Reinventing State Capitalism: Leviathan in Business, Brazil and Beyond

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1. Introduction

In May 2007, the relatively unknown Brazilian firm JBS acquired Colorado-based Swift & Co for $1.4 billion and suddenly became the largest beef processing company in the world. Two years later, in September 2009, JBS made another surprising move by acquiring Pilgrim's Pride, an iconic American meat processing firm, for $2.8 billion. Where had a rather unknown Brazilian firm gotten the funds to finance such acquisitions? The answer was simple. The Brazilian National Development Bank (known in Portuguese as BNDES) had singled out JBS as a "national champion" and provided funding to make it a dominant player in the global beef and poultry market. Thanks to its $4 billion investments in JBS, BNDES eventually controlled 30.4 percent of the firm's shares, becoming its largest minority shareholder and, in turn, a minority shareholder of both Swift and Pilgrim's Pride.[1] These transactions, like many others conducted by governments and development banks around the world, raised interesting questions. Should governments use development banks, such as BNDES, to to support firms? Should governments support firms by becoming minority shareholders? What are the implications of such investments for firms and for countries as a whole?

In July 2010, while the JBS story was unfolding in Brazil, a consortium of investment banks on the other side of the world launched the initial public offering

[1] For further details of JBS's acquisitions, see (Bell and Ross 2008). For a discussion of BNDES's support for JBS, see (Almeida 2009).

(IPO) of Agricultural Bank of China (ABC) on the Shanghai and Hong Kong stock exchanges. ABC had traditionally been a "policy bank"; that is, a bank that lent according to the interests of leaders of the Chinese Communist Party. As a result, by 2008, over 25 percent of its loans were nonperforming. To fix ABC before the IPO, the government bailed out the bank, cleaned up its balance sheet, and revamped its processes and governance.

Investor interest was enormous. This was the largest IPO in the world at the time; it raised almost $22 billion for shares—15 percent of the firm's capital—and share value rose to almost 30 percent above the issuing price in a couple of months. Yet it was not clear if the investors who bought the shares knew what they were getting into. Were they misguided? Could the Chinese government be trusted as a majority investor?

In both cases, investors were faced with something that was clearly state capitalism, but was clearly not the state capitalism they were used to. In this book, we study the rise of these new forms of state capitalism in which the state works hand in hand with private investors in novel governance arrangements. We define state capitalism as *the widespread influence of the government in the economy, either by owning majority or minority equity positions in companies or by providing subsidized credit and/or other privileges to private companies*. The new varieties of state capitalism differ from the more traditional model in which governments own and manage state-owned enterprises (SOEs) [2] as extensions of the public bureaucracy. We refer to this traditional model as *Leviathan as an entrepreneur*.

We identify two new models of state capitalism that go beyond the Leviathan as an entrepreneur model. In the *Leviathan as a majority investor* model, as in the example of Agricultural Bank of China, the state is still the controlling shareholder but SOEs have distinct governance traits that allow for the participation of private investors. In the *Leviathan as a minority investor* model, state capitalism adopts a more hybrid form in which the state relinquishes control of its enterprises to private investors but remains present through minority equity investments by pension funds, sovereign wealth funds, and the government itself. In the latter model, we also include the provision of loans to private firms by development banks and other state-owned financial institutions. In our view, then, the rise of national champions such as JBS, whose expansion was based on subsidized capital from its home government, is a manifestation of the Leviathan as a minority investor model. [3]

[2] We conceptualize SOEs as *enterprises*; that is, they produce and sell goods and services. Such companies should be distinguished from government entities in charge of providing public services (such as courts, the police, social security, and national health services), which often do not have a corporate form and depend directly on orders from government officials.

[3] Our work thus contributes to the evolving literature on the varieties of capitalism (Hall and Soskice 2001; Schneider and Soskice 2009) by introducing a taxonomy of the ways in which states intervene in the management of firms. That is, we are concerned with variation in ownership and corporate governance at the firm level, while the literature on varieties of capitalism examines the coordination of economies as a whole—the connections between governments, firms, and labor. This literature has paid little attention to state ownership, despite the fact that some of the largest firms in OECD countries still have the government as a shareholder. One exception is Gourevitch and Shinn (2005), who explicitly link the active role of governments as investors in publicly traded firms to greater coordination among economic actors.

The examples of Agricultural Bank of China and JBS are by no means curious exceptions. By some calculations, firms under government control account for one-fifth of the world's total stock market capitalization.[4] In Italy, for example, SOEs listed on the stock exchange (both majority- and minority-owned by the government) account for over 20 percent of stock market capitalization. In Greece, this figure is 30 percent, while in the Netherlands and Sweden it is closer to 5 percent (OECD 2005, 35). In large markets, such as Russia and Brazil, companies controlled by the government or in which the government has a significant stake dominate trading and they account for between 30 and 40 percent of market capitalization. In China, companies in which the government is a controlling shareholder account for over 60 percent of stock market capitalization.[5] Furthermore, in our analysis of SOEs in myriad emerging countries (see Chapter 2), the Leviathan as a minority investor model is prevalent and covers about 20-30 percent of the companies in which the government has equity (the rest being majority-owned SOEs).

Thus, it is very likely, then, that global investors will have to at least consider SOEs as potential investment targets. In fact, nine of the 15 largest IPOs in the world between 2005 and 2012 were sales of minority equity positions by SOEs, most of them

[4] "China Buys Up the World," *The Economist*, Nov. 13, 2010. See also the discussion in *The Economist*'s special issue on state capitalism (Wooldridge 2012)

[5] We made these calculations using Capital IQ data on market capitalization and ownership and then tracing ultimate ownership. That is, for each firm, we trace who is the controlling shareholder and, if it is a company, we then track the ultimate ownership of that company. In China, SASAC and other state holding companies are the ultimate owners and controllers of much of the stock market; in India, the government and Life Insurance Corporation own equity in hundreds of firms; in Brazil, the government has direct stakes in some companies and uses its development bank, BNDES, to control others; in Russia, the government uses its flagship SOEs to own other firms. See Chapter 2 for some examples.

from developing countries.[6] One of the reasons why investors do not mind buying these securities is that governments share rents with them, which has often led to high returns. For instance, according to a report from Morgan Stanley, the stock returns of publicly traded SOEs from Europe, the Middle East, Africa, and Latin America between 2001 and 2012 "generated superior returns vs. [the] benchmark [indices]."[7]

Moreover, the firms that we study are by no means small. SOEs are typically among the largest publicly traded firms in the stock markets of developing countries. In fact, large SOEs have also become some of the most profitable firms in the world. The number of SOEs among the 100 largest companies in the *Fortune* Global 500 list, which ranks companies by revenues, went from 11 in 2005 to 25 in 2010. In 2005, there were no SOEs among the top 10, but by 2010, there were four—Japan Post Holdings, Sinopec and China National Petroleum (two of China's national oil companies), and State Grid (a Chinese utility). [8]

Still, many observers view the rise of new forms of state capitalism with apprehension. Political analyst Ian Bremmer (2010) characterizes state capitalism as "a system in which the state functions as the leading economic actor and uses markets primarily for political gain" (Bremmer 2010, 5). A Harvard Business School summit of

[6] Among the largest transactions were the IPOs of Agricultural Bank of China, which raised $22.1 billion, and Industrial and Commercial Bank of China, which raised $21.9 billion, and the secondary issue of shares of Petrobras, which on paper raised $70 billion. For the IPO list, see "State capitalism's global reach: New masters of the universe. How state enterprise is spreading," *The Economist,* January 21, 2012. For details of the Petrobras offer, see Dwyer (2011).

[7] Morgan Stanley, "EEMEA & Latam Equity Strategy: State Controlled Companies—Where to Invest Now," Morgan Stanley Research Europe, May 24, 2012, p. 1.

[8] All lists taken from the *Fortune* "Global 500" Web page, available at http://money.cnn.com/magazines/fortune/global500/, accessed on March 3, 2012.

founders and CEOs of some of the world's top companies identified state capitalism and its support for national champions among the 10 most important threats to market capitalism (Bower et al. 2011). Managers of private firms often complain when they find their competitors heavily supported or subsidized by local governments.

Although not all investors and policy makers feel such apprehension (Amatori et al. 2011), for many the concerns stem from the large theoretical and empirical literature showing that, *on average*, SOEs are less efficient than their private counterparts (see for a review Megginson and Netter 2001).[9] In this literature there are three broad explanations for the inefficiency of state ownership (Yeyati et al. 2004). According to the *agency view*, SOEs are inefficient because their managers lack high-powered incentives and proper monitoring, either from boards of directors or from the market, or simply because managers were poorly selected in the first place (La Porta and López-de-Silanes 1999; Boardman and Vining 1989; Vickers and Yarrow 1988; Dharwadkar et al. 2000). According to the *social view*, SOEs have social objectives that sometimes conflict with profitability. For example, they may be charged with maximizing employment or opening unprofitable plants in poor areas (Shirley and Nellis 1991; Bai and Xu 2005). According to the *political view*, the sources of inefficiency lie in the fact that politicians use SOEs for their personal benefit or to benefit politically connected capitalists. Additionally, managers of large SOEs commonly face low pressure to

[9] Note that we emphasize that comparisons are *on average*. Under certain conditions, firms with state ownership or control perform as well as private firms or even better; for example, when firms face competitive environments (Bartel and Harrison 2005). Also, SOEs seem to perform as well as private firms do when they follow the management and corporate governance practices of private firms (Kole and Mulherin 1997).

perform because they know the government will bail them out if they drive their firms to bankruptcy (Vickers and Yarrow 1988; Kornai 1979; Shleifer and Vishny 1998; Boycko et al. 1996). State participation would therefore entail a "grabbing hand" detrimental to economic efficiency.[10]

In contrast, defenders of the *industrial policy view* see state investment as a way to promote development beyond what is possible under free markets. In this view, governments should help firms develop new capabilities, either by reducing capital constraints (Yeyati et al. 2004; Cameron 1961; Gerschenkron 1962), by reducing the costs of research and development, or by coordinating resources and firms to pursue new projects with high spillovers (Rodrik 2007; Amsden 2001; Evans 1995). According to this view, the creation of new capabilities in the local economy requires the "helping hand" of the government to mitigate all sorts of market failure.

Our book is *not* about whether one view is right and the others wrong; nor is it a test of whether private firms are more efficient than SOEs. This book is about understanding (a) how the world ended up with new forms of state capitalism and (b) the circumstances in which these new forms overcome some of the problems highlighted by the literature and solve a host of market failures that thwart development. Although each chapter proposes and tests explicit hypotheses related to different views of the role of SOEs, the book as a whole is about the nuances of state

[10] The term "grabbing hand" comes from (Shleifer and Vishny 1998) and represents the idea that governments or bureaucrats run state-owned enterprises for political objectives rather than to solve market failures or to make profits.

intervention and the conditions that make such intervention either more or less effective.[11]

Furthermore, we are not trying to argue that privatization is not a desirable policy. We think, nonetheless, that the push back against full-fledged privatization in large developed and developing markets makes the study of the new forms of state capitalism relevant. That is, even if the new forms of state ownership we study are a second best solution from the point of view of economic efficiency, they are a solution that is often politically acceptable. In emerging markets, governments have encountered strong political opposition to sweeping programs of privatization. Shirley (2005) shows that, in Latin America, the popular rejection of privatization increased between the 1990s and the early 2000s. In BRIC countries, privatization programs have almost stopped in Brazil and India and have been proceeding at a gradual pace in China and Russia, with those governments now preferring to privatize only a small share of equity in their large SOEs.

Finally, we also do not claim that the new varieties of state capitalism are *universally* better than the previous varieties. We explicitly warn that the new varieties also have limits when it comes to taming the government's temptation to intervene politically in a firm. In the model in which Leviathan is a majority investor, for instance, the government is still a controlling shareholder and, absent checks and balances, it

[11] In that sense we contribute to an existing literature on both the determinants of private participation in former state-owned enterprises and the possible implications of partial privatizations (Ramamurti 2000; Doh 2000; Doh et al. 2004; Dharwadkar et al. 2000; Gupta 2005).

may be drawn to intervene in strategic sectors such as energy, mining, and utilities. In the model in which Leviathan is a minority shareholder, equity investments or loan disbursements may actually benefit politically connected capitalists rather than financially constrained firms.

The Reinvention of State Capitalism

How have the new forms of state capitalism evolved over the years? For some observers, the rise of state capitalism to the forefront of global markets is a consequence of the global financial crisis that started in 2008. Bremmer (2010), for instance, sees that crisis as a shock that led to an alarming reemergence of state capitalism. Part of the concern comes from the fact that, even in a liberal economy such as the United States, the crisis led the government to bail out firms such as General Motors and AIG, a large insurance group, becoming a minority shareholder of the former and a majority shareholder of the latter. As the examples of Agricultural Bank of China and JBS illustrate, however, state capitalism was alive and kicking—and even expanding—*before* the crisis (Amatori et al. 2011; Bortolotti and Faccio 2009). Firms owned and operated by the government were privatized en masse in the 1980s, 1990s, and early 2000s, but state ownership and influence in those firms continued.

State capitalism peaked in the middle of the 1970s when European governments nationalized firms in large numbers. Around the same time, governments in developing countries either nationalized firms or created (and then owned) tens or hundreds of new ones. As a consequence, by the end of the 1970s, SOE output to GDP reached 10 percent in mixed economies and close to 16 percent in developing countries.

Then, between the 1970s and the turn of the twenty-first century, governments transformed the way in which they owned and managed firms. In the 1980s, governments and multilateral agencies experimented with reforms in SOEs to try to reduce the financial hardship both SOEs and governments themselves were facing. Officials tried corporate governance reforms, performance contracts for firms and managers, and training programs for SOE executives (Shirley 1999; Gómez-Ibañez 2007).

Yet, these attempts were futile and the political cost of privatization started to look small compared to the losses afflicting SOEs. For instance, as a consequence of the oil shocks of the 1970s and the liquidity crunch of the early 1980s, SOEs from all around the world ran average losses equivalent to two percent of GDP, reaching four percent in developing countries (World Bank 1996). SOE losses were then translated into national budget deficits and those deficits exploded once interest rates spiked in the United States in 1979 and once debt markets were closed for developing countries after Mexico's 1982 debt default (Frieden 1991). Ultimately, as a consequence of those macroeconomic shocks and the fall of the Socialist bloc, governments ended up privatizing thousands of firms (Megginson 2005), opening up their economies to foreign trade, and gradually dismantling capital controls.

Still, because sweeping privatization was politically costly, some SOEs were only partially privatized. Around the world, governments ended up becoming controlling shareholders and minority investors in a large number and wide variety of corporations, as can be seen clearly in Bortolotti and Faccio's (2009) survey of SOEs in OECD countries and in the evidence we present in Chapter 2 for a broader sample of countries. While countries such as Australia, Austria, Belgium, Chile, Denmark, New Zealand, Slovenia, and the United Kingdom had less than 50 SOEs controlled by the government circa 2005, others such as Canada, Finland, France, Greece, Italy, Israel, Norway, and Sweden had between 50 and 100. The Czech Republic, Germany, Korea, Mexico, Poland, and Spain had more than 100 such firms. A more recent OECD report (Christiansen 2011) found that SOEs had a total equity value of US$ 1.4 trillion, of which 61% are firms in which the government holds minority stakes. Emerging markets uch as Russia and China had thousands of SOEs and others such as Brazil, India, Poland, and South Africa had over 200 SOEs at the federal level and many more at the provincial level.

Thus, the organization of state capitalism and state ownership that we observed at the turn of the twenty-first century is the outcome of a long process of transformation, of gradually adopting what has been learned from 30 years of research on corporate governance and agency theories (Jensen and Meckling 1976; Hansmann and Kraakman 2004; Khurana 2002) and decades of experimentation with SOE reforms and with full and partial privatizations.[12]

We are aware that, in the past, SOEs in the United States and Europe commonly had governments operating as minority shareholders (Bodenhorn 2003; Amatori 2012; Sylla et al. 1987). In the twenty-first century, however, ownership arrangements in many SOEs were accompanied by more stringent corporate governance rules and more stringent requirements to list firms on stock exchanges.

New Varieties of State Capitalism

Our conceptualization of the new forms of state capitalism, then, is full of nuances to avoid the dichotomous views that pervade some of the literature.[13] Bremmer (2010) treats state capitalism as a general model of capitalism, juxtaposed with an idealized form of liberal market economy in which the government does not intervene in the running of corporations or the allocation of credit. For us, there are more shades of grey in between. We therefore expand the spectrum of state intervention to include not only the model in which Leviathan is an entrepreneur—owning and managing

[12] In fact, the process of learning and experimentation with SOE reform does not seem that long when compared to the slow process of transformation of the corporate governance regime of the largest corporations in the United States. At the turn of the twenty-first century investors were still surprised by corporate scandals, by outrageous executive compensation packages, by boards of directors that were not monitoring managers effectively, etc. For a discussion of this process of transformation in private firms see Chapter 3 of (Khurana 2002).

[13] Some papers comparing the performance of SOEs and private firms acknowledge that there are different forms of state ownership. They usually divide SOEs into (fully) state-owned, SOEs with private ownership, and private firms and they usually find that private firms are consistently found to perform best of all (Boardman and Vining 1989; Gupta 2005; Dewenter and Malatesta 2001). These works, however, do not look at the variation in the corporate governance arrangements of privatized firms. They also ignore the implications of minority ownership.

SOEs (Ahroni 1986)—but also the models in which Leviathan is a majority investor or a minority investor (see Figure 1-1).[14]

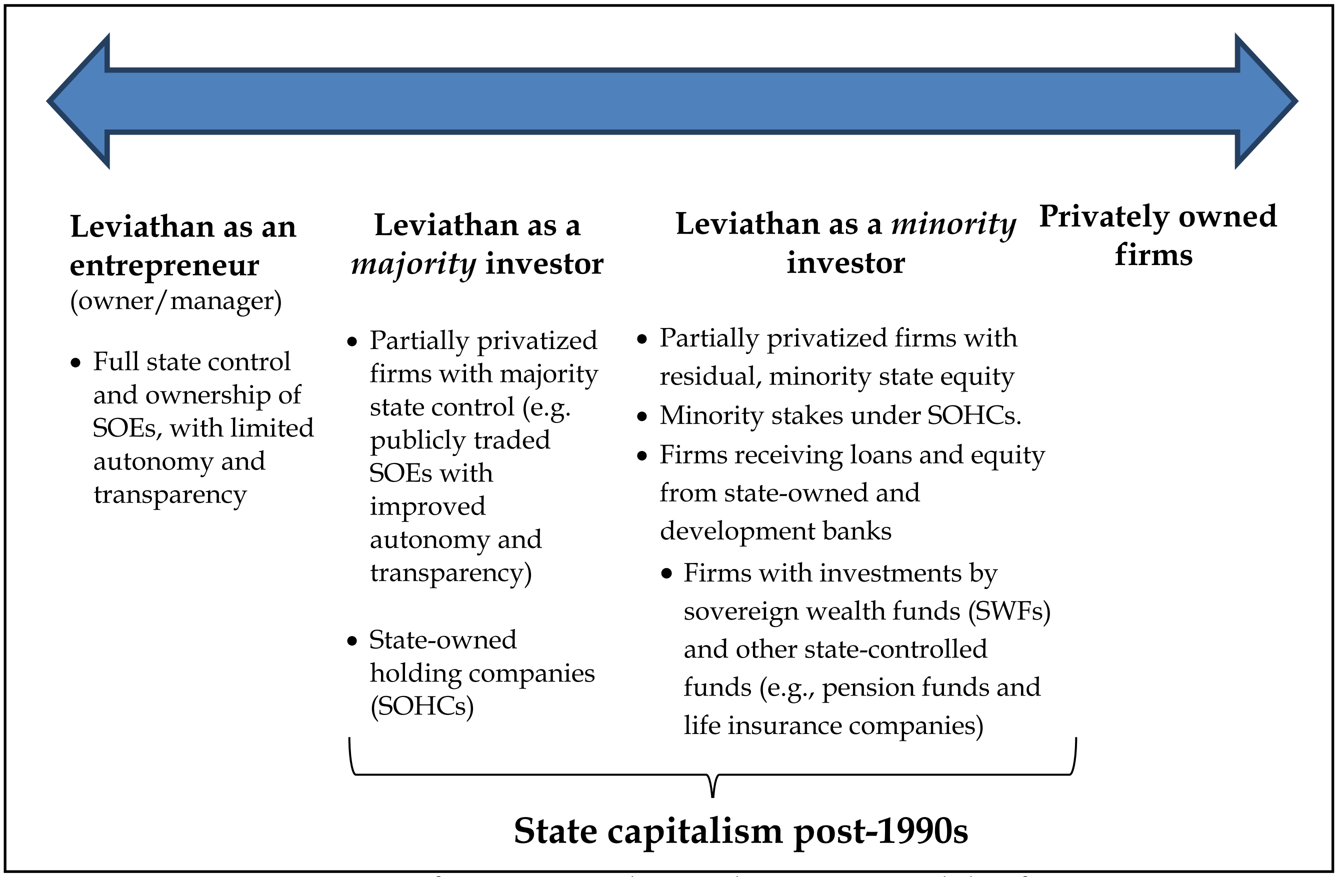

Figure 1-1 Varieties of State Capitalism: Alternative Models of Organization

In the *Leviathan as a majority investor* model, the government corporatizes or lists firms on stock exchanges. This is a form of partial privatization in which the state retains control while attracting minority private investors. Although there is wide variation in the corporate governance configuration of these firms, publicly traded SOEs tend, in general, to have relative financial autonomy, professional management,

[14] A good example of the shades of gray in between full state-ownership and private ownership is in the analysis of privatization of telecommunications companies by Doh et al. (2004). There they explain the why private investors will prefer to invest more or less to partner with the government.

boards of directors with some independent members and with short tenures, and financials audited by professional accounting firms. In some cases, governments exercise their control as majority investors using so-called state-owned holding companies (SOHCs)—pyramidal structures of ownership in which the government is a majority owner in a company that then holds majority or minority equity positions in other companies.[15]

Governments can also influence the economy indirectly, acting as a minority shareholder and lender to private firms. This is the model we refer to as *Leviathan as a minority investor*. This more nuanced form of state capitalism is a hybrid form, in which private parties manage the companies that the government wants to support financially. Thus, we view this model of state capitalism as suffering less from the agency and social problems commonly found in SOEs that are wholly owned and controlled by the government. Furthermore, political intervention should also be low or minimal (although not absent) in this form of state ownership.[16]

Minority state participation in corporations is increasing worldwide. We argue that there are several channels through which states act as minority shareholders, such as directly holding residual shares in partially privatized firms and using state-owned holding companies to hold minority stakes in a variety of firms controlled by private investors. In this model, we also see governments using development banks, sovereign

[15] For examples of state-controlled pyramids in Europe, see Bortolotti & Faccio (2009).

[16] This hybrid model of state capitalism should also be distinguished from hybrid *public-private partnerships* crafted to execute specific infrastructure projects or to provide public services such as water, transport, and prisons (Bennett and Iossa 2006; Cabral et al. 2010).

wealth funds (SWFs), and other state-controlled funds (such as pension funds and life insurance investments) to either lend to or invest in private companies. In India, for instance, the Life Insurance Corporation practically acts as a holding company for the government, with around $50 billion invested as of September 2011. In Brazil, as the JBS example shows, the national development bank (BNDES) has actively poured money into local corporations.

As a way to summarize the differences across the distinct models of state capitalism, Table 1-1 explains the main sources of inefficiency in SOEs according to the agency, the social, and the political views and how those inefficiencies might be addressed by the Leviathan as a majority and minority investor models.

Table 1-1 Theories of SOE Efficiencies and Inefficiencies

Theory of SOE inefficiency	Leviathan as an entrepreneur (i.e., owner and manager)	Leviathan as a majority investor	Leviathan as a minority investor
Social view	Double bottom line (e.g., profit maximization jointly with other social objectives such as low inflation or higher employment).	Maximization of shareholder value subject to political interference if the company is not insulated. Likely conflict if minority shareholders pursuing profitability clash with governments pursuing social or political goals.	Maximization of shareholder value. Minimizes government intervention to attain social goals (except in cases where governments have residual ability to intervene).
	Long-term horizon; government as patient investor tolerating losses.	Likely shorter-term horizon: Markets are generally impatient with respect to losses; yet market pressure can help prevent short-term pressure due to political cycles.	Short-termism to please market analysts and investors.
Political view	Appointment of CEOs using criteria other than merit (e.g., political connections).	Professional management selected by the board of directors. Government has strong influence as majority shareholder.	Professional management selected by the board of directors. Government opinion matters only when it is an important shareholder or when it colludes with other shareholders.
	Poor monitoring: no board of directors (ministry regulates) or else politically appointed board (low level of checks and balances).	Board of directors with some independent members and some political appointees; depending on numbers, it can act as a balance to the government and the CEO. Yet, government can co-opt board members.	Boards as principals of the CEO (monitoring/punishing).
	Government uses SOEs to smooth business cycles (e.g., hiring more or firing fewer workers than necessary).	Effect is reduced if the firm is isolated from political intervention.	Low political interference in management, except for industries in which the government has temptation to intervene (e.g., natural resource sectors) and when the government colludes with other minority shareholders.
	Soft-budget constraint (bailouts).	No clear risk of bankruptcy (governments will likely bail them out).	Hard-budget constraint unless firm is singled out as a national champion. Then maybe bailout because firm it "too big or important to fail."
Agency view	Management has low-powered incentives.	Pay-for-performance contracts, bonuses, and stock options more likely (incentives may not be as high-powered as in private firms).	High-powered incentives.
	Hard to measure performance (financial measures are not enough, not easy to measure social and political goals).	Stock prices and financial ratios as performance metrics. Customer satisfaction and feedback to measure quality of goods and/or services.	Stock prices and financial ratios as key performance metrics.

(Continues) **Table 1-1 Theories of SOE Efficiencies and Inefficiencies**

Theory of SOE inefficiency	Leviathan as an entrepreneur (i.e., owner and manager)	Leviathan as a majority investor	Leviathan as a minority investor
Agency view	No clear punishment for managers who underperform.	Boards may fire managers who underperform.	Boards may fire managers who underperform.
	No transparency: incomplete financial information.	Improved transparency; accounting standards following GAAP or IFRS in several cases.	Improved transparency; accounting standards following GAAP or IFRS in most cases.
	Boards packed with politicians or bureaucrats (exacerbates political intervention and double bottom line).	Boards as principals of the CEO (monitoring/punishing); may also be packed with politicians depending on whether the SOE is more or less insulated from political influence.	Boards as principals of the CEO (monitoring/punishing); effectiveness may vary.

We are nevertheless cautious because, even if these new models of state capitalism have improved incentives and monitoring inside the firm and have, in some cases, insulated SOEs from outright political interference, governments still can and often do intervene. These new models have their limits and can break down when the government's temptation to intervene is at its highest; for example, during a major economic crisis or in advance of a hotly contested election. As we discuss throughout the book, reducing political intervention in the model in which the government is a majority shareholder or reducing agency problems in the model in which the government is a minority shareholder will depend not only the private enforcement of investor rights (e.g., through the firm's own statutes and through the ability of stock markets and rating agencies to prevent the abuse of minority shareholders), but also on legal protections and regulatory provisions that tie the hands of governments and avoid discretionary interference.

In the last two chapters of the book, we look beyond government involvement as a majority or minority shareholder to examine instances in which governments use state-owned development banks to provide private firms with long-term, subsidized loans. Development banks are, in particular, an important and understudied vehicle of minority state participation. These banks are supposed to be relatively autonomous financial intermediaries specializing in providing long-term—usually subsidized—credit to promote industrialization or infrastructure projects (Armendáriz de Aghion 1999; Yeyati et al. 2004; Amsden 2001; George and Prabhu 2000). Yet, the behavior and performance implications of development banks have been neglected in the literature, despite the fact that there are 286 development banks operating in 117 countries, some of them very large and financially healthy (such as Germany's KfW, the Korea Development Bank, and Brazil's BNDES). In contrast, there is a large literature showing how state-owned *commercial* banks perform poorly because they have social and political objectives that prevent them from becoming lucrative (Caprio et al. 2004; Beck et al. 2005).[17] We do not examine commercial banks in detail in this book because they are mainly focused on providing credit to households or working capital to firms. We are, instead, interested in looking at development banks, which provide long-term loans

[17] For instance, a series of papers studies how lending in state-owned commercial banks is correlated with political cycles (Cole 2009; Sapienza 2004; Dinç 2005) and how entrepreneurs with political connections are more likely to obtain loans from state-owned banks than the average entrepreneur (Bailey et al. 2011; Khwaja and Mian 2005). The literature on state-owned commercial banks in Brazil is particularly extensive (Baer and Nazmi 2000; Makler 2000; Ness 2000; Beck et al. 2005), but focuses largely on explaining why they were privatized and how well they performed before and after privatization.

to promote industrialization or the construction of infrastructure and, thus, tend to be intimately linked to the process of economic development (Amsden 2001).

Brazil as a Case Study

Although we present a general discussion of the new forms of state capitalism, most of our detailed empirical studies of the implications of these new forms rely on firm-level data for Brazil. We think Brazil is a good setting in which to study the evolution of state capitalism for two reasons. First, state capitalism's rise in Brazil is similar to its rise in other parts of the Western world and in noncommunist East Asia where, partly by accident and partly by design, governments ended up owning and managing hundreds of firms between the 1960s and the 1980s (Trebat 1983; Baer et al. 1973). Therefore, we use the case of Brazil to show how external events led to transformations in the way the government intervened in the management and ownership of firms, ending with a major dismantling of the Leviathan as an entrepreneur model.

Second, Brazil had and still has all the different models of state capitalism we want to study and we have decades of data on how those forms have worked. Through a variety of archival, public, and private sources, we have been able to compile detailed databases with a variety of financial variables to study the performance of the largest state-owned and private enterprises in Brazil between 1973 and 2009.

With this rich data on Brazilian firms, we test a series of specific hypotheses related to our study. For instance, we compare the behavior of private firms and SOEs before and after the shocks of 1979-1982 and show that SOEs adjusted their employment more slowly and, thus, faced greater losses throughout the 1980s. That is, we use the detailed case of Brazil to argue that the big crisis of the Leviathan as an entrepreneur model happened to a large extent because SOEs could not adjust to the drastic shocks of the 1970s and 1980s and therefore continuously bled the finances of the government.

Moreover, we use the Brazilian case to describe in detail the changes that were made in the corporate governance of SOEs, especially after the 1990. Surveys such as Bortolotti and Faccio (2009) and OECD (2005) show how governments remained as either majority or minority shareholders after privatizing SOEs in the 1990s. Yet, these studies do not look at corporate governance arrangements inside SOEs. We think it is important to examine how corporate governance arrangements have changed. In fact, we think that the policy prescriptions come from looking at the bylaws that have made SOEs less prone to agency problems or political intervention. In Chapter 4, we show in detail the transformation of corporate governance in SOEs in which the Brazilian government is a majority shareholder and, in Chapter 7, we pursue even more detailed studies of the corporate governance arrangements the Brazilian government adopted in the national oil company, Petrobras, compared to other national oil companies from around the world.

The Brazilian case also provides unique insights into the model in which Leviathan is the minority investor. BNDES's distinctive prevalence in the Brazilian economy provides a rich case to study development banks and their role as a conduit of state investments in the form of minority equity positions in private firms. Thus, using detailed data on minority equity investments held by BNDESPAR, the investment arm of the Brazilian National Development Bank (BNDES), between 1995 and 2009, we conduct detailed empirical studies of the impact of these investments on firm behavior. Moreover, by examining how BNDES selects its target firms and the impact of its loans on firm-level performance and investment, we analyze in detail how Leviathan can act as a lender.

Our General Argument

Our book makes three broad arguments. First, we argue that governments have learned that they need more sustainable ownership schemes and corporate governance regimes for SOEs. Our historical narrative maintains that as a consequence of the crisis of the late 1970s and early 1980s the model of government ownership and management of SOEs became too inefficient and turned into a burden on the public finances. Governments restructured their portfolio of firms, privatizing those in which they had no policy reason to operate and changing the ownership structure of many in which they did want to keep an interest (for example, strategic firms with high rents from oil, mining, and utilities). Yet, some states learned that in order to have more sustainable models for these firms, they needed to get the private sector involved in monitoring and funding SOEs as well as in sharing the losses of these enterprises. That meant the state had to share both the management and the rents.

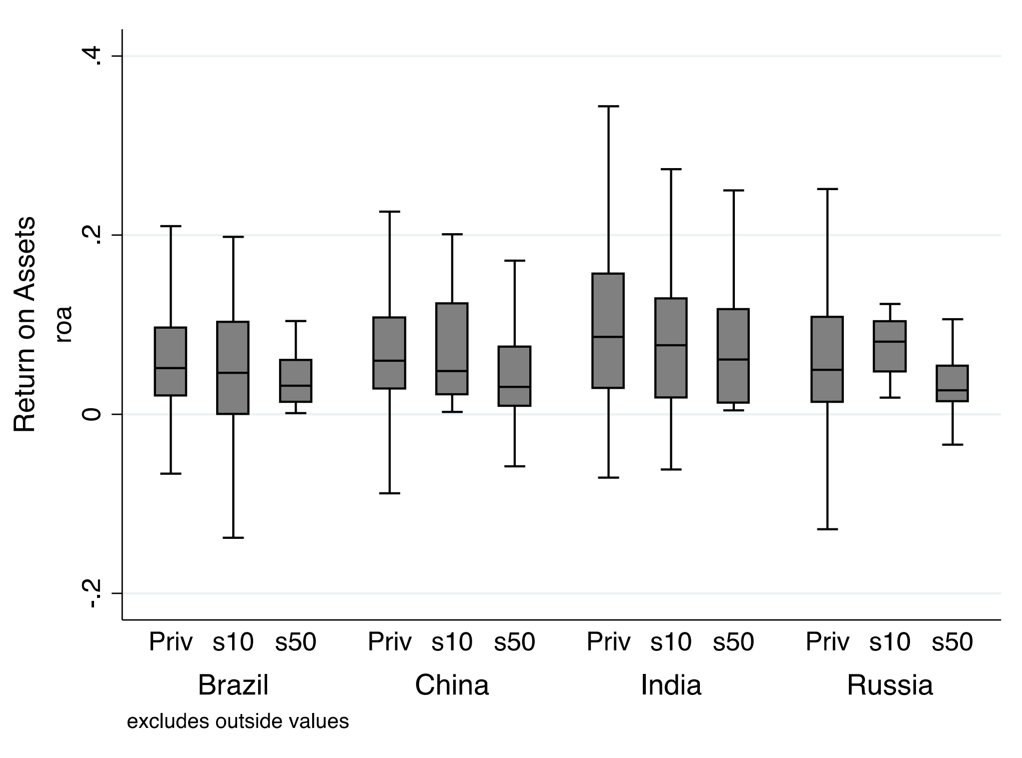

Figure 1-2 Performance of Private vs. Companies with over 10 and 50 Percent of Government Ownership in BRIC Countries Using Return on Assets, 2007-2009

Source: Created by the authors from data in Capital IQ. This data summarizes the performance of SOEs and private companies amont the 125 largest companies traded in the stock exchanges of Brazil, Russia, India, and China.

Second, instead of debating whether state or private ownership are universally superior, we submit that there is much heterogeneity within each model of ownership. That is, part of our argument is that there is too much variation to generalize. Granted, we still find poorly managed SOEs subject to political interference, but we also find many SOEs that changed their governance practices and in which the government acts like an investor rather than a manager. Likewise, we find many instances of minority state ownership which actually help firms develop new, profitable projects, alongside instances of unjustified support to politically-connected national champions. See for instance in Figure 1.2 the wide variation in performance in private firms and firms in which the government is a majority and minority shareholder. In sum, a generic attempt to answer whether state ownership is good or bad will necessarily miss the nuance and variation of organizational forms that emerged from the reinvention of state capitalism documented in this book. We essentially pursue an exercise of finding sources of firm-level heterorgeneity across SOEs.

Third, we argue that the new models of state ownership, which we call Leviathan as a majority and minority investors, will more effectively work depending on a host of conditions that are detailed throughout the book and summarized in our conclusion chapter. For instance, if full privatization of an SOE is not an option, then a government can—and should—at least improve that SOE's governance protections in order to mitigate agency and political intervention problems. We argue that the new models of state ownership will be more effective when they have corporate governance arrangements that prevent abuses by the controlling shareholders – not only when the government is the majority investor, but also when the government is a minority investor and private parties are able to tunnel founds out of the SOE. Thus, when adopting the model in which Leviathan is a minority investor, we argue that governments should target private firms with good governance and with severe financial constraints. Over time, as local capital markets become more developed, the state should progressively exit and leave state participation for cases in which the financing of projects with high spillovers are too risky or hard to execute for private capitalists.

Put another way, the counterfactual of our argument for the Leviathan as a majority investor model is that, without checks and balances on the abuses of the government as a controlling shareholder, even listed SOEs, with minority private ownership, could end up becoming the inefficient SOEs of the past, with controlled prices, excessive debt, and endless needs for the treasury to cover their losses. That is, if the government tunnels out the rents and violates its partnership with the private sector, it may well scare away investors and go back to where it was in the 1980s.

Our counterfactual for the minority investor model is more complex. We argue that having the government investing in or lending to firms that have investment opportunities but that are not financially constrained will not compensate the opportunity cost of the government funds. Governments would therefore be better off using their investment arms to prop up financially-constrained firms with latent capabilities, instead of large groups or national champions with ability to fund their own projects through internal capital markets. Furthermore, when financial markets are more developed, government investments in equity may be necessary only for firms that would never be financed by the private sector; for example, small and medium-size enterprises with complex projects that are either too risky or too difficult to be financed by private financial intermediaries.

We have tried to keep the methodological and narrative approaches of the book as broad as possible to facilitate a conversation with a broad set of fields. Still, we have been as strict as possible in our empirical work to try to convince skeptics of our arguments. Notwithstanding such efforts, there will be readers who will not be convinced by our statistical work simply because governments do not choose to own firms or intervene in private companies at random; that is, there is no natural experiment in this book. For that reason, we are very conscious that our work may suffer from selection bias problems and that our results should be interpreted carefully as we are not uncovering causality in the purest sense. In every chapter in which we deal with statistical work we have included a section explaining how selection bias may affect our results and we have added a series of tests to minimize it or, when possible, guarantee that it is not driving our results. For instance, if we study the effect of government equity investments on the performance and capital expenditure of private firms we make sure to examine what firm characteristics drive the selection of firms—to discard the possibility that governments are choosing high performing firms ex ante. We also use matching techniques and other robustness checks to make sure our results are not purely driven by selection bias.

Overview of the Book

The first three chapters elaborate our argument in a general way, describing the global history of state capitalism and offering possible explanations for the origins and implications of the new models of state capitalism. Chapter 2 is an historical account of the rise, fall, and reinvention of state capitalism around the world in the twentieth century. We describe the efforts of governments in Europe and developing countries at various times to improve SOE performance and emphasize the evolution of state capitalism as a process of learning, of trial and error, and largely as a response to economic shocks. We end the story by explaining how the crisis of the Leviathan as an entrepreneur model led to the privatization policies of the 1990s.

Chapter 3 reviews the literature and the implications that each view of SOEs has for each of the ownership models we study. These views are building blocks for the testable hypotheses proposed in the subsequent chapters..

In Chapter 4, we begin using Brazil as a case study. We first describe in detail the macroeconomic story that led to the reinvention of state capitalism there in the 1980s and 1990s and explore some of the variation within Brazilian SOEs. We also describe the transformation of SOEs in Brazil after the privatization process.

In Chapter 5, we study CEOs as a source of variation in SOE performance. In the Leviathan as an entrepreneur model, governments had few levers to influence the performance of SOEs. Therefore, governments tended to replace CEOs whenever they wanted to change the performance of these firms. Yet, those efforts seem to have been futile as we show that CEOs actually had very little influence over the performance of SOEs, except for top executives who attended elite universities. Those elite CEOs actually led firms to have better performance than the average state-owned firm.

In Chapter 6, we examine how the Leviathan as an entrepreneur model broke down in the 1980s. We show that SOEs facing economic shocks use significantly different policies than private companies do. While private companies tend to fire workers to adjust their production capacity when faced with reductions in aggregate demand (that is, they fire workers to improve productivity while lowering output), SOEs fire significantly fewer workers or even hire new ones. The literature that compares SOEs with private firms usually assumes that the differences in performance between the two are always wide. We show how those differences in performance were, in fact, smaller before the 1980s and then widened in times of economic hardship.[18]

Chapter 7 examines the corporate governance arrangements that governments have adopted for their national oil companies (NOCs) after changes in the ownership structure to attract minority private investors. We study basic corporate governance traits in 30 NOCs, and show the extent to which some of these firms introduced important constraints on the controlling shareholder—the government. We then delve into a more detailed study of three national oil companies—Pemex, Petrobras, and Statoil—and examine the relationship between each government and its oil company. These cases highlight the importance of giving financial autonomy to managers while imposing checks and balances on the government's power.

[18] (Millward 2000) is one of the exceptions in the literature. He shows that, before the 1980s, productivity in SOEs in the United Kingdom was in fact higher than productivity in comparable American private firms.

Chapter 8 begins our examination of Leviathan as a minority shareholder. We start by studying the effects of having the government investing in minority positions in private corporations, using a detailed database of equity investments by Brazil's national development bank, BNDES, between 1995 and 2009. We find that these investments had positive effects between 1995 and 2002, but not after 2002. One of our explanations for the lack of positive impact after 2002 is that perhaps the rapid development of the local capital market after that year made government loans less important to reduce the financial constraints that Brazilian firms typically faced.

Chapter 9 is a case study of government relations with Vale, a Brazilian mining giant in which the Brazilian government is a minority investor. Here, we discuss the limits of the Leviathan as a minority investor model. We explain how, between 2009 and 2011, government pressure on Vale to invest in steel mills led to the dismissal of a very successful CEO. The chapter continues our study of the circumstances that can facilitate government intervention when the government is a minority shareholder. We argue that in industries with high rents, governments can use coalitions with quasi-state actors, such as pension funds of SOEs, to intervene in the management.

Chapter 10 introduces a discussion of the role of development banks and provides a historical narrative of the role played by BNDES for the industrialization of Brazil. Using data from 2002 to 2009, Chapter 11 shows that BNDES is lending to large firms which should be able to get capital elsewhere. We also shed light on the process through which the bank selects its target firms.

We conclude in Chapter 12 by compiling some of the lessons of our detailed studies. We focus on a discussion of the conditions that should make each of the models of state capitalism either work better or fail and end the chapter with a practical section for politicians and managers in charge of running SOEs, development banks, and other state-owned organizations.