resources in this key sector, and

to assess the degree to which the reforms since 1991 have altered the underlying political economy of electricity.

The pattern of subsidies in the power sector reveals an admixture of continuity and change. It provides some support for the idea of the pro-business state but, as Pranab Bardhan assessed liberalization, also based on a (brief) survey of power subsidies: ‘one should not exaggerate the extent of shift in the basic political equilibrium’ (1998: 129-30). Despite almost a quarter-century of putative liberalization, in many States consumer-side electricity subsidies persist, most notoriously (but not solely) those which go to the wealthy farmers introduced in Chapter 3. Meanwhile, poor-quality supply continues to damage industrial and commercial interests, aside from a narrow subset of well-connected energy producers. This section will show how the pattern of subsidies and rents suggests that the pro-business tilt has in practice been limited, painful, and regionally uneven.

### ***Agricultural subsidies***

Consumer-side subsidies in the power sector amount to a form of rent based on redistributive transfers organized through the political mechanism (see Khan, 2000b: 35-40). In India the most notorious set of such rents go to agricultural consumers. There is a consensus that cross-subsidies nominally intended for the poor in fact go to wealthier farmers able to afford to install and maintain tubewells (Gulati and Sharma, 1995; Komives, 2005; Jain, 2006; Kale, 2007, 2014a; Tongia, 2007; Joseph, 2010).<sup>1</sup> This group is in turn strengthened by the subsidies.

1991 marked no sharp break in these subsidies. The number of electric tubewells continued to grow into the first decade of liberalization (World Bank, 2004: 43). By the early 2000s, agricultural tariffs were less than a tenth those for industrial and commercial consumers (Tongia, 2007: 129). Agriculture has accounted for around 25 percent of total electricity

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<sup>1</sup> There are interesting regional variations in this large-farmer bias. Electric pumpsets are concentrated in the hands of medium and large farmers (>2 hectares) in a few especially unequal States: Karnataka, Madhya Pradesh, and Maharashtra. In Rajasthan, Punjab, Haryana, Gujarat, and Andhra Pradesh, too, while small and marginal farmers (<2 hectares) use the majority of pumpsets, the irrigated area is concentrated in larger farmers’ hands. By contrast, in Tamil Nadu and UP, as well as where irrigated agriculture is less common—in Assam, West Bengal, Kerala, and Odisha—small and marginal farms claim a larger proportion of irrigated land (World Bank, 2004: 43, using data from the National Sample Survey, 54th round [1998]).

consumption since 1990, but 4 percent of total revenue—and only 8 percent as late as 2011 (Table 6.1).

Table 6.1 Changing consumer mix over time

	Share of consumption (%)			Share of revenue (%)		
	1991	2001	2011	1991	2001	2011
<b>Agriculture</b>	26	26	23	4	4	8
<b>Domestic</b>	17	25	24	11	16	20
<b>Industrial, commercial and others</b>	57	49	53	83	79	72

Source: Planning Commission (2011a); Pargal and Banerjee (2014: 84)

The pro-agriculture shift in tariff subsidies was not regionally even, but was especially pronounced in States with powerful farmer lobbies. The initiation of power sector reforms in 1991 broadly failed to alter this pattern. Sunila Kale (2014a) forcefully argues that States with powerful farmer lobbies and high levels of ‘wet’ agriculture were *both* early rural electrifiers *and* struggled to reform their power sectors in the early years after 1991 (see also Chapter 3). Several States with large farmer lobbies, even those which are otherwise considered comparatively industry- and FDI-friendly, struggled to raise electricity tariffs and wrestled with a cycle of underinvestment and power cuts. Faced with elections immediately after the passage of the ‘watershed’ Electricity Act of 2003, Punjab, Maharashtra, and Tamil Nadu all promised free power to farmers, while the reformist chief minister Chandrababu Naidu’s 2004 election loss was widely regarded as a response to his push for power reform.<sup>2</sup> ‘YSR’ Rajasekhara Reddy confirmed his victory over Naidu by issuing free electricity to farmers ‘within seconds of his swearing in’ (EPW, 2009: 5).

In contrast, States with less dominant farmer lobbies appeared better placed. As earlier chapters noted, Odisha, with low levels of rural electrification and irrigated agriculture, became the unlikely pioneer of power reforms in the 1990s. Delhi, the only other province to privatize distribution, was also precociously urban (Kale, 2007: 139-83). Regional political economies of power thus appear to have proven path-dependent in the medium term, with wealthy farmers who

<sup>2</sup> Attributing Naidu’s defeat to power reforms has become a truism but, as ever, the reality is more complex. The opposition Congress certainly used the electricity reforms to lambast Naidu as a World Bank ‘parrot’, but more general anti-reform sentiment, irritation at Naidu’s ‘CEO’ self-image, and concerns about irrigation water provision may have played a greater role in his defeat (Suri, 2004).

have received increasing returns from subsidized power leveraging the veto points provided by the concurrent sharing of responsibility for electricity within the federal system.

### *Beyond the big bad farmer*

Nonetheless, the ‘basic political equilibrium’ has not remained static. Path dependence is not fate. Nor are agricultural consumers a monolithic class or the only group with an interest in the maintenance of the unreformed status quo. The political economy of power subsidies today is more complex than the classic emphasis on agriculture versus industry might suggest.

First, agriculturalists are a diverse group, and not all benefit equally from the subsidies. Rural electrification and subsidies favour not only large landholders but those cultivating specific water-intensive crops, such as the wheat and rice farmers of Punjab and the ‘sugar barons’ of western Maharashtra (Kale, 2014a).<sup>3</sup> The advantages of the power-irrigation nexus are also conditioned by local landholding configurations, ecological variations, and caste identities, while many small farmers are dependent on water markets (Dubash, 2002).

Second, many farmers do not receive increasing returns from free or cheap power in perpetuity. Large ‘progressive farmers’ oriented to export markets may form one pro-reform constituency: such agro-industrialists, like their equivalents in the large-scale manufacturing sector, may be more sensitive to quality than price (Kale, 2007: 263-7). But it is not only large farmers who suffer from irregular power. In fact, its impacts may be worse for smaller farmers, for whom the cost of bribing officials to secure a connection and the equipment damage that voltage fluctuations cause are proportionally higher and who, like landless labourers, may have to work at night if this is the only time power flows (World Bank, 2001: 20).<sup>4</sup> Finally, the use of tubewells to extract groundwater exhibits diminishing returns across much of North India. As the groundwater crisis worsens in many States, more expensive tubewells will also be required to pump water from ever-greater depths.

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<sup>3</sup> There exists a rich literature on State-level variations in the agrarian political economy of electricity. See especially Kale (2014a). Good studies of specific States include Birner et al. (2011), Dubash (2002), and a large set by the World Bank.

<sup>4</sup> Farmers of all sizes are also hit by transformer burnouts due to overloading, which peak during the monsoon sowing season when demand is highest and often take weeks to fix. A World Bank survey found that around 95 percent of rural villages in Haryana and Andhra Pradesh experienced such blowouts (2001: 9-10).

In this context, several studies have shown that farmers seek subsidies—and steal power—not only because they want cheaper inputs, but because they are dissatisfied with the quality of supply and therefore resist bill payments and tariff rises (World Bank, 2004: xii; Katiyar, 2005). As UP farmers told Akhil Gupta, the vagaries of electricity supply appear the work of an unresponsive and capricious *sarkar* (1998: 272-5).

Given these declining returns, the lock-in to agricultural subsidies may be less pronounced today than is often thought. This is a chicken-and-egg problem: evidence is mounting that virtually *all* categories of consumer would be willing to pay more *if* provision were better (Santhakumar, 2008). Gujarat's innovative Jyoti Gram Yojana scheme, started in 2003, confirms this: many farmers agreed to the separation of (cheap but unreliable) farm- and (more expensive but higher-quality) non-farm supplies, an idea recently imitated in seven other States.<sup>5</sup> Inspired by the Gujarat example, consistent rather than free power appeared to become the political promise of choice in the Bharatiya Janata Party's 2014 general election campaign. There may be other, political reasons why farmers might seek to protect their subsidies, however. In States in which policymakers lack credibility, it is likely that farmers will be less willing to trade uneven present gains for the uncertain future rewards of an improved power system. Farmers may also be less attached to free or fixed-tariff electricity in and of itself than to subsidies 'as a litmus test to judge whether politicians will serve their interests' (Victor, 2009: 19).

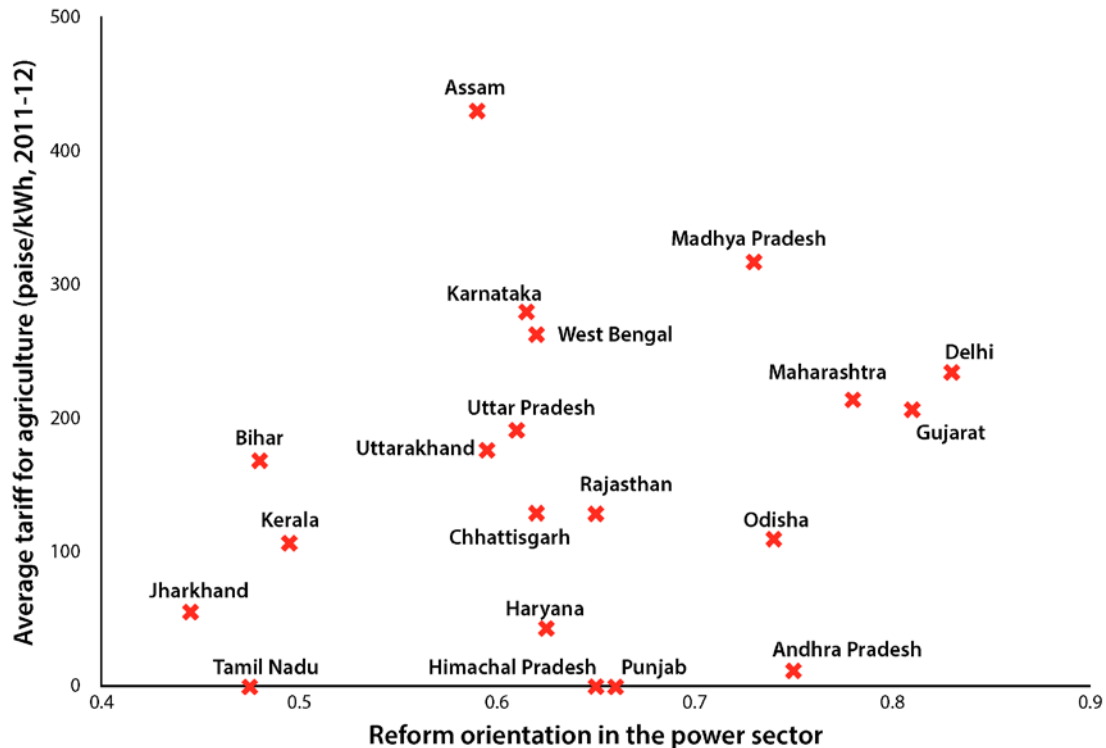
Third, as the Gujarat example shows, regional political economies are not frozen landscapes. In recent years, all-India average agricultural tariffs have risen faster than those for other groups, although they remain low (Planning Commission, 2014: 157). Several States with historically powerful agricultural lobbies have partially restored the financial health of their utilities, especially when political parties have remained in power for several years. Gujarat, Madhya Pradesh and Rajasthan have embarked upon reforms, while Andhra Pradesh and Maharashtra both score highly for power governance (see Figure 6.1). This may indicate a shift in power and the willingness of politicians and regulators to take on rural interests, perhaps because

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<sup>5</sup> For a review of varying State experiences with the separation of rural feeders, see ASTAE (2014). While Gujarat has successfully controlled financial losses from the agricultural sector through the programme, evidence from Rajasthan is more mixed, and losses and subsidies continue to rise.

India's long agrarian crisis has reduced agriculture's economic significance and therefore its political clout (Chandrasekhar, 2015).

Figure 6.1 State-level power reform orientation and agricultural tariffs compared, 2011-12



Source: Planning Commission data on agricultural tariffs (2014: 198); reform implementation scorecard from Deloitte and the World Bank (2013), primarily using data for 2011-12<sup>6</sup>

Nonetheless, the pace of change should not be exaggerated. In 2011, only Kerala, Delhi, and West Bengal had tariffs that covered costs and made profits without requiring a subsidy (Pargal and Banerjee, 2014: 4).<sup>7</sup> In many States agricultural subsidies and power theft are declining only slowly. Nationally, the gap between cost and revenue has virtually doubled since 2003: across India the ratio of sales revenue to cost was only 66 percent in 2011-12 (Planning Commission, 2014: 161). This was due not to any general decrease in tariffs charged to consumers, but rather rising interest costs and the soaring cost of purchased power, thanks to increasing fuel prices and poor procurement planning (Bhattacharya and Patel, 2011; Pargal and Banerjee, 2014: 71-6). The sector's older political settlement still constrains most utilities' ability

<sup>6</sup> States which never even formed SEBs (a step taken by most in the 1950s) have been excluded; they are concentrated in the unusual Northeast (plus Goa).

<sup>7</sup> Even this is controversial. Unpaid transfers to Delhi's discoms have simply been relabelled 'regulatory assets' by the State government, while the West Bengal utility struggled to raise tariffs under the Trinamool government after 2011 and hydroelectricity-dependent Kerala has struggled with falling water levels.

to raise tariffs enough to compensate for these rising costs; instead they shelter favoured consumers from higher producer charges.

Figure 6.1 compares the results of a recent World Bank-Deloitte index of State-wise variations in power sector reform implementation (Pargal and Banerjee, 2014: 97-104) with State agricultural tariffs. It shows that reforms do not necessarily correlate with a willingness to raise such tariffs. Some States with traditionally strong farmer lobbies—such as Maharashtra, Gujarat, and Karnataka—have raised tariffs somewhat. Others have not: Tamil Nadu, Punjab, Haryana, and Andhra Pradesh continued with agricultural tariffs well below the all-India average, despite the fact that the latter is among the most power-reform-oriented States. This suggests a mixed picture. In some States, the ability of farmer lobbies to affect the direction of policy appears to be declining relative to other groups, or farmer interests are beginning to fragment as the wealthiest prioritize power quality over price. In others, the temptation for politicians to offer low or zero tariffs as electoral sops continues despite the trappings of reform.

Despite this, the responsibility of agricultural subsidies for the financial plight of the power sector has often been exaggerated. Other interests are also implicated in the proliferation of subsidies and blocking reforms. Domestic consumption remains extensively subsidized, if less heavily than agriculture in most States. In 2010, 87 percent of all residential electricity consumption was subsidized, accounting for almost a quarter of all consumption and 0.4 percent of GDP (Mayer et al., 2015: 32, ix). In 2011-12, the all-India average tariff for domestic consumers was 314 paise/kWh, compared to 144 for agricultural, 514 for industrial, and 690 for commercial consumers (Planning Commission, 2014: 195). Domestic subsidies were estimated to cost ₹37,047 crore nationwide, compared to ₹57,901 crore for agricultural subsidies (*ibid*: 211, 208).

Again, these subsidies largely go to elites rather than poorer households: despite the nominal existence of increasing block tariffs structures in most States (with increasingly higher rates for added consumption blocks), in 21 States fixed or minimum consumption charges mean that low-consumption households pay more than higher-consumption households (Pargal and Banerjee, 2014: 84). Over half of subsidies go to the richest two-fifths of households, while the poorest two-fifths accounted for only 15 percent in 2010 (Mayer et al., 2015: xvi).

For many years, too, agricultural subsidies were calculated as a residual. Farmer-blaming thus masked poor utility productivity and power theft (Gulati and Narayanan, 2000).<sup>8</sup> This explains the vast leap in all-India T&D losses from 24.5 percent of total available power in 2000-1 to 33.98 percent one year later, after the World Bank and new private players pushed for improved statistics (CEA, 2012: 48). In 2011 the all-India average aggregate technical and commercial losses had dropped by 12 percent since 2003, but still stood at 26 percent of power generated, five times the estimate for China (Pargal and Banerjee, 2014: 5).

Who steals all this power? While much theft is undoubtedly rural,<sup>9</sup> the extremely high levels of T&D losses in Delhi before privatization—almost 60 percent—suggest that urban constituencies are also often implicated, and on a scale that cannot be blamed on slums. The then power secretary argued in 2000 that the sector's problems had been misdiagnosed throughout the first decade of reforms: 'the reality is in a very organized manner electricity is pilfered by large consumers in industrial groups and high-income residential and commercial groups' (Shahi, 2005: 280; see also Kumar, 2004; Katiyar, 2005). In 1998, for example, news broke of a set of mini-steel plants in Maharashtra that had systematically stolen power worth ₹20 crore (Smith, 2004: 2069). Such high levels of theft have trapped some utilities in a spiral of weak revenues and underinvestment.

The losers from this subsidy regime remain industrial and commercial consumers, for whom tariffs are still higher than those for other categories of consumer in most States (Figure 6.2). Often the 'old' consumer subsidies pitted large farmers' interests against their industrial rivals directly, both through cross-subsidization and the allocation of scarce supply: in the mid-2000s, for example, Punjab imposed power cuts on industries—impacting more than 10,000 firms and 25 percent of the industrial workforce—while retaining virtually free power for farmers (Kale, 2014a: 149; 2007: 1).<sup>10</sup>

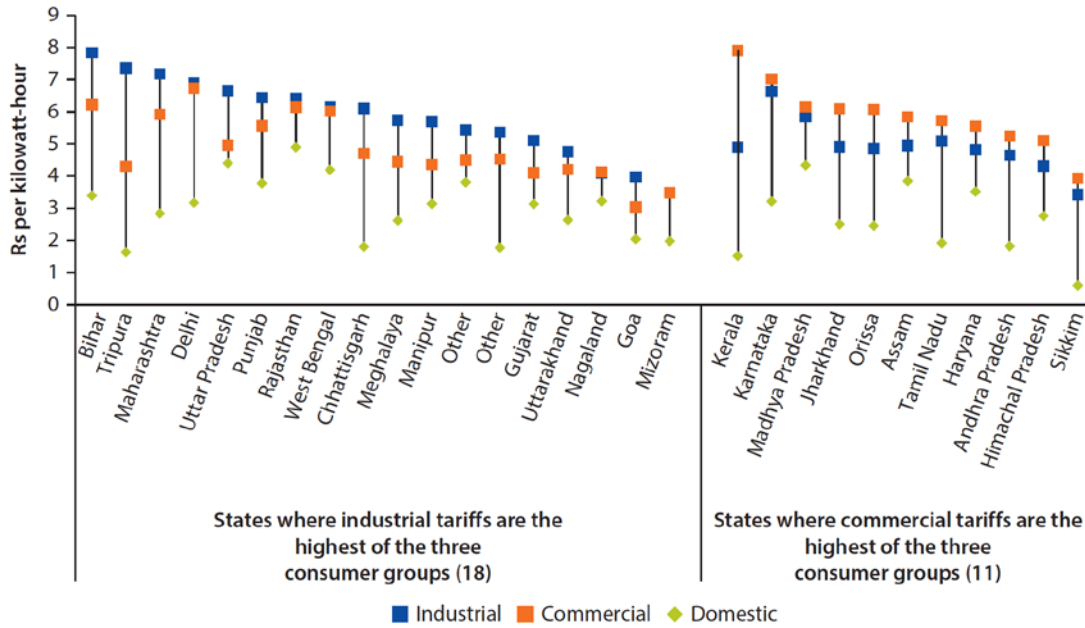
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<sup>8</sup> Sant and Dixit (1997) judged the margin of overestimation to be as high as 20-40 percent.

<sup>9</sup> Again drawing on evidence from UP, Golden and Min (2013) suggest that the beneficiaries of theft may also be wealthy farmers, as their supply is unmetered and so easy to expand (though the same may be true when meters are tampered with).

<sup>10</sup> Industrialists may also recognize this as a 'zero-sum game': the rise of captive generation—a sign of industrial exit (Chapter 3)—was particularly pronounced in States with higher consumption from agricultural electric pumpsets (Joseph, 2010).

Figure 6.2 Effective tariffs by consumer group, 2012



Source: Pargal and Banerjee (2014: 82), using World Bank data compilation

The foregoing review suggests that more than two decades after 1991, there therefore exists a wide, if incoherent, coalition with an interest in retaining elements of the consumer subsidy regime. Wealthy farmers are only the most notorious component of this loose alliance, although electricity subsidies are still a pillar of the ‘subsidy syndrome’ in Indian agriculture. Although the subsidies that these groups corner are often termed ‘populist’, the beneficiaries are overwhelmingly non-poor—but these benefits are offset by the low quality of power supply. As these subsidies have been heavily implicated in the sector’s overall financial crisis, they disadvantage industrial and commercial interests (aside from those stealing power). It thus appears that ‘business’ as a generic category is *not* a particular beneficiary from the reformed power sector, but instead many big business consumers continue to cross-subsidize both ‘populist’ subsidies and high levels of power theft. Nonetheless, there *is* a set of business interests that is benefiting, sometimes greatly, from the reform process.

**Producer subsidies**

Chapter 4 showed that privileged private firms in the power sector receive a number of benefits from the state. To recapitulate, these benefits include subsidies, tax holidays, the discretionary

allocation of natural resources such as coal blocks, land, and land-based financing. While overly generous power purchase agreements have declined thanks to the rise of competitive bidding over opaque memoranda of understanding, large corporations have made sustained efforts to renegotiate agreements where the agreements have become less than favourable. Other producers succeed in making superprofits from short-term markets.

As many of these producer subsidies and benefits are allocated through opaque procedures and the state has little interest in detailing them, it is difficult to ascertain their true magnitude. In a thorough report entitled *Power Drain*, the World Institute of Sustainable Energy made an attempt. Its researchers surveyed 19 ‘average’ thermal and hydroelectric projects (i.e. excluding projects like Enron’s Dabhol plant, widely agreed to have received egregiously overgenerous subsidies). They found that ‘the cumulative subsidies amounted to 150% of the original investment’. Government policies showed a ‘widespread pattern of fiscal concessions, foregone revenues, and underpricing of public services’, but with no effort to account for costs (WISE, 2008: Preface).

These producer subsidies in the power sector include both rents based on political transfers and monopolistic rents extracted via market power in the absence of competition, as entry in the sector is regulated and costly, demand perpetually outweighs supply, and some contracts build in generous guaranteed rates of return (see Khan, 2000b: 26-33). Some of these benefits also apply to CPSEs like NTPC. The final section of this chapter revisits this fact, but argues that there exist major differences between public and private players on this front.

### ***Proliferating institutions, proliferating rents***

In most States the ‘old’ consumer-side subsidies have therefore survived two decades of liberalization and the extension of rents to producers which were designed to force reforms on the sector. At the macro-sociological level this may testify to the limits of the shift to favour big-business interests over other classes, although it is dangerous to extrapolate from the allocation of

subsidies for a single good or service.<sup>11</sup> Instead the analysis here confines itself to making a more limited point: that this system of subsidies is conditioned by the distinctive dynamic of institutional change in the power sector.

How do these two sets of rents—for agricultural and domestic consumers, and for select power producers—fit together? The dominant strand of analysis of India’s notable proliferation of subsidies has, like Pranab Bardhan’s classic 1984 work, focused on the proliferation of interest groups as the explanation. Competing for power, the different segments within this fragmented political coalition each succeed in claiming a share of the spoils, and so subsidies multiply.<sup>12</sup>

Institutionalist scholars in India have countered that interest-group influence is crucially mediated by institutions. Yet such scholars have often pushed this to a counterintuitive conclusion: that interest-group competition ought in theory to increase the state’s autonomy. If there exists a balance of power between fragmented dominant classes, argued Rob Jenkins (1999: 38) of Bardhan’s 1984 work, would this not open up greater room for independent state action, as the Rudolphs (1987) claimed? Both of these arguments miss the nuance of concrete institutions. Bardhan’s structuralist analysis neglects the key role of institutions in mediating interest-group competition, while the Rudolphs’ argument takes too abstract a vision of institutions and the monolithic character of the state.

The alternative—close attention to the complexities of institution structure—is visible in Jenkins’ own work and in more recent scholarship on ‘political settlements’ in India.<sup>13</sup> Yet, while Jenkins’ claim that institutional proliferation (chiefly through federalism) fragments *opposition* to reforms is now the near-consensus in South Asian studies (Sáez, 2002; Sinha, 2005), the same proliferation also fragments the *spread* of reforms. ‘Reform by stealth’, which often takes the form of institutional layering, also ‘produces’ unreformed zones outside its heartlands: it produces *segmentation*. An examination of the overall ‘balance sheet’ rather than the success stories or

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<sup>11</sup> Studying five different goods and services across three African countries, Kramon and Posner (2013) found that ‘the outcome one studies affects the answer one gets’: politicians and officials may compensate groups for higher tariffs in one area with subsidies in another.

<sup>12</sup> Bardhan (1984) influentially attributed subsidy proliferation to increased competition between three ‘dominant proprietary classes’: large industrialists, wealthy farmers, and white-collar professionals.

<sup>13</sup> While acknowledging the importance of organizational structure, Mushtaq H. Khan earlier argued that the causes of political fragmentation lie primarily in society, and focused especially on patron-client networks (Khan, 2000a). His later work includes a more sophisticated analysis of concrete Indian institutions (Khan, 2011; see also Roy, 2013). For an application of Khan’s political settlement framework to energy subsidy proliferation, with special reference to Indonesia, see Lockwood (2014).

zone of stealth alone (cf. Corbridge, 2011: 77), as this thesis attempts, suggests somewhat different conclusions about the political-economy dynamic of economic reforms in India.

Modifying Jenkins' argument, then, the state's multi-tiered and complex organizational structure provides *both* multiple points of entry for 'new' private rent-seekers to influence the policy process, *and* veto points at which 'old' rent-seekers can protect their own subsidies. The layered process of liberalization in the power sector has so far only made this segmentation more pronounced. Institutional layering is thus both the result of path-dependent constraints on the reform process, and has itself channelled evolving interest-group competition along particular lines.

In the previous section two key institutional mechanisms of *segmentation* are visible. The first, discussed below, is the rise of what Kohli has somewhat imprecisely called a 'two-track polity' (2012: 65-6, 214, 219), as different state tiers, agencies, and stages of the policy process prove differentially permeable to different types of interests. In practice, however, it is impossible to maintain their separation (see also Chapter 7). The second mechanism, analysed in the next section, is found in the segmentation of the power sector's architecture itself. Private players are concentrated in the more lucrative generation segment, while (outside the purview of the profitable CPSEs) the statist residual, notably in the distribution segment, remains financially viable only through underpayments, bailouts, and forced load-shedding. In the short term this segmentation blocks the sweeping displacement of older rents, but it also facilitates the expansion of new pro-business rents.<sup>14</sup>

### **The segmented policy process**

Both the 'old' consumer subsidies and the 'new' private producer subsidies are secured through an admixture of legal and extralegal modes of influence on the state. The first mechanism of segmentation is founded on the disunity of the state policymaking apparatus itself, and the multiple points of entry it offers for different forms of influence. The fragmented Indian state

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<sup>14</sup>This link between institutional complexity and proliferating rents has been made by neoclassical scholars; see especially Shleifer and Vishny (1993).

system enables both sets of groups to exercise influence upon different state agencies and tiers, with federalism and institutional proliferation compartmentalizing their influence.

### *Consumer subsidies and State-level politics*

The foregoing analysis and earlier chapters indicate that wealthy farmers and residential consumers are especially influential at the *State level*. To caricature a very rich vein of political activity in order to draw out the contrasts with private sector lobbying, they draw on the influence of their electoral weight, both indirectly and indirectly as farmers entered politics themselves: the proportion of national parliamentarians declaring themselves to be agriculturalists doubled from 22 to 38 percent between 1952 and 1984 (Rudolph and Rudolph, 1987: 97). In addition, popular extra-electoral activism around electricity and, more recently, attempts to influence regulators and a turn to the courts are both featured techniques.

Against Michael Lipton's controversial 'urban bias' thesis (1977), analysts of India's 'first-generation' political economy used power and similar subsidies to argue that a powerful distributional coalition of wealthy peasants had increasingly come to dominate State-level legislatures (Mitra, 1977; see e.g. Byres, 1979; Byres, 1981; Varshney, 1995).<sup>15</sup> That this trend continues post-1991 is supported by the regional variations in agricultural subsidies noted above, which roughly vary with the strength of farmer lobbies (Kale, 2014a).

In mirror image, public-choice theorists consider electricity subsidies a typical example of patronage politics, as politicians competed to offer sops to influential groups in the context of rising electoral volatility (Wilkinson, 2006; Tongia, 2007; Victor, 2009; Golden and Min, 2013: 90-95). The first use of flat-rate agricultural tariffs dates to 1977 in Andhra Pradesh, where the presence of strong opposition parties encouraged increasingly lavish promises by political candidates, and was quickly imitated by the new AIADMK government in neighbouring Tamil Nadu and from there spread to other States. After this point, offering cheap or free electricity

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<sup>15</sup> There are crucial differences between these accounts, of course, especially over the precise categorization of these rural beneficiaries. Several of these authors explicitly reject Lipton's rural-poor/urban-rich dichotomy as an oversimplification which put the deductive cart before the empirical horse: see for example Byres (1979) and Corbridge (1982).

became associated with increasingly intense party-political competition, especially in two-party systems (Dubash and Rajan, 2001: 3369; Wilkinson, 2007: especially 115-16).<sup>16</sup>

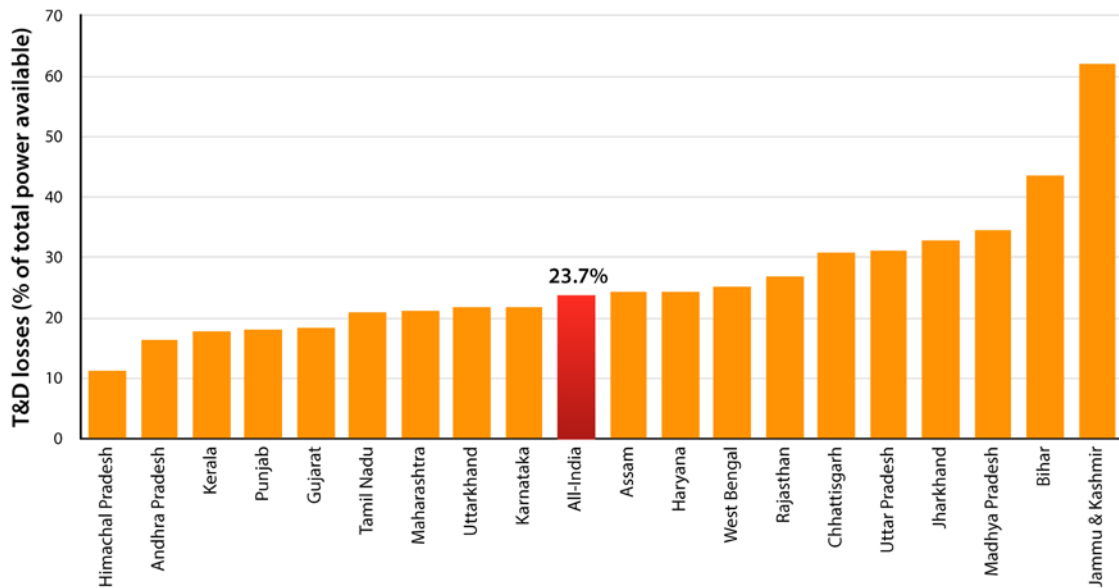
Farmer influence is not confined to their leverage in India's State legislatures, however. If their gatherings do not reach the magnitude and impact of the great movements of the 1970s and 1980s, extra-electoral agitations continue. In Andhra Pradesh in August 2000, after opposition walkouts and hunger strikes, demonstrations against tariff hikes turned violent, leaving two dead (World Bank, 2003a: 4), while in 2002 farmers' associations blockaded roads and railways across Punjab to protest the end of free power (Kale, 2007: 264). More common are micro-political protests. Mandatory metering is a core provision of the 2003 Electricity Act, yet in practice meters are repeatedly smashed and meter inspectors assaulted when they visit villages to clamp down on theft, so often that in Delhi until 2009 they were accompanied on 'raids' by a federal police team (Katakey and Singh, 2014).

Nor are farmer lobbies the only interests to block tariff rises. Chapter 5 noted that the nominally independent electricity regulators have also often been reabsorbed into the pre-existing politics of power. In some instances wealthy residential consumers have also succeeded in carrying their grievances before the new body, and the SERCs have therefore sometimes become politicized arenas for negotiations between business and mass interests (Dubash, 2013). This is shown by urban middle-class activism in Delhi. Aiming to capitalize on their 2004 success in blocking tariff revision, in 2005 a number of residents' welfare associations formed a citywide federation to lobby on energy issues, the United Residents' Joint Action (Urja, or 'energy' in Hindi) (Coleman, 2014). Domestic users can also mobilize for electoral effect to protest higher prices. In Delhi again, residents rewarded the Aam Admi Party's stance towards tariff revision with dramatic electoral victories in 2013 and 2015.

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<sup>16</sup> Chhibber and Nooruddin (2004) find that States with two-party systems are more likely to provide public goods in order to secure cross-cleavage support—electricity is their example—while in multiparty competition parties concentrate resources on their voting blocs. On the evolution of political promises of free power in Andhra Pradesh and Punjab, see Birner et al. (2011: 108-129).

Figure 6.3 Regional variation in power theft across major States, 2011



Source: Planning Commission (2014)

Finally, these groups and other categories of power pilferers also impact implementation at the *street level* through negotiations over connections and theft with individual officials. There is again wide regional variation in electricity theft (Figure 6.3) and high losses are often seen as a useful proxy for the quality of ‘governance’. Between 1993 and 2009, Subramanian (2012) found a strong association between growth in a State’s per-capita net domestic product and lower losses. There appears to be a difference, then, between regimes with influential farmer lobbies and a well-institutionalized tradition of ‘electric populist’ patronage (see Kale, 2014a), and less well-institutionalized systems in which clientelism is associated with weak rule of law and corruption (Smith, 2004). In the latter theft is not simply a matter of micro-level corruption but is a tacitly condoned informal subsidy: Min and Golden (2014: 624) demonstrate that in UP tolerating power theft became ‘part of deliberate political strategy’, rising around elections. Nonetheless, we should not overstate the *political* difference between these types. Singling out Tamil Nadu in particular, one senior bureaucrat warned that some States continue to mask high levels of T&D losses by attributing a large residual to agricultural subsidies, for which discoms can claim money from the State—and the State can take credit.<sup>17</sup> The States therefore exist on a spectrum rather than as distinct types.

<sup>17</sup> Interview, power ministry joint secretary, Delhi, 21 April 2012.

These groups typically seek to influence particular *policy implementation* decisions, such as blocking tariff rises or expressing preferences for populist politicians rather than setting policy agendas. They, along with other categories of power thieves, also engage with the lower tiers of the state, including individual street-level bureaucrats. Such ‘populist’ activism stands in contrast to the high-level politics of producer-side subsidies, to which we turn now.

### ***Producer subsidies: the two faces of corporate lobbying***

If ‘populist’ consumer-side subsidies are acquired and protected through electioneering and pressure politics at the State and local levels, producer subsidies are much less visible and secured through more discreet channels. Private power firms instead rely less upon electoral weight—although some major businessmen have run for office—but work at the apex of the state at both central and State levels.

Not all firms benefit equally from the close state-business links that have emerged in the sector since 1991. As Chapter 4 suggested, it is a subset of well-connected energy players that especially benefits from these producer subsidies. Power sector evidence reinforces the notion that ‘Indian capitalism has two faces’ (Gandhi and Walton, 2012)—but they exist even within this single (‘rent-thick’) sector. Different patterns of business influence can be discerned. On one hand professionalized high-level lobbies and networks within the electricity supply industry have emerged; on the other, the older ‘briefcase politics’ have continued and even intensified in the liberalization era (Harriss-White, 1996). The first strategy seeks especially to influence the earlier, macro-political stages of the policy process—*agenda setting and policy formulation*—at the highest tiers of the state. The second is geared more towards procedural manipulation on a case-by-case basis, as in the attempted tariff renegotiations discussed in Chapter 4 (Kochanek, 1996). These strategies overlap, however, and the same firms may attempt to engage in one or both. The two branches of Reliance are generally conspicuous by their absence at major lobbying events, for example, perhaps because their influence has tended to be more direct.<sup>18</sup>

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<sup>18</sup> See the detailed (and banned) expositions of Reliance’s business practices over the years provided in McDonald (2010) and Guha Thakurta (2014), largely constructed from interviews and media reports.

The partisan structures of Indian politics<sup>19</sup> encourage lobbyists to target the initial agenda-setting phase of policymaking, especially the initial drafting and committee stages of policymaking—if they are unable to influence the party as a whole via their leaders (Yadav, 2008). Some power players have opted to enter the policy process directly: Lagadapati Rajagopal, founder of the scam-struck power and construction company Lanco Infratech, and Naveen Jindal, chairman of Jindal Steel & Power, both became Congress MPs; the latter's father was earlier Haryana power minister. Yet in the infrastructure sectors, which remain heavily regulated, the substance of policy is developed especially in *policy formulation*, the development of detailed policy guidelines for the implementation of the broader agenda (Kochanek, 1996: 164-65). This gives the infrastructure ministries a great deal of influence, as the last-minute reshaping of the Electricity Bill behind the closed doors of the power ministry (albeit somewhat countered in the Lok Sabha) demonstrated (Haldea, 2011 [2003]: 143-6). Chapter 7 discusses these ministries' power in more depth.

As the economy has gradually opened to private participants, business collective action has become more important in shaping the ambitious economic policy changes. Since 1991 the major Indian business lobbies have therefore generally become more 'developmental' in their orientation and mechanisms of influence, favouring PowerPoint policy advice as much as 'briefcase politics' (Kochanek, 1996; Sinha, 2010a). They have found many interlocutors in the central policy establishment increasingly 'willing and responsive' (Yadav, 2008: 69).

In the power sector, the IPP policy helped to facilitate a similar institutionalization of closer state-business relations. In 1995 the Independent Power Producers Association of India (IPPAI) formed as a 'neutral proactive forum' (Dubash and Rajan, 2001: 3372) to 'bring together all the important players, including government officials and multi-lateral agencies':

Over the years, IPPAI has been playing the role of a catalyst between the Government and the Private Sector investors primarily in deciphering policy and regulatory changes as the government opened up the energy sector to private players by providing a neutral

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<sup>19</sup> For example, floor votes are conducted largely on party lines, and the Speaker is party-political and can therefore block floor access to those seeking to introduce amendments or private bills. Targeting the later stages of bill formulation *in Parliament* is therefore less likely to be effective (Yadav, 2008)—although in infrastructure, given the importance of developing detailed guidelines for implementation inside the ministries themselves, infrastructure bureaucrats may be an equally rewarding target for lobbyists (Kochanek, 1996).

platform for discussions, debates, and resolutions of complex issues arising out of the transition of the economy from command to market.<sup>20</sup>

The lobby's conferences and workshops brought private sector representatives into close contact with senior civil servants in the power ministry. Over time this sparked fears of undue influence on policymaking (Dubash and Rajan, 2001): one scholar claims that IPPAI's access, clout, and ability to extract selective concessions and special favours was so great that '[e]ffectively, there was no insulation between the rule makers and vested interests' (Das, 2005b: 186).

Lobbying is a competitive business, of course. IPPAI has been challenged by a newer upstart, the Association of Power Producers (APP). Both continue to enjoy impressive access to senior policymakers.<sup>21</sup> They have taken somewhat different approaches to influencing the policy process. Although both are prominently featured in media coverage of power developments (especially the APP chief) and both attempt to influence senior policymakers, IPPAI has retained an emphasis on 'retreats' with national-level policymakers while APP instead regards the State level as the real centre of the action.<sup>22</sup> There exist other industry bodies too, such as the Association of Captive Power Producers, while more general industry bodies such as FICCI also intervene in power sector debates. Meanwhile, the energy giant Reliance Industries funds an entire think tank, the Observer Research Foundation. It is 'often described as "the intellectual face of the Reliance [Industries] group" and the centre of a "brahmin network" in Delhi' under Mukesh Ambani (McDonald, 2010: 308), although interviewees suggested that Reliance so far does not seem interested in policing their research, some of which has been critical of its gas strategy.<sup>23</sup>

At the three industry-bureaucrat events I attended, four observations were immediately obvious. First was the corporate professionalism of the events. Held in the glossy spaces of five-star hotels and conference rooms, each event featured well-presented advice, media engagement, and 'networking opportunities' for policymakers and practitioners. Such 'PowerPoint politics' is not a mere veneer. There are many anecdotes as to how uncritical the government's acceptance of

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<sup>20</sup> IPPAI website, <http://ippai.org/about.aspx><sup>20</sup> (accessed 14 January 2014). A more recent advertisement self-describes it as 'a NGO...since 1992', although most sources date its foundation later (IPPAI, electronic communication, 12 November 2014).

<sup>21</sup> Alongside lobbyists, attendees at IPPAI's annual 'regulators' and policymakers' retreat' regularly include senior bureaucrats, politicians, regulators, and ambassadors.

<sup>22</sup> Interview, IPPAI, 22 May 2012. I was also told that the lobby hopes to expand its contacts overseas.

<sup>23</sup> Interview, researcher, Observer Research Foundation, Delhi, 14 May 2012.

such proposals can be. Javid Chowdhury recalled a representative incident from his tenure as additional secretary in the petroleum ministry:

[O]ne day I was shocked to see a draft Cabinet Note on an important issue, matching word-for-word a note sent by the Confederation of Indian Industries on its own letterhead. The CII had thoughtfully sent their note in duplicate, the second copy being on plain paper. The Section Officer detached the second copy and put it up as his note for the approval of all... [H]e very respectfully explained that this was a common practice in many matters. CII, FICCI or ASSOCHAM sent their suggestions, which were adopted automatically. (Chowdhury, 2012)

Second, although the sector has seen something of a ‘reindigenization’ of policy formulation as the World Bank’s influence has waned (see Chapter 5), international consultancy firms (albeit often with Indian personnel) continue to play a highly visible role. Both the lobbies and the government itself draw on an additional source of expertise and borrowed legitimacy. This often appears to have the effect of reinforcing reliance on international models.<sup>24</sup>

Third, the ‘revolving door’ between the private and the public sectors noted in Chapter 4 was much in evidence. Ashok Khurana, director-general of the APP lobby group, was an IAS officer in the power ministry and later a World Bank consultant. Other keynote speakers have equally sphere-spanning careers. Reformist former power secretary R.V. Shahi previously worked for NTPC and for the private Bombay Suburban Electric Supply Ltd (renamed BSES, and later taken over by Reliance Energy), for example; having left government, he is chairman of an energy consultancy and sits on the boards of several other companies, including Jindal Power. This produces a very twenty-first-century series of tight connections between the bureaucracy, regulators, public enterprises, and private firms. The effect of these links is mixed, although it broadly secures a sense of collaboration within the sector. On one hand, some former bureaucrats bring at least the rhetoric of public interest with them to the private sector. One private-sector interviewee suggested that it was the ‘duty’ of the power sector lobbies to discipline their own members to ensure they correctly deployed the coal blocks and loans allocated to them by the state.<sup>25</sup> On the other, as discussed below, this may operate as a discreet form of bribery.

<sup>24</sup> Alongside PricewaterhouseCoopers (PwC), which played an important role in Odisha’s reform process, other regular ‘knowledge partners’ include Ernst & Young, Deloitte, and McKinsey. The latter prospered in India from the 1990s, often hired as a corporate ‘status symbol’ (Raghavan, 2013: 131). Former McKinsey managing director Rajat Gupta, now imprisoned for insider trading, was ‘one of the few Indian executives in America who could get the Indian prime minister [Manmohan Singh] on the phone on short notice’ (*ibid.*: 4-5).

<sup>25</sup> Interviewee, corporate businessman, formerly of NTPC, 11 May 2012.

Finally, and in line with the findings of Chapter 5, government officials remain the key players in spite of the pro-business turn. Senior Indian technocrats from the infrastructure ministries still command a respect in industry settings that testifies to their power—as do the senior roles they can command upon leaving public office. At a two-day international gas conference, for example, the speakers—largely international consultants and corporate representatives—were positively Panglossian (though informal conversations were much more gloomy).<sup>26</sup> The final, much better attended panel included senior bureaucrats, who presented a more pessimistic interpretation; it was quite clear that they were the main attraction. (Not all such bureaucrats are equal, however. Unsurprisingly, the fertilizer secretary, whose ministry also commands a share of gas resources, was granted far less space to speak than the power secretary.) The importance of public policy decisions in structuring the sector was cast as the state's duty.

Yet, as Chapter 4 showed, the rise of professionalized lobbies does not mean that 'briefcase politics' have come to an end.<sup>27</sup> Because policy guidelines often leave room for discretion, there exists much room for case-by-case negotiation, often involving opaque methods (Kochanek, 1996: 165-66). A recent Ernst & Young survey (2013) of Indian businesspeople correspondingly found that power was regarded as one of the 'most corrupt' sectors, alongside mining, defence, and real estate. There is nothing new about this link: in the hawala scandal that broke in 1991, almost half of the officials implicated in bribery in the Jain brothers' diaries were from the power sector (Mehta, 2000: 15). The continuities are visible. The MP Jagannohan Reddy, son of the late Andhra Pradesh chief minister, was arrested and remains under investigation for his connections to a number of newly floated and quasi-fictive infrastructure firms, including several in the power sector. In a nod to the older era, the media labelled such firms 'suitcase companies'.

What is new is the systematic intensification of briefcase politics. Party-political fragmentation has seen soaring election costs (Kochanek, 1987; Jha, 2013). Against the official Election Commission cap of around \$110,000, to run a credible campaign for a parliamentary seat at the 2009 general election cost as much as \$3 million, a sum difficult to extract by simply

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<sup>26</sup> 7<sup>th</sup> Asia Gas Partnership Summit, Taj Palace Hotel, Delhi, 23-24 March 2012.

<sup>27</sup> Kochanek attributes the phrase 'briefcase politics' to the *Times of India* in 1977, and uses it 'to describe the transfer of vast amounts of black money in the form of cash into the coffers of the Congress party', explaining that '[p]rices for licenses or other permits were quoted in terms of the number of briefcases required' (1987: 1290).

milking the bureaucratic transfer system—and this figure was expected to double in the 2014 elections (Cockcroft, 2014). The result has been to increase the size and complexity of dubious deals in the sector. In 2008, for example, an O.P. Jindal Group subsidiary provided an unsecured loan of ₹2.25 crore to an intermediary, which bought shares in a company owned by Minister of State for Coal Dasari Narayana Rao—at four times the market price. The Jindal Group was the largest single beneficiary of coal block allocations via the screening committee, overseen by Rao (Rajshekhhar, 2013b). This deployment of discretion appears to cross party lines, however, as the pattern of coal block allocations also showed. Congress was in power at the centre, but allotted blocks were not concentrated in Congress-ruled States. Of the 245 companies awarded blocks between July 2004 (when the decision not to take the auction route was taken) and 2009, 222 were in non-Congress-ruled States.<sup>28</sup>

The forms that such politics can take have also evolved. In the sector today (as in Britain) it often takes the form of gold-plated retirement and consultancy positions: the ‘revolving door’ above is inseparable from the politics of influence. The Gujarati energy magnate Gautam Adani is known to surround himself with ex-bureaucrats ‘whom he looks after well’, for example, as *Outlook* magazine delicately put it (Arora et al., 2014). Other, darker forms of business patronage of bureaucrats have also become increasingly institutionalized, however: the recent scandal over theft of information from the petroleum ministry (naturally dubbed ‘Filegate’) exposed the elaborate system of corporate espionage over power, gas, and coal (Ummithan et al., 2015). Like the Niira Radia tapes leaked in 2010, it exposed the fact that the line between professional lobbying and illegal influence-peddling is blurred: ‘corporate communication officers’ and private energy consultants, many of them ex-bureaucrats, play an increasingly crucial and sometimes underhand role in extracting privileged information and policy favours from the state (*ibid*). This is the logical extension of the blurring of public-private boundaries documented in Chapter 4, in which private firms are inextricably linked to and dependent on state resources in ways which condition their structures and practices.

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<sup>28</sup> They included 62 in Jharkhand (led by the BJP, JMM and president’s rule); 57 in Odisha (Biju Janata Dal); 54 in Chhattisgarh (BJP); 27 in Madhya Pradesh (BJP); and 22 in Bengal (CPI(M)). Blocks in Congress-ruled States were in Maharashtra (22 blocks) and Andhra Pradesh (one) (Rajshekhhar, 2012e). Once the scandal had broken, politicians singled out by the media as particularly egregious beneficiaries were also a cross-party set: alongside Jindal (Congress, Haryana) were Premchand Gupta (Rashtriya Janata Dal, Bihar) and S. Jagathrakshakan (Dravida Munnetra Kazhagam, Tamil Nadu), among others (Rajshekhhar, 2013a).

With constitutional responsibility for power policy shared between the centre and States, energy policy strewn across different agencies and ministries (until 2014), and the importance of discretion from policy formulation through street-level implementation, the fragmentary nature of the state and the fragmentary character of the political settlement prove mutually reinforcing. As the next chapter shows, competition over rents also feeds into the state's own horizontal disintegration, as ministries compete over jurisdictions, resources, and policy direction.

### **The segmented power system**

The second mechanism of segmentation is rooted in the nature of the electricity supply industry itself, which is organized in a series of functional stages: notably generation, transmission, and distribution (and retail) (Appendix 1). Chapters 4 and 5 presented a picture of the reform process as marked by unevenness and compromise. The result has not been sweeping privatization or a simple state transition from provider to facilitator. It is instead 'more accurate to describe the market as grafted on to rather than replacing the state sector, and with decidedly mixed results' (Dubash, 2011: 69). The differential pace of reforms across the segments of the power sector also means that competing interests dominate in almost parallel domains.

Private participation is now well entrenched in the generation segment, bolstered by the sops outlined in Chapter 4. Today around 36 percent of installed generation capacity is owned and financed by the private sector, compared with 27 percent for the centre and 37 percent for the States.<sup>29</sup> As above, both public and private power producers have received sometimes substantial rents from their activities in this segment. Generation also receives the lion's share of state investment, while transmission and especially distribution are characterized by systematic underinvestment.

Yet the system's financial problems are primarily down to distribution, and it is over control of this 'last mile' that residential and agricultural consumers most successfully press their case (for example, through subsidies or stopping the rollout of meters). The first phase of reform, the IPP policy, did not deal directly with the politicization of the distribution segment. It focused narrowly on increasing generation capacity and mobilizing scarce capital, thereby 'promising to

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<sup>29</sup> CEA data, 31 August 2014.

support rather than dismantle the existing [political-economic] matrix' (Kale, 2014a: 99). The emphasis was not on privatization, but the introduction of new greenfield projects in parallel with the public system. This continues with the UMPPs of the twenty-first century, partnerships which fuse the private sector with renewed state activism.

Even after distribution was recognized as a gaping hole in the reform process, politicians and technocrats have struggled to reform the segment—it is simply too politically unpalatable. As a result, as earlier chapters showed, reform has often taken the form of unsuccessful backdoor initiatives, which layer new institutions atop or alongside the sediment of the state-owned system rather than displacing it. Only Odisha and Delhi, both of which lack strong farmer lobbies (as above), have privatized distribution, both before the 2003 Electricity Act. Open access has remained a dead letter in most States.<sup>30</sup> The private sector has otherwise so far largely stayed away from making large-scale investments in distribution and rural electrification (Mukherjee, 2014: 13). Private participation thus remains limited in the sector's more troubled segments.

In this way most private players are somewhat shielded from the continued 'populist' subsidies in State-level distribution, and some contracts give them the right to sell elsewhere should State utilities fall into arrears. In this context, the large rents that some private firms receive for their involvement amounts to a form of state compensation for the risks that they run in becoming embroiled in this most politicized of sectors. The lack of time-of-day or source-sensitive pricing, and in some States the reluctance to bring in tariff rises, means that consumers are insulated in turn from the costs of private power purchased by the State utilities.

There is a clear set of regional differences in this pattern, as we have seen: private sector generation is concentrated in a few 'business-friendly' States. As Stuart Corbridge has written, while the notion that competitive federalism has accelerated liberalization in some States is 'surely right', this is not a universal feature: 'What is truly remarkable about India's infrastructure—the basic geographies that support and hinder liberalization—almost 20 years after the reforms began is its patchiness and poor quality' (2011: 70).

Similar policy initiatives resemble attempts to institutionalize a geographically segmented system in more explicit terms. Increasing attention to urban distribution franchises, the rise of

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<sup>30</sup> While several States comply on paper, Pargal and Banerjee (2014: 8) find that only one has so far specified a route to reduce the cross-subsidization surcharge and so facilitate open access in practice.

short-term market power purchases alongside long-term contracts, and special economic zones with dedicated power plants again attempt to create parallel systems that circumvent the ‘bottleneck’ of State-level politics (*EPW*, 2006). Without decent regulation, such a solution risks ceding ‘all the family silver (big cities, industrial areas, and SEZs)’ to private players (Kumar and Chatterjee, 2012: xiii). Lower-revenue consumer categories, such as rural areas and small, poorer consumers, will be left to increasingly decrepit State utilities.

The power system thus accommodates both the rising influence of big business and the continued influence of the ‘old’ consumer groups. They coexist in parallel: in different segments of the sector, different localities, and with their interests expressed via different state agencies. The organizational proliferation that is a hallmark of layering and India’s state capitalism 2.0 has therefore enabled a proliferation of rent-seeking by a variety of elite groups—and it is likely that these rents are economically destructive.<sup>31</sup> In this way, ‘financially viable units (generally privately owned) and insolvent systems (generally state-owned) can co-exist’ (Victor and Heller, 2007c: 289). But these two elements are not created equal, nor is the compromise between them a durable equilibrium.

### **(Not) funding the segmented system: ‘milking’ the state**

How sustainable and stable is this two-tier system, then? India is not unique either in its continually heavy consumer subsidies for electricity or its state-market fusion. ‘Hybrid’ state-market power systems are also found in a number of other large emerging economies (Gratwick and Eberhard, 2008), while 40 percent of global energy subsidies are found in developing countries (Lockwood, 2014: 3). Do such state-market hybrids mark a viable alternative to both the state-owned model and the ‘global template’ of the fully liberalized system?

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<sup>31</sup> Khan (2000b) showed that, taking a dynamic rather than static view of efficiency, not all rents are economically damaging, such as ‘Schumpeterian’ rents for innovation. Some political transfers may contribute to dynamic efficiency by shifting resources from unproductive to productive users (as in ‘primitive accumulation’). The pattern of power sector rents ill fits with this, however. Political transfers through subsidized power for consumers—wealthy farmers and middle-class residents—encourages inefficient power usage (for example, continuously running tubewells while the power flows) and the overexploitation of natural resources such as groundwater, while distorting decisionmaking regarding investment and cropping patterns. The burgeoning environmental crisis highlights these inefficiencies. Nor do political transfers to producers (through subsidized discretionary provision of natural resources and cheap loans, for example) appear to encourage this type of dynamic efficiency. As Chapter 4 showed, this has encouraged the movement of well-connected firms from more innovative sectors of the economy to rent-thick sectors. Given the often fixed rates of return, this rewards access to the state rather than innovation or improved management.

Reviewing the evidence across five countries, a set of utility regulation specialists concluded that such hybrid systems are ‘not a brief waypoint on the road to some Shangri-la textbook market organization’ (Victor and Heller, 2007c: 260). Instead, they argue, such hybrids offer a distinct and stable alternative to the global template:

a ‘dual market’, combining attributes of the state- and market-based systems... While not the most economically efficient outcome, the dual market arises and is held in place by strong political forces that favour a system in which parts of power generation and delivery are profitable even as other parts are plagued by nonpayment, inadequate investment, and economically inefficient operation. (Victor and Heller, 2007a: 30)

In this vein, Kelli L. Joseph (2010) likens the Indian power sector to the ‘dual-track liberalization’ argued to be China’s successful reform strategy, ‘a reform strategy of market liberalization in which a market track is introduced while the plan track is maintained at the same time’, which Yingyi Qian influentially argued is ‘Pareto improving in the sense that it makes some people better off without making anybody worse off’ (Qian, 2008; see also Qian, 2003). India’s gradual and backdoor reforms, Joseph suggests (2010: 506), may permit a similar strategy of ‘reform without losers’, in the phrase of Lau et al. (2000).

Such an assessment appears complacent in the current scenario, and underestimates the interactions between the ‘dual tracks’.<sup>32</sup> As late as 2011-12, India was the fourth largest provider of consumer-side fossil fuel subsidies in the world. Those above it—Saudi Arabia, Iran, Russia—enjoy far greater natural resource endowments. But India is not fossil fuel-rich. Instead it funds the segmented system through short-term means: by ‘milking’ the state through (1) exploitation of CPSE revenues, and natural resources, (2) government influence on the financial system, and (3) allowing the State-level distribution segment to continue to haemorrhage resources. Each comes with long-term costs. This section therefore presents a more pessimistic view of the segmented system as financially and ecologically unsustainable and, once again, utterly dependent on the state.

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<sup>32</sup> Indeed, as Qian (2008) himself noted, ‘Dual track liberalization requires enforcement of the rights and obligations under the plan track’. Poor enforcement, in contrast, creates supply diversion and suboptimal outcomes (Murphy et al., 1992). Chapter 7 provides a more detailed exploration of the control and authority problems of the state under this segmented state-capitalist system.

*'Milking' the energy CPSEs*

Chapter 5 introduced 'reinvented' public sector enterprises like NTPC, firms which have proved surprisingly resilient despite decades of critique and the contradictory managerial relations between these agencies and the government. Such enterprises play a key role in the politics of subsidies that defines India's pluralist competition between powerful interest groups. They fund a multiplicity of subsidies, which go both to privileged private firms and continue to pacify rival groups that demand a share of the spoils. The energy CPSEs in particular are the essential facilitator of the rent-proliferating system, India's political economy of simultaneous populist subsidies and pro-business privatization. Such firms undergo 'milking', in the phrase of a former director of oil and gas major ONGC (quoted in Kaushik, 2014).

As natural resource prices rose through the 2000s, CPSEs have made significant contributions to central government revenues: between 2004 and 2009, these grew 27 percent annually (Xu, 2012: 7). The petroleum and power CPSEs (notably NTPC) also compensate for the financial weakness of the government's other remaining enterprises in non-energy sectors. Their contributions, though, go beyond overt cash transfers. While much of the cost of subsidies inheres at the State level, the upstream CPSEs themselves also bear much of the burden. The process of 'milking' occurs in several different fashions.

First, despite the strict measures to ensure compliance documented in Chapter 5, CPSEs still struggle to reclaim the full costs of the goods and services they supply to State-level customers. By 2001 NTPC was owed more than ₹25,000 crore by near-bankrupt SEBs, starving it of resources for reinvestment; the total electricity losses passed through to CPSEs and the railways amounted to ₹41,000 crore, then around 2 percent of GDP. One analyst wrote later that 'the sector was on the verge of a default crisis, which would have taken CPSUs down, financially' (Patel, 2008). After a period of improvement during the mid-2000s, many State utilities' finances began to suffer again. Between June 2010 and September 2013, their debts to state-owned generation firms like NTPC leapt threefold to ₹15,792 crore (approximately US\$2.5 billion). This in turn hit the generation, transmission, and trading utilities, whose aggregate book losses doubled (PFC, 2013: iv). The broader issue of underpricing for natural resources leads to a wider environmental problem of overexploitation and suboptimal technology use.

At other times, the central government has simply transferred CPSE resources—that is, *national* resources—into private sector hands. Much scholarly attention has focused on land acquisition and the state’s facilitation of ‘accumulation by dispossession’: land is under the ultimate ownership of the state under the doctrine of eminent domain (Adnan, 2015). Enron’s Dabhol power plant, for example, was given a site that had been earmarked for an NTPC coal plant (Dubash and Rajan, 2001: 3373-4), while the ‘Coalgate’ scandal saw national resources transferred on a large scale into private hands. When the private sector reneges on deals, the state often steps in. Enron’s Dabhol project is now run by state-owned GAIL and NTPC.

This trend of resource extraction is not confined to power, but is a wider strategy used to bolster government budgets. The tradition has continued beyond 1991 of seeing CPSEs as a ‘captive tax base’, which ‘generate predictable source of taxes and compulsory payments to various fiscal agencies’ (Waterbury, 1993: 134). CPSEs provide regular dividends and other revenues for the government. At times of financial hardship they are mined still harder for resources: when the finance minister promised to limit the overall budget deficit in the face of the financial slowdown, he relied in part on extracting a special interim dividend of \$2.6 billion from Coal India. Together the largest (Maharatna and Navratna) CPSEs provided more than ₹45,000 crore in dividends to the central government in 2013-14 (Khanna, 2015: 59).

As Chapter 5 noted, CPSE equity sales have also often been motivated to raise resources for short-term fiscal convenience, as ‘a useful source of revenues to window-dress budgets’ (Chandrasekhar and Ghosh, 2002: 88). There is often little relationship between performance and divestment. To incentivize sales, in the early 1990s sales were concentrated in the lucrative petroleum sector, and good and poor performers’ shares were bundled together using crude metrics of performance, meaning that in effect ‘prime shares were handed over at rock-bottom prices’ (*ibid.*: 89). Despite good CPSE performances over the last 15 years, the process of selling minority stakes in energy CPSEs has continued at times of pressure.

As private investors became increasingly cynical about the value of SOE shares and the concessions they could extract, the state also increasingly resorted to cosmetic divestment, or the ‘cross-holding’ of shares. Cash-rich CPSEs, almost exclusively found in the natural resource segment, are encouraged to buy back the government’s holding of their equity or to buy equity in

their less able siblings (Mohan, 2005: 18). In 2000, the power ministry offered to raise around ₹1,000 crore in order to bring down the budget deficit (Mouli, 2000). This was enabled through an interim dividend of ₹300 crore from NTPC, alongside ‘buyback transactions’: the Rural Electrification Corporation and Power Financial Corporation were encouraged to buy back part of their own equity. Again in February 2014 an Empowered Group of Ministers cleared the sales of a 10 percent stake in Indian Oil Corporation to ONGC and Oil India and a 5 percent stake in electric equipment manufacturer BHEL to the Life Insurance Corporation (LIC), which would together fetch the exchequer about ₹7,300 crore (*Economic Times*, 2014). As this suggests, when demand for such offerings have been low, state finance institutions like the LIC have been encouraged to take up the slack.

Despite this, as Chapter 5 showed, many CPSEs remain surprisingly buoyant. It is this resilience in the face of ‘milking’ that provides this system of subsidies a degree of stability. The result has been to undermine public sector enterprises despite their improved financial performance (Nagaraj, 2015; Khanna, 2015). While the central administration gives with one hand—most of these upstream energy CPSEs remain profitable thanks to their preferential or monopolistic access to natural resources—CPSE personnel complain that the state takes with the other, draining them of investible resources through the subsidy regime. As R.S. Pandey, petroleum secretary from 2008 to 2010, put it, the state is a destitute mother and the CPSEs are her children: ‘A poor parent gives milk to her child, but also forces it to indulge in child labour’ (quoted in Kaushik, 2014).

### *Directing power finance*

The central government has an additional set of instruments in order to direct funds to the power sector. While India does not have a sovereign wealth fund like those of the Gulf or Brazil’s BNDES, it has other, more indirect means of mobilizing the investible surplus created by its high domestic savings rate and risk-averse household investors. Public sector banks and term-lending institutions have bolstered infrastructure investments, providing loans at below-market rates using their pooled resources: in 2011 the state sector still controlled three-quarters of deposits (The

Economist, 2011b).<sup>33</sup> While this financialization of the power sector—alongside the financialization of state-owned enterprises—is a new and little studied phenomenon, this section briefly sketches out this form of state intervention, which appears to combine traditional financial direction with modified financial instruments.

Alongside the Rural Electrification Corporation and the Power Finance Corporation (see Chapter 5), AAA-rated state finance corporations which issue infrastructure bonds, new infrastructure finance corporations and agencies like the Viability Gap Fund provide funds and partial credit guarantees to push up ratings; the intention, as the website of the India Infrastructure Finance Company Ltd makes clear, is to ‘enabl[e] channelization of long term funds from investors like insurance companies and pension funds’.<sup>34</sup> The 2010 budget also sought to encourage the movement of domestic savings into infrastructure sector, offering decent (but officially capped) rates of return and tax benefits to citizens in return for bonds with long maturity periods and a five-year lock-in.

In this project, the public sector banks work in tandem with another key financial institution, the Life Insurance Corporation of India. Formed by the nationalization of the life insurance industry in 1956, LIC is now India’s largest domestic investor with around \$300 billion of assets under management as of September 2014. Like the CPSEs explored in Chapter 5, LIC’s board and management team are still largely selected by the government.<sup>35</sup> Alongside insurance, a market it continues to dominate, LIC has a second purpose. While generally a passive investor, as a dominant financial intermediary in the economy it is able to channel investible funds to priority sectors. Under pressure from the government, it intervenes more actively to support the state’s disinvestment and bank recapitalization drives when demand is weak, often as an additional countercyclical instrument. It is thus a crucial contributor to the ‘cosmetic divestment’ discussed above. This is shown by the fact that its investments in other CPSEs typically ‘significantly

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<sup>33</sup> The banking system remains partially nationalized, although like the CPSEs discussed in Chapter 5, public sector banks have been partially commercialized and corporatized, encouraged to compete with one another as well as with private and foreign banks and to develop market discipline (Sáez, 2004).

<sup>34</sup> IIFCL website, [http://www.iifcl.org/Content/about\\_us.aspx](http://www.iifcl.org/Content/about_us.aspx) [last accessed 10 April 2015].

<sup>35</sup> It is also tightly interlinked to the banking sector through the controversial bancassurance model (partnering banks and insurance companies to sell insurance products), and owns substantial portions of State Bank of India (15 percent by February 2014), Corporation Bank (22.54 percent), and others, including major equity injections in 2013-14 to comply with voluntary Basel III regulatory standards on bank capital holdings.

underperform the market' (Musacchio and Lazzarini, 2014: 51). It has therefore been called the Government of India's 'large holding company' (*ibid*).

Here again the example of NTPC is instructive. In February 2010 a further equity offering of 5 percent received a less than enthusiastic response. It finally raised ₹8,480 crore—but around half of the subscription was taken up by state financial institutions, namely LIC and SBI, which also lends 'patriotically'. Again in summer 2012 and the early months of both 2013 and 2014, LIC sold private stocks, preparing to support another round of divestment, including buying up low-valued stakes in NTPC, PowerGrid, ONGC, and OIL. In contrast, LIC was unable to buy many shares in the more successful Coal India IPO and Rural Electrification Corporation follow-on offer. 'LIC is the only white knight,' said one fund tracker executive. 'You can technically call such share sale disinvestment, but it is not. Out of LIC's multiple objectives, one of them seems to be helping the government reduce [the] deficit' (quoted in Kumar, 2012).

Energy CPSEs are not the only beneficiaries of LIC's countercyclical activism, however. In the midst of the financial slump of early 2013, LIC also bought up stocks in *private* energy champions, including Reliance Industries (\$142 million), Reliance Power (\$203 million), and Cairn India (from 2010 a subsidiary of the Vedanta Group, \$150 million) (The Hindu, 2013). It thus remained heavily exposed to the energy sector and even more so to utilities at a time when the sector was slumping. This has continued under the new administration: State Bank of India stood accused of 'crony capitalism' after agreeing a loan of up to \$1 billion to fund a controversial Australian mining project by the Adani Group, a Gujarat-headquartered conglomerate known to be close to Prime Minister Narendra Modi (Crabtree, 2014b).

This state direction of investment helped to bring about the impressive capacity additions of the Eleventh Five-Year Plan, based on target-beating private investment. By 2012 over half of major state-owned banks had provided power sector loans equal to or more than half of their own net worth, only reducing lending that year after the Reserve Bank of India intervened (Khurana and Banerjee, 2015: 7-8).

Yet this inflated spending while leaving many of the sector's fundamental problems untouched. As growth has slowed and the fuel crisis worsened, the result has been to leave the banking sector overexposed to 'subprime lending' in the stagnating power sector. The fuel supply

crisis left many private thermal assets stranded or with extremely low plant load factors, and loans began to go ‘bad’. The degree of bank exposure to the power sector belatedly became visible as non-performing assets went up almost ten times between September 2011 and September 2012, leading commentators to speculate about the risk of financial contagion (Bhattacharya and Patel, 2011; Pargal and Banerjee, 2014; Khurana and Banerjee, 2015). Public sector banks were particularly exposed.<sup>36</sup> In this context, the World Bank argued that India’s vast 2012 power sector debt write-off amounted to a financial bailout rather than an electricity reform (Bhaskar, 2013b).

### *Starving the State level—and end consumers*

At base, little has changed in the way that this system is funded—or unfunded—since the critiques of the 1980s noted that the power sector suffered from a persistent crisis of internal resource generation at the State level. As we saw above, only three States’ utilities were profitable without subsidies in 2011. While they pass through some of their huge losses through underpayments to central suppliers, they continue to bear the largest share of the burden. The gap between subsidies booked by State utilities and the amount actually received from governments has continued to grow, between 2003 and 2011 reaching a cumulative total of \$10 billion (Pargal and Banerjee, 2014: 7). This suggests that the administrative dynamics outlined in Chapter 3, in which State governments allocate subsidies with little consideration of how utilities will fund them, also continues.

As this indicates, the two systems—of public-private generation and consumer subsidies in the state-owned distribution segment—are not created entirely equal. Together the two sets of subsidies explored in this chapter—for producers and consumers—leave the state-owned distribution segment squeezed on both sides. From ‘below’ the state distribution segment continues to be used to channel rents to wealthy farmers, residential consumers, power thieves, and the politicians and bureaucrats who mediate this system.

From ‘above’, the resources of the public system, often taken on credit, are channelized upstream. State utilities pass on revenues to the central public and private upstream firms who

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<sup>36</sup> The Lok Sabha Secretariat noted that they accounted for 86 percent of total non-performing assets (versus only 75 percent of total credit) by September 2013, up from 75 percent in 2003 (2014: 5).

have high protected rates of return (although underpayment is disproportionately passed on to the former). Although most had moved towards cost-recovery tariffs and increased financial discipline by 2003, they have been hit by the sharply increased cost of purchased power (Pargal and Banerjee, 2014). This latter tends to benefit upstream producers, publicly and privately owned alike. As the former GoI energy advisor Surya Sethi laments:

The tariff increases and efficiency gains at the state utilities primarily guarantee the protected returns of bloated CPSUs and the private sector both of whom have gradually raised their stake in the sector and are, today, the dominant force because of being rewarded selectively with the highest regulated returns in the world. All this is at the cost of the state utilities charged with the primary responsibility for servicing end users of electricity. (2014: 19)

Chapter 5 noted that this system is intended in part to be *deliberately* unsustainable, forcing reforms on sectors and provinces (rural areas and ‘neo-patrimonial’ States) that have hitherto proved slow to change. Open access, for example, is designed to punish low-performing State utilities by facilitating the exit of their most lucrative customers, forcing them to improve. The problem is that this is an old strategy, and it has not worked previously. The creation of state-owned power generation companies in the 1970s was designed to force changes elsewhere in the sector (see Chapters 3 and 5). Such firms demanded high front-end tariffs from its financially and managerially weak customers, the SEBs, to ensure their own debt servicing (Rao, 2004: 86).

Yet this strategy has been undermined by repeated bailouts. In this vein, measures aimed at rejuvenating the State utilities’ financial health have been seen as merely applying ‘a coat of varnish’, as one commentator put it; ‘cynics may view it as indirect “credit enhancement” of independent power producers’ (Patel, 2008). The most recent ₹2 trillion bailout of State electricity utilities, in 2012, was largely motivated by the need to mitigate financial contagion—and thereby protect the overleveraged private sector. This was the second large-scale central bailout in a decade, a pattern that ‘looks set to continue’ or even worsen with the escalating fuel supply crisis since 2011 (Mukherjee, 2014: 15).

In the end, the system is funded through the suppression of demand—through load-shedding, especially at peak times. ‘Indian demand-side management is the best in the world,’

joked one energy efficiency specialist.<sup>37</sup> This harms all categories of consumers, from industrialists to power thieves. It also weakens attempts to build cost-based rationality into the system. Within the utility, officials simply compensate for expensive power by shedding load, more often ‘according to short-term economic and political considerations rather than system stability and equity based norms’ (Chitnis, 2012). It is striking that some of the States which spend most on expensive power procurement from short-term markets, notably Uttar Pradesh, also resort heavily to load-shedding. There is little transparency in this system, and Joël Ruet (2005) has argued that the proliferating demands on State-level utilities has left some of them devoid of cost-based rationality altogether.

This system of funding the sector’s multiple rents provides further evidence that India’s is a hybrid public-private system in which the state continues to loom large. It still has a variety of instruments at its disposal, through its large enterprises, the financial system, and the public power distribution system. At the same time, this system is not the benign alternative to the global template that is depicted for hydroelectricity-rich Brazil. Instead, short-term exploitation of natural resources and state control is used to bail out—and thereby sustain—a persistently unviable system.

The two-tier strategy thus has obvious limits. It harms consumers and concentrates vast financial liabilities in the hands of the state (Victor and Heller, 2007c: 292), while many private firms have been burned by the fuel supply crisis and the sector’s overall financial and regulatory uncertainty (Mukherjee, 2014: 12). The compromise rests on the buoyancy of CPSE revenues, the strength of investor sentiment, and the willingness to continue bailing out State distribution companies. Over-generous sops to business have also provoked a regulatory backlash by consumers and agencies angered by the large sops given to some private firms (see Chapter 7). The segmented system in the power sector is therefore both less generically ‘pro-business’ and less stable than some existing scholarship might suggest.

## Conclusion

This chapter has made three arguments. It reviewed subsidies and rents in the sector, broadly conceived to include not only subsidized power for select consumers, but also a wide range of

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<sup>37</sup> Interview, USAID official, New Delhi, 1 May 2014.

rents for producers. This evidence suggests that the pro-business tilt has been painful, incomplete, and geographically uneven. In broad terms, I suggest that the older ‘populist’ consumer subsidies—which in fact go overwhelmingly to *elite* agricultural and residential consumers—have not ended in most States. Instead, they have been supplemented by a second set of less visible subsidies. These go not to the (generalized and abstract) class of ‘big business’ that Kohli focuses on, but are producer subsidies for a well-connected subset of this group: *private energy capitalists*. The bucket continues to leak, though somewhat less than before 1991; and in the course of supporting particular energy capitalists policies often simply pour more water into the ‘leaking bucket’ of the chapter epigraph.

Second, and more significantly in the wider context of this project, it is the very structure of the state and its organization of the power sector that enable the two-sided system of rent-seeking by multiple elites. The ad hoc and path-dependent layered process through which India’s state capitalism 2.0 has developed has created a segmented polity and power sector, leaving both open to co-optation by competing interest groups at different power segments and tiers of the state. The fragmentary nature of the state and the fragmentary character of the political settlement are thus mutually reinforcing.

Finally, the segmented system is structured and funded through substantial but incoherent state control of the power sector. Once again, this degree of pervasive state intervention confirms the notion that India today might be characterized as possessing a form of market-facilitating, pro-business state capitalism, or state capitalism 2.0. Yet, based as it is on ‘milking’ the state system, this is not a stable, long-term or systematic system of rent sharing but the outcome of the multiple opportunistic changes that have occurred in the sector since 1991. It has allowed the state-owned power sector’s difficulties to persist, enmeshed the public sector banks in the private sector’s overleveraged woes, and created a low-grade crisis of legitimacy for the regime that left power in 2014, as Chapter 7 will discuss.

# 7

## The centre cannot hold: the crisis of control in state capitalism 2.0

It seemed as if dozens of separate governments are running at the same time in one main government. It appeared that every one has its own fiefdom. I could observe disunity and conflict among them. One department is taking on the other department, and taking on to the extent that two departments of the same government are fighting against each other by approaching the Supreme Court.

This disunity, this conflict among people of the same country!

—Prime Minister Narendra Modi (translated from Hindi)  
on the ramparts of the Red Fort, Independence Day 2014

### Power vacuum

In July 2012, over two decades after the first reforms, a set of events occurred which seemed to confirm the fragility of state capitalism 2.0. At the end of that month, a 2,000-kilometre-wide swathe of northern India was hit by the largest power failure in world history.<sup>1</sup> As three interlinked grids collapsed, the lights went out across an area home to between 600 and 700 million people—one tenth of the world's population—including those in the capital and 21 of the 28 States.<sup>2</sup> Offices and hospitals closed, trains and crematoria abruptly stopped, and miners were stranded underground. 'It had,' reported the *New York Times*, 'all the makings of a disaster movie' (Yardley and Harris, 2012).

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<sup>1</sup> There were two interrelated blackouts in quick succession: on 30 July the northern grid failed, and on 31 July the northern, eastern, and northeastern grids. Official reports call them 'grid disturbances'.

<sup>2</sup> Not all these people had electricity on a *good* day, of course: one American satirical magazine reported the end of the blackout under the headline '300 Million Without Electricity In India After Restoration of Power Grid' (*The Onion*, 2012).

A blame game swiftly erupted. The Union power minister publicly blamed northern States for drawing excessive power from the grid. Two official reports drew special attention to ‘grid indiscipline’ by State load dispatch centres (POSOCO, 2012; Ministry of Power, 2012a).<sup>3</sup> They confirmed that northern States were not the only culprits: their unscheduled overdrawn was matched by unscheduled overprovision by western States and NTPC, which sought to benefit from high tariffs for meeting excess demand (see also Celestine, 2013).<sup>4</sup> Together these two trends destabilized the grid. States in their turn claimed the central government had failed in its duty to warn them (Harris and Bajaj, 2012; Raina, 2012) and that PowerGrid managers had neglected to inform Northern grid planners of their line upgrading plans (Celestine, 2012). State governments also set about blaming each other, and their predecessors (Lakshmi and Denyer, 2012).

In the context of an increasingly unpopular administration, the blackouts became ‘a bizarre Rorschach test’ for more general failings (Celestine and Sharma, 2012). ‘[T]he power failure was significant less for its scale,’ wrote the journalist Jonathan Shainin (2012), ‘than for the way it highlighted almost every failing attributed to the ruling coalition’, the second UPA administration. At base, many commentators agreed, was the absence of central leadership in a whole system marked by procrastination and sclerosis. The vicious blame games between state agencies only confirmed this. The phrase increasingly applied to the regime was ‘policy paralysis’. In the succinct words of one Twitter user: ‘Q. What do you call a power failure in Delhi? A. Manmohan Singh’.<sup>5</sup>

### *The crisis of control*

In the foregoing vignette, the state appears as no monolithic developmental leviathan. Instead, it stands accused of a *lack of cohesion and leadership*. If the analysis of proliferating rents in Chapter 6 suggested that the Indian state was *vertically* incoherent due to the effects of federalism, this final empirical chapter examines the *horizontal* incoherence of the Indian state power

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<sup>3</sup> Load dispatch centres at the State and regional level are responsible for managing inter-State flows of electricity. In practice, however, most State centres are indirectly managed by State governments, a structure which ‘severely hampers the autonomy of these agencies in politically sensitive decisions such as load shedding’ (Chitnis, 2012).

<sup>4</sup> States and power plants were also guilty of gaming the regulatory system by scheduling more power than they needed to draw, thus being rewarded as responsible players when they did not use it all. As power prices altered it became more economical for plants to take penalties and cut supply.

<sup>5</sup> @stupidmaximus (a *Hindustan Times* columnist), quoted in Oliver (2012).

polycymaking apparatus.<sup>6</sup> Internal control problems are not unique to the liberalization era, nor to power polycymaking.<sup>7</sup> But not all organizational ecosystems are equally vulnerable to turf wars. This chapter argues that the system of state capitalism 2.0 is affected by distinctive internal control problems.

The following analysis suggests that the decline of the administration into ‘policy paralysis’ by 2014 was not solely the product of popularly attributed proximate causes like the prime minister’s retiring personality or the parallel power centres within the Indian National Congress. It had deeper, structural causes. Chapter 3 introduced the path-dependent weakness of the central apex vis-à-vis both the States and its own agencies. This structural weakness helped to promote a resort to the strategy of ad hoc institutional layering, as the central administration struggled to discipline or destroy older agencies even as new bodies were created. This layering in turn exacerbated central weakness as the state’s bureaucratic organization became increasingly complex and incoherent. Even at the national level, the central apex struggled to control and discipline its own agencies.

The result has been a protracted crisis of control, which culminated in the last years of the UPA administration (2004-14) in a crisis of accountability and legitimacy. This internal incoherence helps to explain the incoherence of the place of power in India’s wider energy strategy and the long period of relative policy stasis after the passage of the Electricity Act, 2003, despite the stillborn enactment of its key provisions. In the short term, increasing institutional complexity allowed state agencies to deflect blame for power policy’s persistent failings, and so deferred major policy action. In the longer term, however, the no-one-in-charge system contributed to the regulatory backlash and ‘policy paralysis’ of the last years before 2014.

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<sup>6</sup> By ‘horizontal’, this chapter refers to the relations between agencies that stand on the same level of the national energy policy hierarchy.

<sup>7</sup> Scholars widely acknowledge that the Indian state is inchoate and disunited, labelling it ‘polymorphous’, ‘multilayered and pluricentric’, an ‘extraordinarily complex organism... suffer[ing] structurally from vertical and horizontal incoherence’, and therefore requiring ‘disaggregated analysis’ (Rudolph and Rudolph, 1987; Gupta, 1995: 387, 392; Herring, 1999: 322). Evidence of disunity can be found scattered across most policy studies and the rich literature on federalism. To give only a handful of examples: The Ministries of Agriculture and Finance argued over food input subsidies (Varshney, 1995), the Ministries of Rural Development and Panchayati Raj over social policy (Chopra, 2011: 97), the commerce and finance ministries over special economic zones (Sampat, 2014), and the Department for Telecommunications attempted to thwart the celebrated competitive turn in telecoms (French, 2013). Often disputes slide into outright subversion and spill out into the media. Competition between the Intelligence Bureau and India’s external intelligence agency, the Research and Analysis Wing, intensified so far that one agency compromised its rival’s senior representative in Pakistan (Kaushik, 2012). Few studies have subjected this common observation to sustained scrutiny, however, perhaps due to the unfashionableness of institutionalist studies in India (see Chapter 1).

The chapter begins by outlining the weakness of central coordination in organizing the national-level energy policy apparatus. The second section moves to examine the consequences of this weak coordination, discussing the horizontal ‘turf wars’ over power policy which consistently revealed the difficulties of isolating it from wider energy policy. The third section explores some attempts made by central policymakers to regain control over the sector, attempts which again often took the form of creating new institutions without destroying the older agencies. The fourth section turns to examine a form of inverted turf war—‘blame games’, or the competition to evade responsibility for power policy’s failures—and, finally, the regulatory backlash for which this weak centre opened up space, a low-grade crisis of legitimacy that culminated in popular reactions to the July 2012 blackouts with which this chapter opened.

### **India’s ‘byzantine and fragmented’ national energy bureaucracy**

Few areas necessitate as much coordination as power policy. Electricity requires upstream inputs in the form of natural resources, and coordination through the functional stages of the supply chain. Yet Chapter 3 observed that from the earliest years of independent India, the central administration was weakened both in its vertical relations with the States and its horizontal relations with its own ministries.

It is with vertical control problems—the crisis of federalism—that the power sector is particularly associated. In the power sector, the centre was constitutionally weakened by the ‘concurrent’ listing of electricity and *de jure* State control over the distribution segment. Chapter 6 showed that this has continued to provide multiple veto points at which power policy change could be blocked, formally and informally, protecting the rents of wealthy agriculturalists and residential consumers in many States. This has prompted periodic (and politically unfeasible) calls to shift the onus of decisionmaking:

They [central policymakers] have to examine whether this should remain a concurrent subject or it should become a national subject... Because in many States, governments fall or rise on the back of issues relating to power only.<sup>8</sup>

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<sup>8</sup> Interview, chairman, BSES Rajdhani, 15 May 2012.

However, the administration is afflicted not only by vertical but horizontal coordination and control problems. ‘Turf wars’ within the bureaucracy are endemic, especially within such a cross-cutting issue as power policy. Even within the national administration, the weakness and unevenness of the centre’s mechanisms of coordination became increasingly apparent. Lacking the ability to destroy old agencies, the number of bodies in the sector multiplied. In addition, by the end of the 1980s, India had become a multi-party system with coalition allies often rewarded with ministerial positions. This section discusses the weakness of central authority in the sector and its relationship to institutional layering.

### *Layering and institutional proliferation*

After independence the number of ministries and departments at the centre increased rapidly. From 17 ministries comprising single departments in 1947 the number had almost doubled to 33 ministries and more than 60 departments plus other secretarial offices by 1991 (Potter, 1994: 78). This was partly the result of specialization, but the rise of coalition governments from 1989 led to a further proliferation and the weakening of cabinet governance as the number of ministers increased to give more opportunities to favour allies. By the time of its final reshuffle in October 2012, the UPA-II administration boasted 78 ministers, while Vajpayee’s earlier NDA administration ended with 88.

The energy sector was particularly hit by the new ministerial fragmentation. In June 1991—that is, exactly as the weak Narasimha Rao government took office—and again in July 1992 the single energy ministry created under Indira Gandhi was twice bifurcated to create separate ministries of coal, power, and new and renewable energy. Former Union power secretary P. Abraham wrote: ‘Ideally, the Ministry should have continued as Ministry of Energy, as coal has been the mainstay of power generation and better coordination would have been possible for planning and development of coal and power’ (2009: 245). Unfortunately, however, ‘exigencies’ led to its trifurcation (*ibid*). The result was that energy policy sprawled across a large number of agencies:

There are, for instance, seven Central agencies involved in energy: the ministries of petroleum and natural gas, coal, atomic, new and non-conventional, power, the Planning

Commission and the PMO. Each is headed by a cabinet minister; most have a phalanx of PSUs under their jurisdiction and are bent on protecting their turf. (Mehta, 2012)

To this list, Abraham added the finance ministry, the railways and surface transport ministries—crucial in delivering fuel sources to plants—and the Ministry of Environment and Forests (2009: 307). Observers expressed ‘ongoing concern’ at the ‘lack of explicit coordination between these various bodies and ministries’ (Dubash 2011: 68).

Once this ministerial expansion had occurred, it was difficult to reverse. The cabinet’s size was a function of coalition politics—and so for all intents and purposes unchangeable in the short term, a former petroleum minister complained to me: ‘so we continue to have several energy policies!’<sup>9</sup> Only the BJP’s surprise majority in 2014, discussed in the epilogue (Chapter 9), would change this equation.

Added to this were the dynamics of institutional proliferation noted in earlier chapters. Faced with the difficulty of controlling large existing agencies, the central administration frequently opted to create new organizations that it hoped would be more readily directed towards its policy ends. The nationalizations and attempted centralization of the late 1960s and 1970s swelled the number of large state-owned enterprises—the Rural Electrification Corporation, Coal India, NTPC, and NHPC—and the workforces falling under the nominal control of the energy ministries. In the 1980s, efforts to extend, streamline and corporatize these central firms’ missions led to the creation of others, including PowerGrid, Nuclear Power Corporation of India Limited, and the Power Finance Corporation.

In this process, institutional destruction was notably absent. The creation of new bureaucratic agencies is also path-dependent. New agencies, once created, in turn created constituencies with an interest in their continuation and, often, an ideological commitment to their own ways of operating. In addition, in the absence of an overarching authority, interagency rivalries also encouraged these agencies to increase their autonomy from one another (Chibber, 2003: 182). Administrative reform, like power policy change, is therefore also easier to alter through incrementalism rather than disruptive shifts. The result was an accretion of new central policy agencies.

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<sup>9</sup> Interview, former petroleum and natural gas minister, Delhi, 30 April 2012.

This institutional creation only accelerated in the liberalization era. Centrifugal pressures to create less compromised or ‘politicized’ bodies have led to increasing institutional complexity, worsening the problem they are in part designed to surmount. As Chapter 5 discussed, the 1990s saw the creation of a new layer of regulatory bodies superimposed upon the older statist sediment, such as the CERC, the State-level electricity regulators, and the Directorate General of Hydrocarbons. In the 2000s, the Electricity Act created new agencies to foster competition, including the power trading body PTC, the Indian Energy Exchange, and the Appellate Tribunal for Electricity (Aptel).

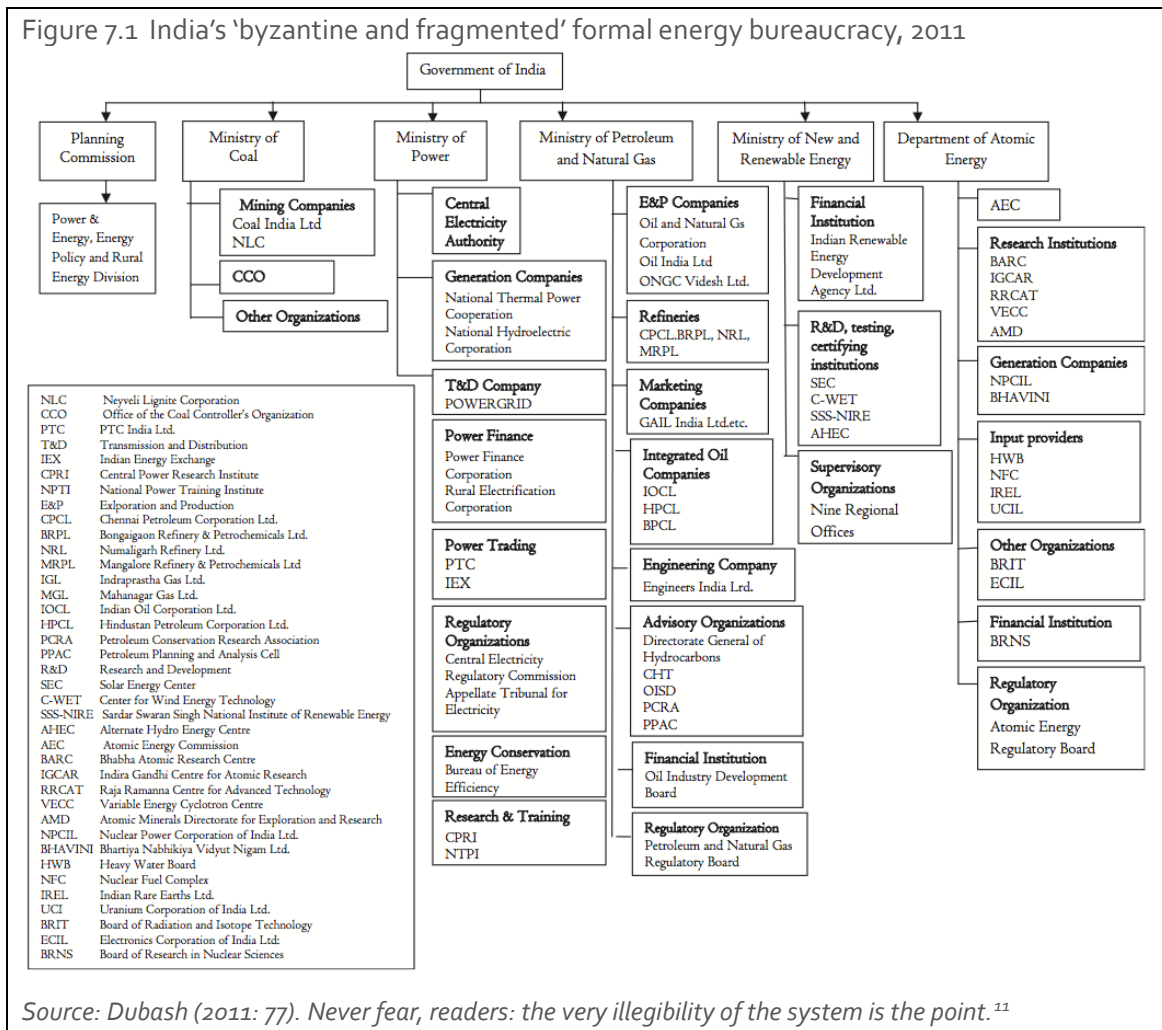
The GoI also generally chose not to institutionalize the comparatively new concern with climate change within pre-existing agencies. Instead it created an entirely new infrastructure through the National Action Plan on Climate Change and its various Missions under the PMO (Prime Minister's Council on Climate Change, 2008), albeit with participation from the renewables and environment ministries. In this way climate change was sectorally divorced from energy concerns in a fashion that threatened its marginalization, faced with the seemingly inexorable rise of ‘King Coal’ before 2011.

Through these different waves of institutional creation, India’s energy administration became ever more ‘byzantine and fragmented’ (Dubash, 2011: 68; see Figure 7.1). The state ecosystem in the power sector became increasingly characterized by both horizontal complexity (multiple ministries and other organizations) and vertical complexity (multiple competing jurisdictional levels). This institutional proliferation was therefore in part a response to the crisis of state capitalism 1.0: in the context of the centre’s weak capacity to enforce its authority on large pre-existing agencies and the States, it created new agencies to shift the arenas of decisionmaking in its favour.<sup>10</sup>

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<sup>10</sup> Moran (2003) has documented a similar trend of institutional ‘hyper-innovation’ in response to the somewhat similar crisis of government in 1970s Britain.

Figure 7.1 India's 'byzantine and fragmented' formal energy bureaucracy, 2011



Source: Dubash (2011: 77). Never fear, readers: the very illegibility of the system is the point.<sup>11</sup>

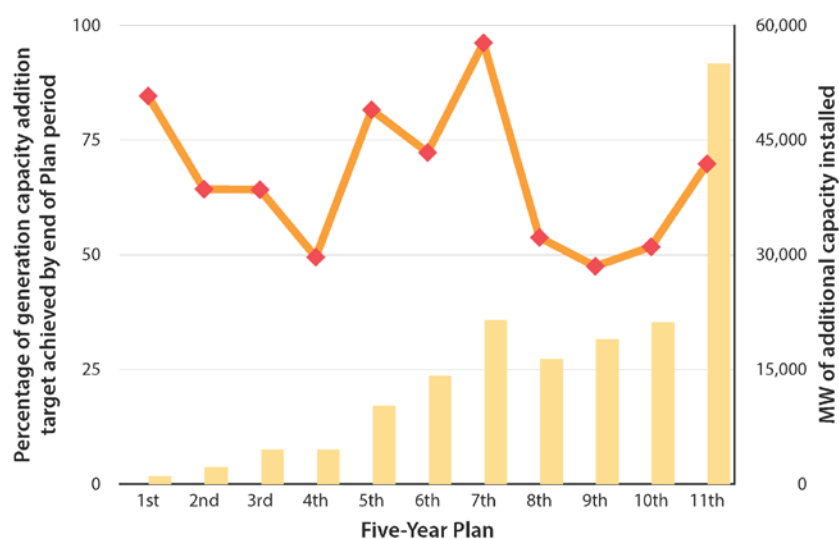
Yet, in the absence of an overarching vision or the ability to discipline or destroy older agencies, this proliferation of organizations in turn made the policy apparatus even more difficult to coordinate. The problems this created have long been acknowledged. The structure of the state has institutionalized incoherence in energy policy. The Eighth Plan warned that the multiplicity of agencies was 'wasteful' and 'counter-productive' because of 'long repetitive procedures and the diffusion of authority involved', especially given the 'fragmented approach' in the priority areas of energy, transport, and rural development (Planning Commission, 1992: §1.5.3, Preface §9). That very year the Ministry of Energy was trifurcated. Complaints about incoherence, fragmentation, delay, and lack of coordination have therefore been regular features of power and energy commentary.

<sup>11</sup> This architecture transformed substantially with the new administration in 2014: see Chapter 9 for a discussion, which contends that the Modi administration's reforms must be understood in the context of this crisis of control of state capitalism 2.0.

### *The decline of central energy planning*

Simultaneously the formal mechanisms of central coordination had diminished. As Chapter 3 discussed, the Planning Commission was initially envisaged as the Indian equivalent of the ‘pilot agency’ of classical developmental state literature, capable of coordinating and disciplining other agencies’ efforts. But it was weakened from the outset, and a further long decline began in the mid-1960s. The result was that ‘each ministry was a state within a state’, leaving the administration ‘paralyzed and fragmented’ (Chibber, 2003: 181; 2002: 951). As early as this, the utopian relationship between power planning and implementation was already visible in India’s persistent failure to meet Five-Year Plan targets (Figure 7.2).<sup>12</sup>

Figure 7.2 Perpetually missed targets: percentage achievement of Five-Year Plan targets for capacity addition



Source: Planning Commission data

Liberalization, some of the principal exponents of which could be found within the Commission, further undermined the rationale for planning. The Eighth Plan explicitly shifted its mandate, to provide a ‘largely indicative’ rather than a ‘directive’ plan (Planning Commission, 1992). The Ninth claimed to abandon ‘a deterministic relationship between the Plan and economic performance’ (1999: vol. I, §1.61-1.62), while the Twelfth (2013b) finally saw the

<sup>12</sup> The unusual success of the Seventh Plan was via the deficit financing that helped to contribute to the 1991 balance-of-payments crisis. The Eleventh Plan saw a large private contribution for the first time. Conversely, the Twelfth Plan (2012-17) has seen setbacks due to the fuel supply crisis and the general economic slowdown. In general, targets were missed so repeatedly that even policy planners started publicly to acknowledge it, suggesting that target-setting had become a rhetorical exercise (Planning Commission, 1973: §4.9, 118; Henderson, 1975: 36-7; Planning Commission, 2005, Part II: 329).

abandonment of top-level targets altogether in favour of ‘scenario’-based models. Few were shocked when the Commission was abruptly abolished by the new prime minister in August 2014 (see Chapter 9).

In the liberalization era, the Commission’s decline coincided with the rising power of individual ministries, especially the large, cash-rich infrastructure agencies. The Commission had to content itself with ‘working within the interstices of the dense structure of the sectoral ministries to influence policy’, as one former member wrote (Desai, 2014). Although Five Year Plans were still produced, the locus of macro-level financial decision making increasingly shifted to the finance ministry. Meanwhile, planned expenditure to the States declined in importance and in their place spread conditional transfers through centrally sponsored schemes, the uncontrolled proliferation of which prompted a report arguing the instrument should be reined back in (Planning Commission, 2011c). In this way ‘allocative power shifted to the loose confederation of sectoral ministries’ (Desai, 2014).

This transference of power from central planners to the ministries was perhaps especially pronounced in the power sector. During many interviews the Planning Commission came in for polite ridicule as a mere talking shop, distanced from power. After the energy ministry was broken up in 1992, a former minister said, the Commission ‘can’t do more than generalized sermons—it doesn’t become part of the governance mechanism’.<sup>13</sup> As one sometime consultant to the government stated, citing an interview with the government’s former principal energy advisor, ‘in practice, the Planning Commission is often hard-pressed to herd together large and powerful energy ministries’ (Dubash, 2011: 68). Its influence was ‘idiosyncratic and dependent on personal relationships’ (*ibid*).

Nonetheless, the Commission was one of the few agencies which attempted to provide a synoptic view of energy. Although the Five-Year Plans reflected the interministerial fragmentation of energy policy,<sup>14</sup> the Commission made an attempt to revive interministerial communication with its Integrated Energy Policy (Planning Commission, 2006). Yet five years later an energy

<sup>13</sup> Interview, former petroleum and natural gas minister, New Delhi, 30 April 2012.

<sup>14</sup> Working groups established into each ministry fed into the Plans, but even these were prone to further fragmentation. The working group on power for the Twelfth Five-Year Plan, for example, was constituted of nine subgroups, each of which focused on different segments and issues: transmission, distribution, energy efficiency, and so on (Ministry of Power, 2012b). This also undercut the ability to offer an overarching view even of power policy, let alone relocating it within wider energy policy.

commentator found the document ‘simply gathering dust’ in the corridors of power (Mehta, 2012). In 2012 interviewees still referred to it as the touchstone of central energy policy—but because there were few alternatives, not because it had much practical influence. The striking feature of agenda setting since the Electricity Act of 2003 was near-stasis on the agenda-setting front. One senior power bureaucrat stated:

Senior decisionmakers [at the centre] have a clear and coherent idea of the power sector’s problems but they don’t articulate this... They are overworked; there is no policy work below in lower tiers of government. This explains the lack of big policy documents.<sup>15</sup>

Even before its demise, the Planning Commission could not bring other agencies outside with its vision. In its weakness, there were few other organs that could take a consistent synoptic view of energy policy as a whole (though see pp. 229-236 below). With ‘no executive authority responsible and accountable’ for energy policy, wrote one commentator, there was ‘in effect an energy problem but there is no energy strategy’ (Mehta, 2013: 1).

## **Turf wars**

As Vivek Chibber (2002) argued of the planning era, state capacity depends in part upon state cohesiveness. Individual bureaucratic quality and disciplining private firms are not enough: ‘bureaucratic rationality must also be structured in an appropriate apportionment of *power* among state policy agencies’, so that policymakers at the central apex ‘have the capacity to discipline other *state agencies*’. If they lack this power, ‘a robust bureaucracy can become a weapon *against* state cohesion’ (*ibid*: 952, 954, 984, original emphasis).

India’s energy ministries are such a ‘robust bureaucracy’. The following section argues that the fragmentation and incoherence in Indian energy policy—which has often pitted the power ministry and the state-owned enterprises under it against upstream energy agencies—is not an indication of the frailty of the ministries and CPSEs between which energy policy is divided. It is a sign of their strength, as they compete with one another for ‘turf’: resources, jurisdictions, policy

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<sup>15</sup> Interview, power ministry joint secretary, Delhi, 21 April 2012.

direction, and new opportunities. In these turf wars, the coherence of overall energy strategy is frequently sacrificed.

### *The licence raj redux*

The breakup of the Ministry of Energy hardly left the new power ministry a poor relative. It was very large, with the secretary assisted by a special secretary and an unusual six joint secretaries. The ministry, and the politicians and technocrats that man it, have been some of the key beneficiaries of the liberalization era.

The energy ministries now lie at the heart of the rent-seeking political economy in India (see Chapter 6). With the comparative decline of licensing and, conversely, the rise of public-private collaborations, the centre of gravity of power and lobbying has shifted from Udyog Bhavan, the Ministry of Commerce and Industry, to the infrastructure ministries with their control over huge resources (Kochanek, 1996: 163-4). Reflecting on his time as Establishment Officer, in charge of placement of senior officers and appointments to CPSEs, Javid Chowdhury (2012) noted that the ‘positions perceived to be attractive’ were concentrated in the ministries of commerce and industry, petroleum, power, and economic affairs. This expansion of rent seeking has been encouraged by the regionalization of politics, as individual ministers in coalitions compete for business in their new positions, not always with unified intent: ‘multiple centers of power pursue reforms with competitive vigor’, with each minister vying ‘to take part in the reforms and allocate reform spoils to their respective [S]tates’ (Sinha, 2005: 87).<sup>16</sup>

The resulting fragmentation often stalled power projects: ‘quite often, the perception of each Ministry differs and there are considerable delays in decision-making on inter-related matters. I often used to frankly remark, “What the Power Secretary proposes, other Secretaries dispose!!”’ (Abraham, 2009: 307). Piyush Goyal, who took charge of a newly integrated energy ministry under Narendra Modi administration in 2014 (Chapter 9), summarized the pre-2014 situation:

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<sup>16</sup> Treatment of different ministries may vary on this front, however: see pp. 261-4 below for an analysis of patterns of appointments to the power sector versus other infrastructure ministries.

One Ministry would propose, and another would dispose. Ministers and Ministries would be consistently at loggerheads with each other, and stories on interministerial turf-wars were a matter of bureaucratic legend. Ministers would talk to each other on paper, and not in person, and queries would be raised sequentially and not all at once, thereby elongating the time taken to decide, often fairly routine matters even. Applications would be pending for years at end, because of trivial queries being raised by one department or other, thereby vitiating the investment climate. (Goyal, 2014: 6-8)

During the 1990s, for example, many IPPs were delayed as scrutiny was carried out at multiple levels and by multiple agencies, slowing central counter-guarantees for projects (*ibid*: 263). Almost two decades later another report complained that a ‘typical infrastructure project’ faced similar hurdles, requiring ‘clearances from 19 ministries and on average 56 permissions on issues ranging from the environment to defence. The whole process takes up to 24 months’ (Singh, 2012). Ministries were keen to protect their veto rights, in a fashion that appeared an echo of the old ‘licence raj’, in which the need for businesses to acquire multiple licences was utilized as an opportunity for bureaucrats in multiple agencies to extract multiple rents.<sup>17</sup> Alternatively, these multiple vetoes can be used to stall reforms seen as ill-judged. One young former civil servant described the Indian use of the term ‘in the loop’: in order to stall the plans of feckless politicians, in true ‘Sir Humphrey’ style bureaucrats send their proposals in an endless swirl between the ministries. (‘The law ministry is especially helpful for this,’ he added.)<sup>18</sup>

Industrial penetration of this rent-dependent ministerial system has at times become so pronounced that industrial disputes have spilled into interministerial conflicts. In 2004 a dispute between the two Ambani brothers, heirs to the Reliance fortune, spilled into the relations between state petroleum and power agencies.<sup>19</sup> Anil Ambani’s Reliance Energy announced the construction of the world’s largest gas-fired power plant at Dadri, Uttar Pradesh, using gas from Reliance’s Krishna-Godavari (KG) Basin reserves. In 2006 the two brothers’ gas supply agreement broke down. The petroleum ministry’s interventions, under an old friend of the late Dhirubhai Ambani, favoured Mukesh’s gas firm. Anil’s group took out advertisements on the front pages of newspapers to allege petroleum ministry corruption, publicly aligning itself with NTPC, which

<sup>17</sup> Providing theoretical support for this claim, Shleifer and Vishny (1993) argue that an intermediate level of state fragmentation—several strong agencies with limited coordination—leads to greater corruption than either a strong centralized hierarchy or competition between multiple fragmented bodies.

<sup>18</sup> Personal communication, former civil servant, 25 February 2014.

<sup>19</sup> And into party-political competition: Mukesh was allegedly furious about Anil’s decision, without consultation, to take up a Rajya Sabha seat for the opposition Samajwadi Party (McDonald, 2010: 318-19). Samajwadi politicians would remain among Anil’s most vociferous defenders, while Mukesh maintained close links with Congress and later Narendra Modi.

would also be hit by any price rise. The matter was eventually decided by a group of ministers (see also below, pp. 264–8). So dangerously close were the petroleum ministry’s links with Reliance Industries perceived to be that in January 2011 the Congress opted for a pre-emptive reshuffle in the wake of the 2G telecom scandal, explicitly briefing the new minister of the need to avoid another scandal. Reliance’s influence on the petroleum ministry waned under the newcomer’s tenure (Mahajan, 2012)—but he was unceremoniously demoted in October 2012 for fining the corporation in line with an audit report.

In this system of horizontal competition, any extension of licensing arrangements offered a valuable source of power. The sector’s piecemeal liberalization led to the creation of still more administrative tasks and bodies, over which existing agencies were swift to try to extend their influence. The Central Electricity Authority was allegedly so reluctant to hand over regional load dispatch centres to the transmission utility PowerGrid that it retained the land, and in Delhi PowerGrid employees had to enter via a back entrance (Singh, 2009: 62). From 2009, the regulator CERC became locked in a turf war with the Forward Markets Commission over regulation of power trading, a dispute that reached the Supreme Court (Jha, 2014). Inside the new administrative layer of nominally independent regulation, then, the organizational fragmentation and rivalries of the old system were replicated.

### *Institutionalizing policy disagreements*

Just as significantly, the fragmented state structure institutionalized policy disagreements. India ‘looks at energy through a fragmented and siloed prism’, wrote the former Shell official-turned-policy commentator Vikram Singh Mehta (2012). The metaphor of silos, is, however, incorrect. In practice these ministries are intimately interlinked: ‘Perhaps the performance of no other infrastructure sector depends so heavily on the cooperation of other Ministries,’ one power secretary reflected later (Abraham, 2009: 307).

Yet the divorce of power from its fuel sources ensured that the ministries would very often have diametrically opposed interests. The power ministry has frequently found itself at loggerheads with the upstream line ministries and the SOEs at least nominally under their control. The different ministries have quite different interests. The upstream ministries and their CPSEs

seek to maximize revenues from their control of natural resources—by resort to market mechanisms, if necessary—while the power ministry and its enterprises seek to maintain administered pricing to keep their own costs down.

This is not to say that the power ministry has retained a consistent stance to policy frugality. In the 1990s, it was belatedly criticized by financial ministry officials, who argued that the IPP policy had been ‘forced through by the power ministry against the better judgment of both financial and energy experts’ (Dubash and Rajan, 2001: 3372). As Chapter 4 noted, this phase of reform was characterized by widespread allegations of corruption and gold-plating of expensive contracts. Indeed, it has been noted that the Ministry of Finance often acts to block the programmes of other ministries due to their financial implications.<sup>20</sup>

When its own enterprises would have to pay higher rates, however, the power ministry has often taken a rather less overtly ‘pro-business’ stance. It has repeatedly protested attempts by the upstream ministries to raise prices to market levels. Together it and the fertilizer ministry succeeded in maintaining a ‘hybrid market’ for natural gas, blocking price deregulation for their supplies (Jackson, 2005).

In coal, too, the power ministry sought to retain controls on the price of natural resources for power plants. Ahead of its maiden share offering in 2009, Coal India hiked its prices by 11 percent—despite the protests of the power, cement, and steel industries (Bhaskar, 2009). In 2012 negotiations mediated by the ratings agency CRISIL, the power ministry demanded that the reserve price for new coal blocks up for auction be set at a mere 10 percent of the coal’s estimated value, and again protested the decision to allow Coal India to sell a (lucrative) portion of its coal stocks through electronic auctions. ‘It seems peculiar that two governmental bodies can be so opposed in such an important issue as coal mining and power generation,’ wrote one wide-eyed industrial journalist (Gardner-Stephens, 2013: 17).

As the fuel supply crisis began to bite, the power ministry once again found itself in battle with the upstream ministries over administered prices. With the burgeoning gas crisis caused by

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<sup>20</sup> Varshney (1995) found this for agricultural policy, Chopra (2011: 96-7) for the National Rural Employment Guarantee Scheme, and Sampat (2014) even for the excesses of the Ministry of Commerce and Industry’s special economic zone (SEZ) policy. The finance ministry is not a reliable ideological bastion of pro-market purism, however. When a senior petroleum official approached the finance ministry to warn of the estimated \$6.3 billion loss to the national exchequer if they acceded to Reliance’s demands for a large gas price hike, he recounted the dismissive reply: ‘Is it your concern or mine?’ (quoted in Nayar, 2012).

high Asian prices and underproduction from Reliance's KG Basin blocks, state-owned GAIL and the petroleum ministry lobbied hard for price increases. The fertilizer and power ministries countered that this would hit their own industries and the *aam admi*. For every \$1 rise in the gas price, which is controlled by the central government, the ministry claimed that power sector losses would rise by ₹10,040 crore annually and state fertilizer subsidies would increase by ₹3,155 crore—in turn worsening the state's budget deficit. The beneficiaries would be private companies like Reliance Industries and Cairn, and upstream CPSEs like ONGC—although the CPSEs would also see much of the profit clawed back by the government, as Chapter 6 showed.

This upstream-downstream conflict spilled over to the agencies that fall under the line ministries, which compete amongst one another and (somewhat less regularly) against their own line ministries. In good times the CPSEs agreed to meet their payment obligations to one another, and it was the State utilities that failed to pay up (Narayan, 2012). In leaner times, and as competitiveness has risen on the agenda, they have become rivals, disputing control over natural resources and their pricing.

NTPC found itself embroiled in a showdown with state- and private-owned gas suppliers in the mid-2000s over the low prices it demanded, calling in the power ministry to lobby on its behalf. Its victory proved short-lived as the suppliers finally refused to sell, leaving its plants idling (Mehta, 2013: 16). The tensions between the power and upstream ministries were again mirrored in disputes between Coal India and NTPC over coal quality. NTPC, Coal India's largest client, has attacked the coal major for providing sub-par coal, while the state-owned Maharashtra generation company took Coal India subsidiaries to the Bombay High Court on similar charges. The power-coal dispute failed to be solved by ministerial interventions, resulting in a prime-ministerial directive to compel Coal India to issue fuel supply agreements with power firms, guaranteeing at least a minimum assured quantity of coal. Meanwhile, the coal ministry put Coal India divestment plans on hold (despite EGoM approval) in the face of the NTPC row, including ₹1,000 crore which the thermal power utility refused to pay for supplies it alleged to be of inferior quality to that promised by Coal India during loading, claiming it was receiving loads padded with boulders and even dirt. This longstanding controversy testifies again to the weakness of central enforcement—this time via the line ministries—in ensuring quality control as well as dispute

resolution: at one point the feud threatened to cut power to a swathe of eastern and northern India.

Competition between the agencies has created duplication in their activities. Forced to double its own imports, NTPC announced in October 2013 that it was moving directly into the coal mining industry, both through captive domestic mines and overseas assets. A power ministry official announced that this entry was ‘strategic’ to ‘partially reduce dependency on Coal India’, which was agreeing to supply a smaller percentage of coal for new projects (*Power Insider*, 2013). As cooperative mechanisms repeatedly fail, persistent interagency difficulties thus often encourage agencies to increase their distance and autonomy from one another, thus further fragmenting the energy policy apparatus and making coordination still more difficult (cf. Chibber, 2003: 182).

### *The perils of sectoralism: outside the core ministries*

The losers from the infighting between the larger energy ministries were the far smaller Ministry of New and Renewable Energy (MNRE) and the perpetually scapegoated Ministry of Environment and Forests (MoEF).<sup>21</sup> Initially created as a department within the Ministry of Energy in 1982, the MNRE achieved ministry status in 1992 and gained its current name in 2006. However, despite its full ministerial status ‘the ministers appointed to [MNRE] have been “relatively junior” and senior servants regard MNRE as “the first step in career progression to a heavy-weight ministry”... or as a punishment posting’; the average tenure of the secretary was only 10 months (Harrison and Kostka, 2012: 31-32, n 27; Harriss-White et al., 2009: 53). Its status has begun to rise somewhat as renewable energy ascends on the agenda, thanks to the thermal fuel supply crisis, the collapsing costs of solar components, and the success of the Jawaharlal Nehru National Solar Mission after 2010. In 2014 it was integrated under the same ‘superminister’ as power and coal, marking a belated mainstreaming of renewable energy under the new administration.

The environment ministry has fared less well. Slow environmental clearances are a longstanding concern (Planning Commission, 2000: 523; 2011b: 300, 306-8). The popular

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<sup>21</sup> In 2014 the ministry was renamed to include climate change in its title, in line with the new administration’s nominal priorities: Narendra Modi’s Gujarat made a show of having a climate change action plan and department (see also Modi, 2011), although reports suggest it was moribund by the time he took up the prime ministership (Dave, 2013).

scapegoat is the MoEF. A small ministry with little representation at the State level, the MoEF is perceived as hostile to corporate interests by delaying or even denying environmental clearances. It is thus criticized as ‘obstructionist’ and ‘anti-development’, both by private corporations and SOEs (see e.g. Singh, 2009: 44).<sup>22</sup> While it grew in stature under the vociferous tenure of Jairam Ramesh, its ministers have short political lifespans: ‘it would appear that the reward for any minister of environment and forests who follows the mandate given to him/her is dismissal from his/her job’ (EPW, 2014a: 7). The tactic of scapegoating the MoEF exploits the multiplicity of government goals, playing off infrastructure priorities against environmental protection. Like most such tactics its credibility has a finite shelf life. In January 2014, desirous of being seen to take action, the government handed the environment portfolio to the petroleum minister.

### **Attempts to recover central control**

The increasing number and weight of infrastructure ministries thus created an energy policy system defined by multiple licenses and delays for individual projects and by repeated interministerial conflict over the government’s headline commitment to gradual energy price reform. In the absence of a single energy ministry and the weakness of the Planning Commission, other central agencies have tried alternative means to exercise central authority over electricity policymaking, with uneven success. One strategy revolved around centralization, presaging that deployed by the new Narendra Modi administration and confirming the perceived importance of the infrastructure ministries. The other strategy once more resorted to complexifying the state by attempting to institute cooperation via committee, again with only limited success.

### ***Centralization***

That political parties in power feel the need to centralize control over power and other lucrative infrastructure ministries is visible in the pattern of ministerial appointments (Table 7.1). Occasionally the power ministry has been awarded to key coalition allies, notably to the Shiv Sena

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<sup>22</sup> In reality the environment ministry under the UPA had sped up clearances: they took an average of 11 months in 2010-12 (clearing 90.4 percent of cases), compared with three years in 2000-04 and five years in 1982-99 (Rajshkhar, 2012f). Often the delay in clearances rested with the Group of Ministers or the States.

under the NDA government of 1999-2004.<sup>23</sup> This pattern fits the coal ministry more strongly, though: like the railways and mines ministries, it is often awarded to fractious allies in eastern India. These regional satraps appear to trade their (capricious) support for control over employment, prices, and influence on the ‘coal mafia’—all sources of informal subsidies and patronage—which are especially valuable in the poor, coal-rich east.<sup>24</sup>

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<sup>23</sup> It was a Shiv Sena minister, Suresh Prabhu, who is particularly credited for pushing forward power reform. He is widely acknowledged to have been an unusually competent power minister, and the Shiv Sena forced his resignation for his pains. He defected to the BJP in 2014 and has entered the Narendra Modi administration as railways minister. He was therefore perhaps no ‘ordinary’ coalition ally.

<sup>24</sup> Recent incumbents include Ram Vilas Paswan (Lok Janshakti Party, 2001-2), Mamata Banerjee (Trinamool Congress, 2004), and Shibu Soren (Jharkhand Mukti Morcha, 2004-5, 2006). On the ‘coal mafia’, see Lahiri-Dutt (2014a) and work in progress by Barbara Harriss-White. Nonetheless, these politics are not monolithic. On the contrast between natural resource politics in Bihar and Odisha, see Kale and Mazaheri (2014).

Table 7.1 The politics of key infrastructure appointments, 1991-2015

Ministry	Total ministers	Of which:		Regional dominance
		Party loyalists	Coalition allies	
Power	13	10 [including 2 by prime minister] (c. 20 years) <sup>25</sup>	2 (c. 4 years)	Maharashtra (c. 13 years)
Coal	17	9 [including 2 by prime minister] (c. 16 years) <sup>26</sup>	8 (c. 8 years)	Eastern India (various States, c. 10 years)
Petroleum & natural gas	10	8 (c. 21 years)	2 (c. 3 years)	Industrial India Maharashtra (10 years) Karnataka (4 years)
Railways	14	7 (c. 9 years)	7 (c. 15 years)	Eastern India: Bihar (11 years) West Bengal (6 years)

*Ministers of state are counted only when they had 'independent charge' of a ministry, i.e. not if they served beneath a cabinet minister.*

*Sources: Lok Sabha and Rajya Sabha/National Informatics Centre, New Delhi<sup>27</sup>*

Much more often, though, the power ministry has gone to party loyalists. This may be because loyalists command strong power bases, argued one interviewee:

Why was everybody sleeping?<sup>9</sup> Well, one, clearly, lack of leadership. Mr Shinde [then power minister] is not there because he is a professional or he has sound understanding of the initiatives. He is there because he is the biggest OBC [actually Dalit] leader of the Congress... Those are his credentials.<sup>28</sup>

But it also suggests that the leadership of political parties seeks to retain control over crucial (and profitable) infrastructure ministries, in which the interests of key industrialists are directly implicated and rent seeking can be highly centralized (for example, through the award of large contracts). It is striking that the pattern of rewarding loyalists is even more pronounced in the Ministry of Petroleum and Natural Gas.<sup>29</sup> Even in coal, when the exigencies of coalition politics have permitted, central control has (nominally) been exerted much more strongly than over the

<sup>25</sup> Including P.R. Kumaramangalam (1998-2000), who had defected from the Congress in 1995 and joined the BJP in 1997, but excluding Yoginder Alagh (1997-9), an academic.

<sup>26</sup> Including P.A. Sangma (1991-3) and Ajit Panja (1993-5), who would defect from the Congress in 1999 and 1998.

<sup>27</sup> These details are correct as far as I have been able to verify them: it proved remarkably difficult to find information on former ministers. This list is pieced together from an internet data trawl, combined with a survey of official Lok Sabha and Rajya Sabha biographical profiles available at <http://164.100.47.132/LssNew/members/lokprev.aspx> and [http://164.100.47.5/Newmembers/alphabeticalist\\_all\\_terms.aspx](http://164.100.47.5/Newmembers/alphabeticalist_all_terms.aspx) [last accessed 4 April 2015].

<sup>28</sup> Interview, former NTPC official, May 2012.

<sup>29</sup> Recent petroleum ministers include longtime BJP worker and Mumbai powerbroker Ram Naik (1999-2004); Reliance-linked Congress loyalist Murli Deora (2006-11), also based in Mumbai and 'the last of India's Tammany Hall chieftains' (Gupte, 2014); and senior Congressman and former Karnataka chief minister Veerappa Moily. 1991 is not a sharp break in this pattern: the petroleum minister in the V.P. Singh administration, S.P. Malaviya, was also reportedly close to the Ambani family (Godbole, 1996: 248). This pattern is cyclically punctuated with shorter stints by politicians with less business-friendly reputations—in Jaipal Reddy's case (2011-12) explicitly charged with avoiding scandal.

railways through extended periods under prime-ministerial control or party loyalists—despite the fact that Coal India is utterly dependent on the railways to perform.

Some prime ministers have also opted to take on energy portfolios directly, especially when there are key decisions to be taken. During the 13-day BJP minority government of 1996, Prime Minister Atal Bihari Vajpayee retained the power portfolio himself. The short-lived administration extended the central counter-guarantee given to Enron's Dabhol plant. The next prime ministers, H.D. Deve Gowda and I.K. Gujral of the United Front, also retained de facto control of the power portfolio (Abraham, 2009: 247).<sup>30</sup> In October 1996 Deve Gowda convened a conference of State chief ministers specifically to discuss the power sector; at the end of the year the conference agreed to a wide-ranging reform programme, the Common Minimum National Action Plan for Power.<sup>31</sup> Most recently, an especially 'strong' prime minister, Narendra Modi, has taken a close interest in infrastructure and the power sector in particular, again opting for centralization (see Chapter 9).

We might conjecture, then, that attempted centralization of this type of rent allocation is a common strategy in contemporary Indian politics.<sup>32</sup> As scholars of political settlements have noted, capitalists in India today 'have greater bargaining power because of increased political fragmentation' (Roy, 2013: 113). But politicians do not simply acquiesce to the newly pro-business balance: this also encourages centralizing tendencies once parties are in power.

This centralization and personalization of power in the Prime Minister's Office is inconsistent, however. In the two UPA administrations of 2004 to 2014, the PMO's dominance was challenged despite the fact that Manmohan Singh opted to hold the critical coal portfolio on and off while prime minister, a decision that would become highly contentious with the Coalgate scandal of 2012. A series of tell-all books has made plain the fact that Singh, 'the accidental prime

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<sup>30</sup> They each appointed ministers of state—junior ministers who only attend cabinet meetings on items of relevance—rather than cabinet ministers to the role: S. Venugopalachari of the Telugu Desam Party, a coalition ally (1996-7); and the academic Yoginder K. Alagh (1997-8). Some ministers of state act to support cabinet ministers; others are given 'independent charge' of ministries, as in the case of the two most recent young incumbents, Jyotirao Madhavrao Scindia (Congress) and Piyush Goyal (BJP).

<sup>31</sup> The Plan contained fairly radical proposals later made mandatory in the 2003 Electricity Act, including SEB restructuring, tariff rationalization, private participation in distribution, and independent regulators. The actual agreement came about in farcical fashion, however, demonstrating the dangers as well as potency of a prime-ministerial system. The Plan was put to a second conference of chief ministers. The apparently jetlagged prime minister abandoned the agenda and, with dinnertime drawing near, the Plan was hastily ratified with virtually no discussion (Abraham, 2009: 281).

<sup>32</sup> See Wilkinson (2007) for a discussion of earlier attempts at patronage centralization, and the inevitable State-level resistance.

minister', in practice struggled to impose his will on the cabinet, rarely intervening in meetings, and ministers 'were even known to absent themselves if the agenda did not interest them' (Baru, 2014). In the power sector, then, 'There is no coordination mechanism. The PMO can bash heads, but only in crisis.'<sup>33</sup>

This was partially a matter of temperament, showing the deinstitutionalized nature of reliance on the PMO to direct energy policy. But it was also a matter of strategy, a strategy that began to backfire as the regime became tarnished by the media's favoured slogan, 'policy paralysis'. This points forward to the final section of this chapter: protecting turf is only half the story of this dynamic of institutional proliferation and interagency rivalry. In high-blame environments, as in cases when regimes become increasingly dogged by scandals and high-profile policy failures, state agencies often become more risk-averse than resource-maximizing.

### ***Government by committee***

Even such attempts to manage key ministries cannot entirely overcome the problems of interministerial coordination, however. While Rajiv Gandhi attempted to create parallel circuits of influence within ministries themselves,<sup>34</sup> alternative liberalization-era strategies to facilitate interministerial cooperation in the era of coalition politics have often taken the form of committees of relevant line ministers. The Vajpayee administration introduced the mechanism of the Group of Ministers (GoM). These groups were appointed by the prime minister or cabinet to investigate particular issues. They were designed to facilitate consensual decisionmaking by select ministers, thereby in theory recognizing complexity and solving turf wars. This instrument was wielded with gusto by the UPA administrations—at one point in 2007 there existed over fifty GoMs—and extended still further to create Empowered Groups of Ministers (EGoMs), which were not required to refer back to the council of ministers but could take decisions on their own authority.

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<sup>33</sup> Interview, power ministry joint secretary, New Delhi, 21 April 2012.

<sup>34</sup> To ensure central control and enforce interministerial decisionmaking, Rajiv Gandhi experimented with the creation of a 'brains trust' of 'super-secretaries' answering directly to him, and with special 'advisors to the Prime Minister' appointed in each ministry—but '[n]one of these schemes worked well' (Potter, 1994: 89).

Several such groups were constituted for the power sector and related issues; those existing in 2012 are set out in Table 7.2. Others included groups to decide the fate of the formerly Enron-owned Dabhol power plant, Ratnagiri Gas and Power Private Limited, another on under-recoveries by oil marketing SOEs, and one on the two Ambani brothers' momentous dispute over power and gas pricing.

Table 7.2 Key EGoMs with power ministry participation, 2012

Issue	EGoM composition
On Gas Pricing and Commercial Utilization of Gas	Minister of Defence Minister of Home Affairs Minister of Power Minister of Petroleum and Natural Gas Minister of Chemicals and Fertilizers Minister of Law and Justice & Minister of Minority Affairs Planning Commission Deputy Chairman Minister of State in the Ministry of Finance
On Ultra Mega Power Projects	Minister of Defence Minister of Power Minister of Coal Minister of Law and Justice & Minister of Minority Affairs Planning Commission Deputy Chairman Minister of State of the Ministry of Environment and Forests Minister of State in the Ministry of Finance

Source: Ahn and Graczyk (2012: 19)

Unfortunately GoM and EGoM minutes are very difficult to access,<sup>35</sup> so it is difficult to assess the extent to which they successfully disentangled interministerial conflict or merely reproduced the wider problem of an absence of hierarchical control. Certainly even some EGoMs which took decisions struggled to enforce them: when shortfalls from Reliance's KG Basin reserves fell short, the firm stopped supplying the amounts allotted by the EGoM to the 'priority' power and fertilizer sectors, and the power ministry took up the skirmish again with the petroleum ministry (PTI, 2011).

Many other groups, like that on the Andhra Pradesh power crisis, hardly met. Given this fact, EGoMs became perceived less as a real attempt at coordination than as means to allow the prime minister to avoid responsibility, shelve controversial issues, and undermine the cabinet. Singh's former media advisor judged their purpose to be to 'pass the buck on tricky issues where

<sup>35</sup> A colleague found that even Right to Information requests were ignored.

he did not want to be seen taking the decision’, but concluded that overall the mechanism ‘effectively undermined prime ministerial authority’ by ceding turf (Baru, 2014; see also Gilani, 2012). After all, the prime minister stepped away from direct management. It was the finance minister and trusted Congress satrap, Pranab Mukherjee, who headed 12 of 27 GoMs and all 12 EGoMs at the point he shifted to the presidency.

Indeed, the finance ministry was perhaps the best-placed agency to step into the central breach. The finance minister is a key post in any regime, especially under well-connected and experienced incumbents such as Mukherjee, and the ministry has capitalized on its position in the liberalization era. It increased its control over financial direction of States and the national administration as Plan expenditure declined in importance. It also proved willing to colonize instruments and agencies that might otherwise fall under the purview of rivals. It was not the MNRE, with its special expertise in the field, that managed the clean energy fund, for example, but the generalists at the finance ministry and its boards of taxes and excise (Mehta, 2014b). More than this, the definition of ‘clean energy’ taken was broadened to permit diversion of the fund away from R&D towards the government’s consolidated fund or to support delayed projects. Similarly, a cess on oil and gas production was used to create an ‘oil industry development bond’ fund—but after an initial disbursement, the fund was managed not by the petroleum ministry but the finance ministry (*ibid*). Nonetheless, the Ministry of Finance lacked the hierarchical authority to arbitrate between competing ministries aside from on issues that fell under its purview.

A stream of other committee-based attempts to accelerate infrastructure projects rapidly foundered as ministries asserted their rights. In 2005 the prime minister created an interministerial energy committee under his principal secretary, reportedly revived in 2012 (Mehta, 2012). Again in December 2012 the administration established a Cabinet Committee on Investment to fast-track major infrastructure projects through speeding up clearances and solving interministerial disputes. Among its early successes was the end of a 14-year conflict between Coal India and NTPC over a power project in Jharkhand, for which the power firm had permission but beneath which Coal India claimed reserves (Williams and Kumar, 2013).

However, such successes were rarer than deliberate obstruction by the divided ministries. An infrastructure consultant claimed that ‘resistance from ministries keen to guard their veto

rights' had watered down the Committee's powers: although envisaged as a powerful body, it 'does not have statutory power to override line ministries. So effectively it has become a pressure [group]... I think the line ministries felt uncomfortable about their powers being taken away, as usual' (quoted in *ibid*). Even cleared projects had seen 'no clear uptick in activity' (*ibid*). The National Investment Board, another solution designed to fast-track infrastructure projects, was similarly hobbled by disputes between the finance and environment ministries. In a letter leaked to the media, the environment minister complained that the Board was 'completely unacceptable as it will decimate the role of individual ministries in taking responsible decisions' (quoted in Singh, 2012). Government by collaborative committee—or, rather, by institutional proliferation—rather than by cabinet appears no simple substitute for a strong hierarchical authority at the centre.

### **Blame games**

The discussion above noted that, in high-blame environments institutional proliferation has a second dimension: it offers opportunities not only for resource maximization ('turf wars'), but responsibility evasion ('blame games') for the sector's repeated and obvious failures.<sup>36</sup> This final section examines the consequences of institutional proliferation and the weak centre for the evasion of responsibility for policy failures. It argues that for much of the period under consideration, the complex institutional architecture of the power policy apparatus enabled policymakers to deflect blame for the sector's obvious continuing failures.

Yet all such evasive strategies have a shelf life. Chapters 4 and 6 observed the success of some politically connected firms in seeking large new rents, thanks to their proximity to the state. Such particularistic rents have proved unstable, however. They gradually brought about 'negative feedback effects' as the national regime's legitimacy fell (Sen and Kar, 2014)—notably a regulatory backlash, spearheaded by the government's external audit agencies and the courts.<sup>37</sup> By 2014,

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<sup>36</sup> This section condenses arguments made in Chatterjee (2012).

<sup>37</sup> Regulatory institutions are public organizations of a particular type: their role is 'more procedural than substantive, more rule-making and enforcing than law-making and policymaking' (Rudolph and Rudolph, 2001b: 129). They have an arm's-length (i.e. not a direct 'chain-of-command') management relationship with the organization(s) being overseen (Hood et al., 1999: 8-9). Beyond this they vary greatly in form, mechanisms of operation, and ability to enforce decisions. The analysis here concentrates on the formal national-level agencies

then, this complex institutional architecture no longer allowed the central administration to escape responsibility for failures, but was seen as a key symptom of ‘policy paralysis’.

### *The norm: deflecting blame in the no-one-in-charge system*

Two decades on from the introduction of the IPP policy, the Indian power sector in many areas is still characterized by poor quantity (endemic load-shedding) and quality (voltage fluctuations). Several of the problems diagnosed in the 1980s—high tariffs for industrial consumers, persistently high levels of T&D losses, and the financial unviability of many State utilities—remain.

The persistence of the sector’s inadequate performance is striking. It is not as if policymakers are unaware of the failures of power policy. There has been a proliferation of enquiries within and without the state on aspects of exactly that issue.<sup>38</sup> Despite these snowballing reports, policy failures persist: ‘Many Studies, No Learning’, as one report put it (Morris, 2003: 38). While high-profile scams are revealed, the everyday failures of the sector often go underexamined. This prompts an intuitive question: not so much *why* policy fails—a question on which the earlier analysis has shed some light—but *how does the state ‘get away with it’?*

The complex organogram of the public-private, multi-departmental hybrid system opens many channels through which responsibility can be displaced or dissipated via the state’s organizational architecture and rhetorical strategies which capitalize on this.<sup>39</sup> Such evasive

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most relevant to the blame games discussed below. Scholars of regulation typically distinguish regulatory institutions from the orthodox constitutional checks on executive control, the legislature and judiciary. Nonetheless, judicial activism is one of the hallmarks of the twenty-first-century state in India and beyond and fulfils a somewhat similar role in challenging the older Whitehall-Westminster model (Ruparelia, 2013; Shankar, 2010). The two are therefore considered together here.

<sup>38</sup> There exist a vast number of evaluations of the power sector. These include cyclical official evaluations from ministries (e.g. Ministry of Power, 2002), planners (such as the Mid-Term Appraisals of the Five-Year Plans), and international financial institutions (World Bank, 1996); regular audits by government regulatory agencies (CAG, 2012) and the parliamentary Public Accounts Committee; longer-term evaluations (GoI, 1965; World Bank, 1999); and reports by special committees (Department of Power, 1980). Particular fiascos may prompt additional reports (Government of Maharashtra, 2001). Official accounts are supplemented by reports from industry lobbies (FICCI, 2012), think tanks and specialist NGOs, consultancy firms (World Bank, 2009), the business and mass media (*The Economist*, 2005), academics (Kannan and Pillai, 2000), and former bureaucrats (Rao, 2004).

<sup>39</sup> The public administration scholar Christopher Hood (2011) calls these ‘agency strategies’ and ‘presentational strategies’, respectively. He also discusses ‘policy strategies’, a micro-politics of blame avoidance within the meso-level state I am analysing. The latter often take the form of procedures designed to minimize responsibilities, for example through rigid rule-following or avoiding taking decisions—‘the rule of Nobody’, as Hannah Arendt defined bureaucracy (1994 [1963]: 289)—in part because politicians use transfers to reward obedience rather than initiative. As the Rajadhyaksha Committee report noted:

[W]here powers are delegated it is noticed that the concerned officers try to evade responsibility and wait for directions from the Board so as to ‘play safe’. This is because where delegated powers

manoeuvres often rely on formal delegation of power to other actors. They include federalism, sectoral compartmentalization, defensive reorganization, multi-agency arrangements, partnership working, decentralization, and delegating responsibility out of the state entirely, whether to experts, private corporations or ‘civil society’ (Hood, 2011: 19, 67-89).

As Table 7.3 shows from a survey of a representative subset of Planning Commission and Central Electricity Authority evaluations from the 2000s, official audits repeatedly implicate such forms of delegation and reorganization in their explanations of policy inadequacy. This repetition becomes almost ritualistic, ‘explaining away’ failure and thereby allowing it to persist. Bernard Schaffer (1984) thus called such repeated justifications for failure ‘escape hatches’ (see also Fernandez, 2008).<sup>40</sup> The repetition of such explanations in the absence of major policy shifts after the 2003 Electricity Act suggests that the state’s fragmented ecosystem thus allows policymakers to dodge responsibility for failure in the short and medium term, even as they continued to neglect the sector’s long-term health—and the state’s legitimacy—in the longer term. The ‘solutions’ offered, too, often further added to the state’s complexity.

Table 7.3 Some persistent problems and escape hatches

Persistent problem identified	Source	Escape hatch	Sample solution proposed
Leakages in the distribution segment	PC (2005: 333; 2008: 349)	Federalism: distribution is the domain of the States	Hiving off and privatization: Task Force to review; privatize (PC, 2000: 526-7). PC to review (2011: 328).
Unviable tariffs	PC (2005: 333; 2008: 349)	Federalism: States set tariffs Delegation: lack of regulatory independence (2011b: 320) and accountability (2005: 336), Central SOEs unfairly privileged PC (2005: 337)	Hiving off: Task Force to review (PC, 2000). PC to prepare discussion paper on regulators (PC, 2005). Inter-Ministerial Task Force to review implementation of open access.
Uncertain fuel supply ( <i>gas and coal</i> )	PC (2005: 328-9) (2011b: 317), CEA (2011: 129-	Sectoralism: problem lies with coal ministry and especially Coal India. Lack of political will to	Privatization and regulation: Deregulate coal prices, permit private mining, establish regulator (PC, 2000: 534).

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have been exercised and bona fide mistakes have taken place, as they occasionally must, witch hunts and interminable enquiries have been started[,] tending to dampen all initiative and enterprise. (Department of Power, 1980: 108)

On the ‘structural violence’ produced by bureaucratic rule-following behaviour at the street level, see Gupta (2012); for an insider’s view, see Subramanian (2004).

<sup>40</sup> On the ritualistic nature of audits, see Power (1997).

THE CENTRE CANNOT HOLD

	130)	change Coal Act.	
Slow environmental clearances	PC (2000: 523; 2011b: 300, 306-8)	Sectoralism: environment ministry to blame	Streamline clearances.
Slow land acquisition, law & order problems	PC (2011b: 308, 315), CEA (2011: 79)	Federalism: State governments must be proactive.	Hiving off: PC to review.
Delays in finalizing policies and regulations	PC (2000: 515; 2005: 327, 335-6)	Lack of political consensus. Missing ingredient: lack of regulatory expertise.	PC to prepare discussion paper.
Slow implementation, construction, and repairs	PC (2005: 327), (2011b: 317), CEA (2011: 86)	Missing ingredient: lack of human capital (PC, 2011b: 317) or coordination (CEA, 2011: 86).	Bring in 'manpower planning', use 'project management tools' (PC, 2011b: 317); human resource development (CEA, 2011: 149-151).

Notes: PC = Planning Commission

Table 7.3 shows that delegation strategies repeatedly feature as both the diagnosed problem and solution in official audits. 'Hiving off', for example, the tactic of passing responsibility onto technocratic 'expert' bodies (Schaffer, 1984), is often the first deployed. The Planning Commission was often called on to 'review' issues or produce policy papers, for example on the underperformance of independent regulatory agencies (Planning Commission, 2005: 336), while above we saw that GoMs were often criticized as means for the prime minister to dodge responsibility. A variant is the formation of innumerable expert committees to discuss every aspect of power sector failure. Rural electrification concerns have been passed on to a Smart Grid Task Force and related Forum (2010); State reluctance to bring in open access to the Inter-Ministerial Task Force for Operationalizing Open Access in the Power Sector (2010); and worries about PPP model contracts and everyday thermal plant operations to another two task forces. Both the centre and States have also frequently found it expedient to allocate responsibility to external experts, including World Bank consultants, thereby heading off blame, at least in the short term (Jacoby, 2001). Sometimes this astutely brings in expert advice, but at other times it appears much more a tactic of postponement—and one which only adds to the problem of institutional proliferation.

The creation of regulators is a special form of 'apolitical' hiving off. It may at first appear odd that some States should voluntarily renounce their control over resource distribution through tariff setting. The creation of SERCs can be seen as a potential tactic for blame-avoiding State

administrations tiring of the financial burden of electoral subsidy promises: the international template ‘freed the politicians of their responsibilities’, while allowing the creation of the unpopular regulators to be blamed on the centre, argued Joël Ruet after interviews with State power secretaries (2003: 12-13). In reality the credibility of this delegation has been limited (Chapter 5). As the experience of middle-class lobbying for tariff revisions shows (Chapter 6), voters clearly believe that the final power of decision still rests with the State governments.

Even privatization and partnership models of working also offer the opportunity to shift the locus of unpopular decisions, forcing companies to publicly demand tariff rises in the face of popular opposition (Ruet, 2003: 13). Private participation also offers readymade villains in the case of underperformance. In times of crisis, some policymakers prove willing to vilify (temporarily) even those companies that the state’s pro-business policies have done so much to bolster, as we shall see below—though the government’s closeness with key business players weakens this tactic.

The key blame-shifting strategy in the power sector, though, rests with federalism. Using electricity’s ambiguous status on the Concurrent List, the tendency is to shift public responsibility—and therefore risk—for difficult tasks downwards or sideways, as noted two decades ago by Bose (1993: 95-6). Evaluation reports are typically content to suggest changes at the margin rather than to the structure of governance itself. This includes pre-emptive strikes—‘more than ever before, the success of the Eleventh Five Year Plan will depend upon the quality of service delivery by the State Governments’ (Planning Commission, 2008, vol. 1: 5)—as well as reactively attributing failures to continuing State-level weaknesses on the distribution front (2005: 333; 2008, vol. 3: 349) or in managing land acquisition and law and order problems (Planning Commission, 2011b: 308, 315; CEA, 2011: 79). So, for example, the national government blamed the failure to bring in allocation by competitive bidding for coal blocks on ‘the compulsion of federalism as many state governments had opposed it’ (Mathur, 2012: 13; Parakh, 2014). This is the flipside of ‘provincial Darwinism’, the survival-of-the-fittest logic of the liberalization era: unfit States are blamed for policy failures. As Table 7.3 shows, this tactic has repeatedly proved attractive. Nor is this confined to the power sector. Atul Kohli writes of ‘the changing nature of the credit-and-

blame political game in India' that national leaders 'take credit for achievements... while shifting the blame for failures to [S]tate-level governments' (2012: 66-7).

The complex organizational structures of state capitalism 2.0 recur as a means for state agencies to battle to escape blame: the shift to a more decentralized state system weakens accountability by blurring traditional lines of control through delegation. The very disunity and organizational complexity of the state dissipates responsibility. Through these tactics, blame for recurrent failures is displaced, deflected, and finally dissipated—in turn allowing failing policies to persist with only tinkering around their margins. Despite the frequent recourse to creating new bodies, institutional proliferation thus appears to facilitate the evasion of responsibility rather than solve it. In this way layering is implicated in the persistent low-grade crisis of power policy.

### *The regulatory backlash and the crisis of legitimacy*

Yet, as the opening vignette of this chapter illustrated, these strategies have a limited shelf life. Ritualistic audits and strategies of blame diffusion eventually become unconvincing, and so failures and scandals become politicized. This section concludes by returning to the regulatory backlash and the ensuing 'age of uncertainty' first encountered in Chapter 4 to indicate how the increasingly layered forms of administration in the power sector eventually created a crisis of legitimacy for the ruling administration.

The proliferation of institutions and the weakness of hierarchical authority undermined the formal framework for ensuring the accountability of the Indian national executive. Traditional accountability requires clear hierarchies, performance measures, and sanctions, resting on a modified, federal version of the Westminster model: parliamentary sovereignty, in practice especially through specialist committees;<sup>41</sup> the departmental model of hierarchical supervision; ministerial responsibility to parliament; the collective responsibility of the cabinet; and, grafted on, US-style judicial review (Austin, 1966: 126-7; Mitra, 2011: 75).

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<sup>41</sup> The most important of these committees are the three financial committees (Morris-Jones, 1957-308): the Public Accounts Committee (established in 1923), the Estimates Committee (1950), and the Committee on Public Undertakings (1964). In 1993 an attempt to improve parliamentary oversight was undertaken through the creation of new subject-based standing committees, including one on energy (examining coal, renewables, power, and nuclear). Though they 'have not curbed the decline of Parliament as a law-making body' (Rubinoff, 1996), since then they have gained in prominence.

This top-down vision of accountability through legislative oversight has come to appear increasingly untenable on two tracks. First, as the above discussion shows, the vision of a coordinated, hierarchical state structure presumed by the emphasis on a unified, collectively responsible cabinet and ministerial departments never reflected the empirical realities (Chapters 4 and 6; see also Venkateswaran (1967: 162)). Institutional fragmentation and complexity has only made ‘internal’ accountability more difficult.

At the same time the legitimacy of parliament, the primary ‘external’ control on the executive, decreased with the instability of regimes in the 1990s, a reputation for gridlock, and a host of corruption scandals. In the face of this declining legitimacy, the balance between state institutions, and the corresponding politics of accountability, altered. One survey found that Indians were not ‘indiscriminate’ in their ‘culture of distrust’ of state institutions (SDSA Team, 2008: 53-63). Fewer than half of those surveyed had high levels of trust in political parties but most showed high levels of trust in ‘expert bodies’ such as the courts and the Election Commission (*ibid*). As Vinod Rai, who did much to reinvent India’s supreme audit institution, the Comptroller and Auditor General (CAG), as a formidable if flawed watchdog, declared: ‘[W]hen some pillar of democratic functioning cedes space, some other institution will move in to fill the gap’ (2014: 113).

Into the breach left by the legislatures stepped ‘enhanced regulatory institutions’: the courts, the Election Commission and, increasingly, the CAG (see Rudolph and Rudolph, 2001b: 129).<sup>42</sup> As it appeared that the prime minister and EGoMs were little interested in controlling their agents in the energy sector, the audit bodies and the Supreme Court have taken rearguard action against egregiously close state-business relationships. Their role has been supercharged by an increasingly vibrant civil society and the 24-hour news media—societal watchdogs with broader, less technical definitions of accountability and ‘the public interest’.<sup>43</sup>

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<sup>42</sup> The CAG works for the State and Central legislatures, especially the non-partisan parliamentary Public Accounts Committee, in holding the executive to account.

<sup>43</sup> Their development lies outside the scope of this work, but these changes are also reshaping the politics of blaming, and claiming (Rajagopal, 2009: xii). The media’s financial links with energy capitalists and financiers have tightened at the same time. On the political economy of the media, see the subcontinental media watch website The Hoot ([www.thehoot.org](http://www.thehoot.org)).

Traditionally the CAG simply checked the quality of state bookkeeping and compliance; for long ‘it was a friendly poodle in service of the government’ (T. S. R. Subramanian, 2012).<sup>44</sup> This changed dramatically, especially during Rai’s tenure (2008-13). The CAG, today with a staff of around 50,000, became more activist and interpreted its role increasingly broadly. Alongside more traditional audits it now conducts ‘performance audits’ of government programmes (Karnad, 2011); their influence has been magnified by the office’s willingness to provide hypothetical calculations of the huge opportunity costs of corruption and policy failure. The CAG is also pushing to the expand its role to include new institutional forms that did not exist in 1971, the date of its foundational Act, notably public-private partnerships, provoking ‘large-scale lobbying’ to ensure this does not occur (T. S. R. Subramanian, 2012: 21). Then-CAG Rai argued that the office ought to concentrate particularly ‘on areas where the risk of misgovernment is the greatest’ (quoted in *The Economist*, 2012a), which in practice meant the energy sector.

This regulatory backlash gradually gathered momentum, spurred on by non-energy scandals like those over 2G spectrum. The zenith of the CAG’s influence on the power sector came with the Coalgate scandal over discretionary coal block allocations. For eight years between the prime minister’s first endorsement of competitive bidding in 2004 until 2012, the issue remained dormant.<sup>45</sup> Nor did the cabinet or legislature make much attempt to scrutinize the policy, despite written questions to the prime minister and coal and finance ministers as early as 2006. But in March 2012 a draft CAG report was strategically leaked which made dazzling accusations of ‘windfall gain’ from the opaque process (CAG, 2011).<sup>46</sup> The draft put the loss in potential earnings at more than \$210 billion. (The final report, published in August, revised the figure down to \$33 billion (₹1,86,000 crore).) In May the CVC ordered the CBI to open a preliminary enquiry, and the prime minister—who had also served as coal minister for much of the period, as above—was forced into an unusual defence in Parliament. The scandal culminated in autumn 2014, when the Supreme Court struck down the executive procedures and ruled all allocations through the screening committee route arbitrary and illegal. It cancelled 214 of 218

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<sup>44</sup> It was no agenda setter: its reports on the Bofors scandal and disinvestment appeared long after the extensive parliamentary and media debates on the issues, for example (Iyer, 1997: 98).

<sup>45</sup> Not all review reports are created equal: the Ashok Chawla Committee on the allocation of natural resources criticized the process but was not made public, and instead simply ‘gather[ed] dust in the corridors of power’ (Mehdudia, 2012.)

<sup>46</sup> The terminology was the coal secretary’s from July 2004. CAG letter to the prime minister, 22 March (printed in *Times of India*, 2012).

coal block allocations, and directed the companies to pay compensation to the state. Despite protests from firms with deallocated blocks, the new BJP-led national administration claimed the judgment meant a decisive break with the past.

Although ministers sought to discredit the audit body, the episode tarnished an administration already wracked by scandals (including the 2G spectrum, Commonwealth Games, and Adarsh scandals). The prime minister, himself often depicted as a figurehead, had been largely seen as above the corruptibility of the wider regime he nominally headed—but for the first time he was centre-stage. Along with the 2G telecoms scandal, Coalgate came to define the closing years of the UPA regime.<sup>47</sup> As Chapter 4 showed, the growth of politically connected firms declined from 2011 onwards, and has hardly recovered. Uncertainties over coal block allocations worsened the overall fuel supply crisis, leaving thousands of megawatts of new thermal capacity stranded.

The threat of scrutiny also encouraged the pre-existing trend toward ‘policy paralysis’. Clearances for major infrastructure projects slowed even further and bureaucrats appeared increasingly reluctant to exercise initiative. At an event organized by the industry lobby ASSOCHAM, the petroleum secretary and minister claimed that bureaucrats, worried about audits, were now paying ‘almost obsessive attention’ to ‘processes at the costs of results’ in the energy sector (Bhaskar, 2013a). This criticism was itself a testament to the increased prominence of such agencies.

It is easy to exaggerate the power of the regulatory transformation. The length of time the scandal took to break and the failure of the sanctions mechanism operating through the CBI together suggest that the rise of regulation and the judiciary can provide only sporadic oversight over the pro-business state. The regulatory agencies are overworked and vulnerable to executive power.<sup>48</sup> They also struggle to impose sanctions, for which they are reliant on the criminal investigations of the Central Bureau of Investigations (CBI), an offshoot of the police and a far

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<sup>47</sup> The office’s role in the 2G spectrum allocation scandal discomfited the administration enough that, as we have seen, in January 2011 they brought in the unlikely Jaipal Reddy to replace the Reliance-linked Murli Deora as petroleum minister, thereby seeking to avoid another scandal.

<sup>48</sup> The CAG is expected to sign off on 20 Central and 70 State-level reports each year and certify the accounts of all the Union, State, and Union Territory governments. On paper its head enjoys the same constitutional status as a Supreme Court judge, serving a six-year term and removable only by impeachment, but the officer is appointed by the executive of the day.

weaker organization (Narasimhan, 1997).<sup>49</sup> The CAG report having done so much to raise public awareness of the Coalgate scandal, the case was passed on to the CBI. Its response was feeble: it suggested that there was no case to answer, and sought to close most investigations. It later emerged that the CBI's draft report had been seen in advance by the law minister, joint secretaries in the coal ministry and the PMO, and the attorney general, who all suggested changes designed to stunt the scope of the investigation. The Supreme Court consequently labelled the CBI a 'caged parrot'. Thus the CBI, the implementation wing of the state audit bodies, has itself become the object of an 'intense turf war' for control between pro-business central administrators and more activist regulatory agencies, one that it is not yet clear that the latter is winning (Das, 2005a: 154).

Nor is there a clear regulatory project. Regulators are slow to raise the alarm about slow, low-grade crises. The handling of the UMPP tariff renegotiations as the prices of imported coal rose also elicited mixed messages from different regulatory bodies. In April 2013 the CERC directed the State governments to compensate Tata and Adani Power (CERC, 2014a, b), and decided to reopen the 25-year PPA for the Tata UMPP (CERC, 2013). Nonetheless, this decision did not carry the day. The appellate tribunal, Aptel, ordered an interim tariff increase—but the State discoms appealed the decision. A month later the Supreme Court stayed the interim order, arguing it was not possible to renegotiate contracts allocated through tariff-based competitive bidding, and dispatched the matter back to Aptel. 'It seems that tariff increase decision for imported coal based plants is a never ending regulatory/judicial process', wrote one financial services company (quoted in Gadgil, 2014).

Despite these defects, the regulators' findings over the energy scams resonated with the public. Not all policy failures and close state-business deals can be 'explained away'; strategies of blame dodging have their limits, and do not always succeed. There exists a 'blame avoidance frontier' beyond which blame shifting lacks credibility (Hood, 2011: 105-111). Crucially, this frontier moves along with the public's trust and confidence in the political and administrative establishment. In the longer term, the opacity of accountability relationships and the tendency to

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<sup>49</sup> The CAG lacks the power to summon officials before it, to compel them to produce records or give evidence on oath, to dole out sanctions, or even to prevent ministries from delaying the presentation of its reports to parliament (Iyer, 1997). The Central Vigilance Commission, the apex anti-corruption watchdog, is still weaker. It enjoys a supervisory role over the CBI on corruption cases but is itself an advisory rather than an investigative body.

evade responsibility impact the legitimacy of the state itself. Public blame games and well-publicized failures of formal accountability mechanisms, like the ones we have seen, come at a cost for the credibility not only of the blame strategy but the blame shifters themselves: ‘a vindictive public may not accept politicians’ non-culpability, especially in areas of high salience’ (Robert Gregory, 2003, quoted in Flinders, 2008: 176). Then ‘normal’ failures can become political crises ‘when influential actors in the political arena succeed in framing them as blameworthy violations of crucial public values’ (Brändström and Kuipers, 2003: 280).

The world-record blackouts that opened this chapter revealed the degree to which this ‘blame avoidance frontier’ had shifted by July 2012 as the administration’s legitimacy had plunged. In some ways they were ‘normal accidents’ in Charles’ Perrow’s famous phrase (1984)—that is, the type of accident that is inevitable in technically complex, tightly coupled systems with little slack, vulnerable to cascading failures.<sup>50</sup> International media commentary pointed out that in India power outages are endemic, after all, and middle-class and business users often have private generators to compensate (Peer, 2012; Shainin, 2012; Kazmin, 2012; AFP, 2012). Even mega-blackouts were not uncommon: inquiries into similar Northern grid collapses back on 1 January 1997 and 2 January 2001 had also implicated the States’ defiance of regional load dispatch centres (Ramanathan, 2001; CERC, 2001).

Instead, popular and business responses treated the blackouts as something supernormal—in part *because* of the ubiquity of blame games and the obvious failures of formal accountability mechanisms. The intensity of the blame game lay in the unpopularity of the regime: ‘Powerless and Clueless,’ declared the *Times of India* front page. ‘Superpower India: R.I.P.’ was the *Economic Times* headline. The failure ‘stunningly caps the shameful blowouts of governance & policy the country has been suffering with impunity’ (2012). A technical crisis thus became a political crisis.

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<sup>50</sup> This did not go unchallenged. Alongside the official enquiry, CERC registered a case to investigate grid regulations breaches (CERC, 2012). In February 2014, more than eighteen months later, the regulator pressed again, arguing that the blackouts’ causes ‘have not been investigated in depth’: ‘The report of the Enquiry Committee constituted by the Ministry of Power was submitted hurriedly in very short time span of 15 days’ (quoted in PTI, 2014).

Senior policymakers had long trumpeted the integration of the national grid (nominally completed to amalgamate South India on 1 July 2014) as a panacea. Mismanagement could equally make it a liability. A CAG audit of PowerGrid stated that ‘inter-regional transfer capability’ remained low, the objectives of national grid formation remained unachieved, and there remained systemic inadequacies in Indian transmission (CAG, 2014).

India's 'byzantine and fragmented' energy bureaucracy has at times facilitated the dissipation of blame—a form of inverted turf war to minimize responsibility—and thereby contributed to the persistence of policy failure. This strategy was a short-term one, however. In the longer term, it has helped to delegitimize the layered administrative structures of state capitalism 2.0. The layered structure of the central bureaucracy thus opened a path up for the centralization offered by Narendra Modi, who took charge in 2014 not as an economic revolutionary but an *administrative reformer*, as the epilogue (Chapter 9) discusses.

## Conclusions

As Part 2 showed, power sector reform in India has been a halting process of institutional layering. Faced with the high costs of destroying older organizations, these bodies are very often not simply destroyed, but new layers of organizations are allowed to accrete atop the remnants of the older ones. One result was the development of the byzantine organizational architecture outlined in Figure 7.1 above. This chapter examined the implications of this profusion of institutions within the national policymaking apparatus itself.

Within the national administration, layering was both a symptom and a further source of declining central coordination. The centre created new institutions to provide it with new tools—whether to create more malleable agencies, to accommodate coalition allies, or to keep 'politics' more at arm's length—but this in turn made the coordination of energy policy more difficult. Central policymakers struggled to discipline not only the large private conglomerates analysed in Chapter 4, but also the large, powerful agencies within the national policy apparatus itself. This lack of cohesion at the state apex is not new: in fact, it illustrates the path dependence in the balance of power within the state (Chibber, 2002, 2003). The process of institutional layering offered no solution to the pre-existing frailty of the central coordinating mechanism, however, but instead often exacerbated it.

The fragmentation of the Ministry of Energy left power policy divorced from its essential relations with the upstream industries. Meanwhile, infrastructure ministries gained power while the hierarchical authority that nominally coordinated them declined. This has fostered horizontal turf wars which undermined the coherence of Indian energy strategy—indeed, it is not clear that

India had any overarching energy strategy at all. This confirms one conclusion of Chapter 6: that it is not interest-group competition alone that has undermined power policy, but a competition mediated by institutional complexity.

At the same time as turf wars undercut the coherence of power policy, horizontal complexity facilitated their inverse: blame games. Through the state's complex institutional architecture persistent policy errors were repeatedly 'explained away'. This came at a high cost. In the shorter term, it helped to undercut the impetus for policy change and allowed the perpetuation of an inadequate status quo. As regulatory and popular agitation about the absence of hierarchical coordination and monitoring of the system's persistent failures and pro-business scandals grew, however, this strategy of blame dissipation lost credibility. Institutional proliferation and government by committee were popularly re-evaluated as symptoms of 'policy paralysis'.

The power sector thus provides a lens on the wider implications of the centre's weakness over time. The weakness of central coordination—its unwillingness *and inability* to discipline its own agencies, often with scandalously close links with private business—created a low-key crisis of legitimacy. This left the door open for regime change in 2014. Within the broad parameters of state capitalism 2.0, this *administrative crisis* would provide the Modi regime with its *raison d'être* and its *raison d'état*, as the epilogue will discuss.

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PART 4  
CONCLUSIONS

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## 8

# Conclusion

And so these men of Indostan  
Disputed loud and long,  
Each in his own opinion  
Exceeding stiff and strong,  
Though each was partly in the right,  
And all were in the wrong!

—John Godfrey Saxe, ‘The Blind Men and the Elephant’

This thesis has analysed organizational change in the Indian power sector between 1991 and 2014 in order to construct a case study of the changing morphology and operations of the state in the era of economic reforms. The unusual choice of the power sector as a lens provides a new angle on the state, very different to the usual focus on industrial, trade, and social policy in much of the existing literature. Using this lens, it offers a novel account of the process of liberalization in India and its outcomes. Unlike many existing analyses, it seeks to survey not only the reformed ‘zone’ of India’s political economy, but to locate this zone in the context of the power system as a whole, and the interactions between the reformed and unreformed elements of the sector. It argues that we cannot understand India’s liberalization-era political economy by looking at its liberalized or private sector-dominated segments alone: their characteristics and evolution are inseparable from the statist ‘sediment’ upon which they are grafted, and which they have in turn helped to reshape.

The thesis’s argument is threefold. First, it analyses the process of power sector reform in India as one of gradual institutional layering, and shows that the state retains a revised but still crucial position even as private players have come to play an increasing role (Part 2). Second, it

outlines a distinctive analysis of the emergent outcome of this fragmentary process of institutional development: state capitalism 2.0, an organizational amalgam that combines and layers state activism and public-private collaboration—and in which the state’s own modes of activity have themselves been reinterpreted to address elements of the market critique. Third, it shows this state-capitalist hybrid to be distinctively dysfunctional due to its layered emergence. Organizations have emerged in an ad hoc fashion, each shaped and reshaped by multiple collective interests, while existing organizations are rarely destroyed. Part 3 especially highlights the proliferation of rents and internal crisis of control that this organizational proliferation has facilitated. These sources of dysfunction cast doubt upon whether state capitalism 2.0, as it emerged in the period from 1991 to 2014, is a stable alternative either to state ownership or the mode of ‘deregulatory’ liberalization found in Anglo-American power systems.

This concluding chapter first draws out the broader thematic conclusions from the foregoing analysis, both in terms of the morphology and the functioning of the Indian state in the liberalization era. Second, it reflects on the implications of this sectoral case study for wider scholarship on the Indian state, given that this thesis rests on analysis of a crucial but in some ways unusual policy area. Finally, it suggests directions for further research that build on this analysis.

### **Thematic conclusions**

This analysis suggests that the umbrella concept of liberalization is too broad and indeterminate to capture the more complex and fragmentary process described here. Instead we must pay attention to *varieties* of liberalization, which are shaped by the earlier histories and pre-existing institutional arrangements of particular areas and sectors. As Kathleen Thelen has argued of changes to labour market institutions in the global North (2014: 12-13), it is necessary to distinguish between ‘deregulatory liberalization’, in which older institutions are ‘explicitly set aside in favour of arrangements that re-impose the discipline of the market’, and the more gradual, incomplete, and state-centred process and outcomes of the type documented here.

*The dynamics of institutional change*

Informed by historical-institutionalist scholarship, this analysis started by charting the pre-1991 genealogies of the power sector. Institutional arrangements, formal and informal, shaped during this period have continued to channel and constrain the direction of organizational reform in the liberalization era. These path-dependent constraints make sweeping policy or administrative reform impossible. Instead of the displacement of older organizations and policies, the process of institutional change in the Indian power sector has therefore been a gradual and endogenous one, marked by compromise and unevenness.

Due to the high costs of institutional replacement—too many interests had a stake in the status quo—this gradual process of institutional change has been characterized by *layering*, a concept adopted and modified from rich literatures on legislative politics and welfare state reform in the global North (Schickler, 2001; Thelen, 2003; Streeck and Thelen, 2005: 22-24; van der Heijden, 2011). In this mode of change, new or reinterpreted organizational elements do not displace or eliminate the old, but are superimposed onto them.

Reform in the power sector therefore proceeded not according to a preordained scheme, but through an ad hoc, opportunistic, and improvised series of stages, marked by continuities and compromise. The first phase of reform, the introduction of independent power producers, ‘was a convenient innovation that tinkered at the margin without attacking the decrepit core’, as one long-term energy commentator cuttingly observed (Mahalingam, 2005: 200). The independent regulatory agencies introduced in the second phase were often swiftly reabsorbed into the pre-existing politics of the state organizations upon which they were superimposed. It was only a decade later that the ‘bold and beautiful vision’ of the 2003 Electricity Act materialized; even then many of its key measures to encourage competition have remained stillborn in practice in most States. Today, only one-third of commercial generation capacity lies in private hands, and transmission is still overwhelmingly dominated by public sector companies. Outside Odisha and a handful of cities, the crucial distribution segment remains in the hands of State administrations.

In this process of layered reforms, older ‘core’ institutions have not been directly attacked but are left to coexist with new private institutions, as the areas in which market forces operate are gradually enlarged. Private participation therefore coexists with continued heavy state

participation. This dynamic has some similarities with Rob Jenkins' (1999) celebrated conception of 'reform by stealth', but it relocates the 'reformed' segment of the economy in the wider context of the 'unreformed' segment with which it remains intimately linked. The sediment of these statist institutions itself has undergone processes of both active institutional conversion to new objectives (in the case of central public sector enterprises partially reoriented to adapt to a more competitive scenario) and passive institutional drift (in the case of unreformed State utilities left to flounder with the intention of forcing reforms) as the wider environment changes. New or reworked organizational forms—such as public-private partnership, corporatized state-owned enterprises, and imported independent regulatory agencies—have thereby been grafted onto the older statist system.

### *State capitalism 2.0*

This process of reform as gradual institutional layering has created a distinctive hybrid outcome. In line with much existing research, this thesis confirms that the obituaries of the state written in the 1990s (most famously Ohmae, 1996) were premature. The previous chapters suggest that the transition to a liberalized or 'pro-business' system in India has been painful and incomplete, at least in the power sector. Indeed, the role of the state remains central in the liberalization era.

Yet this is a state with a morphology and modus operandi quite different to those of the classic East Asian developmental states, so often the reference points for any consideration of state activism in the global South (cf. Kohli, 2006a, b, 2012). It has not remained impervious to Washington Consensus-style critiques of traditional high-modernist dirigisme and state ownership, nor to the growing importance of corporate interests.

Morphologically it combines a variety of institutions whose characteristics and activities blur the public-private boundary. Chapters 4 and 6 demonstrate that the large private conglomerates that especially benefited from the sector's opening have developed structures and practices that rely on the sector's proximity to the state, an interdependence that crosses the public-private divide. Chapter 5 shows too that 'traditional' statist organizations like the centrally controlled power major NTPC have been retrofitted for market competition and now boast at least the veneer of corporate governance and autonomy. In its operations, the state in the power sector

is distinguished by increasingly tight networks of public-private collaboration. At the same time its forms of intervention and roles as an activist are myriad: it acts as the majority owner of SOEs, as financier, as the more or less senior partner of big business, as regulator, as risk absorber of last resort, and as the guarantor of stability and (however imperfectly) of popular rights.

This organizational amalgam is an evolving state-market hybrid, which this thesis labels *state capitalism 2.0*. As Chapter 1 explains, the term captures the state's persistently widespread economic influence and its critical role in structuring this system. At the same time it acknowledges the continuities in the state's fragile (and often antagonistic) collaboration with big business since 1947, and the continued direction of such business interests' profit-making interests towards opportunities for predatory profit through proximity to the state (Chibber, 2003; Weber, 1978: 164-6). Yet this system has been updated since 1991 to incorporate state support (rather than dominance) alongside market discipline and private capital: hence '2.0' (Aldo Musacchio in *The Economist*, 2012b). The thesis stresses that this is not the product of a coherent or articulated ideological project, however, but a pragmatic and ad hoc fusion of ideas from different public policy paradigms and organizations old, private, and imported.

### ***Distinctive dysfunction***

The layered and ad hoc process of its emergence has implications for the functioning of the state-capitalist hybrid state. Against Victor and Heller's (2007a, b) suggestion that the state-market hybrid represents a stable alternative to full electricity liberalization, this thesis suggests that, at least in the Indian power sector, it amounts no neatly functional hybrid but is characterized by contentious and expensive forms of dysfunction.

Chapters 6 and 7 explore two of these key forms of dysfunction in detail. The process of layering was structured by competition between private firms and the beneficiaries of older consumer power subsidies (namely wealthy farmers, residential consumers, and power thieves). Layering has created increasing institutional complexity and regional unevenness in the post-1991 power system across the Indian States. Chapter 6 shows that this layered complexity has in turn created a segmented policy process and a segmented power system. This segmentation permits uneven influence by different interest groups on different state agencies, tiers, and aspects of the

power system. The increasing influence of well-connected private firms (at the apex of the policymaking process at the national and State level and increasing private participation in power generation) can thereby *coexist* with the continuing influence of the ‘older’ consumer groups (via electoral and protest-group politics and influence on the distribution segment). In this way, the institutional proliferation characteristic of the layered emergence of state capitalism 2.0 has facilitated a proliferation of rent seeking and rents.<sup>1</sup>

Proliferating institutions, proliferating rents, and the generally gradual and ad hoc pace of reform all testify to the weakness of the central administration. Chapter 7 explores the central government’s crisis of control, which both promoted resort to the strategy of institutional layering, and was exacerbated by this layering in turn as the state’s bureaucratic organization became increasingly complex. If Chapter 6 suggests that the Indian state is *vertically* incoherent due to the effects of federalism, Chapter 7 shows that it is also *horizontally* incoherent as infrastructure ministries and their state-owned enterprises compete for influence. In the short term the state’s increasing institutional complexity allows policymakers to evade responsibility for power policy’s persistent failings. In the longer term, however, this no-one-in-control system contributed to the regulatory backlash and so-called ‘policy paralysis’ of the last years before 2014. This in turn laid the groundwork for the centralizing and technocratic solution offered by the new administration elected in 2014, which the epilogue (Chapter 9) will discuss.

The analysis points to deep fault lines in the Indian state, which precede liberalization but have not been solved by it—and indeed have often been worsened. At least in the power sector, the Indian state remains simultaneously more indispensable, more ambivalently pro-business, and more chaotic than much theory might suggest.

### **State capitalism 2.0 beyond the power sector**

Studying the state is famously difficult, as Chapter 2 noted. There exists a famous parable about five blind men and an elephant. State theories based upon detailed studies of any single area of policy risk committing this fallacy, unwittingly exaggerating the extent of their applicability. Any

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<sup>1</sup> This also suggests that the institutionalist assumption that interest-group competition automatically opens room for state autonomy (Rudolph and Rudolph, 1987; Jenkins, 1999: 38) is less likely once scholars take into account the concrete realities of institutions.

research that takes seriously the disaggregated nature of the state, and so avoids the fallacy of the blind men and the elephant, can make only modest claims. The interpretation presented here has hoped not to definitively contradict, but to enter into conversation with complementary accounts built on study of the state from the vantage point of quite different sectors and policies.

This is especially true given the unusual characteristics of electricity. It is a sector in which some of the patterns seen here—institutional complexity, a strong state role, and the presence of ‘rentier’ capitalists—are especially visible. While the sector is so crucial to the economy, politics, and society in India that any interpretation of the Indian state ought to take it into account, as Chapter 2 argued, this thesis’s contribution will also depend on the degree to which its arguments have some relevance beyond the sector’s sprawling confines.

This section tentatively suggests that the overall pattern described here—the layered emergence of state capitalism 2.0, and its consequent troubles—may not be unique to electricity. It makes a few observations about their relevance at the macro-level of India’s political economy, before closing with some suggestions for future research.

### ***Reinvented state capitalism***

This thesis has shown that direct state intervention remains far more crucial in India than most scholars acknowledge. Rather than a firm break, there has been a great deal of continuity in the macro-level picture from the first, failed generation of state capitalism. The state retains a key but changed role in state capitalism 2.0. It continues to actively mobilize resources, direct investment, and channel subsidies. More than this, the state remains *directly* interventionist.

Macro-level evidence suggests that this corrective may be true beyond the power sector. The shrinking state is a ‘myth’ (Nayar, 2009). Liberalization has come without a consistent reduction in the public sector’s contribution to GDP (Figure 9.1 below) or in public sector employment outside the central bureaucracy.<sup>2</sup>

Equally striking is the resilience of CPSEs—state-owned enterprises majority-owned and controlled by the central government—despite more than three decades of critique and neglect by

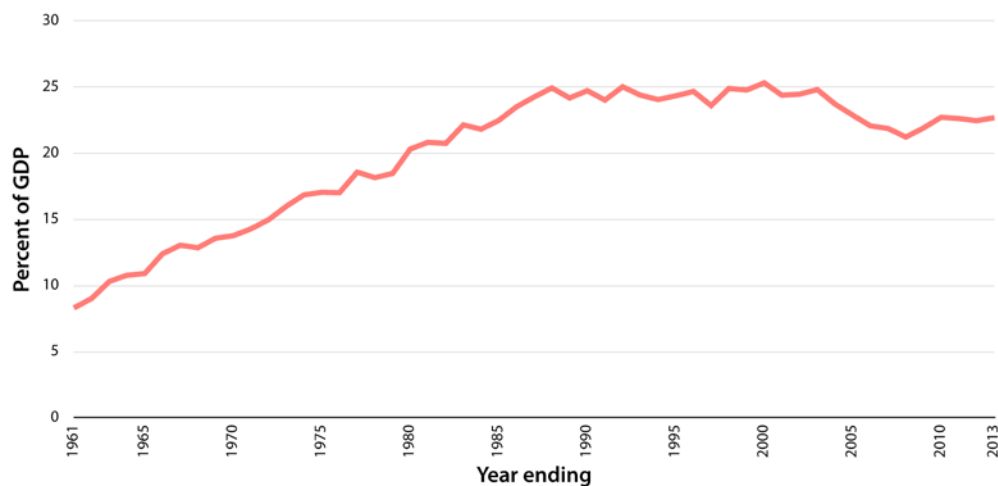
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<sup>2</sup> While official estimates suggest that public sector employment has shrunk by 10 percent since its peak in 1997, the decline has been much slower at the local and especially State levels. National Sample Survey estimates even show 3.4 percent annual *growth* in public sector employment over the 2000s (Nagaraj, 2014).

## CONCLUSION

ruling administrations. They continue to play a significant though not dominant role in the Indian economy: stockmarket-listed CPSEs controlled 41 percent of Indian big business wealth in 2011, as measured by the profits of its largest 100 firms (The Economist, 2011a). Despite the so-called ‘pro-business tilt’, today six of India’s 10 largest firms by sales (and eight by assets) are still CPSEs, down from eight in 1982 (Table 9.1). Even in Gujarat, the much-touted private-sector-led model of reform that spurred India’s new prime minister to his post, the state’s presence is obvious in the form of the Gujarat State Petroleum Corporation (see Chapter 9). Reviewing firm-level data from 1988 to 2005, two economists concluded: ‘The story rather is one of an economy still dominated by the incumbents (state-owned firms) and to a lesser extent, traditional private firms (firms incorporated before 1985)’ (Alfaro and Chari, 2009).

Figure 8.1 The public sector’s share of GDP (%), 1960-1 to 2012-13



Data from National Accounts Statistics, various years

Table 8.1 India’s largest firms by sales: 1982 and 2015 compared, highlighting government majority ownership

	1982		2015	
	Industrial unit	Ownership	Industrial unit	Ownership
1	Indian Oil Corporation	Government	Reliance Industries	Large business house
2	Steel Authority of India	Government	Oil and Natural Gas Corporation	Government
3	Hindustan Petroleum	Government	Indian Oil Corporation	Government
4	Coal India Limited	Government	National Thermal Power Corporation	Government
5	Bharat Petroleum	Government	Tata Steel	Large business house
6	Oil and Natural Gas Corporation	Government	Steel Authority of India	Government
7	Bharat Heavy Electricals Limited (BHEL)	Government	Bharat Heavy Electricals Limited (BHEL)	Government
8	Tata Engineering and	Large business	Tata Motors	Large business house

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	Locomotives	house		
9	Tata Iron and Steel	Large business house	Bharat Petroleum	Government
10	Madras Refineries	Government	Jindal Steel and Power	Large business house

*1982 data from Bardhan (1998); 2015 data from Sen (2015)*

More than this, Chapter 5 also highlighted the fact that state-owned NTPC, a ‘Maharatna’ state power major with minority shareholders and somewhat greater autonomy, had been outperforming many of its private sector counterparts. The formal structures of the SOEs have been *reinvented* under the influence of liberalization ideology and international financial institutions. On paper today the best of them indicate a new, entrepreneurial, corporate mode of state intervention as a key instrument of state capitalism 2.0.

Again this trend is not unique to India’s largest power generation company. In the last decade—and even before this—most of India’s CPSEs have in fact looked remarkably healthy (Figure 9.2 below; see also Nagaraj, 2015). Surveying sectors from chemicals and electronics to transport and textiles, T.T. Ram Mohan found that, while SOEs performed poorly in earlier years, ‘the advent of reforms has led to a convergence in performance between the public and private sectors’ from 1995 onwards—even in non-monopolistic sectors (2005: 195-6):

Post-deregulation, public sector firms were told to focus on profits and given a measure of freedom to do so. They delivered profits. There is little evidence here that public-sector firms suffer from a congenital inability or aversion to making profit. (*ibid*: 197)

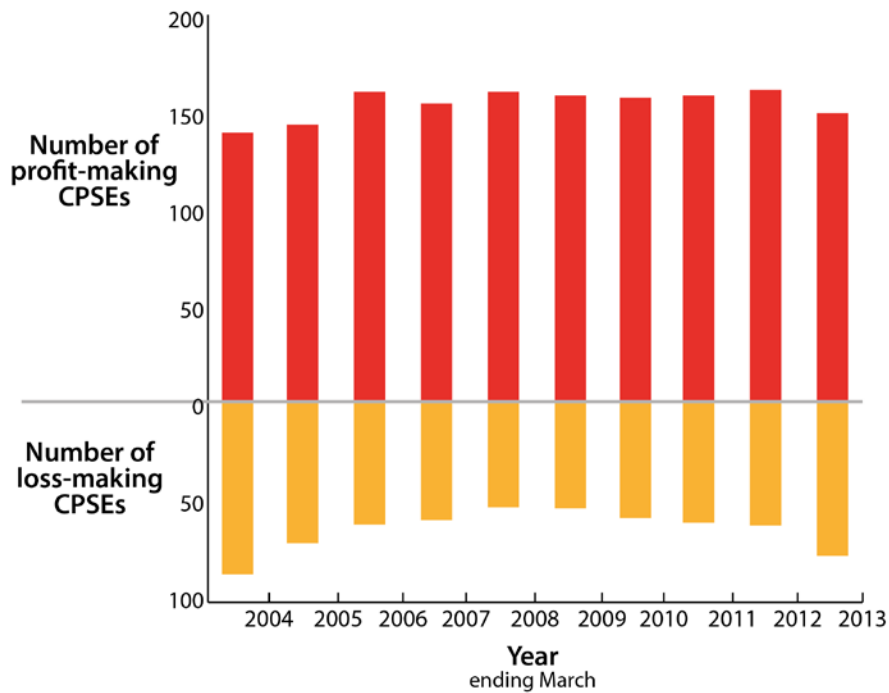
The gap may even have widened in favour of the public sector since this point. More recently in the manufacturing sector, state-owned firms have seen higher returns on capital employed than private firms in the last fifteen years (Figure 9.3; Khanna, 2015).<sup>3</sup> Overall net profit from all 234 existing CPSEs stood at ₹1,29,109 crore (around \$21 billion) in 2013-14, up a robust 12.3 percent on the previous year (Department of Public Enterprises, 2014: 4).

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<sup>3</sup> The lag in the service sector is attributable to a handful of large enterprises, notably Air India/Indian Airlines, the two state-owned telecoms companies, and the Food Corporation of India (Khanna, 2015: 55). On losses and Indian food policy, see Mooij (1999), and for an insider’s account of the decline of Air India, see Bhargava (2013).

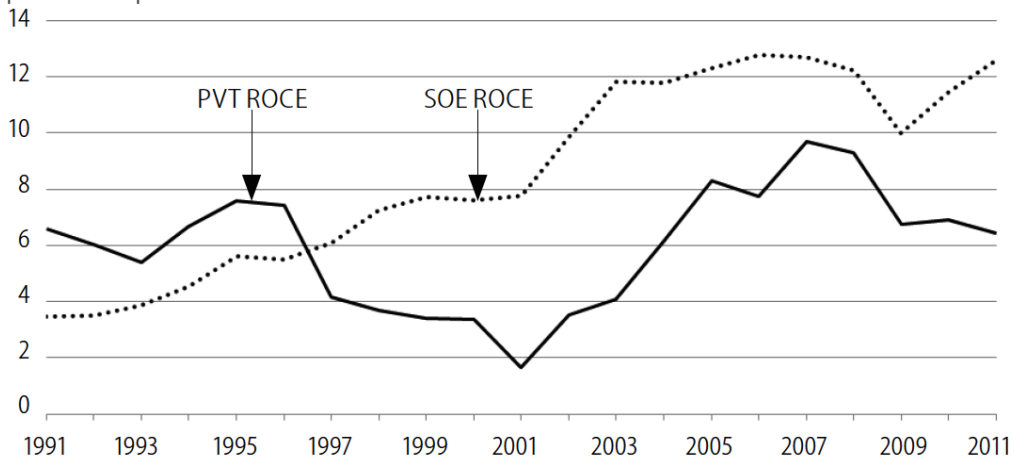
## CONCLUSION

Figure 8.2 The profitability of CPSEs, 2003-4 to 2012-13



Data from Department of Public Enterprises (2013: vol I, 4)<sup>4</sup>

Figure 8.3 Manufacturing firms' return on capital employed (ROCE): private and state-owned enterprises compared



Source: Khanna (2015: 54); data from the PROWESS database, focusing on non-financial firms with sales above ₹100 crore, 1991-2011

### **Public-private partnership: some unsettling conclusions about the private sector**

While its layered emergence has failed to displace many of these statist structures, the foregoing chapters also demonstrated that state capitalism 2.0 *does* amount to a qualitative change from first-generation state capitalism. Gone is the older emphasis on detailed planning and overt

<sup>4</sup> The report attributes the rising number of loss-making enterprises in 2012-13 in part to improved audit procedures in some CPSEs.

protectionism. State capitalism 2.0 places new emphasis on discipline via market competition, public sector reform, and independent regulation; the state ‘tries to stimulate, not replace, the private sector and much emphasis is placed on public-private collaboration’ (Trubek, 2013: 4).

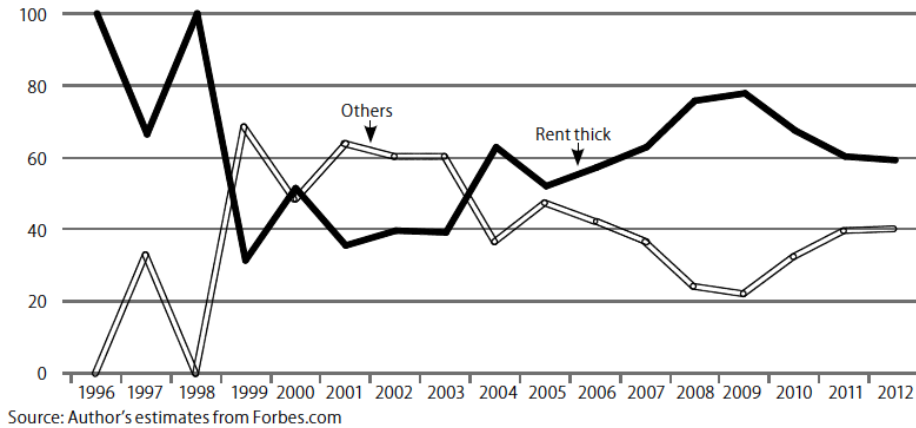
This broadly fits with recent literature on Latin America, China, and the global North, some of which was reviewed in Chapter 1. Several scholars of these regions have suggested that contemporary state activism relies on hybrid organizational forms and modes of operation that fuse elements of statism with liberalization and increasingly operate in overt partnership with business (Musacchio and Lazzarini, 2014; Trubek et al., 2013; Hsueh, 2011; Ó Riain, 2004; Breznitz, 2007; Block, 2008). Each of these hybrids is different, conditioned by local contexts, histories, contestations, and resource endowments. While much of this existing scholarship focuses on high-technology export-oriented sectors and the state’s role in fostering innovation, this thesis shows that similar dynamics may apply in some quite different sectors.

Following this, in Chapters 1 and 4, I identify the most crucial difference between state capitalisms 1.0 and 2.0 as the novel contemporary emphasis on overt public-private collaboration: the institutionalization of this through public-private partnerships and systematic influence in the policy process, the new fuzziness of the boundaries between the state and the private sector, and the tightening co-dependence of state and business. The power sector evidence discussed above does not suggest that the result has been an upsurge in effective competition, efficiency, and dynamic innovation, however. It also suggests that the capitalist class is far from monolithic: particular large, well-connected domestic incumbents have been the especial beneficiaries of the producer subsidies on offer (Chapters 4 and 6).

This assessment is also well supported by wider scholarship on India. A recent body of research also confirms that business is not a monolithic category, and that rentier capitalists have been particularly successful since around 2003, declining from around 2011 (Figure 9.4). Aditi Gandhi and Michael Walton (2012) claimed that ‘Indian capitalism seems to have two faces’: one set was concentrated in more dynamic, competitive sectors of the economy, the other in ‘rent-thick’ sectors such as electricity (see also Sen and Kar, 2014; Mehta and Walton, 2014). This thesis also strikes a note of caution, showing that even *within* a single (rent-thick) sector, different

firms deploy a range of different strategies of influence on the state (Chapter 6) and the state has also responded with oscillations between de- and re-regulation (Chapter 4).

Figure 8.4 Where do India's billionaires get their wealth? The private sector's reliance on rentier income and close links with the state



Source: Gandhi and Walton (2012); authors' estimates from Forbes.com

In touching briefly in Chapter 6 on the ways in which this rentier system is funded, the thesis also opens up an underexplored element of this political economy. The state has often leveraged its control over the sector to direct investment towards infrastructure sectors. Several favoured industrial conglomerates are financed through large-scale lending, especially via public sector banks, and large (and sometimes countercyclical) equity sales to state financial institutions such as the Life Insurance Corporation (see also Mohan, 1995). More broadly beyond the power sector (though electricity assets remain a key drag), this influence has left the banks overexposed to non-performing and restructured loans thanks to overleveraged and poorly performing private sector companies. State influence thus helped to create to a form of low-key, developmental 'subprime' crisis, the spectre of which continues to haunt the private sector today even if bullish investor sentiment has staved it off in the short term: the IMF recently found that one-third of the troubling drop in India's corporate-investment-to-GDP ratio since 2011-12 is attributable to overleveraging, leaving it vulnerable to shocks (2015: 4, 45-51). Again, then, this trend appears to extend beyond the power sector. Such increasingly sophisticated financial underwriting of big business by the state is currently underexplored by Indian political economists.

## Directions for future research

Both the foregoing discussion and the inevitable limitations and lacunae in the thesis suggest several different areas on which a future research agenda might build. I sketch only a few here.

Most obvious would be to extend the analysis beyond the power sector to examine how much purchase the concept of layered state capitalism 2.0 has for India's wider political economy. How can we reconcile these findings with the somewhat different conclusions of scholars extrapolating from more conventional sectors—industrial and trade policy, say?

In addition, the dynamic of segmentation that the thesis has suggested is one outcome of layering—fostering a selectively active private sector with a disfavoured and overlapping public sector, much of it insolvent—may also have wider applicability in drawing attention to *interaction effects* between the 'reformed' and 'unreformed' area of India's political economy. Similar segmentation is in evidence in labour markets, health and education policy, and the continuation of welfare schemes even while draining them of resources during the 'pro-business tilt': a simultaneous Polanyian double movement. Examining such different sectors would also correct this thesis's bias towards treatment of the formal economy, providing a more integrated perspective on how far 'state capitalism' can apply if more than 90 percent of livelihoods lie outside the direct purview of the state and how this segmentation conditions its character.

Particular aspects of reinvented state capitalism could only be treated briefly here but are worthy of in-depth study: for example, on the political economy of the state's continued financial control through organs like the Life Insurance Corporation, the Power Finance Corporation, and the public sector banks. There exists no dedicated history of state-owned enterprises, or much work on the 'paradox' of their improving performance over the last fifteen years (Khanna, 2015). There is also a rich and largely untold story of how the 'milking' of the state-owned sector fits into the wider political economy of party-political funding. Aside from the brief sketch provided in Chapter 6, this thesis's focus on changes to the administrative side of the state did not allow any systematic treatment of this issue, which reached titanic proportions in the election campaigns of 2014.

This thesis has also paid less attention to State-level political economies than they deserve. The State-level analyses presented in Chapters 4 and 5 raise interesting possibilities for

## CONCLUSION

the regional applicability of the concepts presented here: for example, comparing Gujarat's 'state capitalism 2.0 with a strong administration', in which State-level state-owned enterprises have sometimes developed in direct competition with central enterprises, with the overtly reformist yet tightly constrained developments in Andhra Pradesh. The exploration of regional variations in path-dependent layering and state capitalism 2.0 is likely to prove a rich seam for future research, providing a new approach to regional variations in state organization in India.

This thesis has therefore tentatively illuminated only a small angle on the state. The elephant is a moving target, and the blind (wo)men studying Indian political economy can grasp only here and there a rope, a fan, a spear. Further close research on why the state is comparatively 'stronger', more coherent, and more convincingly 'capitalist' in particular policy areas is warranted—so that gradually, tentatively, the shifting shape of the beast emerges.

# 9

## Epilogue: Modification

‘How many hours do you get electricity?’ Modi asked the Gorakhpur rally on 23 January 2014. ‘We don’t get power,’ the crowd chanted back. Modi thundered, ‘In Gujarat, we get 24-hour electricity. Netaji,<sup>1</sup> you cannot turn UP into Gujarat. You need a fifty-six-inch chest to do that.’

—Joshi (2014)

Minimum government, maximum governance.

—BJP election slogan, 2014

### 2014: all change?

‘Among all forms of mistake,’ George Eliot famously wrote, ‘prophecy is the most gratuitous.’ Nonetheless, this epilogue seeks to shed a first light on a burning new question: are the features of the state documented in this thesis confined only to those of the power sector up to 2014, or do they have repercussions into the era of ‘Modification’?

The 2014 general election promised to change fundamentally the governmental equation in India. For the first time in thirty years, a single party, the BJP, enjoys a majority in the Lok Sabha. It is thus free from many of the constraints of coalition bargaining and boasts a decisive mandate to foster *vikas* (development); historical-institutionalist scholars have suggested that when a majority regimes appears after some period in the minority, ‘dismantling rather than layering of institutions is more likely’ (Pierson, 2004: 140n; Schickler, 2001). The regime promises a new

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<sup>1</sup> Samajwadi Party satrap Mulayam Singh Yadav, whose party forms the UP government. Gorakhpur is in Uttar Pradesh. Narendra Modi, now prime minister, was of course chief minister of Gujarat from 2000 to 2014. For an assessment of the plausibility of his chest size claims, see Sandhu (2014).

vision of the state—‘minimum government, maximum governance’—with a prominent role for a revitalized power sector.

The new government is headed by a leader, Narendra Modi, famous for his strong, centralized style of administration as chief minister of Gujarat. Upon his election many commentators predicted a radical reshaping of the state.<sup>2</sup> His victory was attributed to an ‘ideological consolidation of the right’, which went beyond the BJP’s ‘traditional base of social conservatives’ to mobilize a new group: ‘voters who favour less state intervention in the economy’ (Chhibber and Verma, 2014: 50).

What form this state reshaping would take was less certain. Modi was likened to every rightwing leader imaginable (Tharoor, 2014). First were the archetypal neoliberal reformers Ronald Reagan and Margaret Thatcher. Focusing more on Modi’s centralizing style, there were also comparisons with Asian ‘developmental state’ leaders such as Suharto, Lee Kuan Yew, and (arguably) Deng Xiaoping, as well as the religiously inflected liberalizer Recep Tayyip Erdoğan. Others instead focused on the darker side of Hindutva ideology, equating Modi to nationalists (Shinzo Abe, Ariel Sharon, Vladimir Putin, Mahinda Rajapaksa) or even to elected ethnonationalist dictators like Slobodan Milošević, Idi Amin—and, inevitably, Hitler (*ibid*).<sup>3</sup>

This epilogue makes some provisional remarks on the regime’s promise to change the functioning of the Indian state, with the proviso that the government is only ten months old at the time of writing. Once again the power sector’s treatment appears a useful lens. The success of the Gujarat model of power reforms featured heavily in the general election campaigns, with the BJP promising a ‘saffron revolution’ in energy in the country at large. Indeed, Modi is ‘obsessed with power,’ writes the director of the Brookings Institution, who interviewed him as chief minister, ‘as in, electricity’ (Antholis, 2014). The new government’s electoral mandate meant that finally the conclusions of the endless committees documenting aspects of power policy could be implemented. As one long-term energy commentator wrote, ‘There could not be a more propitious combination of circumstances to correct the imbalance’ (Mehta, 2014a).

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<sup>2</sup> See for example the varied supporters quoted in Daniel and Singh (2014) and Rapoza (2014).

<sup>3</sup> The last, Godwin’s Law-esque comparison was repeatedly made by Modi’s political opponents, including Rahul Gandhi, Congress stalwart Mani Shankar Aiyar, Bihar chief minister Nitish Kumar, and Modi’s predecessor as Gujarat chief minister, Keshubhai Patel (Fuechtner, 2014).

Using such power sector evidence, this chapter makes two suggestions, drawing on this thesis's central argument on the layered emergence of state capitalism 2.0 in India and its ensuing governance problems. It contends that the Modi administration's reforms must be understood in the context of the crisis of control of this state-capitalist regime, documented in Chapter 7. It argues that the path-dependent constraints that have channelled the power sector's institutional reforms before 2014 will not easily be dismissed. Nor does the Modi regime's handling of the power sector so far—and, indeed, the experience of the power sector in Gujarat—imply a movement to a fully liberalized regime. Instead, it suggests a further modification of state capitalism 2.0, in which both state direction and the market transition are solidified, hand in hand.

Within these broad parameters, the regime's primary concern is to address the fragmentation problems that this thesis highlights as the difficulty of India's peculiar mode of state-market organization. This means that governance reforms take precedence over economic ideology. On the evidence of its initial weeks, the Modi administration is not a regime of 'big ideas' but a regime that prioritizes improved *administrative efficiency*. To return to the international analogues above, Modi is more of a modernizer than a free market ideologue, a Lee Kuan Yew rather than a Thatcher or Reagan. The regime has both sought to make micro-political changes—altering bureaucratic behaviour—as well as reshaping state organizations, from the Planning Commission to the CPSEs and an integrated energy ministry. Within the bounds of state capitalism 2.0, this marks an attempt to reconstitute administrative power (packaged in the rhetoric of 'good governance') to create a strong administrative authority commensurate with the state's pro-business tilt, attempting to surmount the problems derived from the coalition politics of the 1989-2014 era. If the stuttering development of state capitalism 2.0 before 2014 amounted to 'institutionalized governmental disarray' (cf. Skowronek, 1982: 166), the new administration marks an attempt at a more authoritarian solution to this disarray. The key question, then, is: does this solution mark the end of the 'patchwork politics' of institutional reform (*ibid*), or is it itself a workaround rather than a recalibration of the state's institutional foundations?

## **Continuities in state capitalism 2.0**

So far the policy differences between the NDA and UPA regimes appear less striking than their similarities. The ‘slash-and-burn’ demise of the Planning Commission is an anomaly. On one hand, this continuity means still closer links with the big business interests analysed in Chapter 4, and a continued emphasis on moderately trimming government expenditure and reliance on private investment (Chandrasekhar, 2014a). On the other, it does *not* mean a decisive end to state interventionism. Mehta and Walton (2014) called Finance Minister Arun Jaitley’s debut a ‘distinctively old-style budget’, in contrast to Manmohan Singh’s famed 1991 budget: ‘While many—especially market reform types—anticipated a major statement of intent, the budget was typified by a long list of projects and even a few protectionist supports for specific industries.’ On the evidence of the administration’s first six months, India’s economic trajectory remains broadly unchanged.

### ***Still tighter public-private links***

The new plank of state capitalism 2.0 is the centrality of public-private collaboration (Chapter 4). Few doubt that this is likely to continue. Already the administration is accelerating decisionmaking on infrastructure and has taken a number of other ‘business-friendly’ measures, such as cutting back environmental checks. While investments in the overleveraged power sector, which now has slack capacity, have been somewhat slow to recover, several of the large power conglomerates explored in Chapter 4 continue to benefit from their close links to the administration.

Conscious that the regime’s reputation rests on its ability to deliver stability, the administration is so far taking care to appear even-handed (rather than too ‘pro-business’, in Kohli’s terms) while discreetly attempting to rein in the perceived excesses of the regulatory backlash. The Supreme Court’s decision to revoke virtually all captive coal block allocations (marking the ‘end’ of the Coalgate scandal) was greeted as the promise of a fresh start. Outside the coal sector, the administration has quietly moved to exert pressure on the courts. It remains to be seen how other regulatory agencies will be treated if and when another scandal arises.

*Continuing state intervention*

Before the election there was particular lip service played to an ill-defined ‘Gujarat model’. Many scholars have interrogated this for its lessons about the new national administration. Even before Modi’s time as chief minister (2001-14), the State was characterized by a regime of ‘bureaucratic developmentalism’ (Sinha, 2005: 92-99). Aseema Sinha characterized it as a largely non-ideological, technocrat-led regime that pragmatically bargained with the centre and consciously and systematically targeted pro-industrial investment as early as 1970. Such features are reminiscent of ‘governance’—the emphasis on technocrats and public-private consultation in policymaking—but also comprised a strong market-guiding role (*ibid*). These trends, alongside Hindutva ideology, were extended under the BJP administrations that have held power continuously from 1998, notably Modi’s centralizing leadership from 2001 to 2014 (Sud, 2012; Jaffrelot, 2014).

Nonetheless, the Gujarat model has been often misunderstood. Most scholarly attention has focused on the State’s consistent pro-business policies, and its far less consistent investment in human development outcomes (*ibid*; Hirway et al., 2014). In the power sector, the intense private participation in the sector owes much to an older history of captive power generation which long precedes Modi. Far less attention has been paid to Gujarat’s more traditional forms of state intervention. As Chapter 5 noted, the celebrated turnaround of the State’s power sector saw the administration working to win utility staff over, rather than pursuing unpopular retrenchment. The Modi regime in Gujarat opted to install new management and grant greater operational autonomy rather than abandoning direct state intervention in the economy.

Gujarat also has its own prominent ‘hybrid firm’, the Gujarat State Petroleum Corporation (GSPC). As a public-sector exploration company owned by the State rather than the central government, GSPC is unique. Against the calls of foreign players such as British Gas and Enron, Gujarat’s Gas Act of 1999 made it the single nodal agency in the gas industry. It enjoys day-to-day commercial autonomy, talented personnel, private partners, and a healthy balance sheet. Nonetheless, the corporation owes its strength to its relationship with the state: the administration allegedly helped secure lucrative deals for GSPC, notably in compelling British Gas to sell cheaply its stake in Gujarat Gas in 2012 and in securing a long-term liquefied natural gas

deal, again with British Gas, in 2013. In turn, GSPC has been criticized for offering gas on very favourable terms to the Adani Group. As these two examples suggest, the Gujarat model may not be quite what it seems.

The Modi regime at the centre has so far taken a similarly pragmatic stance on CPSEs, to the chagrin of some foreign observers who had expected rapid privatizations in line with his ‘Thatcherite’ reputation. Rather than renouncing control of key sectors (or taking on the unions), the administration instead looks to be continuing the policy of divesting small chunks of the energy CPSEs (Crabtree, 2014a). Even the mooted reduction of stakes in public sector banks would see the state retain majority ownership. It appears more likely that the administration will seek to restructure and ‘enterprise’ such SOEs to become more efficient and less of a budget drain, rather than abandoning this plank of state capitalism 2.0. Well-functioning SOEs, like Gujarat’s own GSPC, may be the beneficiaries rather than the victims of government favour.

Furthermore, the ability even of the majority administration to implement far-reaching alterations to electricity policy is limited and the government is proceeding cautiously. The path-dependent constraints on the power sector—the federal sharing of power and the influential interest groups in state-owned enterprises and State-level legislatures—will be difficult to shift. The administration has introduced an Electricity (Amendment) Bill, including the separation of carriage (the distribution grid) and content in different corporations, prospective unbundling of discoms to create competition, and prescribing tariff norms from the centre, but it remains to be seen whether these changes will work in practice. The new legislation revives many of the older concerns about cherry-picking, the fuel supply crisis, and the losses of the State-level utilities, and is ambiguous about the undoubtedly contentious process of implementation; even reformers are pessimistic and State governments have already begun to complain (Celestine, 2014; Prayas, 2015). This strategy therefore risks replicating the stillborn birth of the ‘bold and beautiful vision’ of the original Electricity Act (Chapter 4).

Other changes in the energy sector, as in the case of coal, have therefore again favoured the form of layering, and liberalization as segmentation. Coal mining has been opened up in a more systematic fashion to private companies, both Indian and foreign, through auctions, with the administration winning over State-level parties in eastern India with the promise of greater

revenues. This ends the quasi-monopoly of Coal India, but without dismantling the CPSE or ending the emphasis on captive rather than merchant mines, as had been predicted by some commentators. While the state coal major remains dysfunctional (if profitable), production has once again hit unprecedented levels as Coal India opens new mines under new, tighter monitoring.

### **From government to governance?**

The continuities in the broad structures of state capitalism 2.0, at least in the energy sector, do not mean the Modi regime is changing nothing. On the contrary, it bears at least the promise of an *institutional and governmental reconstitution of the state*, within institutional parameters that remain broadly similar. This should not be surprising; both in its election campaign and in office, the BJP administration has consistently attributed the woes of the later 2000s not to ‘a wrong reading of the underlying drivers of the economy and consequently, wrong policies and reforms’, but to ‘the previous government’s dysfunctional decision-making’ (Aziz, 2014).

Upon taking the prime ministership, Modi again announced that his administration would provide ‘smart governance’: ‘I believe government has no business to do business. The focus should be on Minimum Government but Maximum Governance’ (quoted in narendramodi.in, 2014). His regime would aim to shrink ‘the top layers of government’ and expand ‘at the grass-roots level’ (Kumar, 2014), and swiftly set about altering the administrative structure analysed in the above chapter.

If the structural combination of state activism and public-private collaboration remains broadly intact, what does ‘minimum government, maximum governance’ mean in practice? Examining the power sector’s trajectory during 2014, I suggest that its focus is an attempted regeneration of state authority and institutions through political reform, to tackle the coordination problems of India’s state capitalism 2.0 so far. This appears to mean a balance between executive centralization and technocratic decentralization.

### *Centralization*

Dismayed at the interministerial infighting he discovered upon taking office, as the epigraph to Chapter 7 showed, Modi's new administration brought in shifts in the structure and power of ministers and the top tiers of the state. Cabinet governance was weakened still further, in favour of a combination of centralization and delegation.

The size of the cabinet decreased somewhat,<sup>4</sup> in part facilitated by combining ministries.

Modi claimed:

Keeping our commitment to 'Minimum Government, Maximum Governance' we have made an unprecedented & positive change in Ministry formation... Various Assembled Ministries will be transformed into Organic Ministries for quicker pace of work & better coordination between departments.<sup>5</sup>

Energy was a special focus for centralization and reintegration. As this promised, the prized energy portfolios were combined through the creation of super-ministers rather than super-ministries. Piyush Goyal, son of a longstanding BJP treasurer (a role he also filled himself) and a prominent spokesman close to finance minister Arun Jaitley, took on power, coal, and new and renewable energy, thereby reuniting power with its most important primary fuel source and coal with its key consumer. In a review of the integrated ministry's first hundred days, Goyal summarized the rationale for the change in terms reminiscent of the problems of internal control that this thesis has documented within state capitalism 2.0:

#### *Inter-ministerial turf-wars*

The Government decided that the first step towards solving the power crisis in India was *an administrative one*—ending turf wars between Ministries which are wholly dependent on each other... Ever since, these three Ministries are working seamlessly. Silos have been broken and issues are looked at holistically, as opposed to a "Ministry A" versus "Ministry B" issue, as was the case earlier. (Goyal, 2014: 8, emphasis added)

The new setup promised not merely 'inter-ministerial coordination', but 'bonhomie', extending to all the other ministries upon which power issues impinged (*ibid*). Petroleum and natural gas, and environment and forest, remained as separate ministries (the latter combined with

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<sup>4</sup> At its largest (2013), the UPA-II government totalled 80 ministers: 33 cabinet ministers, 12 ministers of state with independent charge, and 35 ministers of state or deputy ministers. The first iteration of the Modi cabinet comprised 46 ministers, 24 of cabinet status, 10 with independent charge, and 22 ministers of state (Jagannathan, 2014a). It was swiftly expanded to 66, however.

<sup>5</sup> Narendra Modi (@narendramodi), tweets, 7:26 and 7:27pm, 25 May 2014.

information and broadcasting, and parliamentary affairs, under the first-time minister and spokesperson Prakash Javadekar, so prominent in blame games over the 2012 blackouts). The change was greeted as ‘a judicious mix of independence and forced interdependence’ (Jagannathan, 2014a). It was apparent that the environment was a secondary priority at best in this new system: officials were encouraged to relax environmental norms for infrastructure projects (Gilani, 2014).<sup>6</sup> At the same time, the integrated ministry initiated meetings with State-level power and mines ministries and with a wide range of stakeholders, including public and private producers, regulators, financial institutions, SOE managers, and renewables associations.

For the first time, something approaching the ‘integrated energy policy’ long mooted but never applied (Planning Commission, 2006) appeared feasible. The decrease in the cabinet’s size was also facilitated by creating ‘ministers of state with independent charge’, who conventionally only attend the cabinet for discussion of relevant issues. This was the status of the ministers, like Goyal, chosen to head the big infrastructure ministries. The locus of decisionmaking was thereby shifted away from the cabinet, with the cap for central ministerial clearances without cabinet checks raised to ₹1,000 crore (currently around \$165 million). The prime minister himself offered the embodiment of centralization. Cabinet substitutes, notably the Vajpayee and UPA regimes’ resort to GoMs and EGoMs (see Chapter 7), (empowered) groups of ministers widely perceived as means for the prime minister to abdicate responsibility for adjudicating between colleagues, were ended. An official statement explained that this move aimed to ‘expedite the process of decision making and usher in greater accountability’ (*India Today*, 2014).

How independent these empowered, integrated ministries will be in practice remains to be seen. The former CERC chairman Pramod Deo warned, however, that during the integrated energy ministry under Indira Gandhi—when a single cabinet minister handled energy, with ministers of state for each sector (see Chapter 3)—‘coordination between the various sectors came only at the ministerial level while the bureaucrats in various departments tried to protect their own turf’ (Unnithan and Sriram, 2014). In relying on the figure of the super-minister to unite the ministries, elements of competition and conflict will doubtless be preserved—as in any state.

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<sup>6</sup> In just two meetings (12-13 August), the new National Board for Wildlife cleared 133 of the 160 proposals before it (Gilani, 2014).

The more common criticism alleged that cabinet government had been well and truly replaced not by renewed ministerial responsibility, but by prime ministerial government. Modi's own list of portfolios contains the ambiguous line 'all important policy issues'. He was a much more vocal presence in cabinet meetings than his famously silent predecessor, so much so that the meetings risked becoming 'tutorials' for ministers (Gilani, 2014). He was accused of allotting portfolios to 'relative lightweights' to create an 'imbalanced Cabinet' that he could dominate (Unnithan and Sriram, 2014). The media reported that the prime minister's office itself had instead become the single-point authority for major decisions:

[D]ecisions by ministers have been few, with plenty of papers and files moving to the Prime Minister's Office (PMO), which is increasingly emerging as a centralised clearance point, even for routine and ordinary issues... [It] is PMO that seems to be the hot seat for infrastructure projects [including power]. A large number of decisions and meetings, big and small, in the infrastructure sector take place at Modi's South Block office. (Mookerji et al., 2014)

In the energy sector, as Chapter 7 noted, this marked the logical conclusion of the priority previous administrations have placed on centralizing control over the lucrative infrastructure ministries, with their control of valuable resources and conflicts. The new prime minister appointed ministers of state (independent charge) from the Rajya Sabha—that is, loyalists without significant popular bases of their own but who owe their position to the party—to both the petroleum and the conjoined power and coal ministries, while favouring technocrats over politicians by liaising with civil servants directly. In this way the PMO consolidated control.

This nascent shift to a more centralized and ministerial system has been accompanied by further moves to streamline the state apex (Chandrasekhar, 2014b). Modi was always expected to reduce the role of the Planning Commission, the possible competing 'head' irretrievably weakened since its 1950s and 1960s heydays (see Chapter 3); serious changes had been mooted for years. In August 2014 it was abruptly lopped off with '[n]o known consultation within the central government', the States, or even senior figures in the BJP (EPW, 2014b).<sup>7</sup> Modi announced that its replacement would be a new thinktank based on 'public-private partnership' and especially 'empowering the federal structure'. The body's removal was not a sign of more

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<sup>7</sup> Some senior BJP figures apparently expected a beefing-up of the Commission to control even non-Plan expenditure, along the lines of the 1998 BJP government (Ramakrishnan, 2014).

minimal central control. In the absence of the Planning Commission to allocate finances through the Plans, yet more of the power to allocate resources is likely to inhere in the finance ministry—which was already directing much of non-Plan expenditure, without recourse to guiding formulae (Chapter 7)—and PMO (EPW, 2014b; Srinivasan, 2014; Patnaik, 2015).

### *Technocracy*

The indications are that this is not simply a centralizing regime, however, but also one characterized by a parallel reliance on technocrats. Although none of his appointed ministers were technocrats, Modi ‘is known to discuss important issues directly with secretaries and, at times, even joint secretaries, across ministries, without bothering about the protocol of keeping ministers in the loop’ (Mookerji et al., 2014). The logic of appointing energy ministers without independent power bases also fits this pattern. As Modi stated in an interview, reforms should be delinked from ‘politics’: ‘There is bound to be resistance to reform, and therefore, it is essential to insulate the reform process from politics. Reform should be an institutionalised process’ (*Business Standard*, 2014). Again, this extends the processes of the autonomization of state agencies, documented in Chapter 5, and the repeated diagnosis of India’s problems as a surfeit of ‘politics’.

This too has come with strengthened discipline and top-down control through a new system of centralized monitoring and ‘micromanagement’. Modi reconstituted the Appointments Committee of the Cabinet as a body with only two members—the prime minister and the home minister, Rajnath Singh—thereby cutting out ministers, and allegedly cutting out Singh in practice (Jain, 2014); the prime minister therefore vets all senior appointments, including ministers’ private secretaries (Mookerji et al., 2014). Although it has slowed some appointments,<sup>8</sup> it has the advantage of minimizing lobbying for positions. Bureaucrats are also monitored through unannounced visits and use of identity cards to check attendance. Ministers appeared even more cautious: ‘The unstated instruction is to wait until asked for’ (Samanta, 2014); ‘some ministers are working on the basis of their understanding of what will please the boss’ (Sukumar, 2014).

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<sup>8</sup> Other organizations have been left headless, including Coal India and the explorations joint secretary of the petroleum ministry. Whether this is simply the product of micromanagement or more strategic is disputed (Samanta, 2014).

The administration also proposed limiting the number of administrative layers to four, rather than the present 12 to 15 in the States and the centre, nominally to speed up clearances and limit the number of veto points in the system (Kulkarni, 2014). This has not spelled an end to more familiar solutions when the administration seeks delay. On the controversial gas pricing issue, for example, a Committee of Secretaries was instituted and the issue stalled until after State elections.

### **Reconstituting the state: the authoritarian solution**

The end of the Planning Commission, more symbolic than substantive given the agency's existing weakness, ably established the regime's anti-statist, anti-planning and federalist credentials. But it is the projection of unitary power that has been still more crucial. Whatever its real achievements in the few months since it has been in office, the Modi administration's 'biggest achievement' has perhaps been his office's projection of 'a Prime Minister in control' (Samanta, 2014).

Of course, this is a high-risk strategy, most effective at the height of a new regime's popularity: 'While it may work well for the prime minister while the going's good, unfortunately the blame for any misstep will also land at his doorstep' (*Firstpost*, 2014). It remains to be seen whether even a strong leader with popular support will be able to improve state capacity and coherence. This is a largely informal strategy, a reconstitution by personalization and practice, rather than reconstituting the organizational structures of state capitalism 2.0 itself.

The thesis has explored the evolving organizational structures of contemporary India's reinvented state capitalism as it is manifested in the power sector, a sector at the heart of both industrial and agricultural interests. It has documented the incoherence of this new state capitalism. This epilogue has suggested that the new administration's tactics—a combination of centralization, delegation to technocrats, and high-profile 'good governance'—are one attempted means to combat this incoherence from the top down whilst preserving the broad structures of state capitalism 2.0 intact. The logic of these reforms is India's own, for all that the talk of 'governance' may appear to echo international models. Whether they can offer a more dramatic reconfiguration of the slowly and painfully transforming institutional structures of the state remains for another, later student.

# Appendix 1: Electricity in India

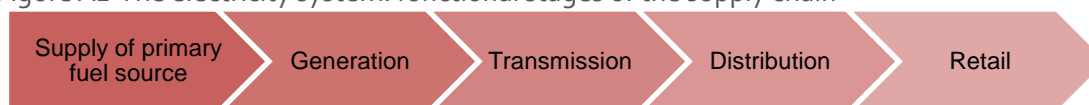
Electricity: carrier of light and power, devourer of time and space; bearer of human speech over land and sea; greatest servant of man—yet itself unknown.

—Charles W. Eliot, inscription on the Union Depot in Washington, DC

## An introduction to electricity

This appendix provides a brief primer on electricity and on electricity in India in particular. This is not an abstract topic, after all, but one founded in complex material and technical systems.

Figure A1 The electricity system: functional stages of the supply chain



Electricity is physically unique. It is prohibitively expensive to store, so demand must match supply at any one moment to retain systemic stability (easier said than done); there can be no ‘strategic electricity reserves’. Large-scale generation and (high-voltage) transmission and (lower-voltage) distribution through grids have high barriers to entry and high fixed costs. Until quite recently price signals were unclear: supply was fairly unresponsive, with long generation lag times and reliance on large coal-based plants which could not cheaply be turned on and off, while demand is generally relatively inelastic.<sup>1</sup> A supply-demand mismatch can lead to deteriorating quality (frequency and voltage fluctuations or ‘brownouts’) or loss of service (blackouts), both with serious economic costs. Synchronization and standardization across the supply chain (Figure A1) is essential.

Thanks to these unusual characteristics, the technical possibilities for designing electricity systems are broadly similar across the world. Virtually everywhere electricity ‘evolved with

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<sup>1</sup> Demand remains inelastic in India for agriculturalists and residential consumers, though less so for industrialists (Bose and Shukla, 1999; Filippini and Pachauri, 2004).

(primarily) vertically integrated geographic monopolies' (Joskow, 2008), variously private and state (see Chapter 3). The design possibilities shift along with available technologies, from the rise of computerized control and small, flexible combined cycle gas turbine plants in the 1980s—which shook the old certainty about the sector's centralized, capital-intensive economies of scale—to smart grids and dramatically cheaper renewables today, which promise to revolutionize conventional on-grid power—though not for some time. There is nothing inevitable about the specific technologies that have flourished, however: the standardized supply of 220 volts and 50 hertz in Europe versus ~110 volts and 60 hertz in the United States are arbitrarily selected levels, for example (Hughes, 1983; Patterson, 1999: 22).

Within these broad shared parameters existing electricity systems show some variation. After all, from an economic perspective electricity is ambiguous. Although infrastructure is often considered a public good with positive externalities, including that for which electricity is essential (such as streetlights), electricity consumption itself is actually a rivalrous and (given strong institutions) excludable good (Shaw, 2010: 81-5). Power generation also has serious negative externalities in the form of environmental damage. The purportedly universal template for power sector liberalization, meanwhile, rests on the debate over the natural monopoly status of grids in particular: electricity must always be a *regulated* network industry.

### ***Primary fuel sources and electricity in India***

As this suggests, physical and technological dimensions constrain and condition the development of power sectors. Although electricity—a secondary source—appears the same no matter the primary fuel source, electricity systems are conditioned by geography: by natural resource availability, topography, and demography,<sup>2</sup> and for India, even by its giant size (cf. Lewis, 1991). Power stations that utilize particular fuel sources have long lives and little possibility for substituting uses, locking in decisions for decades to come.

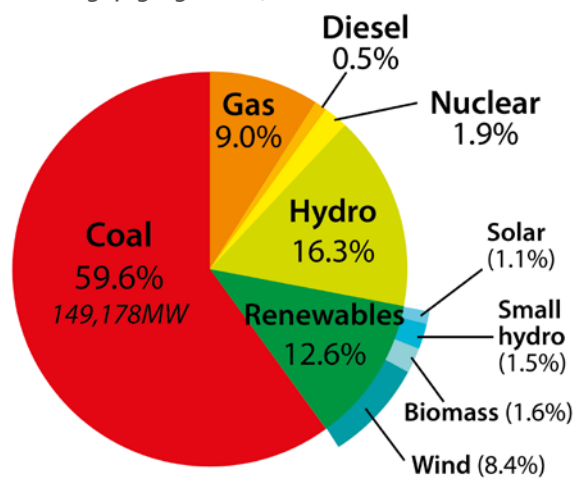
India's physical and technical endowments provide constraints on the developments in the structure of the power system discussed throughout this work. Like many other countries—

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<sup>2</sup> Due to the relatively high cost of distribution, rural power is much more expensive than urban power to supply, though often rural consumers are poorer.

including Indonesia, Malaysia, Thailand, Nigeria, South Africa, and China, as well as the Middle Eastern and Central Asian oil and gas states—it provides generous energy subsidies for consumers (Lockwood, 2014). Unlike most of these countries, it does not possess abundant fossil fuel reserves. As the thesis notes, Indian power policymaking takes place in a context of perceived energy scarcity. This is worsened by the global shift to a ‘new energy paradigm’ of unstable hydrocarbon producers, ageing assets, and international pressure for climate change mitigation efforts (Helm, 2007a).

Figure A2 ‘Coal nation’: all-India installed capacity by primary fuel source, as on 31 July 2014 (total: 250,256.98 MW)



Source: Central Electricity Authority data; renewables data correct as of 31 March 2014.

The importance of coal is greater than indicated here because thermal plants produce more output as a proportion of capacity, while the usable capacity of hydro, nuclear, solar, and especially wind is often lower than their theoretical capacity. Thermal plant load factors have improved since 1991.

India today has been called a ‘coal nation’ (Lahiri-Dutt, 2014a). The Indian power sector today is so reliant on it—see Figure A2—that elements of power policy are inseparable from the politics of coal. Coal-fired plants in practice provide around 70 percent of Indian power, and will contribute two-thirds of capacity added during the next five years.

Other fuel sources contribute, especially in some States (see Figure A3). Big dams, Nehru’s ‘temples of modern India’, continue to contribute a considerable amount of units, but a declining share of the overall energy portfolio. Gas is of rising importance especially to meet demand at peak times (gas plants being more flexible), although Asian gas prices remain an order of magnitude higher than the US Henry Hub spot price. India also likely lacks the huge shale gas reserves of the United States or even China. Nuclear and solar both currently contribute only a tiny amount to on-grid power generation nationwide, and so are touched upon only in passing in this thesis. Nonetheless, solar has grown rapidly since 2010 from an extremely low base, thanks to

a strong push by the centre under the Jawaharlal Nehru National Solar Mission. It remains concentrated in a handful of States (which supplied two-thirds of additions from 2010 to 2013), although the current administration has stepped up efforts to expand it rapidly, with a revised official target of 100GW by 2022, up from 22GW—although the Ministry of New and Renewable Energy privately believes 50GW to be a more feasible figure.<sup>3</sup>

Table A1 summarizes the problems faced by power plants using these varying fuel sources.<sup>4</sup>

Table A1 Problems facing on-grid Indian power generation using selected fuel sources

Fuel	% *	Persistent problems
Coal	59.6	<p>Fuel supply problems: underproduction by state-owned monopolist Coal India, underproduction from captive private blocks (exacerbated by the fallout of the 'Coalgate' scandal), and possible overestimates of reserves.</p> <p>Increasing reliance on expensive imports, creating balance-of-payments woes; large suppliers Indonesia and Australia raised prices in 2011</p> <p>Environmental, air pollution, and land acquisition problems: coal mining has displaced as many as 7 million Indians (Fernandes and Bharali, 2014)</p> <p>Some pressure from multilateral lenders to move away from dirty coal</p> <p>Most Indian coal is low-quality (high-ash and low-calorie)</p> <p>Eastern areas face law and order problems with Maoist insurgencies. 'Coal mafia' partially controls supply; high levels of theft and informal sales</p> <p>Rail linkage problems delay deliveries</p> <p>Plants frequently suffer from 'unscheduled maintenance', i.e. breakdowns. Coal plants take days to be reactivated after a shutdown</p>
Hydel	16.3	<p>Land acquisition, environmental, and resettlement and rehabilitation problems: dams account for three-quarters of India's development-related displacements, displacing perhaps 40 million people between 1947 and 2000 (Fernandes, 2004)</p> <p>High up-front capital costs</p>
Natural gas	9.0	<p>Fuel supply problems: limited domestic reserves, underproduction from Krishna-Godavari Basin (by Reliance Industries)</p> <p>High Asian gas prices for exports; even higher prices for naphtha and liquefied natural gas plus additional infrastructure requirements</p> <p>Price distortions passed through to power (and other consumer sections, like fertilizers) by complex system of subsidies; central administration has slowly reduced these over the last few years</p>
Wind	8.4	Land-intensive

<sup>3</sup> Businessman reporting conversation with MNRE secretary, personal communication with author, November 2014.

<sup>4</sup> There is a substantial literature on each of these fuel sources and their politics in India. On coal, see the collection edited by Lahiri-Dutt (2014a); on the politics of mining more widely, see Padel and Das (2010). On gas pricing, see Jain and Sen (2011); on the Reliance controversy, see Guha Thakurta (2014). On nuclear energy, see Ramana (2012) and, for a history noting the blurred lines between domestic energy and military programmes, Abraham (1998). On solar's rapid growth since 2010, see World Bank (2013), and on solar politics, see Harriss-White et al. (2009). For a seminal exploration of resistance to the famous Narmada dam, see Baviskar (1995).

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		Expensive Concentrated (70 percent) in only three States, Tamil Nadu, Maharashtra, and Gujarat. <sup>5</sup> Tamil Nadu has especially suffered from evacuation (grid transmission) problems; high proportion of wind in portfolio can affect grid stability
Nuclear	1.9	Secrecy and internecine strife within the nuclear establishment, including the involvement of the military Capital-intensive, cost overruns; once understated subsidies are taken into account power remains expensive Local protests and safety fears about catastrophic accidents Unlimited liability issue discourages private and foreign investors, even as courting of foreign investors is seen as an affront to nationalism and security
Solar	1.1	Land-intensive Regionally concentrated at present (in Gujarat, Rajasthan, Madhya Pradesh, and Andhra Pradesh), although with expansions in the pipeline Domestic banks hitherto reluctant to lend for renewables projects Prices have fallen rapidly to become some of the lowest in the world, but remain comparatively high (although solar has almost reached parity with imported coal); subsidies are high-profile compared to understated subsidies for fossil fuels Concerns about importing key components; facing World Trade Organization dispute with United States over indigenous purchase requirements High levels of flux in domestic firms
Diesel	0.5	Expensive; oil products are source of recurrent balance-of-payments worries Substantial environmental impacts

\* Percentage of installed capacity as of 31 July 2014.

Within government, as Chapters 3 and 7 discuss, power has at different times been sectorally separated off from its primary fuel sources, either in its own ministry or paired with irrigation. Much existing academic literature also replicates this denaturing of electricity. While I concentrate on the power sector itself, it is impossible in practice to divorce power from its fuel sources. Since 2011, for example, power policy discussions have been dominated by a worsening fuel supply crisis, especially linked to coal, caused by slowing domestic production and rising imports, increasing prices of Indonesian and Australian coal (which provided 55 percent and 23 percent respectively of India's imported coal in 2012), and the coal block allocation scandal of March 2012 onwards (inevitably named 'Coalgate'). Especially in the later chapters, this thesis is careful to place power into its essential context—as part of the broader energy sector.

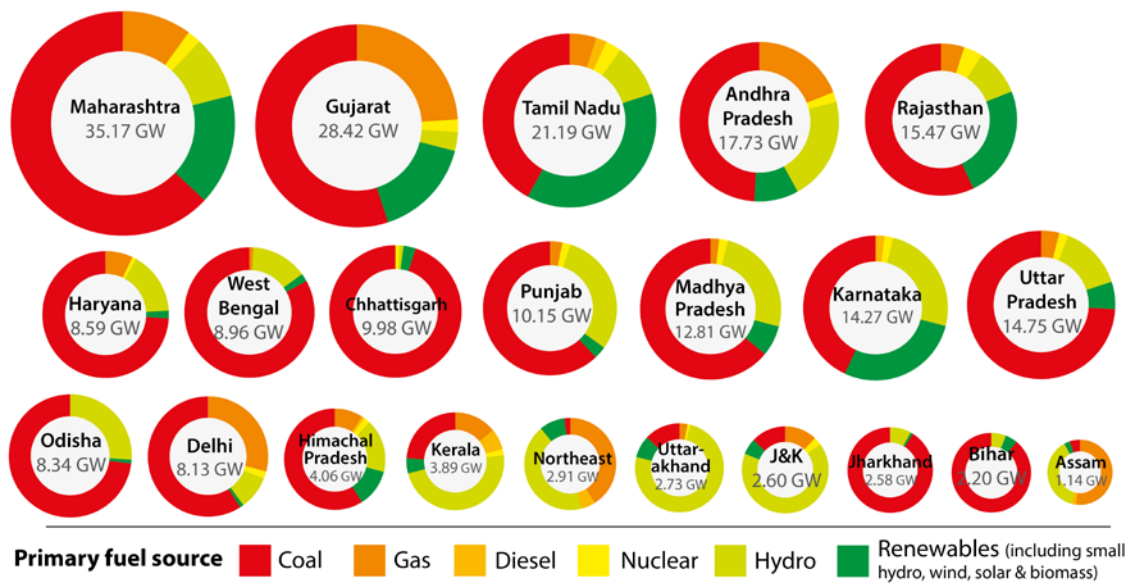
<sup>5</sup> As of May 2014 (India Wind Turbine Manufacturers Association, 2014).

## Regional variations

### *State-wise variations in fuel sources*

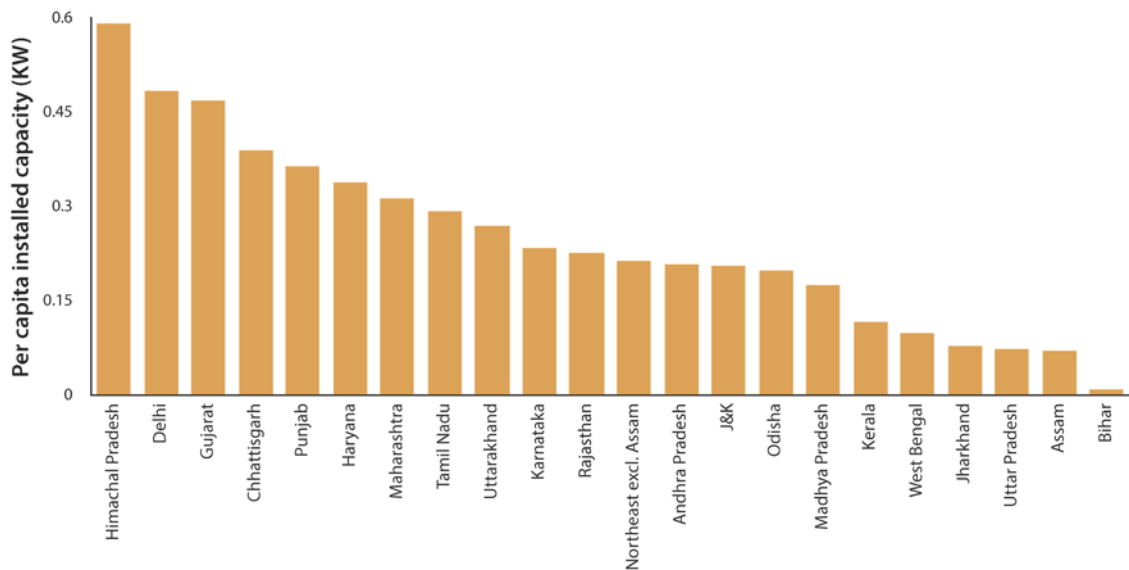
National-level figures mask important regional variations. Some States have far greater reserves of primary fuels than others, and consequently different policy room for manoeuvre. India’s major coalfields lie in the eastern States, while hydroelectric capacity is concentrated in the mountainous North. Even solar does not have equal potential everywhere. It requires both large amounts of sunlight, found in much of India although less so in the wetter east, and ‘empty’ land, as is found in arid areas of Rajasthan and Gujarat. This geological and meteorological variability is readily visible in the quite different portfolios of fuel sources used by various Indian States (Figure A3).

Figure A3 Regional variation in total installed capacity and primary fuel usage: installed capacity of power utilities by State, as on 31 July 2014



Note: Central Electricity Authority data. The Union Capital Territory of Delhi is also included as it has significant installed capacity, while the small States of the Northeast (excluding Assam) are grouped together. Telangana is included under Andhra Pradesh.

Figure A4 Regional variation in per capita installed capacity



Note: Central Electricity Authority data on installed capacity at 31 July 2014. Population data from the 2011 Census of India.

Nonetheless, the differing trajectories of State power policies do not simply reflect their resource endowments. The country is marked by grave inequality in power provision. Coal-rich Jharkhand and West Bengal remain under-electrified, while States with substantial irrigated agriculture and powerful farmer lobbies—such as Tamil Nadu, Punjab, Haryana, (western) Maharashtra, and Gujarat—have higher levels of rural electrification (Kale, 2014a). Bihar, with a population of 103.8 million citizens, has less than third of the installed capacity of Delhi (population 16.8 million), and a fraction of the per capita installed capacity (Figure A4); in 2011 only 16.4 percent of Bihar’s households used electricity as their primary lighting source (GoI, 2011). These inequalities are not new, but the result of longer-term policy decisions, as Chapter 3 notes.

As this—and indeed the entire thesis—shows, the effect of technology and physical access to resources is not deterministic, but socially mediated. Social, political, and institutional history also plays a role. As the World Bank acknowledged, after a decade of international stumbling for their ‘global template’ for power sector reform:

the performance of state-owned network industries reflects a variety of country characteristics both observable and unobservable, including institutional capacity, business culture, nature of organised interest groups, patterns of social conflict, and codes of conduct. (Kessides, 2004: 7)

Politics, institutions, and electricity are inextricably bound up in a fraught trilateral relationship.

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## Appendix 2: A timeline of major events in the Indian power sector

<b><u>Date</u></b>	<b><u>Event</u></b>
1910	Indian Electricity Act, setting licensing rules for public and private operators
1948	Electricity (Supply) Act brings all new generation and T&D facilities into state purview
1950	Constitution comes into effect, including power on the Concurrent List despite resistance from (among others) B.R. Ambedkar and Meghnad Saha
1956	Industrial Policy Resolution adopted, making electricity generation & distribution an exclusive responsibility of the state
1969	Central government establishes Rural Electrification Corporation to finance transmission extensions
1973	Coal Mines (Nationalisation) Act passed
1975	Central government establishes NTPC and NHPC, signalling the centre's major movement into the generation segment
1977	Possibly the first use of electricity subsidy as a political tool, with flat-rate tariffs offered to farmers in an effort to get Congress re-elected in Andhra Pradesh
1986	Centre establishes the Power Finance Corporation to provide additional project funding for the sector
1989	Centre forms PowerGrid India to move into transmission
1991	<b>Oct</b> Passage of Electricity Laws (Amendment) Act and amendment of the 1948 Electricity Act to allow private 'generating companies'
1992	<b>July</b> Ministry of Energy splits twice, into ministries of power, coal, and non-conventional energy sources (later New and Renewable Energy)
	<b>Oct</b> Government of Maharashtra announces signing of an MoU with the Indian subsidiary of Enron, Dabhol Power Company.
1993	The World Bank reviews its historical role in financing Indian power and suggests a change of approach—restructuring and the rollback of state participation—and sponsors conference in Jaipur for Indian policymakers to call attention to the shift
	National Development Council establishes Committee on Power, bringing together chief ministers
	<b>June</b> Coal Mines (Nationalisation) Amendment Act passed, allowing Indian companies in power generation, iron and steel production to engage in captive coal mining
	<b>Sept</b> Advised by external consultants and led by the reforming chief minister Biju

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		Patnaik, Odisha (Orissa) begins a pioneering process of comprehensive electricity restructuring; in September Odisha SEB issues a steep tariff hike
<b>1994</b>		Foundation of the Independent Power Producers Association of India (IPPAI) as a 'neutral proactive forum', i.e. a lobby
<b>1995</b>	<b>Nov</b>	Orissa Electricity Reform Act is enacted, forming an independent regulator and providing for divestment in generation and distribution
<b>1996</b>		Series of chief ministers' conferences, resulting in Common Minimum National Action Plan for Power
<b>1998</b>		Electricity Regulatory Commissions Bill and passage of the Electricity Regulatory Commission Act
	<b>April</b>	Under another reforming chief minister, Chandrababu Naidu, Andhra Pradesh passes power reforms
<b>1999</b>		Government of Odisha divests 51 percent ownership of its four discoms, three of which are successfully transferred through competitive bidding
<b>2000</b>		Power ministry initiates drafting of comprehensive legislation to replace all previous. First draft of the Electricity Bill is presented in February at the Chief Ministers' Conference, chaired by the prime minister. National Coordination Committee of Electricity Employees and Engineers formed
<b>2001</b>	<b>Jan</b>	Maharashtra State government stops payment to Enron's Dabhol power project and seeks to cancel power purchase agreement Delhi Electricity Reform Act passed, eventually privatizing distribution
	<b>Aug</b>	Electricity Bill finally introduced in Parliament
<b>2003</b>		Electricity Act finally passed, repealing the 1910, 1948 and 1998 Acts, mandating a competitive system, chiefly through open access in distribution
<b>2004</b>	<b>Jan</b>	First set of amendments to Electricity Act become effective
	<b>May</b>	UPA government assumes office, its National Common Minimum Programme having promised a review of the Electricity Act
	<b>July</b>	Coal secretary raises concerns about 'windfall gains' for private companies allotted coal blocks by screening committee, but despite the PMO's theoretical support competitive bidding is not introduced
<b>2005</b>		Power ministry issues Competitive Bidding Guidelines National Electricity Policy released Rajiv Gandhi Grameen Vidyutikaran Yojana launched (RGGVY, centrally sponsored scheme for rural electrification)
<b>2006</b>		National Tariff Policy and Integrated Energy Policy released
<b>2007</b>	<b>June</b>	Second set of amendments of Electricity Act on rural electrification, theft, and captive generation
<b>2008</b>	<b>July</b>	Launch of Restructured APDRP (R-APDRP), flagship central sector scheme
<b>2010</b>		Jawaharlal Nehru National Solar Mission (JNNSM) launched Indonesian government begins publishing a monthly coal reference price for

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- coal, requiring companies to sell with reference to this price
- 2011** Australian government announces plans for a carbon price scheme. Bill passes both houses in Nov, and comes into force in July 2012.
- 2012** **Mar** Coalgate scandal breaks
- April** Indonesia proposes a tax on its coal exports
- July** After a late monsoon, three interlocked grids in north and eastern India fail, causing huge blackouts. In the midst of the blackouts, power minister **30-31** Sushilkumar Shinde is promoted to the home ministry.
- Sept** Cabinet approves bailout package for SEBs
- 2014** **May** New administration takes power under premiership of Narendra Modi, with first parliamentary majority since the 1980s. Power, coal, and renewables are united under a single minister.
- Dec** Electricity (Amendment) Bill, 2014 introduced in the Lok Sabha



## Appendix 3: A glossary of technical terms

<b>availability rate</b>	Proportion of the total number of hours in the year that the plant was available for generation
<b>build-own-operate</b>	Build-own-operate (BOO) schemes are ‘methods by which private sector participation in the power sector is encouraged. Under these approaches, a project company under private ownership, or a joint venture with a minority public participation, is set up to plan, finance under limited recourse, design, construct, and operate power generation facilities’ (World Bank, 1993b).
<b>captive power plant</b>	‘Auto-generation’, a power plant set up by industry or other organization (e.g. a housing association) to supply its own needs, not with the primary purpose of selling to the market
<b>cost-plus</b>	A form of contract in which the contractor is reimbursed for all their expenses up to a set limit, <i>plus</i> a payment to ensure profit
<b>crore</b>	10,000,000
<b>dispatch</b>	To instruct a generator to begin or stop delivering electricity into the system (Patterson, 1999: 184)
<b>distribution</b>	Delivery of electricity received on transmission lines at distribution centre to retail consumer’s home or business through system of low-voltage wires, poles and conduits running along public highways. Distribution companies are often called ‘discoms’ in India, ‘discos’ elsewhere.
<b>generation</b>	The segment of the electricity cycle in which electricity is produced from a variety of sources, e.g. coal, natural gas, and nuclear fuel, typically through a device that converts mechanical energy into electrical energy
<b>greenfield</b>	A business that is developed as an entirely new venture, as opposed to one developed via the purchase of an existing business (cf. <i>OED</i> )
<b>grid</b>	Network of high-voltage transmission lines
<b>installed capacity</b>	The maximum continuous capacity of the generating equipment or system
<b>independent power producer</b>	Privately owned power producer established specifically to sell power, as distinct from private captive plants (above)
<b>lakh</b>	100,000
<b>load dispatch centre</b>	Control centre from which generation levels in various power stations are controlled for dispatch
<b>load shedding</b>	Euphemism for scheduled rolling blackouts to manage imbalanced demand

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<b>meter</b>	Device to measure the cumulative flow of electricity (Patterson, 1999: 185)
<b>open access</b>	Non-discriminatory access to infrastructure, in this case to T&D grids
<b>peak capability</b>	The maximum reasonable peak generating capacity of the existing system at any time, as opposed to <i>peak load</i> , the maximum simultaneous ultimate customer demand within the supply area of the system
<b>plant load factor</b>	‘Actual energy produced by a plant during a given period as a percentage of the maximum energy that could have been produced had the plant generated at full capacity during the same period’ (Department of Power, 1980: 207)
<b>power purchase agreement</b>	A contract between the purchaser (often a state-owned electricity utility) and a privately owned power producer, defining the commercial terms for the sale of electricity between the two parties, including payment terms. As it defines the revenue and credit quality of a project, it is a key instrument of project finance. (cf. Wikipedia)
<b>States</b>	Capitalized to clarify the difference between national governments (‘states’) and India’s 29 subnational, federal entities (‘States’) (plus an additional 7 Union Territories, including Delhi). Given that Telangana only came into being on 2 June 2014, most of the statistics presented here include it under pre-bifurcation Andhra Pradesh.
<b>transmission</b>	Transport of electric current from generation plant to distribution point over high-voltage lines
<b>turnkey</b>	Used to designate a contract, system, etc., whereby the contractor undertakes to supply or install a complete product or service that is ready for immediate use (cf. <i>OED</i> )

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