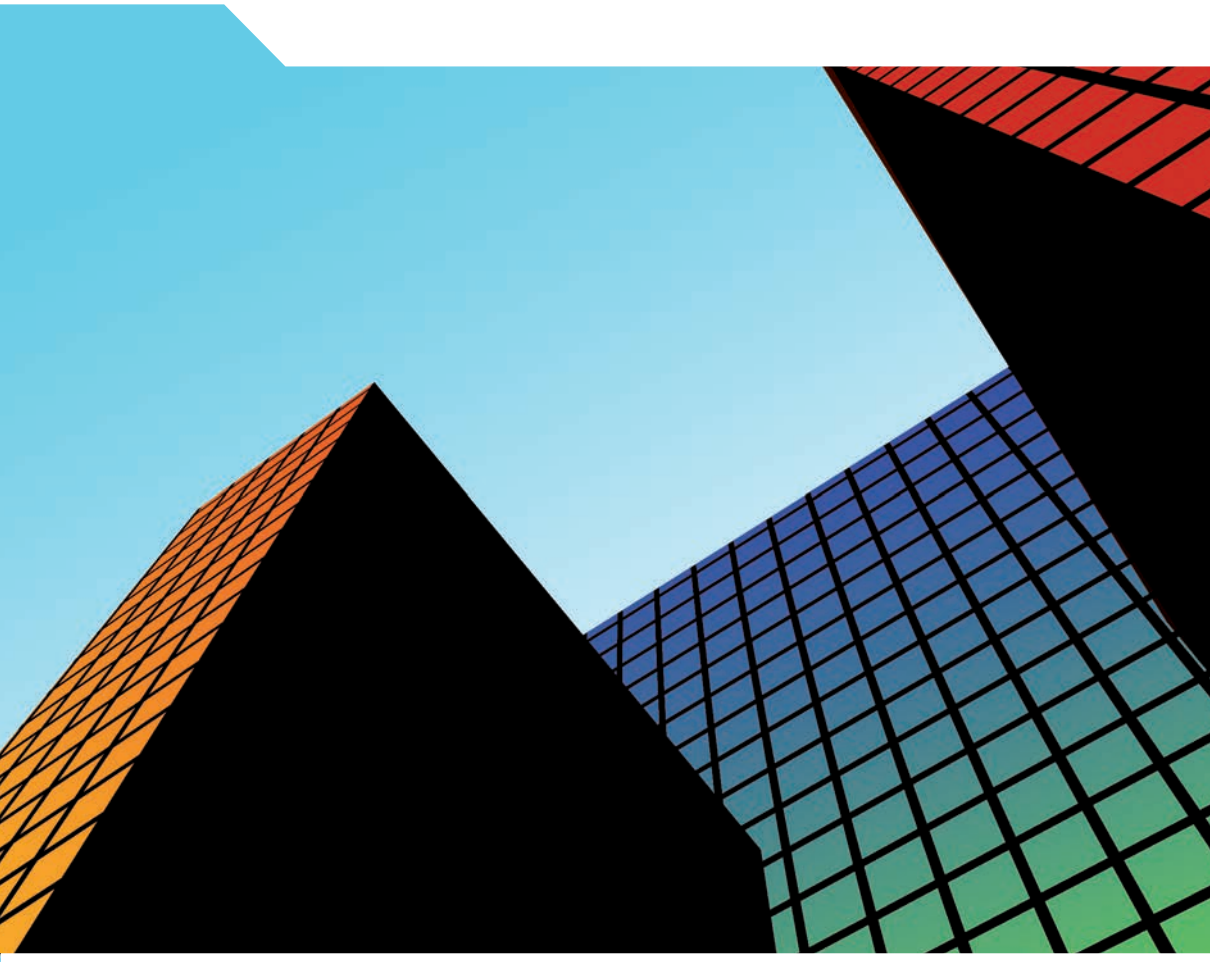
State-Owned Enterprises in the Development Process



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Please cite this publication as:
OECD (2015), *State-Owned Enterprises in the Development Process*, OECD Publishing, Paris.
http://dx.doi.org/10.1787/9789264229617-en

ISBN 978-92-64-22960-0 (print)
ISBN 978-92-64-22961-7 (PDF)

Foreword

The role of state-owned enterprises (SOEs) in countries' development process, an integral part of the political economy in most of the emerging economies with which the Organisation for Economic Co-operation and Development (OECD) partners, is not without controversy. The issue gains importance on policy-makers' agenda because of separate, but related, concerns about how to maintain a level playing field (as addressed by previous OECD publications discussing the issue of "competitive neutrality") in a global economy where SOEs from emerging economies increasingly coexist with privately owned companies.

This report is a first response of the OECD to the issue of what role is, or can be, assigned to SOEs as part of national development strategies. It was developed principally by the Corporate Governance Committee's Working Party on State Ownership and Privatisation Practice in the context of an ongoing project addressing SOEs and Inclusive Growth. It benefited from the co-operation and inputs from the Investment Committee and the Trade Committee. The OECD Secretariat's draft report was prepared by Hans Christiansen and Yunhee Kim of the Corporate Affairs Division, headed by Mats Isaksson, with substantive inputs from Mike Gestrin of the Investment Division and Przemyslaw Kowalski of the Trade and Agriculture Directorate.

The report has further benefited from the inputs of speakers and discussants at a Workshop on State-Owned Enterprises in the Development Process, organised in Paris on 4 April 2014. The inputs from external consultants are recognised in the introductory sections throughout the report, but the text should be read as a collective output from all involved. In the latter context, the development of the report has also benefited from consultations with the Business and Industry Advisory Committee (BIAC), the Trade Union Advisory Committee (TUAC), and other consultation partners and non-member economies.

Preface

The mission of the Organisation for Economic Co-operation and Development (OECD) is to promote policies that will improve the well-being of people around the world. We refer to this as working toward "Better Policies for Better Lives". We work with governments to identify good policies for supporting economic growth, job creation, social cohesion and environmental protection. These are obviously priorities for all policy makers, but nowhere more than in emerging economies searching for ways to advance economic and societal development.

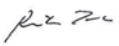
In this context, many of us have noticed that policies for the business sector are back in fashion. In the more advanced economies, this has been the case since the most recent economic crisis forced a rethinking of industrial competitiveness and structural priorities. In emerging economies, the issue was never really off the table. In those countries, policy action has traditionally been guided by broad-ranging reform priorities, laid down in national development strategies and policies. The OECD's long-standing position is that policy works better when it is aligned with market principles and supports necessary structural reform. However, we are not blind to the fact that a number of countries have been looking to the apparent success of, for example, some Asian governments that have relied on more state-interventionist practices to obtain growth and development.

Governments deciding to rely on specific development strategies need to ask themselves several questions, including just how "interventionist" they want to be. Textbook economics tells us that in the case of market imperfections there is an argument for government intervention – provided that it is in the government's power to remedy them. But some governments have gone well beyond that, for instance by attempting to nurture "infant industries" in early stages of the development process. Classic economic thinking would imply that such approaches would need to target sectors where, at the outset, the implementing country has certain demonstrated competitive strengths. Nevertheless, according to a competing school of thought that has gained considerable traction in recent years, comparative advantages are not a given characteristic to be exploited; rather, they are developed through targeted policies and strategies.

In my view, this raises another set of issues. Once a government has decided on overall strategies, it will need to consider how to implement them. Here, too, countries differ. Some governments intervene in the marketplace largely through laws, regulations and incentives to private actors. Others take a more "hands on" approach, with large segments of the productive economy controlled by the state. A key question in this report is to what extent governments rely on state-owned enterprises (SOEs) to deliver developmental and industrial policy objectives. This topic is of particular interest to the OECD, which is the leading forum for standard setting and knowledge sharing in the areas of government ownership and corporate governance of SOEs.

It is also necessary to place the discussion of SOEs in the development process within an international policy context. National governments may decide to intervene in the marketplace in ways that make perfect sense in a purely domestic context. If the concerned enterprises compete internationally, however, then foreign competitors may face competition on an uneven playing field. Their governments may intervene on their behalf, which could trigger a protectionist backlash. This is an important consideration in a world where SOEs based in emerging economies increasingly compete with private companies from advanced economies. A key question is how one can use SOEs as a tool for development while ensuring that they do not compromise the global competitive landscape.

We invite governments, in OECD and partner countries alike, to continue to exchange experiences and deepen the international dialogue on how state-owned and private businesses can work together for the benefit of all societies.



Rintaro Tamaki

Deputy Secretary-General, OECD

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Executive summary

A renaissance of government development strategies? Policies for the business sector are back in fashion, not least in developing countries. At the same time, "statist" approaches – whereby most important activities should be planned by the state – have been dropped in favour of more market-based strategies. The underlying cause is a disappointment in many countries with the outcomes of both the free-market model and the planned economies of yore. Governments increasingly look to the apparent success of a number of Asian countries whose economies have grown through strategies involving state intervention in economies that have remained essentially market-based. The tools of intervention have varied from the regulation of private-sector activities, to the control over financial intermediation and in some cases direct controls over financial institutions, to the pursuit of industrial policy through directly state-owned enterprises (SOEs). A key question raised in this report is the extent of the role that governments choose to assign to SOEs.

National differences. The role of SOEs in development strategies varies dramatically across countries. This report reviews the experiences of five countries: Singapore (including comparisons with some other ASEAN economies), Brazil, India, China and South Africa. This selection reflects, in particular, two sets of national differences:

- *Level of economic development*. The level of development at the outset is very important. Countries that start from a relatively low level are more likely to pursue policies of "catch up" industrialisation, in which a role for large SOEs (including "national champions") is relatively easily assigned. More mature economies need to give more careful consideration to the respective roles allocated to the private and public sectors.
- *Economic and political history*. The role that is given to SOEs is clearly path-dependent. In companies emerging from state socialism and other centrally planned economies, model SOEs play a role "by default" and most of the national debate is about possibly diminishing this role. Other developing countries, by contrast, engage in more proactive strategies for assigning developmental mandates to, or creating with this purpose, state-owned enterprises.

Success criteria. The experiences reviewed in this report indicate that some crucial conditions generally need to be met for SOE-based strategies to

be successful. First, the state should be backed by a competent bureaucracy that is empowered to exercise the ownership function effectively, reward success and punish failure. Second, the areas in which SOEs are expected to operate should preferably be free of concentrations of commercial, financial and other market powers. Some of the success stories occurred because countries started from a position of relative equality, whereas in other countries attempts to define industrial and developmental policies were quickly captured by existing interest groups. Third, the developmental objectives need to be clearly spelt out and, in particular, not interspersed with social policy objectives. At the root of the demise of many potentially trail-blazing SOEs in emerging economies has been an expectation that, because of their state ownership, they should contribute to social policy goals unrelated to their stated purpose.

Internationalisation of SOEs. State-owned enterprises in emerging economies are increasingly making their presence felt in the international marketplace through foreign trade and investment. As a corollary, they are also more likely to find themselves competing with foreign private enterprises when the latter enter the markets of emerging economies. To some extent this is a logical consequence of growth, but other factors might be at play. Some governments that have nurtured SOEs in certain sectors consider, as a final test of satisfactory performance, the exposure of these enterprises to international competition. If those SOEs still enjoy government subsidies or other material advantages at the time of their internationalisation, this may be a cause for concern. Among the findings of this report, two observations can be made:

- *International investment*. International investment by SOEs increased dramatically during the global financial crisis, and it seems likely that SOEs will remain an important source of investment. Most of the increase is attributed to outward investment from emerging economies. Partly in consequence, governments around the world have become more active in their efforts to formulate policies for dealing with international investment by SOEs. Provisions about SOEs appear increasingly in newly concluded international investment agreements. Most of these initiatives would seem to be aimed at clarifying the treatment of state-controlled investment, and there is little indication of a protectionist backlash. Nevertheless, a widely held perception remains that SOE investors present particular risks and challenges compared with private investors and therefore need to be monitored more closely.
- *Foreign trade*. SOEs, whilst often an important element of the economy in emerging economies, have traditionally directed their sale of goods and services toward their domestic markets. Over the last decade, however, this has changed. As demonstrated by this report, SOEs now feature prominently in several internationally contestable and vertically-linked

economic sectors. This situation gives rise to some additional concerns, but these do not seem to be insurmountable. Compared with the international investment environment, the trade environment has more developed rule-making to curb the support of governments to their SOEs. The World Trade Organisation's (WTO) rules include specific provisions that can be, and indeed have been, used to this effect. SOE-related rules going beyond those of the WTO agreements have also been included in some regional trade agreements and are a subject of negotiations in two mega-regional ones: the Trans-Pacific Partnership and the Transatlantic Trade and Investment Partnership.

PART I

Introduction and summary of main findings

PART I

Chapter 1

A look at state-owned enterprises and development

1.1. Recent theories and findings on the state in development

Policies for the business sector are back in fashion. In highly developed countries, this has been the case at least since the most recent economic crisis forced a rethinking of industrial competitiveness and structural priorities. In developing countries, the process has been underway for much longer. In their case, policy action has traditionally been guided by broad-ranging structural reform priorities, set forth in national developmental strategies and policies. The question has been whether to supplement these with a specific and targeted "industrial policy" aimed at nurturing industrial development; very often also furthering the interests of certain priority sectors and/or prioritising individual "national champion" enterprises. This has been the case increasingly over the past decade.

The background to the ostensible renaissance of industrial policy is a widely held disappointment with two competing policy approaches that have been attempted in the past. First, a commonly held view is that the markets for goods, services and labour in most developing countries – especially the poorest ones – are very inefficient and that a *laissez-faire* approach to development is therefore not a viable option. In the decades after the end of colonialism this reasoning led a number of governments, especially in Latin America, Africa and South Asia, to conclude that the state rather than the marketplace should be the vehicle to provide economic development. This resulted in extensive government ownership of commercial entities (including through a wave of nationalisations), the shielding of national economies from international markets and extensive bureaucratic planning systems. Such approaches are commonly referred to in economic literature as statism and/or developmentalism (e.g. Bresser-Pereira, 2009 and Trubek, 2010).

The statist approaches, however, mostly failed to produce the hoped-for improvements in standards of living. In the 1980s a second, alternative, view therefore took hold, which could be summarised as "if the markets in developing countries don't work, then we must fix them". The belief in market mechanisms, coupled with structural reforms, became known (using a phrase coined by Williamson, 1990) as the Washington Consensus. Owing to its reliance on market forces it encouraged – with the assistance of the lending programmes and conditionalites of the Bretton Woods institutions – a number of governments in developing countries to enact massive privatisation programmes. However, some of the structural changes commonly attributed

to the Washington Consensus have more to do with another international development. The advent of the World Trade Organisation and some of its specific agreements, including GATS (liberalisation of service trade) and TRIPS (intellectual property protection), significantly limited the scope of some traditional statist approaches.

Whether the Washington Consensus has succeeded or failed goes beyond the scope of this report. In any case, it has fallen out of fashion in a number of developing countries, which are keenly aware of the developmental success of Asian economies (currently China, but previously Japan, Korea, Singapore and Chinese Taipei) that did not subscribe to market fundamentalism in the early stages of their development process. All of these countries depended heavily on state intervention to further economic development, in some cases (especially in China and Singapore) including widespread state ownership of enterprises.

The apparent success of an alternative approach has been studied extensively in economic literature and has given rise to a new line of thought commonly referred to as neo-developmentalism or neo-structuralism. This strain of research has gained much traction with Latin American development economists (e.g. Ban, 2012) but has also been supported previously by chief economists at the World Bank such as Joseph Stiglitz and Justin Lin (Cimoli et al., 2009a, and Lin and Monga, 2010). It interprets the Asian success as relying on a hybrid of the two previous approaches, arguing that the state should be a driving force in development and that it should act in the marketplace and be alert to market signals. (One of the first to document this new, evolving line of thought in detail was Amsden, 2001.)

A couple of basic assumptions underlie the neo-developmentalist approach. First, it rejects the classic notion that countries should specialise in sectors in which they have a comparative advantage, arguing instead that comparative advantages (with the exception of those conferred by the availability of natural resources) are not given – they are created, and creating them should be a key goal of development policies. Second, neo-developmentalism argues that a crucial element in economic progress is the learning process, which is part and parcel of capital accumulation. In other words, even with the best training programmes and the deepest pockets, an economy cannot appropriate foreign capital goods and expect to be able to compete at world market prices immediately. A gradual process of "mastering" new technologies and production processes is involved, which means that temporary measures in the form of either protection from competition or subsidisation are necessary.

Even strongly pro-market economists would concede that there are economies of scale in certain sectors and (since in this case the absence of scale counts as a verifiable market failure) can justify government intervention. But the neo-developmentalists go beyond the market failure argument, arguing:

governments shall not only remove obstacles, they shall play a positive role, for instance by identifying feasible development paths. It should be kept in mind that most developing countries aim to develop their economies along lines that others have already followed and therefore are not in the dark about feasible paths. In the Association of Southeast Asian Nations (ASEAN) countries, this emulation approach has been dubbed "flying geese".

The most comprehensive attempt to define neo-developmentalism is arguably that of Trubek (2010). He argued that a "new political economy of development" has evolved, proposing a reappraisal of the role of the state in the economy. The main elements are summarised in Box 1.1.

Box 1.1. **Elements of a new political economy of development**

- Underdeveloped markets. There are significant market imperfections in developing countries. In particular, there are relatively high levels of information asymmetry, low levels of risk tolerance, weak institutional structures, and a number of other barriers that make them imperfect allocative mechanisms. There is a need to perfect these markets, but this is a complex process that cannot be accomplished easily or quickly.
- Market failure. Not only are developing markets underdeveloped, where they do operate more or less optimally they still have limitations. In particular, all markets fail to provide incentives for certain investments that will produce social externalities such as know-how and skills development. And they may be unable to manage co-ordination between related investments, so that market prices will fail to signal the socially optimal level of investment spending.
- Strategic trade theory. Comparative advantages are a fact, but in the modern economy comparative advantage is made, not found. Nations can actively pursue certain niches in the world economy through planning and targeting investment.
- Networks. With the proliferation of global supply chains, it is important for developing country producers to be in secure positions in global networks. States can assist in this process.
- Technological capacity. The development of technological capacity is a key element in any strategy to maintain global competitiveness and penetrate advanced markets. Because technological knowledge and capacity are to some extent public goods, states can play a role in expanding these.
- Innovation. Reflecting the new context of development, this concept places great emphasis on innovation of products and processes to achieve and maintain competitiveness. According to this world view, state action should foster, support and reward innovation.

That said, whereas the neo-developmentalist argument may seem appealing, and the Asian success stories are undeniable, the policy implications of this approach may in practice run into some major obstacles. For example, in many countries at low levels of development, one of the main hindrances to economic growth is a malfunctioning or corrupt public sector. Relying on government intervention to lift the private sector would therefore be highly problematic. (Critical reviews of governments' ability to correct market failure have been provided, among others, by Pack and Saggi [2006], Rodrik [2008] and Altenburg [2011].) Rather, the approach needs to be coupled with – perhaps as part of the learning process mentioned above – a sustained effort to improve public and SOE governance.

There is also a risk that industrial policies can become either hijacked or watered down by interest groups and entrenched businesses. Economists focusing on Latin America have identified this as one of the main reasons that some of the Asian approaches have worked less well in the Western hemisphere (e.g. di Maio, 2008, and Shafaeddin and Gallaher, 2008). It should be noted, however, that the argument cuts both ways. Amsden (2001) argues that the only European economy that has industrialised whilst practicing unfettered free trade is Switzerland. She attributes this to a remarkable absence of entrenched interests in the Swiss economy (due to a combination of the absence of a feudalist history – and, in consequence, of capital concentrations in the hands of a few families – as well as the threat of referenda) at the outset of the process.

Another problem with the neo-developmentalist approach is that it implies the participation of subsidised or protected industries in the global marketplace. In theory governments might, of course, limit these activities to the domestic economies, but in practice only the largest countries could do so – which is one reason that the protectionism of the early statism was widely seen as a misstep. Additionally, as will be discussed further below, some of the most successful Asian countries actively used the favoured industries' (or individual companies') export performance as an indicator of success and, by implication, of their worthiness to command continued support. From the perspective of the home country authorities this may make perfect economic sense, but in the international environment there is a strong probability that such practices will spark a protectionist backlash abroad. This possibility may be discarded only where (as mentioned in connection with the flying geese) the newcomers compete in market segments that other countries have already come to consider as "sunset industries".

1.2. Industrial development policy and the role of SOEs

In academic literature "industrial policy" may signify anything from the broadest national strategies toward knowledge creation and structural reform to highly specific policies targeting individual sectors or activities. This

apparent confusion is highlighted by Warwick (2013), who moreover points out that in many cases industrial policy (however defined) has been "defensive", aimed at protecting existing structures and/or entrenched interests, rather than development-oriented. For the purpose of the present document no precise definition is needed, but the term will be used mostly to signify policies aimed at raising the performance and competitiveness of national industries and/or industrial sectors. Across countries and over time a multitude of instruments have been employed in the service of industrial policy, including:

- *Subsidisation*. This may involve outright subsidies, tax concessions, concessional interest rates or (in the case of SOEs) the lowering of rate-of-return requirements to selected sectors, industries or companies. It may also include measures to incentivise enterprises in certain sectors to undertake specific activities (e.g. tax rebates for reinvested earnings; R&D allowances).
- *Infrastructure*. This should be understood in the broader sense, including the selective provision of transportation and utilities networks, as well as a broader range of backbone services to business such as industry parks, technological institutes, etc.
- *Foreign trade and investment*. Regulating access to international markets can be among the most potent industrial policy instruments, especially in small and open economies. The options have historically involved protection from foreign competition, export subsidies and/or the attraction of foreign direct investment deemed of interest to the domestic industrial development.
- *Government ownership*. Especially in countries at low levels of development, governments have resorted to creating national markets through direct establishment of enterprises. In maturing economies these enterprises have mostly been privatised, but in some cases they continue to act as conduit for government influence (discussed further in the following section).
- *Direct intervention*. This may involve the direct interaction between a state and companies, including through public procurement and, somewhat more controversially, regulatory action with the purpose of benefiting specific domestic constituencies.

As indicated above, industrial policies in the development context are usually related to a desire to "catch up" with neighbouring or other comparable countries that have previously achieved significant developmental progress. Reinert (2009) develops this argument and argues that emulation has been a driving force in industrialisation throughout economic history. While it is hardly debatable that a "late developer" has an interest in emulating the development path of other countries, it is much less obvious how to do this in practice. Governments cannot pursue developmental goals for dozens of economic sectors at once, and even if there are foreign examples to follow

countries differ in terms of their resource endowment, competencies, culture, etc., so there are limits to how far the emulation can be taken. In addition, in a dynamic world a number of new opportunities and fresh obstacles may have arisen that early developers did not have to take into account. Concretely, it would seem that there are three predominant schools of thought:

- *Horizontal approaches*. Some countries have opted to keep their industrial policies as non-distortive as possible, in the sense that they have given support to business development in ways that are equally beneficial to a wide range of sectors. This approach has appeal to policy makers who wish to rely to the greatest extent possible on market mechanisms, but also to countries at particularly low levels of economic development that may be uncertain about which economic activities are potentially profitable. Taken to the extreme, this could be used to argue that the state should assume a role of large-scale entrepreneur. In a situation of great economic uncertainty, the default risk in starting new enterprises is massive. At the same time, the societal benefits from an active entrepreneurial role are undoubtedly great and are commonly assumed to outstrip the private returns. In theory, the risk could be overcome by the state undertaking a significant part of the entrepreneurial role on its own. Of course, as soon as an adequate business infrastructure exists, it will in most cases make more sense for the state to subsidise private entrepreneurial activity than to remain in the marketplace. Few, if any, countries have implemented broad-based industrial policies on such approaches, but vestiges can be found in many jurisdictions. For example, the comparatively lenient treatment of personal insolvency in the United States is commonly justified by a need to support risk-taking and entrepreneurship.
- *Augmented comparative advantages*. Development analysts are still debating whether targeted industrial policies should take as their starting point demonstrated national strengths or attempt to leapfrog certain levels of development. It has been argued (e.g. by Rodrik, 2006) that many attempts at selective industrial policy have failed because governments were too ambitious in terms of the sectors they were targeting. According to this line of thought, the government should make resources available to support (including through the requisite physical, intellectual and financial infrastructure) manifestly competitive sectors in the hope of allowing them to develop further through clustering. It should further be alert to the opportunities offered by natural, geographic or historic advantages of the national economy and support the business sector in developing these commercially. An oft-cited example of the latter is the Chilean government's efforts to develop the national salmon industry. It was obvious from the outset that Chile had a potential for aquaculture, but it was a quasi-public foundation that undertook the necessary research and development (R&D)

and disseminated it to smaller private firms. The operation was eventually sold to a private Japanese investor (UNCTAD, 2006). Obviously, such an industrial policy may act "on the slipstream" of the approaches suggested in the previous bullet point: countries may opt to commence with a broad-based strategy and subsequently follow up on areas where apparent success stories are manifesting themselves.

- *"Picking winners."* Few governments would claim the foresight to be able to pick future winners in a strictest sense of the word, and examples from the OECD where a government has emerged successfully as an innovative market player (one frequently cited example is EADS/Airbus) have usually involved large amounts of trial-and-error. In developing countries, however, the picture might be slightly different. As mentioned earlier, the challenge is often to follow a development path that others have already trod, and some development economists have argued (e.g. Lin and Monga, 2010) that even countries with little prior experience in these sectors would be well advised to subsidise low-tech industries (such as textiles, leather apparel, toys) in the early stages of industrialisation. As these sectors mature, the time will come to move on to medium-tech productions such as machinery and heavy chemicals. Through this process a network of backward linkages to small and medium-sized enterprises (SMEs) will emerge from the targeted industries which, ideally, will be adaptable and innovative enough to spawn industrial clusters as the economy matures, contributing to dynamic processes that allow the industrial sector to continue growing beyond mid-income levels. Arguably, such strategies and processes have been involved in Japan as well as most of the other successful Asian economies, and are currently playing out in China (e.g. Huang, 2012).

The "infant industry" argument is one of the most commonly accepted rationales for shielding domestic enterprises from competition – and, as a corollary, sometimes for justifying outright trade protectionism. According to this line of thought, production costs may initially be higher for newly established domestic industries than for well-established foreign competitors. Over time, domestic producers can reduce costs as they learn by doing and eventually they can reach the same levels of efficiency as their foreign competitors. Conversely, if the infant domestic industry is not initially protected from foreign competition, it is unlikely to take off. This argument is supported by mainstream economists, on the condition that there are demonstrated economies of scale in the sectors concerned. It is also supported generally by the neo-developmentalists, who might argue that the learning process that is an integral part of capital accumulation automatically leads to rising returns over time. Put differently, "It takes time to master new technologies".

It should be noted, however, that even if one accepts this line of thought, the advantage of nurturing a successful industry may come at too high a price

for the government and home society. To justify intervention, one needs additionally to assume that the speed of learning (in economists' terms, the "dynamic scale economies") will be strong enough to justify the costs (Pack and Saggi, 2006).

The examples of recent and past industrial policy experience in different countries raise important questions about what works, what doesn't, and why. The development literature seems to have reached the conclusion (e.g. Rodrik, 2006, and Khan and Blankenburg, 2009) that the essence of success is to mix "carrots" and "sticks". As already noted by Schumpeter, all innovation requires rents, but if these rents are becoming open-ended then resources become tied up in unproductive activities. In other words, the incentives offered by governments to enterprises as part of industrial policies need to be time-bound and tied to concrete performance requirements, the non-fulfilment of which will lead to corrective action by the authorities.

The contrasting experiences of East Asia and Latin America, in particular, are illuminating in this respect. At the height of their interventionist industrial policies, the Southeast Asian countries relied on both incentives and disciplines. While tax incentives and credit subsidies in some countries were quite generous, they were conditioned on performance – not least export performance. Underperforming firms were penalised by a withdrawal of subsidies and in other ways. On the one hand, this generated new economic activities; on the other, it allowed failures to wither away. Conversely, under their traditional import-substitution policies from the 1950s to the 1980s, the Latin American countries provided considerable incentives (in the form of trade protection and cheap credit) but mostly failed to exert discipline on the beneficiaries. Rodrik (2006) argues that this policy did contribute to a number of success stories (some of these listed below), but also kept alive many unproductive firms.

The historical experience of the East Asian countries also seems to show that the use of trade protection policies is not *per se* harmful to growth. It has even been argued (e.g. Amsden, 1989) that one of these countries' keys to success has been the selectivity of their market opening practices (i.e. choosing to open some markets to international competition while keeping others closed). Di Maio (2009) argues that development history shows that import substitution policies worked poorly only when i) they were not supplemented by export promoting policies and ii) there was no external or internal competition. This, again, is a crucial difference between Asia and Latin America. In the latter region import substitution was often allowed to stand alone, whereby it effectively benefited a small number of industrialists rather than the economy at large.

Authorities in some of the countries that have been less successful with their industrial policies have argued that "they pay a price for being democracies",

whereas the Asian economies mostly conducted their catch-up industrialisation in periods of rather autocratic political regimes. This arguably made it easier to impose the requisite disciplines on enterprises benefiting from government support. However, researchers addressing the issue of industrial policy from a political-economy perspective have argued that the social and economic structures at the outset of the process were also an important factor. For example, the income and wealth distribution in the East Asian economies after the Second World War was relatively even, whereas Latin America's nascent industrialisation took place in a context of already considerably entrenched interest groups and concentrations of capital (di Maio, 2008, and Cimoli et al., 2009b).

Even if one accepts as a fact (and for the reasons suggested above, this is not obvious) that the state can and should play a role in developing industries, it is far from obvious that this needs to extend to corporate ownership. As indicated in the previous section, a number of governments have implemented industrial policies largely by incentivising existent parts of the business sector and/or subsidising the creation of new ones. Whether or not to rely on direct ownership will depend on a number of factors, likely to include:

- Level of development. Countries at particularly low levels of economic development are more likely to rely on state-owned enterprises. Where the extant business infrastructure (e.g. financial institutions) is weak or absent, governments may conclude that the easiest way to nurture certain sectors is to establish enterprises in state ownership.
- Sectoral concerns. In sectors where public policy obligations that enterprises are expected to pursue may be so complex, or changeable over time, these cannot realistically be written into contracts or pursued through incentivisation of private enterprises. In those cases, the government may perceive a need to act as company owner.
- Historic or cultural factors. State ownership involves an element of what economists know as "path dependency". For example, countries that industrialise with a strong reliance on SOEs are likely still to attribute a greater role to these enterprises as they approach mid-income levels of development.

In general, most developing countries have business sectors (at least as far as large and/or industrial companies are concerned) that consist to a great extent of family-owned enterprises and SOEs. The implication is that the state typically relies for its industrial policy implementation less on formal regulation and legislation than on direct ownership and connections between policy makers and a small group of leading industrialists. This makes it particularly relevant to review the evolving role of the SOE economies of a number of developing and post-developing countries (discussed below).

1.3. State-controlled vehicles for more targeted intervention

As mentioned earlier, the state may wish to prioritise certain economic activities without getting involved in them through direct ownership. In an ideal situation this would be done through generic legislation and regulation, but in practice it may sometimes not be feasible. Previous sections have touched upon how many governments operate by effectively subsidising (part of) the business sector's training and research costs through the establishment of technological institutes and specialised education and research institutions. This section focuses on the ways in which some governments moreover operate via selective and/or subsidised access to external finance. The two main sources of external finance are debt and equity. Numerous governments have established financial institutions making loans (and in an increasing number of cases also equity) available on preferential conditions. An additional source of equity capital has been the attraction of foreign direct investment (FDI) from enterprises abroad. This need not in principle involve the government directly, but since a number of countries seek to limit FDI to selected segments of the economy and others are able to attract investment only if they offer incentives, it has been common practice to establish state-controlled entities – including in some cases state-owned enterprises – directing the process.

1.3.1. Development banks and other financial institutions

The creation of SOEs (and in some cases also privately owned "national champion" or politically favoured conglomerates) has in the past been triggered by a shortage of financing. This has contributed to a centralisation of economic powers with the few economic agents with access to tap international sources of capital, and has sometimes – especially in countries in early stages of investment – led the state to step in as "investor of last resort". If a sufficient entrepreneurial basis is already present in the economy, however, relying on state-owned financial institutions to make sufficient funds available to investors may provide an efficient – and less intrusive – way of overcoming this market failure. The traditional way of achieving this has been the establishment of state-owned "development banks", and in recent years these have been supplemented by the use of government-controlled investment vehicles such as sovereign wealth funds.

Even where industrial structures and access to capital are relatively well-developed, vehicles for financing preferred activities may play a pivotal role. As noted by Hikino (1997), during the first wave of industrial revolutions the biggest challenge for commercial survival was an ability to compete with the (in most cases numerous) other companies in the same sector. In more modern times, the nature of competition has shifted to rivalry among capital-intensive,

oligopolistic firms whose survival depends on the assessment of capital markets – up to and including the ultimate threat of hostile takeovers.

In spite of a wave of privatisation over the past decades, state-owned financial institutions (SFIs) still constitute an important part of the financial system. For example in the European Union SFIs – defined broadly to include commercial banks, development banks, postal banks, insurance companies, credit guarantee funds, leasing firms and similar institutions – are estimated to represent close to 30% of the total financial system (Schmit et al., 2011). In the emerging economies there is reason to believe that the market share of SFIs is substantially higher.

1.3.2. Investment incentives and special economic zones

Among the countries that have embraced comparatively market-based developmental strategies, inward FDI has long been perceived as a main source of acquiring foreign know-how and technology. The value was seen as twofold. First, if the government was powerful enough, and its domestic market sufficiently interesting to attract foreign firms regardless of certain inconveniences, then it could demand a degree of technology sharing in return for market access. Second, foreign-owned enterprises tend to increase their sourcing of inputs from local companies over time, hence creating backward linkages though which much learning and upgrading are possible. This benefit of FDI has been extensively reviewed in the OECD (2001). In a best-case scenario, the foreign entry could spawn entire industrial "clusters" specialising in high-value added activities.

One of the principal tools with which developing countries have tried to encourage such dynamics is the establishment of gated special economic zones (SEZs). These are typically state-owned (hence effectively SOEs) and have taken the relay from earlier days' export-processing zones, whose beneficial import and export tariff regimes are now largely proscribed by international agreements. Currently, investment incentives, cheap infrastructure within the SEZs, subsidisation of training and research and a easy-touch regulation are among the main tools employed to attract foreign investors to the zones. Pack and Saggi (2006) note that SEZs have been used to great effect in the early development of China, Chinese Taipei and Korea (to which may be added some examples in the Persian/Arabian Gulf) but that a number of other countries have wasted large sums of money attempting to emulate such strategies, with little result.

An interesting example of the use of both SEZs and FDI is provided by Mauritius. One of the most successful African economies, Mauritius took off in the 1970s by targeting labour-intensive industries such as garments and other textiles. These industries had become "mature" in Hong Kong, China, which

was chosen by Mauritius as its partner and mentor. Lin (2011), who argues in favour of the "augmented comparative advantage" approach, mentions that both economies had broadly the same factor endowments, the main difference being that Mauritius's GDP per capita was half that of Hong Kong, China. The Mauritius Industrial Development Authority and an authority overseeing and establishing export processing zones were created specifically to attract direct investment from Hong Kong, china. The vision was to position Mauritius as a world-class export hub based on the foreign model. Whether this ambition has been fulfilled is perhaps debatable, but it must be admitted that the country has emerged as a regional economic success story.

1.4. Summary and main findings of the remainder of the document

The remainder of this report falls into two pain parts. The first reviews the experiences of five countries (Singapore, Brazil, India, China and South Africa) using SOEs, and other government-controlled entities as agents of their development strategies. The second part reviews the growing internationalisation of SOEs – including in, but not limited to, emerging economies – through foreign trade and investment.

1.4.1. *Using SOEs as agents of development policies*

The approaches of governments to development strategies in general, and the role of SOEs in particular, vary dramatically across the five countries included in this report. Singapore, alongside some of its fellow ASEAN economies, are among the most widely cited examples of a proactive use of SOEs for development (and even here, as we shall see, the approaches actually applied were more complex than often assumed) with key companies in the network industries controlled by the state and assigned roles in fostering development since the early days of independence. Other Asian countries, such as China and India, have large remaining SOE sectors partly because of their past socialist or communist development models. Their governments have, until relatively recently, not assigned specific roles to SOEs within the marketplace but rather viewed them as executive branches of the government charged with delivering on public policy objectives. Brazil, following decades of privatisation, displays an interesting dichotomy, where some of the country's largest and most successful companies did not reach their full commercial potential before they were transferred to private ownership, but at the same time it is doubtful whether these companies would even exist had it not been for government intervention in earlier times. South Africa is apparently in the process of reversing earlier pro-market and privatisation-driven strategies and is in discussions over how to restructure its SOE sector, giving it a more development-oriented focus.

Singapore. Since its independence in 1959, Singapore been among the most active users of SOEs as a tool for development. It is a widely cited success story but, as demonstrated in this report, the success was not based solely on SOEs. The early governments of Singapore sought to emulate earlier and contemporaneous experiences of Japan and Korea in attracting large amounts of FDI as a source of international integration, knowledge transfers and much-needed jobs. In contrast to those countries, however, the government of Singapore was unsure if a domestic industrial sector – in a city-state that had previously existed almost exclusively as an entrepôt trading station – would evolve rapidly enough to serve as an equal partner to the foreign-owned companies. It decided that the state should fill the gap and act as Singapore's largest owner of commercial enterprises. The chapter dealing with Singapore argues that one main reason that the Singaporean model was so successful was that it did not burden its SOEs with multiple objectives. Their role in the development of certain sectorial activities was clearly defined, and other essential tenets of early industrialisation such as providing health care and affordable housing were assumed by the government alone. The latter point is particularly important: the continued industrialisation of Singapore did at times seem threatened by a lack of housing that was affordable to industrial labourers. The government consistently addressed the issue through provisioning subsidised homes. Good corporate governance also played a role. The establishment and development of Temasek as an industrial holding company has helped sustain the development focus of the SOE sector by emphasising the need for professional management and boards, providing the SOE boards with sufficient autonomy to perform their job, and ensuring that the regulation and ownership of SOEs have been clearly separated.

Other ASEAN economies. The rest of the ASEAN economies have tried to emulate Singapore's development model to varying degrees. In a region that is considerably more heterogeneous than often assumed, they have met with different degrees of success. A strong conclusion arising from this chapter regards path dependency: a faulty design of an SOE sector and the surrounding legislation, regulation and political environment in the early stages of the development process can be almost impossible to correct later on. Malaysia arguably comes closest in terms of emulation with its holding company Kazanah Nasional, created in 1993 and clearly modelled on Temasek, but unlike Singapore this country has placed the empowerment of indigenous people at the heart of its development strategy. The national investment policy, on which the SOEs are dependent, prescribes Malay ethnic preference in both staffing and procurement, which may have social merits, but, at least in the near term, is unlikely to contribute to macroeconomic performance. In addition, Kazanah is commonly seen to be much more "interventionist" toward individual SOEs than is Temasek. In Thailand, SOEs have been used

partly as a counterweight to foreign influence and seemingly in compensation for a ban on foreign majority ownership of domestic companies. In a similar vein, after World War II Thailand embarked on the region's longest-lasting import-substitution industrialisation programme, in which the SOEs were assigned key roles. Absent the disciplines of international competition, however, the national manufacturers generally did not make products that were globally competitive – a situation that was really addressed only after the 1997 financial crisis. Finally, the next chapter argues that the early development history of the Philippines provides a gloomy picture of intervention gone wrong. Political power was highly concentrated in the hands of people who had their own investment interests, and it cannot be said that SOEs (and even less so, banks) were operated in the broader national interest. After the military coup the number of SOEs mushroomed, now apparently seen as an extension of the government's executive powers. Until relatively recently they have been operated according to evolving political priorities, rather than to any long-term overall objectives or subject to transparent oversight structures.

Brazil. The early development and industrialisation in Brazil were led by the state through fully controlled SOEs – a method referred to in this report as "the state entrepreneur model". To some extent this model resulted from the sheer lack of private capital willing to take substantial risk, as well as an overall need to co-ordinate multiple infrastructure investments. Large modern Brazilian conglomerates like the aircraft manufacturer Embraer and the mining company Vale started as SOEs and would arguably not have existed in the absence of state intervention. At the same time, the early governments of Brazil also exposed the private sector to price controls and strict regulations, so one cannot exclude the possibility that the private sector, given a different set of operating conditions, would have been able to fulfil many of the entrepreneurial roles that were assumed by state. In recent decades concerns about the efficiency of SOEs has led to a transformation of the sector through corporatisation and public listings. In the course of this process Brazil has effectively pioneered (at least among the emerging economies) a model in which the state renounces majority ownership in a number of enterprises but remains a significant minority investor. The vehicle for this model has mostly been the national development bank BNDES through its investment-banking arm. In the case where the state acts as a minority shareholder, the Brazilian experience suggests that equity will work under particular conditions: the state should target firms with clearly constrained opportunities such as a lack of resources to invest and grow. The model is, however, not without risk. Recent experience shows that the temptation to vote the state's share for political rather than corporate or developmental purposes can sometimes get too strong. Therefore, this minority-investor model needs to be coupled with

strong safeguards regarding the autonomy and objectives of those charged with exercising the ownership power.

India. The economic policies of India during the decades following independence were strongly inspired by state socialism – including regular five-year plans – combined with societal objectives such as combating class differences and addressing rural poverty. In this environment SOEs were assigned the role of holding "commanding heights" of the economy by acting as growth engines and operating the infrastructure sectors, but also redressing the socio-economic inequalities. Private enterprises existed in large numbers, but they were mostly small, and the relatively few large corporate groups were held back by an unfavourable licensing system. Following the early years, a succession of Indian governments have embarked on a process of cautious, gradual liberalisation in which the role of SOEs in the economy was pared back (to currently just under 20% of GDP) by way of relinquishing their role in sectors deemed non-strategic. It would appear that the Indian model could have generated more development and growth if two problems had been addressed earlier in the process. First, a highly atomised ownership structure with most line ministries in charge of some SOEs that were deemed developmentally important has contributed to a situation where many companies were operated largely as parts of the executive powers. Second, SOEs have been assigned mixed roles in the sense that many of them are expected to contribute to economic growth and at the same time deliver on social policy objectives that would in many other countries have been the task of the federal government. The Indian experience suggests that there is a need, at the beginning of the development process, to establish appropriate institutions to formulate and promote industrial policy and gain widespread social objectives for these goals. Absent this, there is a risk that SOEs will become captured by corporate insiders, the communities in which they operate and representatives of the executive power.

China. The Chinese experiences differ qualitatively from those of the other countries in this report in the sense that when economic reforms began in 1978, SOEs accounted for 80% of total economic activity. The "enterprises" were almost invariably weakly corporatised and operated as branches of the governmental powers.[1] During the decades that followed China embarked first, on a policy of "grab the big, let go of the small", which effectively consisted of privatising SOEs that were small or located in sectors not deemed essential to the exercise of economic power. The enterprises remaining under state ownership (currently estimated at around 30-40% of GDP) are formally justified by a need to overcome market failure in a wide range of areas including public service delivery, externalities, natural monopolies and, perhaps more controversially, large sunk costs and intrinsic market weaknesses. At the same time SOEs are widely perceived in China as rather inefficient and

difficult to govern, so the process of assigning such vital roles to SOEs has necessarily gone hand-in-hand with efforts to strengthen their governance. These include the creation of a central ownership entity, SASAC, in 2003 and a policy of operating a sufficient number of SOEs in each sector to ensure the disciplines of competition. The Chinese authorities are, moreover, increasingly alert to a need to develop a considered view of what activities are best allocated to the private and public sectors. Recent experience suggests that there is a need to make a comparable assessment of the costs and benefits of state ownership, which needs to be conducted in the broader context of industrial policy and regulatory alternatives. State ownership, if carried out competently, can be a flexible industry policy tool. It may be adopted by the government to address the problem of market failure and to achieve certain social goals. At the same time, it should act as a complement to market mechanisms and regulation. It is particularly when a given country is lacking in terms of capacity for implementing a more flexible industrial policy, market mechanism and regulation that state ownership can sometimes provide a flexible tool for government. In consequence, the balance between state and private ownership should depend on the degree of market failure as well as the availability of alternative policy instruments.

South Africa. The South African experience is also atypical in at least two respects. First, until relatively recently a succession of governments (including in the aftermath of apartheid) were of a pro-market orientation and bent on further privatisation. Second, the development of the South African economy has been overwhelmingly based on mining and the export of raw or lightly processed resources. To the extent that an industrialisation process took place in South Africa in the 20th century it was driven by investments from – and the markets were created by – the large mining houses. Nevertheless, this model has displayed some weaknesses. Future growth and development will arguably rely on a greater diversification of the economy, and the mining clusters have largely relied on the availability of low-wage immigrant labour, which does not seem to offer a particularly promising development path for the 21st century. In addition, the privatisation experience in some sectors has been a disappointment. Apparent weaknesses in sector regulation led to a situation where public monopolies were essentially converted into private ones, the effect of which on pricing and supply is well documented. A process is currently ongoing in South Africa to rebalance SOE objectives toward promoting development. The remaining SOEs are almost all found in the network industries, and there is an obvious need to ensure that they lend support to – or, in view of recent experiences, at least do not impede – the development of the many other sectors of the economy that depend on them. At the same time, this process is not without risks. If the rebalancing of objectives from financial performance to developmental impact is to be

successful, there is a need to adjust the South African ownership model to specify more clearly the non-financial objectives that SOEs are expected to deliver. Realistic targets, including profitability and capital structure, must be set and adequate ways of assessing the goal fulfilment by SOEs must be developed. In the absence of these targets, the setting of multiple objectives could lead to weak managerial accountability and excessive politicisation of the SOE sector.

Summing up, it would appear from this collection of country case studies that the usefulness of SOEs in promoting economic (and other) development hinges on a number of factors, not least the level of economic development at the beginning of the process. If the government of a low-income country embarks on a strategy of catch-up industrialisation, a case can certainly be made for establishing SOEs to carry out key functions: very likely, there is no domestic entrepreneurship available to fill the void, and unless the country in question is particularly large, the interest of foreign investors to participate may be limited. In addition, if the government's ambition is to follow a development path already trod by numerous comparable nations, it is relatively easy to hammer out a strategy and provide the SOEs with company-specific objectives toward the fulfilment of the strategy. Experience also shows, however, that some crucial conditions generally need to be met for such SOE-based strategies to be successful:

- The state needs to be backed by a competent bureaucracy that is empowered to exercise the ownership function effectively, reward success and punish failure. Many of the less successful examples derive from a spirit of impunity among SOE managers, either because they are politically protected or because the state is incapable of acting as an active and informed enterprise owner.
- The developmental objectives need to be clearly spelt out and, in particular, not interspersed with social policy objectives. At the root of the demise of many potentially trail-blazing SOEs in emerging economies has been the political (and public) expectation that, because of their state ownership, they should be expected to contribute to housing, education and public health. Furthermore, one of the main sources of inefficiency in strategic SOEs has been political demands that they act as "employer of last instance" and, especially, abstain from downsizing during cyclically weak periods.
- The areas in which SOEs are expected to operate should be free of concentrations of commercial, financial and other market powers. One of the crucial differences between the Latin American and Asian experiences is that the use of SOEs was feasible in Asia precisely because the latter countries started from a position of poverty and relative equality, whereas attempts to coin industrial and developmental policies in Latin America were quickly captured by existing powerful families, industrial firms and labour movements.

- The usefulness of SOEs changes, and usually diminishes, as a country becomes more highly developed. SOEs are generally less efficient than comparable private companies. In the early stages of development this is usually immaterial because the alternative to SOE activities is no activity, and in any case the benefits of the commencement of commercial activities in a poor country would normally outweigh, in the short term, the efficiency concerns. When a country in a development process approaches mid-income levels, however, a number of questions present themselves regarding what activities are more appropriately placed in the private sector.

1.4.2. SOEs in the international marketplace

State-owned enterprises in emerging economies are increasingly making themselves felt in the international marketplace, through foreign trade and investment. As a corollary, they are also more likely to get into a situation of competition with foreign private enterprises when the latter enter the markets of emerging economies. To some extent, this is the logical consequence of decades of rapid growth in economies that still have large SOE sectors. Recent work by the OECD indicates that as of 2013, 22 of the world's largest 100 enterprises had a government as their main shareholder.[2]

But other factors could also be at play. The ASEAN experience indicates that a number of Asian governments that have nurtured SOEs in certain sectors (or in some cases government-backed private firms) consider as a final test of satisfactory performance the exposure of these enterprises to international competition. At this point, there is a potential conflict between the developmental goals and the more widely shared common interest in maintaining a healthy international competitive environment. If the SOEs in question still enjoy government subsidies or other material advantages at the time of their internationalisation, this might be a cause for concern in foreign capitals. The emerging economies may well counter that they support their national SOEs only to compensate for non-commercial objectives or to overcome demonstrated market imperfections. There are, however, two possible problems with this argument. First, except for the relatively rare case where an SOE is compensated for non-commercial objectives through a disbursement from the national treasury, the benefits that SOEs enjoy in their domestic jurisdiction may be turned into a competitive advantage when they operate abroad.[3] Second, in the case of market imperfections such as economies of scale, there is a convincing economic argument in a domestic context for compensating enterprises for a lack of size. Nevertheless, from the viewpoint of a foreign competitor, this may amount to the unwelcome subsidisation of an otherwise unviable competitor. The final two chapters of this report shed light on the changing role of SOEs in international trade and investment.

International investment. International investment by SOEs increased dramatically during the global financial crisis that began in 2008 and, although this is a relatively new phenomenon, it seems likely that SOEs will continue to be an important source of investment. Most of the increase is attributed to outward investment from emerging economies. It would be wrong, however, to assume that this implies a dominant role for SOEs. A separate study of the sectors where SOEs are particularly widespread (e.g. petroleum and infrastructure) showed that they now account for 10-15% of outward investment flows.[4] China plays an important role in this story. It is one of the world's top five sources of foreign direct investment, most of which originates with SOEs. This is partly the result of a deliberate policy, known in Chinese as the "going out strategy", according to which the government encouraged its largest SOEs (not unlike the ASEAN example cited above) to test their competitiveness and learn from foreign best practices. In an interesting twist, there is growing evidence that foreign greenfield investment by SOEs located in emerging economies has a positive developmental impact in the recipient countries. For example, Chinese investments in the African resource sector have grown rapidly in recent years. This development has given rise to some concern about unwanted side-effects, but it has undoubtedly bolstered the infrastructure of some African countries with broader economic and developmental gains as a consequence.

Partly as a result of these developments, governments have become more active in their efforts to formulate policies for dealing with international investment by SOEs. Provisions about SOEs are increasingly seen in newly concluded international investment agreements. Most of these initiatives would seem aimed at clarifying the treatment of state-controlled investment, and there is little indication of a protectionist backlash. Yet a widely held perception remains that SOE investors present particular risks and challenges compared with private investors and therefore need to be monitored more closely.

International trade. SOEs were always an important element of the economy, especially in countries with low levels of national income, but they have traditionally been oriented toward their domestic markets. This has changed over the past decade. SOEs now feature prominently in several internationally contestable and vertically linked economic sectors. This chapter has identified five internationally contestable sectors of the world economy where SOEs account for more than a third of the corporate landscape. Compared with the international investment environment, the trade environment has more developed rule-making to curb the support of governments to their SOEs (and other enterprises). The WTO's rules, including those bearing on subsidies and countervailing measures and the protection of intellectual property rights, include specific provisions that can be, and indeed have been, used to this effect.

Notes

1. Indeed to this day the CEOs of some of the largest SOEs hold ministerial rank.
2. Christiansen and Kim (2014).
3. Typical examples would be an artificially low rate-of-return requirement which effectively creates artificial economies of scale and hence an incentive to expand.
4. Christiansen and Kim (op. cit.)

PART II

Experiences with using state-owned enterprises as agents of development

PART II

Chapter 2

The case of Singapore and other ASEAN economies[1]

2.1. Introduction

While the concept of development goals' being achieved through different combinations of policy actions, including state-owned assets, is conceptually sound, it is still difficult to apply in practice. Developmental goals might mean very little, simply forming the basis of political rhetoric and public relations. As a result, both political scientists and economists often refer to "revealed preferences": what those in power actually do rather than what they say. This involves intensive analytical work and extensive fact finding.

Development involves the elaboration and interaction of many different institutions, which are both complementary to and interchangeable with each other. The developmental question is achieving the right balance for the country in question. Corporate action by state-controlled bodies is an important aspect, but these can be used for much more limited political and economic goals, even though their macroeconomic impact may be much wider. This chapter focuses on one city-state, Singapore, to keep the task manageable. As a city state, Singapore does not raise questions of agricultural policy, which often forms a crucial part of the development challenge. Analysis of other countries in the Southeast Asia region is thus more discursive in nature.

The first part of this chapter discuses Singapore since its independence in 1963.[2] It outlines the economic history and, more importantly, the political economy of the country, especially its concept of social equity. State assets have played a crucial role, especially since 1974 through the state's holding company Temasek, which has attracted attention in a number of countries. How it works and how it has evolved will be discussed. Nevertheless, the discussion needs to be set in a wider policy framework, especially concerning monetary and fiscal policy.

The second part briefly discusses each Southeast Asian nation, how its development strategy has changed over time, how policy instruments have interacted, and how this has affected the use of state-owned assets. For the purpose of this paper, Southeast Asia includes Indonesia, Malaysia, Singapore, the Philippines and Thailand. Some reference will be made to Vietnam and its recent policies.

2.2. Singapore

To understand the role of state-owned assets, it is essential to first know the overall development policy. The first section details the main thrust of

policies since Singapore's independence. SOEs have played a special role, but this can be appreciated only in the overall context. The second section thus outlines the state's political economy, including the political background of government-linked corporations (GLCs). Temasek, the state holding company, has been closely associated with – not always correctly – the success of Singapore. The third section therefore outlines the structure, operations and procedures of the holding company, from the viewpoint of corporate governance arrangements of both the holding company and the portfolio companies. It further covers the structure and operation of boards and senior management. The final section examines what is known about the performance of the holding company and its investments which, in the development context, is necessarily more speculative and controversial.

2.2.1. An economic overview

Since 1960, Singapore's per capita real GDP has risen some 12 times and now equals or exceeds that of many OECD countries. Indicators of living quality such as health are also impressive, and the city-state regularly scores highly on educational attainment. In addition, income distribution appears relatively equitable, and there is widespread access to social benefits – even though the government has resisted establishing a benefits mentality among the population. Thus, Singapore appears to have been successful in achieving its development objectives. Naturally, the experience of Singapore is closely watched in other countries both within and outside the region.

Like that of other Asian countries (World Bank, 1993), Singapore's growth has been driven, until the past decade, by high rates of savings and investment: savings accounting for around 35% of GDP, and higher for investment. During much of the period since 1960, the growth of Total Factor Productivity (TFP) has not been out of the ordinary, but Singapore is now moving into a new phase with greater emphasis on TFP growth and a greater focus on private start-up companies.

Contrary to some perceptions, the role of the state has been very important. One study (Hopf, 2009) calculates that the government has been able to "control" a high level of savings and investment (around 60%). Whether and how (i.e. which institutions) the state has actually controlled such savings and investment, and to what ends, is discussed below in the context of state ownership.

For private savings, the policy instrument has been compulsory contributions to the central provident fund (CPF), leading to some claims that Singapore has at times been over-saving. The state enterprise sector (termed government-linked corporations in Singapore) has also contributed via its profitability. In addition to being available for health and retirement benefits, deposits with the CPF can be used for housing purchases and sales, a major

element of development policy (discussed below). The CPF assets are in turn controlled to an important extent by the sovereign wealth fund, the GIC (Government Investment Corporation), which one study claims invests funds abroad and into equities (Hopf, 2009). Private savings have also been invested with a postal savings bank (a GLC).

With respect to the allocation of capital formation, the state has been important in several ways. First, the Housing Development Board (HDV), which includes several state ministers, has played a major role in determining housing expenditures in Singapore, facilitated by the state's purchasing the bulk of land in the first decade after independence (see below).[3] Second, the government has had an important role in establishing an international financial centre with a great deal of capital provided by FDI. A new state body, the Monetary Authority of Singapore (MAS) was formed in 1971 to oversee the financial sector, a task previously undertaken by the Ministry of Finance. Third, the Economic Development Board comprising *inter alia*, senior ministers, was given responsibility for industrial policy through both tax breaks and the provision of industrial estates. In its early years it also acquired shares in a number of companies, later transferred to Temasek. Fourth, the way in which GLCs have operated has also affected investment. As noted below, the method of operation has changed over time.

The establishment and encouragement of Singapore as a financial centre has had major implications for policy choice. It has meant that monetary policy was committed to a "hard Singapore dollar" policy and that the state committed to being an open economy. It is no accident that unlike in other countries in the region, there has never been a full-blown financial crisis. The financial regulatory policy has been conservative, and tax policies rather than import controls have been used to encourage FDI.

An important element of Singaporean growth has been the emphasis not only on FDI but also on GLCs. The reasons were essentially pragmatic. As Lee Kwan Yew, the first Prime Minister, wrote in his autobiography: "We did not have a group of ready-made entrepreneurs such as Hong Kong gained in the Chinese industrialists and bankers who came fleeing from Shanghai, Canton and other cities when the communists took over. Had we waited for our traders to learn to be industrialists, we could have starved. It is absurd for critics to suggest in the 1990s that had we grown our own entrepreneurs, we would have been less at the mercy of the rootless MNCs [multinational companies]. Even with the experienced talent Hong Kong received in Chinese refugees, its manufacturing technology level is not in the same class as that of the MNCs in Singapore" (Yew, 2000).

Finally, although the government had a high level of control over the use of savings and capital, it followed successful development examples by

emphasising market prices and exports – and therefore competitiveness. Unlike many countries before and since, it avoided the pitfalls of import replacement and the state setting prices. This set an important operational framework for GLCs.

Nevertheless, the lessons that other countries can learn are not straightforward. Singapore is a city-state, so it has not had to resolve complex agricultural issues and has not faced the challenge of large populations that have often dominated in other countries in the region such as Indonesia and the Philippines (Studwell, 2013). On the other hand, it has had to contend with being a multi-racial and multi-cultural country with, at the outset, no strong sense of national identity. Like many other countries at the time (early 1960s), it had a largely unskilled, young work force and was under great pressure to provide jobs – any jobs (S. Yap, R. Lim and L.W. Kam, 2009, p 627). In responding to these challenges, Singapore has developed unique political structures and has succeeded in avoiding business corruption. How it has evolved and changed or adapted its policy settings is clearly of relevance to other countries, though the lessons for others must be carefully interpreted.

2.2.2. The evolving political economy of Singapore

The development goals, and therefore the framework for GLCs, were and remain the work of the dominant political force: the People's Action Party, closely associated with Lee Kwan Yew. The party had a Fabian socialist background prior to internal independence in 1959 and therefore placed great emphasis on social equity, but in a highly pragmatic manner. It was not concerned with local Chinese businesses, viewing them as engaged in entrepôt trade, which did not create jobs – the crucial variable at independence and for years afterwards.[4]

Rather, the government took the view that the key to growth was foreign investment and, to that end, taxes and other regulatory reforms were pursued with considerable success. Still, the government believed that there needed to be a counterbalance to FDI in the form of GLCs that would act as a substitute for the lack of private entrepreneurs.[5] With some exceptions, these were to be oriented toward profitability in the medium term, but it was taken for granted that GLCs would also pursue the more general development goals of racial and religious equality.

To obtain FDI and more recently to encourage start-ups in areas such as biotech identified by the economic plan, the government established the Economic Development Board (EDB). This institution has had to develop criteria for tax breaks outside the parliament. Social equity was to be ensured not through inefficient control of GLCs but via land acquisitions at undeveloped cost and social housing, which would ensure affordable lodging and no spatial

segregation by income group: different income groups live in the same neighbourhoods, and there is no racial segregation.[6] Thus, like Korea and Chinese Taipei, Singapore had a land reform, with state ownership rising from 10% in 1965 to some 90% in 2004 (Yap et al., p. 620). One GLC is affected by the housing policy (Keppel Land), but others must pursue commercial objectives.

Even though the government was keen to distance itself from racial, linguistic and religious movements, it was concerned with preserving what it termed Asian culture, defined as one aspect of Confucian doctrine. By this the state meant a focus on the family as a social unit, organised along hierarchical lines. The hierarchy also required the acceptance of responsibilities by the head, who was seen as having stewardship responsibilities to preserve and increase the wealth of the family for future generations. The government extended the idea of stewardship to its own operations and those of its GLCs (Tsui-Auch and Y-J Lee, 2003).

In combination with the lack of interest in supporting, at first, a local Chinese business elite, a result has been a lack of corruption in general and in business life in particular. The World Corruption Perception Index lists Singapore at number 5: significantly clean, whereas neighbouring countries are around 50 to lower than 150 in rank. Whether GLCs favour each other (which could arguably be considered a form of corruption) is discussed below. Since 2004 a competition authority has underpinned efforts to promote competition in the small, open economy that is characterised by concentrated ownership. The 119 enforcement actions in Singapore during 2007-12 involved anti-competitive agreements (51 cases), prohibited mergers and acquisitions (36 cases), and abuse of a dominant position (32 cases) (Waller, 2014).

Although the general objectives set for GLCs have been clear for some time, and widely supported by managements and boards (see below), specific targets have varied over the years. At first the emphasis was on jobs, viewed as the best way to achieve social equity. As one source notes, "[T]his explained why garment factories sprouted in those days as they could absorb a large number of workers. Pictures of rows of women treading on sewing machines were proudly displayed in official publications. There were factories which produced matchsticks, plastic tooth brushes, cotton wool, zip fasteners and yes, chewing gum" (Yap et al., p. 627).

By the mid-1980s, policy had changed to encourage regionalisation, by which was meant outsourcing some unskilled activities to countries in the region. This policy was accompanied by specific measures such as a significant rise in labour costs (through another government-influenced body) that proved perhaps too effective. GLCs were also part of the policy change.

Following the Asian financial crisis in 1997, policy objectives widened to cover globalisation and not just regionalisation. The implications for GLCs

were important and are discussed below. At the same time, emphasis also shifted to encouraging local start-ups, especially ones based on high technology. Again, the evolution of objectives led to a number of policy changes such as the negotiation of investment treaties.

Although regionalisation and globalisation made sense in the context of a small economy, it was not an objective that could easily be met by GLCs and has not always been welcome by recipient countries (Box 2.1). State-owned or -controlled companies were always open to charges that they operated as an agent of a foreign government. Thus there have been problems with investments in India, Thailand, Indonesia and Australia (Goldstein and Pananond, 2008). These issues have led to changes in the main state investment company, Temasek, including improved disclosure and transparency (Goldstein and Panamond, 2008).[7]

Box 2.1. **Responding to changed objectives is often difficult**

One of the elements in Singapore's regionalisation strategy was the creation of industrial estate projects, especially a number of trans-border industrialisation estates in Indonesia, India, Viet Nam, China and Malaysia. These were run by SembCorp Park Management, a GLC in which Temasek held 50.58% of the equity and local partners the remainder. However, the returns have been disappointing due to the local partners. For example, Temasek has had problems with its Chinese industrial estate investments. As Goldstein and Pananond note, "Singapore has a contractual business culture in which deliverables, timeless and the nature of risk sharing are specified fully. This has proved excessively formalistic in China's emerging business community" (page 428).

With respect to globalisation, it has been unclear whether Temasek was the investor or the GLC corporation. This has been the case in both telecommunications and in banking. With respect to the latter, Temasek was the controversial purchaser of the Thai conglomerate Shin Corp in 2006 (not the corresponding GLC, Singtel) that caused major political problems with Thailand. This raised political questions since Temasek followed market practices and used nominee companies to circumvent Thailand's local equity rule. The corresponding GLC, Singtel, has also invested in many countries (e.g. Optus in Australia) and has been in the process of integrating them into the company. The board has been widened to include an Australian director. The banking group DBS (Development Bank of Singapore) has also been integrating a number of foreign purchases and has also now broadened the board to include foreigners.

Box 2.1. **Responding to changed objectives is often difficult** *(cont.)*

Common to all business, there have also been failures both by the GLC and Temasek. For example, Singapore Airlines (SIA) bought into an Australian airline indirectly by investing in Air New Zealand, which at that time controlled an Australian airline. That airline went into bankruptcy, forcing SIA to write down the investment.

Nevertheless, SIA continues to invest in airlines around the world in the form of equity participations. DBS continues to acquire foreign financial institutions. It is not known to what extent Temasek was indirectly involved since these were operational decisions by the portfolio companies (see the text for further discussion).

One case did involve all state entities. Neptune Orient Line (NOL, a GLC) acquired US President Lines in 1997, but at that time both the Ministry of Finance and the sovereign wealth fund, GIC, needed to inject cash to the transaction. The board of NOL is now quite international.

In conclusion, Singapore has been very clear about what was expected of GLCs, and these have evolved over time in line with economic development. At the outset, GLCs had a major role in industrial policy, with both SIA and NOL aiming to establish Singapore as a transport hub. The state has also been clear, however, that more general issues such as social equity were not the primary goal of GLCs but of specific policies such as land acquisition, social housing and public health. To see how the GLC policy was implemented, one must examine the operation of the state holding company, Temasek.

2.2.3. Early examples of state interventionism and the role of GLCs

Export-oriented industrialisation

As mentioned above, Singapore's early industrial development went hand in hand with an opening of the economy. One element was the effort to attract foreign direct investment discussed above. In a similar vein – and obviously reflecting the limited size of the domestic economy – the government embarked on an industrialisation strategy that emphasised a need to develop export-oriented manufacturing.

Partly in consequence of this strategy, institutional support for industrialisation in the late 1960s became characterised by increasing specialisation. This particularly affected the EDB, which was initially tasked with multiple complex functions that were gradually ceded to more specialised institutions. One of the more prominent examples was the establishment of the Development Bank of Singapore (DBS) in 1968 as a public limited company

that was nearly half-owned by the state. The express purpose was to relieve EDB from of responsibility for financing the development of industry. From the outset DBS was very active. After a year's operation it was invested in almost 100 ventures encompassing SGP 160 million in loans.[8]

Almost at the same time, in November 1968, the government established the International Trading Company (Intraco) to take over what had previously been EDB's export promotion division. Intraco was tasked with two objectives, namely to develop overseas markets for Singaporean products and to source cheaper raw materials for local industries through pooled purchasing. Not least, Intraco was intended to handle the trade with centrally planned economies, which was perceived as a natural role for a large government-controlled entity. As in the case of DBS, the state was the beneficial owner of just under half of the shares.

Another spin-off of EDB was the Jurong Town Corporation (JTC), a statutory corporation established under the Ministry of Finance in 1968. It assumed all responsibility for industrial land estates from EDB's Industrial Facilities Division. The creation of JTC was prompted by developments on the ground, where demand had begun to outstrip the supply of industrial land, imperilling the industrialisation process. The company moved quickly to bolster supply; Rodan (1989) estimates that the availability of fully prepared industrial real estate grew by 25% within its first year of existence.

As an element of the strategies to boost Singapore's ability to engage in international trade, a majority-state-owned company, Sembawang Shipyard, was established in 1968 to take over the UK military's Royal Naval Dockyard. Furthermore, the Keppel Shipyard was separated from the Port of Singapore Authority to form a wholly owned SOE. The same year the government invested (as significant minority shareholders) in the Singapore Shipbuilding and Engineering and the Jurong Shipbuilders, and in the following year in the rigs building and drilling company Bethlehem Ltd. To further promote the prospects of export manufacturing, in January 1969 the government established a fully state-owned company, Neptune Orient Lines. The purpose of the latter was to limit Singapore's dependence on foreign shipping (accused at the time of discriminating against developing economies with excessively high charges) and, again, facilitate the trade with centrally planned economies.

The old Dockyard also spawned SOEs outside the shipbuilding industry. The Singapore Electronic and Engineering took over the British military's Weapons and Radio Organisation. This has been frequently cited as an example of the government's recognising commercial viability and taking the initiative to ensure the survival of an enterprise. Other significant investments in 1968 and 1969 focused on the hydrocarbons sector. Joint ventures with the US oil company Amoco and Japan-based Oceanic Petroleum led to the formation of the Singapore Petroleum Company, of which the government owned almost one-third.

A shift toward higher value-added production

By the end of 1969 the unemployment rate had fallen to 6.5%, and the government decided that under the circumstances it was appropriate to become more selective in its industry promotion. The tightening labour market prompted a refocusing away from low-value, labour-intensive production. The government was further encouraged to do this by a manifest interest by foreign entities to invest in more high-end productions in Singapore.[9]

In addition to allowing wages to rise, the government took a number of measures to attract and develop higher-value-added industries. Advanced training centres were established jointly by the government and private companies. A 10-point programme to promote more advanced manufacturing was announced in early 1973, including tax holidays for new firms with the desired level of technology, measured by indicators such as capital-labour ratios, value added per employee and the share of technical personnel and skilled workers in the companies' workforce.

A fell-funded scheme for equity participation by the government in capital-intensive industries was further announced. This was part of a trend: the government's involvement in productive activities had become gradually more complex and diverse. Chan (1975) estimated that by 1973 the Ministry of Finance directly owned 26 companies and had partial ownership of an additional 33. The government was furthermore the beneficial owner of significant addition equity shares via DBS (estimated at 50 companies) and Intraco (20 companies). The number of boards (i.e. statutory corporations) also grew rapidly, with an additional 12 being established between 1970 and 1974.

It was in this situation that the government decided to streamline its equity holdings through the establishment of two holding companies. One was the Ministry of Devence's Sheng-Li Holding Company, and the other was the now-well-known Temasek Holdings.

2.2.4. The special role of Temasek: structure, operation and control of investee companies

Temasek was formed in 1974 as a fully owned company of the Ministry of Finance. It took ownership of a number of companies previously subject to a state body, such a statutory board or ministry. This allowed the government to separate regulatory authority from state ownership, a major evolution of policy. While Temasek is 100% owned by the Treasury, there are safeguards against expropriation by the government. At the time of a change in government, the past reserves of Temasek are frozen and thus can be distributed only to the budget with the authorisation of the President: only current earnings from which

dividends are paid are subject to transfer. The President approves nominations to the Temasek board. The Minister of Finance is not a board member.

Temasek raises some finance on the capital markets and has a "AAA" credit rating by Standard & Poor's. It has also attained perfect quarterly scores on the Linaburg-Maduell Transparency Index, a measure of openness of government-owned investment funds. Although not a sovereign wealth fund (that is the GIC), it voluntarily follows the Santiago Principles.

Temasek owns stakes in a large number of companies, together accounting for a high proportion of the Singaporean economy (Table 2.1). One estimate, which is biased downwards, is 20% (Tsui-Auch et al., 2011). They are market leaders in air transport, banking, telecommunications and real estate development. Each company is also head of its own corporate group. In addition, Temasek holds a large number of investments directly on its own balance sheet, the largest being an 18% shareholding in Standard Chartered Bank. The investment in China Construction Bank accounts for 8% of Temasek's portfolio, about the same as Standard Chartered. It also owns indirect stakes in two new telecommunications companies that are in competition with the dominant carrier owned by Temasek, Singtel.

Table 2.1. **Basic information on the largest Temasek business groups, 2006**

Name of group	Total assets (SGP m)	No. of subsidiaries	No. of associated companies
Development Bank of Singapore (DBS)	197 372	88	17
Singapore Telecom (SingTel)	33 606	139	36
Singapore Airlines (SIA)	23 369	24	32
Keppel Corporation	13 816	144	39
Neptune Orient Lines	6 550	123	45
Keppel Land	5 261	102	30
Semb Corp Marine	3 429	33	12
Singapore Petroleum (SPC)	3 140	123	10

Source: Lai Si Tsui-Auch et al. (2011).

At the time of Temasek's formation, the government transferred shares at book value to the company. These companies had already been formed into groups by the government along the lines of Korean chaebols (Tsui-Auch and Yoshikawa, 2010). The formation of such local champions has been followed by many other countries, but not in the same context as Singapore.

Since 2004 and following a government review in 2002 (Report of the Entrepreneurship and Internationalisation Subcommittee, Economic Review Committee, 2002), Temasek has been subject to a charter (Box 2.2) and has improved its transparency by publishing annual consolidated accounts.

Box 2.2. **The Temasek Charter**

Temasek is an active investor and shareholder: we deliver sustainable value over the long term.

- We own and manage our assets based on commercial principles.
- As an active investor, we shape our portfolio by increasing, holding or decreasing our investment holdings. These actions are driven by a set of commercial principles to create and maximise risk adjusted returns over the long term.
- As an engaged shareholder, we promote sound corporate governance in our portfolio companies. This includes the formation and of high calibre, experienced and diverse boards.
- Our portfolio companies are guided and managed by their respective boards and management; we do not direct their business decisions or operations.
- Similarly, our investment, divestment and other business decisions are directed by our Board and management. Neither the President of Singapore, nor our shareholder, the Singapore Government, is involved in our business decisions.

Temasek is a forward looking institution; we act with integrity and are committed to the pursuit of excellence.

- As an institution and as individuals, we act with integrity and are guided by our Temasek values.
- We foster an ownership culture which put institution above the individual, emphasises long term over short term and aligns employee and shareholder interests.
- We pursue excellence as an institution by developing our people's capabilities and processes.
- We challenge and reinvent ourselves to stay relevant in a rapidly changing world. We do things today with tomorrow in mind.

Temasek is a trusted steward; we strive for the advancement of our communities across generations

- Temasek is a responsible corporate citizen. We engage our communities based on the principles of sustainability and good governance.
- We support community programmes that focus on building people, building communities, building capabilities and rebuilding lives in Singapore and beyond.
- We engage stakeholders in the development of sound governance practices.
- Under the Singapore Constitution, Temasek has a responsibility to safeguard its past reserves.

Temasek thus has full flexibility to take concentrated risks, whether in owning up to 100% of a portfolio company or in deploying most of its investments into a country or sector.

2.2.5. How does Temasek go about fulfilling its own charter?

An important feature is the board, which at 31 March 2013 had 10 members, a majority of whom were non-executive, independent private-sector business leaders, including two foreigners. However, one board member is also on the board of Singapore Airlines, one of the major investments of Temasek. Each committee is chaired by a non-executive director, who is independent of management. There is no ministerial representative. The shareholders' (i.e. the Ministry of Finance) right to appoint, reappoint or remove board members is subject to the President's approval. The appointment or removal of the CEO by the board is also subject to the President's assent.

In the past, the board of Temasek and its portfolio companies had a high proportion of civil servants and former military personnel as directors, but this is slowly changing. Unlike in other countries, they appear to have been rather effective, showing few signs of the risk-aversion noted elsewhere. It is interesting to speculate about the reasons (Box 2.3).

Box 2.3. **The risk-aversion note**

Why is it that civil servants and former military personnel appear to have been successful in running GLC?

It should be remembered that prior to independence the human resources of Singapore were quite modest. As a result, the new post-independence government introduced a wide-ranging scholarship scheme covering very broad strata of society. Students were bonded after their study to the government for a period, resulting in a public-sector elite that seemed to feel at ease in business.

To some extent this resembles the French scheme set up by Charles de Gaulle at the end of World War II at the Ecole Nationale Supérieure Administrative, where training included a broad approach to running the country and its economy. The choice of candidates covered a wide swath of society. The U.K., by contrast, in general continued past policies of recruiting the civil service from a narrow range of universities and backgrounds. Success in commerce was not an obvious strength.

It is nonetheless worth stressing that board members, civil service or not, were all appointed from the ruling strata of Singapore. As a result, there was

widespread agreement about the government's developmental objectives, which have remained in the hands of the People's Action Party since independence. They were also products of the "clean traditions" established early in Singapore, noted above.

Temasek has grown to some 450 people, analysts and others, from 23 countries to oversee its broad portfolio of companies. But how do they oversee and run such companies?

Securing objectives and overseeing portfolio companies

With respect to specific portfolio company objectives, there are no (or very few) formal documents that are consistent with extensive devolution to the boards of these companies. The board of Temasek and its main companies are all from the same "political family", so the objectives of the government, the ultimate owner, are well-known. When policy has changed, as with a greater emphasis on globalisation after 2004 (not just regionalisation [Box 2.4]), the policy was well understood and was accompanied by other policy measures such as investment, double-taxation agreements and the establishment of a competition authority.[10] Boards have also become more international. The long-term policy to establish a nation without racial tensions has long been understood and accepted.

Box 2.4. **The globalisation of Temasek**

Temasek has globalised its portfolio since 2004 while the portfolio has increased. Singapore accounted for 52% of the portfolio in 2004, but by 2013 it had decreased to 30%. At the same time, China's share rose from 6% to 23%.

The rebalancing of the portfolio led to a decreased share for telecommunications, media and technology, from 36% to 24% and financial services from 35% to 31%. Transportation rose from 14% to 24% in part due to a capital increase for the shipping line NOL.

Source: Temasek Review 2013 and 2004.

Unlike Australia and Canada (and Malaysia), no detailed objectives or key performance indicators (KPIs) are set for each company, but there is now a risk-adjusted rate of return that serves as a benchmark. Temasek monitors the companies, and for their main investments they meet the boards on a regular basis as well as also informally. The emphasis is on the role of the boards in portfolio companies and hence the efficiency of their nomination committees. As a result, boards have tended to become more formally independent, and management more professional in line with the evolution of corporate

governance standards in Singapore. This is illustrated in Tables 2.2 and 2.3. Nevertheless, there is some way to go toward a private enterprise model, so maintenance of high civil-servant standards remains important.

Table 2.2. **Identities of board chair/president, CEO/Managing directors in GLCs 1997, 2006 and 2012**

Core companies	Board chair/president			CEO/MD		
	1997	2006	2012	1997	2006	2012
DBS	G	G	P	G	P	P
Singtel	G	P	P	G	G	P
SIA	G	G	p	G	G	P
NOL	G	G	G	G	P	G
SPC	n.a.	G		n.a.	G	n.a.
Keppel Corp	G	G	P	G	G	P
Keppel Land	G	G	n.a.	G	G	n.a.
Semb Marine	G	G	n.a.	G	G	P

Note: G = government linked (serving in government linked corporations, statutory boards/civil service, army or as members of the parliament and ministers.
Source: 1997 and 2006, Lai-Si Tsui-Aiuch, 2011. For 2012 based on annual reports.

Table 2.3. **Percentage of outside directors on the board of the core companies of the Temasek business groups 1997, 2006, 2012**

%

Core company	1997	2006	2012
DBS	10	8	80
SingTel	0	45	70
SIA	10	30	80
NOL	38	54	90
SPC	13	33	n.a.
Keppel Corp	0	27	70
Keppel Land	20	8	75
Semb Marine	n.a.	44	70

Note: In the case of NOL, information on the backgrounds of three out of 10 directors was insufficiently stated and hence only 8 directors were considered. For the same reason, Lai-Si Tsui- Auch was only able to consider 8 out of 11 directors in the case of SPC. The company is now delisted and acquired by PetroChina.
Source: 1997 and 2006, Lai-Si Tsui-Auch, 2011. 2012, the author.

For their other investments (those under 25% shareholding), Temasek takes the same approach but it does not have regular meetings with the boards. Rather, the company tells the board its concerns but is careful. For example, with Standard Chartered Bank, where Temasek is a major shareholder (18%), the company let the board know that it considered the number of executives on the board excessive. It then abstained from voting, believing that this would send a strong market signal.

Temasek regularly rebalances its investments, and this is an important source of revenue. Over the past decade or so, it has made some SGP 400 billion in new investments but has disposed of some SGP 350 billion of assets. As such, it is very sensitive about being open to the charge of insider trading. The company therefore does not want its employees on boards as a general rule.

Temasek has stated that it encourages its companies to compete with each other and more generally. The example was given of Singapore Airport (owned by the government), which is the base of Singapore Airlines. However, Qantas also uses it as a hub for their budget airline to compete against Singapore Airlines. Temasek also holds indirect stakes in two small telecommunications companies that compete with each other and with the dominant carrier (owned by Temasek). In the past, there was often a practice to establish two companies in a sector as a potential counter to aggressive trade-union behaviour (Yap et al., 2009). Nevertheless, claims surface from time to time alleging that companies favour other Temasek companies (Report of the Entrepreneurship, 2002). It should be noted that the competition authority was established only in 2004.

2.2.6. Performance of Singaporean GLCs

Around the world, discussions of GLCs invariably raise questions about their performance relative to private or foreign companies. There are a lot of methodological and empirical problems with the work (Doamekpor, 1998). One problem is that it is difficult to determine externality effects (either negative or positive and perhaps even time-varying) and the attainment of developmental goals. Another is that the counterfactual is not obvious: Singapore could just as well have ended up like Burma or Cuba (Yap et al., 2009 p. 625).

One measure often used as an indicator of efficiency is the rate of return on either shareholder funds or, preferably, on assets. Temasek uses total shareholder return (TSR), which measures compounded annual returns to the Ministry of Finance (the shareholder). It includes dividends that Temasek has paid to the ministry but excludes capital injections by the ministry.

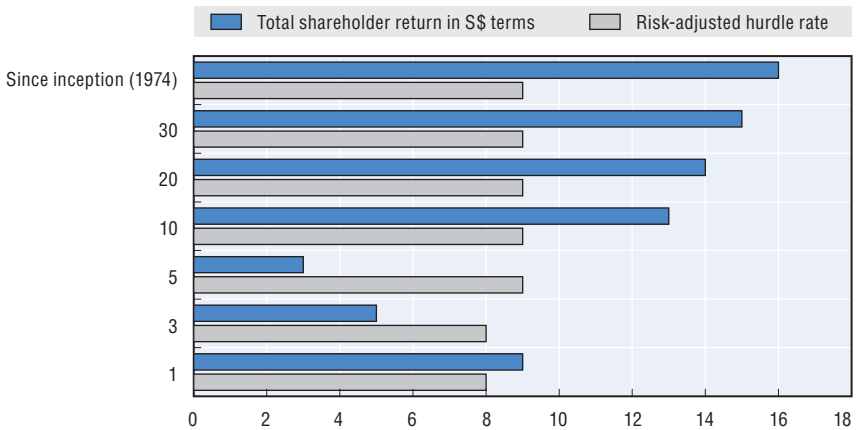
As shown by Figure 2.1, the TSR in 2013 was some 9%, against an average risk-adjusted hurdle of some 8%. Inflation was 2%. Over the past decade the TSR was 13%, against a hurdle of 9% – excellent given their exposure to banking and other cyclical stocks such as aviation.

Nevertheless, it is worth noting that some have challenged these claimed returns, especially over the long term (Balding, 2011). The study claimed that the returns appear high compared with Singapore Stock returns, averaging less than 8%. “If Temasek returns can be verified, it represents the greatest and most sustained period of investment brilliance in human history” (Balding, p. 3).

It is not the place here to examine the arguments that might come down to the valuation of shares that were transferred to Temasek by the ministry at nominal or historical cost. There are also questions about how investment write-downs such as with Air New Zealand were handled, as well as other valuations that are marked to market (Goldstein and Panamond, 2008).

Around the world studies indicate that SOEs often have preferential access to capital, thereby starving access by the private sector. A study by the IMF (Ramirez and Hui Tan, 2004) found no evidence that GLCs in Singapore have had easier access to credit. However, their share price has a premium over non-GLCs so that their cost of capital was less, perhaps due to investors' pricing in what they believe is an implicit government guarantee. Thus, a capital market distortion is present.

Figure 2.1. **SGP total shareholder return and risk-adjusted hurdle rate (%)**



Source: Temasek Review 2013, p. 19.

2.3. Experience in other Asian countries

Like other Asian countries, Singapore followed the examples of both Korea and Japan in developing large, integrated company groups that would be competitive abroad ("national champions"). But there the similarity ends, with Singapore's focus on GLCs and foreign investment that were not important in either Korea or Japan. The example of Singapore has, however, led to new thinking about GLCs in the Southeast Asia region.

Within the region, the Temasek model has been replicated to some extent in Malaysia (and the Philippines) and might be followed by Indonesia and Vietnam. China has an entirely different model (SASAC) but reforms, which might incorporate elements of Temasek, are being studied (Straits Times 2014). Nonetheless, the above discussion illustrates that in examining other

countries it is important to understand the macroeconomic policy framework as well as the political economy that affects both GLCs as well as their operation.

Each section below therefore first outlines the general features of economic history, including the tendency to financial crisis that has formed a backdrop to the development and use of GLCs. Developmental goals are noted. The approach to running GLCs is then outlined.

2.3.1. Malaysia

Whereas the political economy of Singapore chose to de-emphasise its ethnic Chinese roots, the opposite was true in Malaysia: right from independence, Malaysia emphasised its Malay roots and gave preference to ethnic Malays (the "bumiputra"). One aspect of the bumiputra policy included forcing banks to meet minimum lending quotas to Malays.

As in Singapore, the government retained significant control over private savings through a compulsory CPF that had control over some 30% of deposits. Indeed, by 1980 government control of all financial assets reached a peak of 64% of all financial assets. In addition to the control over the financial sector, the government also used the state oil company, Petronas, to support big industrialisation projects such as an automaker, Proton. The allocation of state funds was highly distorted, and there were no export tests as in Korea and Chinese Taipei. As a result, a state-owned investment bank, Bank Bumiputra, created in the 1960s required repeated bail-outs.

From the early 1980s, the state-owned infant industry projects stepped up with a privatisation drive for older government businesses. At the same time, the financial sector was liberalised, setting the scene for a property boom and thereby establishing the domestic basis of the 1997 financial crisis.

The bumiputra policy was in great part based on the national investment programme, which was also instrumental in creating GLCs. To support the policy, not only were companies giving preference in employment to Malays, they were also giving preference to Malay private companies in their sourcing. Such arrangements are ideal for fostering corruption and could evolve into supporting individuals rather than companies. Predictably, Malaysia ranks 53 in the World Corruption Perception Index.

Apart from encouraging corruption, there were other indicators that the original policy was failing. In 2005, the CEO of Khazanah stated that a study had found GLCs to be more highly indebted than the average listed company on Malaysia's stock market, as well as generating less profit per worker and earning a lower return on equity. In the five years before the CEO was appointed, shareholders made a total return of 3.6% on GLCs but 7.5% on other firms in Malaysia's stock market index. As an example, it is also reported that

under the old system one transaction cost MYS 100 million (UDS 27 million), whereas the same transaction cost only MYS 12 million after competitive bidding was introduced later (The Economist *op cit.*). Malaysia had no competition law until 2012.

In 1993, Malaysia founded a GLC holding company, Khazanah, entrusted to manage the commercial assets held by the government and to undertake strategic investments in new industries and countries. It is also tasked with shaping selected strategic industries in Malaysia, and with nurturing their development with the aim of pursuing the nation's long-term economic interests. Currently, it has 60 major companies in its portfolio, but there the similarities with Temasek end.

The Asian financial crisis in 1997 and the collapse of some favoured companies such as Malaysia Airlines led to significant reforms of Khazanah and therefore of GLCs. With the appointment of a new CEO in 2004, young foreign-educated professionals were brought in to run some GLCs. Senior executives were placed on fixed-term contracts, with extensions and pay linked to performance. Government officials with a regulatory role have been removed from GLC boards. On the other hand, the board of Khazanah remains highly political, reflecting the importance of the Malay policy: the board of eight includes the Prime Minister and the Minister of Finance. The emphasis on industrial policy and especially the support of high-tech firms remains.

In comparison with Temasek, Khazanah is highly interventionist with its portfolio companies and carries out extensive monitoring of them. On the other hand, there were probably more issues to deal with, including loose definitions of company objectives such as Petronas, the national oil company, being used in the past as a financing vehicle. The separation of regulatory powers from the exercise of ownership and the development of complementary institutions such as a competition authority have been late in being implemented.

2.3.2. Indonesia

In comparison with that of Malaysia, the situation in Indonesia has been much more complex, driven by major political shifts. The political economy of Indonesia is highly complex, with significant regional, racial and religious differences and at times regional insurgencies. The political party structure since 1997 has been complex and competitive. There is also a very significant rural economy. It is thus quite different from both Singapore and Malaysia.

The economic history of Indonesia can be identified by two financial crises, those of 1965 and 1997. Policy objectives have also varied markedly. From independence in 1949 to 1965, the governments of President Sukarno had no viable policy for industrial development or promoting exports.

Indigenous traders were encouraged with import licenses and by grants of monopolies such as in the spice trade. The central bank granted credit to them in abundance. Indonesia in the early 1960s became, in the words of Studwell, a zero-discipline financial environment: "[T]he central bank fed the beast of credit demand unquestioningly, printing so much money that the economy experienced hyperinflation" (p. 171). Reliance of the private sector on the whims of the government was thus well-established.

In the years following 1965, Indonesia experienced high, constant growth, appearing to signal the discovery of a new development model. There was a first round of ambitious public-sector investment in steel, chemicals, fertiliser, aluminium, machine tools and aircraft construction. These were financed by a big increase in central bank preferential credit. At this time, the term "crony capitalism" came into being as funds were directed to the families surrounding President Suharto. Unlike in Singapore, Korea and Chinese Taipei, there was no export discipline. Financial liberalisation made the situation worse as credit flowed into construction speculation. And bank collapses increased in the years prior to the 1997 crisis. The pain of the crisis was great and became part of the collective memory: it was not until 2005 that Indonesia regained the level of GDP per capita that it had in 1996. By that time, 50 financial institutions had been closed, 26 had been taken over by the Indonesian Bank Restructuring Agency, 12 had been nationalised and 4 out of 7 state banks had merged.

Following the financial crisis, the primary objective of GLCs became at first one of helping to repay foreign debt (in part through privatisation) and then maximising dividends to help the budget. The first step was to bring all GLCs under a new Ministry of State-Owned Enterprises. The first minister had preferred a national holding company but, as noted by Wicaksono, "… the legal hindrance resulting from the lack of Indonesian laws regulating such a holding company forced him to opt for this second best option, something which proved to be part of the problem in managing SOEs as time went by" (Wicaksono, 2007, p. 172).

In the above conditions, the GLCs have become an important political target, and have also been under pressure to produce positive financial returns.

As of 2010, there were 141 GLCs. Eight of these companies were loss-making, down from 36 in 2006. The plans call for sectoral holding companies in sectors such as plantations and pharmaceuticals. Some observers believe that the holding structure will serve as a layer shielding the SOEs from politics and governmental intervention. By itself this would not lead to greater professionalism, transparency and governance, which is the apparent motivation. Indeed, a holding company structure has no legal basis. There are also other problems. As the OECD noted in 2012, the legal structure of the dual board system and other aspects of corporate governance remain underdeveloped.

A sectoral holding company might also exacerbate the problem of limited competition. Indonesia has had a competition law and authority since 1999, but at the beginning it was a very minor player. However, in the period 2000-10, it undertook actions on collusive bidding and tenders that accounted for 85% of the 237 anti-competitive actions that the competition authority initiated.

In determining which holding company model might be appropriate, it would be important to take into account how to allocate the scarce resources: high-level management and governance expertise. The Khazanah model, which is interventionist, might be more appropriate for these conditions. Singapore also has a developed competition policy and actually encourages GLCs to compete, something the Indonesian plan avoids by forming sectoral holding companies. (That said, the Singaporeans do not have to deal with the issue of regions and agriculture.)

2.3.3. Thailand

Uniquely among the Southeast Asian states, Thailand was never colonised and indeed remained distrustful of colonial powers in the region. The historical distrust of foreigners might be the basis for the ban on majority holdings by foreigners of domestic companies.

Thai governments began the longest-running strategy of import substitution industrialisation in the region after World War II, with numerous sectoral development campaigns until the 1980s. There being no incentives for export discipline as in Korea and Chinese Taipei (or financial discipline as in Singapore), however, manufacturers did not make products that were globally competitive. As in Malaysia, there was only a modest and non-inflationary amount of rediscounting of bank loans by the central bank, most of which went to export crops, primarily rice. In the 1980s, finance was liberalised but was subject to capture by entrepreneurial interests. A series of financial rescues were required in the mid-1980s, affecting institutions that held one-quarter of all the financial systems assets.

From the late 1980s, Thailand experienced both a real estate and stock market boom, leading to a current account deficit of some 8% of GDP by 1997. As a result, 56 of the 91 non-bank financial institutions in 1997 were closed.

Since the 1997 financial crisis, the economy has grown quickly, fostered by sound macroeconomic policy, import liberalisation and FDI. The latter elements have improved competition, even though the competition law (in place since 1999) has not been effectively enforced and in fact excludes branches of the economy such as SOEs (Kohaiboon et al 2010). Public procurement is also an issue. SOEs, like the government in general, reserve the right to accept or reject any or all bids at any time and may also modify the technical requirements during the bidding process if, according to regulations,

corruption is suspected. The latter provision allows considerable leeway to SOE in managing procurement, while denying bidders recourse to challenge procedures. Allegations frequently surface that changes are made in procurements of a protectionist nature (US Department of State, 2012).

There has always been an important role for SOEs in Thailand. Currently, the state owns 58 companies, defined where the state has 50% or greater ownership, and it has minority stakes in dozens of others. These include five listed companies in which the government holds a majority position, and another 12 in which it is a majority shareholder. The 58 SOEs have over 250 000 employees, assets of THA 6 trillion and revenue of THA 2.7 trillion. They dominate key sectors (including energy production and distribution, transportation and water) and are active in other areas. They include a number of large financial institutions, with about 30% of banking assets (The World Bank, 2013).

The five listed SOEs include the largest listed company in Thailand as measured by market capitalisation – two of its subsidiaries are also in the top ten – as well as one of three of the largest banks, and the national airline and the airport authority. The direct holding in these companies is estimated to be around 15% of market capitalisation.

A number of SOEs run at a loss. The government regularly allocates 3%-4% of its annual budget expenditures to fund SOEs. Corporate board seats have typically been allocated to senior government officials or other politically affiliated individuals.

A governance reform in 2008 focused on the independence and non-political affiliation of SOE board members. There is a directors' pool for SOEs (run by the Institute of Directors) from which one-third of the members of an SOE should come. Those selected to be in the pool are known to be non-political and independent-minded, with a track record of credibility. Still, both the Ministry of Finance and the supervising ministry are represented by senior civil servants on SOE boards. Other government officials also usually sit on boards. In addition, major subsidiaries of SOEs tend to have at least a few civil servants or other state employees on their boards.

The Bank of Thailand oversees the governance of banks and other lending institutions. It is active in using these powers to screen directors and senior managers, and to block shareholders and auditors of the bank. Even though the state-owned companies compete with commercial banks, they are not regulated in the same way, including not being subject to the competition law. They implement government policies, helping to support rural incomes, small business, housing and other policies.

The World Bank conducted a special review of state financial institutions, which was included as part of its 2013 Reports on the Observance of Standards and Codes (World Bank, 2013). It concluded that reforms should seek to better

account for the state financial institutions' commercial and non-commercial objectives. In particular, high-level decision-making should be clarified and regulations, audits, boards and disclosures should be brought in line with those of other banks.

The State Enterprise Policy Office (SEPO) in the Ministry of Finance is responsible for SOEs, including listed companies in which the state has either a majority or minority stake. It shares it ownership responsibilities with the relevant ministry in companies in which the state has a controlling stake; for example, with the Ministry of Energy in oil and gas major PTT, the largest listed company. It has issued guidelines on corporate governance and related areas for SOEs. SOEs have performance agreements with KPIs and targets that have been contracted with SEPO. KPIs are disclosed to the public. SEPO is also the secretariat for the State Enterprise Policy Committee, a cabinet-level body chaired by the Prime Minster, and as such has the power to help establish SOE policy. In addition, it monitors company performance.

Although there has been some improvement in recent years, the perception of corruption remains high, at a rank of 102 out of 177 according to the 2013 index. This is hardly surprising given the allowances made for various sectors in competition policy and the strong relationship between regulation and ownership, especially of SOEs.

2.3.4. Philippines

The Philippines has a lot in common with Indonesia, with its complex regional politics and limited central administrative capacity. The post-war economic and political history of the Philippines was driven by a national elite with its own investment interests. The financial sector became, in the words of Studwell, the "personal piggy bank of entrepreneurial families". By the time President Ferdinand Marcos was elected in 1965, there were 33 private banks and almost every major business family controlled at least one of them. In that year, the first in a series of bank failures started. To pay for foreign debt, the IMF demanded privatisations, but only two banks were actually sold. Many banks were nationalised and thus boosted the GLCs sector. By and large, national sentiments made privatisations to foreigners unacceptable.

The election of Marcos led to a statement of development goals: he vowed he would deliver land reform and industrial development, and tame what he called the old oligarchs. However, the rise to prominence of the SOEs began when he declared martial law in 1972. The total number of SOEs in 1970 was 65 and grew to at least 303 in 1985 (De Ocampo Bantug, 2011). They then tripled to 604 as of August 2010.

As in other Asian countries, the Philippines also suffered a financial crisis in the 1980s, leading to a payment moratorium in 1983 and to the collapse of

banks and financial institutions. Loans to leading controlling families were often involved. In 1985, the central bank got rid of its multiple, below-market rediscounting rates that "encouraged orgies of priority lending in which the main priority was to plunder" (Studwell, 2013). The two big state financial institutions wrote down their loan portfolio by 67% and 86% respectively after making behest loans to associates of Marcos.

Against this economic and political background, the methods of administering SOEs and their objectives focused on political access and scarcely on national developmental objectives. Established by either special laws or as corporate vehicles, they have on paper to remit at least half of their annual net earnings to the national government. More often than not, it is the budget that pays the SOE. For instance, the National Food Authority created in 1981 receives the greatest subsidies to meet the contradictory objectives of ensuring food supplies at cheap prices and returns to farmers. By setting floor prices in purchasing rice from farmers, they have incurred substantial loses.

A number of GLCs, such as the national oil company, also have regulatory powers, which creates conflicts of interest. Having ministers who are responsible for regulation on company boards creates similar conflicts.

Government financial institutions and other private banks often issue rules, designating SOEs as one of their priority sectors. These receive funds because there is a national government guarantee, sometimes without debt ceilings.

SOEs generally have poor corporate governance. There is political interference with the decision making of their boards, since cabinet secretaries serve as *ex officio* members or as *ex officio* chairs of the boards. The cabinet secretaries (i.e. ministers) are appointed by the President, to whom they are accountable. Ministers often have multiple board appointments. For example, the national power corporation has eight cabinet secretaries on its board of nine (De Ocampo Bantug, 2011). The cabinet secretaries exert influence and moral ascendancy on the other members of the board. Being presidential appointees, they are expected to remain loyal to and execute the orders of their appointing authority, the President. The cabinet secretary is also often the industry regulator.

In addition, reporting on finances has been poor, and the State commission on Audit is reported to be corrupt, subject to bribery or collusion with GLC officials to conceal corrupt activities (De Ocampo Bantug, 2011).

A reform bill came into force in 2011, clarifying the right of the government to set standards of performance, compensation and other matters incidental to the conduct of GLC affairs. This came after several high-profile scandals. A centralised advisory, monitoring and oversight body has been established

(Commission on Governance, GCG) presided by a chairman with the rank of minister. It will formulate, implement and co-ordinate policies, formulate corporate governance standards for GLCs; conduct periodic assessments of performance; and, most importantly evaluate the conflicting mandates of GLCs as to whethe the GCG is a regulatory body or engaged in the activity which it regulates, and make recommendations to the President about how to address the conflict.

While constituting an advance, the law still lacks stringent corporate governance structures that would help insulate GLCs from political pressures under current circumstances. In particular, GLCs remain under line ministries, transparency is poor (De Ocampo Bantug, 2011) and boards are still dominated by ministers.

The political economy of the Philippines is extremely complex. Local demands are strong and varied, so that the concept of national development goals might not be informative. Under these conditions, GLCs are available to respond to the situations with highly specific interventions.

2.4. Conclusions

It is hard to generalise from what on closer inspection turns out to be a heterogeneous region. Nevertheless, some generalities do appear. First, all countries are characterised by path dependency. They are all to a greater or lesser extent marked by their histories. A misstep early in the process establishes an interest group that can frustrate future reforms. Second, corruption is widespread but could still be controlled by a sequence of difficult reforms. One such reform concerns the use of GLCs that have often become the object of political control in favour of selected groups. It is not just GLC governance that matters, however, but also competition and trade policy. For many countries, what is important now is to separate regulatory policy from the control of state-owned assets. In many countries this will require distancing ministers from the administration of GLCs.

A more general conclusion is that the objects of development are often not well-defined. Clearly, one goal is national independence, and this is likely to frustrate privatisation for some time to come. Hence, there is a need for reforms to the operation of GLCs and wider steps to control corruption. It is striking that development goals appear to have become specific to regions or groups, and GLCs have provided ways to achieve such specific goals, albeit at cost to others in the country. A general development objective requires broader policies and institutions to assist in achieving the goals.

A number of these more general conclusions become apparent when examining Singapore in more detail. Singapore's developmental objectives have, on the basis of most indicators, been achieved: per capita GDP has risen strongly, and health and education indicators are amongst the highest in the

world. Social housing has developed impressively, and indicators of perceived corruption are impressively low. On the other hand, the government has been rather authoritarian at times, though hardly totalitarian. Yet the ban on political parties based on race or religion was certainly warranted in view of the situation the state faced at the time of independence.

A great part of the success has been due to the definition of objectives as one of social equity, by which was meant at first jobs, social housing and later, education. The real difference with other states was that these objectives were assigned to specific institutions and policies that suited the objective. Thus, land reform was an essential part of housing policy and removed the basis for a great deal of potential corruption. All of this meant that industrial policy and what was expected of companies was much more limited and focused on jobs and later technology, and growth, which benefited the budget.

The initial strategy or industrial policy was focused on attracting FDI that, as in Japan and Korea, would promote exports but especially provide much-needed jobs. It involved specific policies such as tax breaks, administrative efficiency, and access to land. Not a lot was expected of the domestic business groups, although since 1985 more attention has been given by, *inter alia*, Temasek, to encouraging domestic start-ups. Expectations of FDI were realistic (i.e. to a good extent, unregulated); hence, the role for GLCs to act as recipients of technology and management transfers.

GLCs have made a major contribution to achieving the development objectives, primarily because they were not distracted by other objectives such as the provision of housing and health care. They had a clear economic goal, and managements and boards were driven to produce results by the emphasis on competition. The Singapore holding company, Temasek, has reinforced and strengthened this framework by placing an emphasis on professional management and good corporate governance. The regulation and operation of companies have been clearly separated, and company boards empowered to do what they can do best: run a company.

Temasek's policies have changed over time as the economy has developed. At first, civil servants and the military staffed many boards and managements, but this has evolved to a greater stress on independent, private-sector board members and professional management. The interesting question is why civil servants and the military have been successful, whereas their track record in other countries has not been great. The differences might be due to a "clean society" with little corruption and to the competitive nature of appointments.

As Temasek and Singaporean policy moves forward, there is quite rightly greater emphasis on globalisation and not just on regionalisation. Here there are challenges, as many countries will perceive the companies as agents of a foreign government and could argue that Singaporean companies do not

compete with each other, i.e. no level playing field. This will require greater transparency on the part of Temasek and perhaps some institutional improvisation such as the protection and promotion of a level playing field.

Finally, the case of Singapore is to some extent unique and difficult to transfer abroad. The supporting institutions for industrial policy and GLCs might be hard to establish in other countries. The experience does not support the notion that industrial policy and state ownership are everything. Rather, to avoid clear downside costs, efforts are needed to establish supporting institutions, i.e. policy consistency.

Notes

1. This chapter was prepared by the OECD Secretariat based on original work by Grant Kirkpatrick, Paris, France.
2. The chapter applies a certain fluidity to the concept of "independence": Singapore became independent from the British Empire in 1963 as part of Malaysia and subsequently established itself as an independent nation in 1965.
3. Land purchases and sales are booked as a financing transaction in the national accounts, and not as positive or negative investment as in OECD countries.
4. An important exception concerned the private Chinese banks, which became a focus of regulatory action such as the monetary authority's having power to approve board and managerial appointments. More generally, to guarantee financial stability, the monetary authorities have pursued a conservative regulatory policy.
5. The Fabian socialist origin of many founders of the PAP undoubtedly also played a role.
6. Access to housing is in part a function of the Central Provident Fund, which all citisens are obliged to join and contribute to. Buying and selling of property is via such accounts. See Yap et al. (2009).
7. The case was further weakened when the former prime minister (Lee Kwan Yew) argued that the controversial acquisition of the Thai holding company owned by him was a pure commercial deal.
8. Further details are provided by Rodan (1989).
9. A further factor was the erosion of Singapore's previous wage advantage over other production locations in Asia, and a spate of industrial unrest in the years following 1970.
10. The exception was Neptune Lines, which received funds from both the Treasury and the Sovereign Wealth Fund (GIC) to take over the US President Lines (Tsui-Auch and Yoshikawa, 2010).

PART II

Chapter 3

Brazil: History and lessons[1]

3.1. Introduction

Brazil is a good "laboratory" to study SOEs in a development dimension, for various reasons. The emergence of state capitalism in Brazil followed a similar path found in other countries, where governments created and managed myriad SOEs in the second half of the 20th century. Thus, after World War II, many governments in Continental Europe owned and ran water, oil, gas, electricity, telecommunications, shipping and other companies (Millward, 2005). This model, with SOEs completely controlled and run by the state, can be labelled as the "state entrepreneur model" (Musacchio and Lazzarini, 2014, referred to it as "Leviathan as Entrepreneur"). In Brazil, state ownership of large enterprises began mostly after World War I, when the government ended up bailing out a large number of the nation's railway companies. Then, in the 1940s, President Getulio Vargas created many state-controlled SOEs in sectors that were considered fundamental for economic development, such as mining, steel, chemicals and electricity. Yet the heyday of state capitalism in Brazil took place in the early 1970s, during the military dictatorship (1964-85). By 1976-77, the public sector represented 43% of the total gross capital formation in the country, with around 25% of those investments coming from large SOEs (Trebat, 1983).

As the importance of SOEs increased, however, the deficiencies of the model became increasingly evident. Governments frequently used SOEs to artificially maintain employment during economic crises (such as after the oil shocks of the late 1970s) and even to control consumer prices (Shirley and Nellis, 1991). A lack of insulation from social and political objectives meant that SOE managers had to deal with multiple goals beyond profitability. Furthermore, SOEs lacked managerial practices commonly found in private firms, such as close monitoring by independent board members, transparency and high-powered incentives for managers (e.g. pay-for-performance schemes). Facing escalating debt and realising the high opportunity cost of allocating state capital to unprofitable SOEs, Brazil and other governments in the late 1970s and the turn of the 21st century experimented with reforms in the public sector (Gómez-Ibañez, 2007; Shirley, 1999) and eventually undertook large-scale privatisation programmes (Megginson, 2005). Despite the efforts to get countries to privatise state assets en masse, governments had political reasons to slow the process and to keep some strategic assets under their control.

Arguably, the state-as-entrepreneur model collapsed in the 1980s due to the failure of many SOEs to adjust to the economic crisis of the late 1970s. As discussed below, after the second oil shock in 1979 and the debt crisis of 1982, Brazilian SOEs increased employment, whereas comparable private firms downsized. Faced with losses and large liabilities in foreign currency, SOEs led the government to face large budget deficits and escalating total debt. Under this scenario, the Brazilian government was forced to start privatising many SOEs, especially between 1997 and 1999. On the whole, the privatisation programme generated total revenues of around USD 87 billion, 54% of which originated from foreign investors and firms (BNDES, 2002b). An interesting feature of the privatisation process in Brazil is that around 50% of privatisation auctions involved "mixed consortia" controlled by domestic private groups and foreign investors, often with funding from state-related actors such as the Brazilian National Development Bank (BNDES) and pension funds of SOEs (De Paula, Ferraz, and Iootty, 2002; Lazzarini, 2011). Some argue that mixed consortia helped to "dilute political criticisms that often accompany the transfer of privatised assets to foreign entities" (De Paula et al., 2002: 482). Thus, the formation of such consortia was viewed as a means by which governments could more easily implement privatisation programmes, while preserving some degree of influence in the (partially) privatised companies. The privatisation process thus led to the expansion of a "state-minority model" in Brazil.

While increasing the presence of the state as a minority investor, privatisation reduced the relative importance of SOEs with majority state control: their share in Brazil's fixed capital formation dropped from 25% in 1976 to 8.9% in 2002. Yet, throughout the world, many private firms and SOEs were improving the corporate governance practices of SOEs – through listings, the creation of independent boards, and improved transparency. These reforms reduced agency conflicts and attracted minority private investors (Gupta, 2005; Pargendler, Musacchio and Lazzarini, 2013), giving rise to what is here referred to as the state-majority model. Brazil followed suit. By 2009, around 5% and 30% of the SOEs with majority control by federal and state governments respectively were listed, while the remaining non-listed federal SOEs had to report their financial details to the Department of SOEs (known as DEST) and were closely monitored by different ministries. Despite these improvements, as discussed below, interference by the government remained prevalent in some majority-controlled SOEs, especially when, after 2012, the government used large SOEs such as Petrobras (oil), Eletrobras (electricity) and Caixa Econômica Federal (banking) to control prices.

Brazil therefore allows researchers to examine in detail changes in the nature of state capitalism in the 21st century, as well as the remaining threats to the efficiency of those new models. This chapter is structured as follows.

The next section reports on how SOEs have been traditionally used in Brazil to support development objectives, focusing mostly on SOEs with majority state control. It then details the emergence of the model where the state reduces its role to become a minority investor, with particular emphasis on the role of BNDES, one of the largest development banks in the world. By 2013, BNDES contributed to around 21% of the total credit to the private sector and almost the totality of long-term credit. In addition, BNDES sharply increased its presence in the economy as a minority shareholder of many private firms. Thus, the penultimate section reviews the extant empirical evidence on the performance implications of BNDES's large presence in the Brazilian economy. The chapter concludes by outlining some lessons for governments interested in improving both the efficiency of SOEs – with majority or minority control – and their impact on national development goals.

3.2. SOEs and development objectives in Brazil

This section discusses the role of SOEs in the execution of projects aligned with development objectives of the Brazilian government. The discussion is guided by a host of complementary theories on the economics of state ownership (Yeyati, Micco and Panizza, 2004). The *industrial policy* view proposes that, under certain conditions, state involvement will have a positive effect in the promotion of firms and industries. In this view, state capital and state-owned enterprises can be used as tools to solve important sources of market failure and promote industrial upgrading (OECD, 2013). Namely, state capital can help firms develop *latent* capabilities by funding new knowledge and profitable projects that would otherwise remain unfunded. Constraints to finance latent capabilities are more binding in countries in early stages of industrial development or that have shallow financial markets (Cameron, 1961; Gerschenkron, 1962; Yeyati et al., 2004). Rodrik (2004), in particular, points out the difficulty of starting new industries in which there is uncertainty about costs and possible demand. This is what he calls "discovery costs." If such costs are high enough, they will prevent the development of new products or technologies. For instance, entrepreneurs need to experiment before deciding whether a product is feasible, a process that costs money and time whether it succeeds or fails. Yet if it succeeds, other entrepreneurs in that country can replicate the entrepreneur's success (Rodrik, 2007 pp. 105-106).

State capital, and SOEs in particular, can also help co-ordinate the local deployment of complementary resources and support activities with high externalities and industrial linkages (Amsden, 2001; Evans, 1995; Hirschman, 1958; Rodrik, 2007). Hirschman (1958) famously proposed that backward and forward linkages in the production chain need to be created to spur local development. In other words, a "big push" by the government may be necessary to promote co-ordinated, complementary investments (Murphy, Shleifer, and

Vishny, 1989; Rosenstein-Rodan, 1943). The Korean government, for instance, created the national steel company, POSCO, in order to foster the development of a national auto and shipbuilding industry (Amsden, 1986).

In a related way, the *social* view of SOEs suggests that governments will use these to pursue social and development objectives beyond pure profitability (Ahroni, 1986; Bai and Xu, 2005; Shapiro and Willig, 1990; Toninelli, 2000). For instance, governments may force SOEs to cater to less profitable customer segments, minimise unemployment or invest in remote areas. In other words, SOE managers will typically face a "double bottom line" involving not only financial goals but also social objectives that are not necessarily addressed by the private sector.

State ownership, however, can have important negative implications. According to the *agency view,* SOE managers are poorly selected (*e.g.* for political reasons) and lack high-powered incentives to pursue efficiency and profitability (Boardman and Vining, 1989; Dharwadkar, George, and Brandes, 2000; La Porta and López-de-Silanes, 1999; Vickers and Yarrow, 1988). The multiplicity of social and financial objectives in SOEs also imply that it will more difficult to craft incentive (pay-for-performance) contracts for SOE manages (Bai and Xu, 2005; Shirley and Nellis, 1991). The *political view*, in turn, posits that governments (and their political coalition) will use SOEs to benefit cronies and politically connected capitalists. In addition, SOEs will face a "soft budget constraint": they will be less incentivised to perform if they know that the government will bail them out in case of poor performance (Boycko, Shleifer, and Vishny, 1996; Kornai, 1979; Shleifer and Vishny, 1998; Vickers and Yarrow, 1988).

The Brazilian experience, through the lens of those distinct perspectives, can be divided into four stages of state intervention. First, the government owned enterprises by accident, mostly as a consequence of bail-outs. Second came the explicit design and development of large state-owned enterprises as a way to overcome market failure and co-ordinate large sectors of the economy. The third stage represents the peak of the model where the state acts as an entrepreneur, and refers to a period that starts roughly after 1967, in which the government owned and managed many SOEs in a variety of sectors. This corresponds roughly with the "Brazilian miracle", the period when Brazil grew on average at 10% or more. Yet, this was also a period in which the monitoring of SOEs was poor and there were no controls over the actions of these firms. Thus, fourth came the crisis of the 1980s and the dismantling of the SOE apparatus in the early 1990s.

3.2.1. *The State as an accidental owner (1880s-1930s)*

The industrialisation of Brazil began in full force in the 20th century. Yet, in the second half of the 19th century the country began experiencing rapid

GDP growth (especially after 1880), and domestic and foreign entrepreneurs established an industrial sector. That is, the nascent infrastructure projects necessary for the development of a domestic market were *not* undertaken by the government directly. Before World War I the most important state-owned enterprises were the commercial: the railway Estrada Central do Brasil (Triner, 2000), which was used to connect the coast with some of the coffee regions of Rio de Janeiro; the bank Banco do Brasil, which specialised mostly in short-term lending to agricultural exporters (Bogart, 2009); and the shipping company Lloyd Brasileiro, which the government ended up owning after a series of bail-outs (Bureau of Railway Economics, 1935).

In this initial stage of state intervention, the government was an insurer against failure and a residual owner. In that role, the Brazilian government ended up owning and operating SOEs mostly by accident. There was no grand plan to develop a state apparatus to promote the industrialisation of the country, at least not until the late 1930s. The case of shipping and railways illustrates this point. Between the 1880s (if not earlier) and 1930, the Brazilian government gave subsidies to private shipping companies that carried on coastal trade within Brazil. Then, in 1890, the government merged four shipping lines that were receiving subsidies into Lloyd Brasileiro and protected the new firm from foreign competition by restricting the number of firms that could receive subsidies and carry out internal trade. Even so, the company had to be bailed out in 1913, thus falling under government control. This firm, which actually operated as any other corporation in the country, was in 1937 transformed into an *autarquia* – a government body – and, in 1966, it was again corporatised and turned into an official SOE (SEST 1985-1994; Baer et al. 1973; Topik, 1987).

Railway companies had a similar fate. In the 1850s the Brazilian government tried to develop the first railway lines to connect the coffee hinterland with the coast in Rio de Janeiro. In order to lure foreign investors, the federal government gave concessions that had a guaranteed minimum dividend of 5% for the equity holders of the first few railway lines. These incentives were not enough to co-ordinate foreign investors and domestic capitalists; thus, provincial governments added an additional 2% guaranteed dividend to some of the lines going through their states. Even with such guarantees, the first railway line, which tried to connect the mountains to the coast of the state of Rio de Janeiro went bankrupt and, per its concession terms, had to be taken over by the federal government. Thus, the railway Estrada Central do Brasil started early on as a corporation with majority control by the government. Over time, partly due to government support, it became the second-largest railway in the country.

The increase in government ownership of railways in the first half of the 20th century was rapid, but did not respond to a master plan to co-ordinate specific industries. Again, state ownership was accidental. The government

controlled just over 20% of the kilometres of railway in operation in 1900, but ended up with almost 100% by 1953. Most of the transfers of lines from the private to the public sector were either direct sales or the result of nationalisations built into the concession contracts. These contracts usually gave residual rights to the government and guaranteed transfer of ownership if the concessionaire did not meet its contractual obligations (e.g. if the firm did not build the promised rail lines or if it went bankrupt). For example, in 1904, one of the largest railway companies in Brazil (the Companhia de Estradas de Ferro Sorocabana e Ituana) went bankrupt and the federal government took it over from private investors. Within a few months, the federal government sold it to the government of the state of São Paulo, which then leased it to Percival Farquhar, an American entrepreneur who was developing a railway trust by borrowing large sums of capital abroad and purchasing and leasing land and railway lines in Brazil. With the liquidity crunch of World War I, Farquhar's holding company (the Brazil Railway Company) went bankrupt and the rail line (Sorocabana e Ituana) returned to the state of São Paulo. Other lines operated by Farquhar also went bankrupt and returned to federal control. After that, government ownership increased gradually, as lines all around the country failed and the state became a residual owner (David et al., 2006).[2]

During the 1920s state governments also ended up controlling large commercial banks. The Bank of the State of Sao Paulo, established in 1909 with a dividend guarantee from the state government, operated mostly as a private bank helping to finance coffee exports until 1916. In 1916, the bank ran into some liquidity problems and asked the state treasury for support. The government of Sao Paulo provided the bank with a convertible loan, which by 1926 gave the state government control of the bank. Interestingly, the state government did not send a representative of the Treasury to exert control until the late 1930s (Musacchio, 2009).

3.2.2. SOEs and the big industrialisation push (1934-67)

It was in the 1930s, under President Getúlio Vargas (1930-45), that the Brazilian state openly ventured into a variety of sectors as a way to co-ordinate industries and promote a big push. The government had to step in partly because it wanted to promote import substitution industrialisation (ISI), but also because private stock and debt markets were in crisis and private investors were unwilling to take the risks associated with the creation of new industrial companies in an environment of two-digit inflation (Musacchio 2009). Consistent with the social view of SOEs, the Brazilian government also had a tendency to use SOEs to directly control prices.

Thus, in 1934, the government of Vargas, who was a nationalist military president, passed the first Water Code, bestowing the ownership of waterways

and waterfalls on the nation and allowing the government to regulate electricity rates. Therefore, the Brazilian government controlled tariffs in such a way as to cap the maximum return on investment for private electricity generators and distributors at 10% of historical capital. The existing companies in charge of the generation of electricity had traditionally charged tariffs indexed to the exchange rate (or to gold). Thus, over time, these controls on tariffs led to low returns and underinvestment, leading private companies to sell their assets to the government in the 1950s, 1960s and 1970s (Centro de Memória da Eletricidade 2000; Baer et al., 1973).

In 1937, President Vargas created the Carteira de Crédito Agrícola e Industrial, a special section of the state-owned Banco do Brasil, with the aim of providing long-term credit to industrial firms. This form of development bank was financed with bonds that insurance companies and pension funds were required to buy (Dean, 1969, p. 214). Additionally, after running a pro-free-trade government in the early 1930s, Vargas turned protectionist in the late 1930s. During World War II, Vargas and the Brazilian military realised the dangers of relying on imported raw materials and manufactures and began following an ISI policy with significant state ownership of manufacturing firms.

For instance, between 1938 and 1942, Vargas, associated with the United States government and the private sector, financed and built the first integrated steel mill in Brazil, Companhia Siderúrgica Nacional (CSN). Developing a steel mill required co-ordination with other parts of the supply chain, especially getting iron ore from the centre of Brazil to the southeast, where the mill was going to be located. Thus, in 1942, with financing from the American Eximbank, Vargas created the Companhia Vale do Rio Doce (CVRD), an iron ore mining firm that consolidated a variety of small and medium firms, and a railway (from the mining areas in the centre of Brazil to the port of Victoria a few hours north of Rio de Janeiro). Initially, the government wanted the private sector to participate in the financing of both firms, but owing to scant private participation in the subscription of capital of these firms, the Brazilian Treasury ended up having to buy the bulk of voting shares while pension funds bought the majority of the preferred (non-voting) shares. Therefore, with the creation of both CSN and CVRD, the government connected the iron ore sector with the new steel industry and provided the first push for heavy industrialisation.

Thus, beyond CSN, established in 1941, and CVRD, established in 1942, the government created a variety of SOEs between the 1930s and 1940s. These include the Fábrica Nacional de Motores (FNM), a manufacturer of buses, trucks and cars, founded in 1943; the soda ash producer Companhia Nacional de Á;lcalis, established in 1943; the electricity company Companhia Hidroelétrica do São Francisco (Chesf), projected in 1945 and opened in 1948; and the specialty steel products firms Companhia de Ferro e Aços de Vitória

(Cofavi), established in 1942, and Companhia de Aços Especiais Itabira (Acesita), opened in 1944 (SEST 1981-85). Boxes 3.1 and 3.2 present the cases of FNM and CVRD in more detail. Although the former was a case of failure, the latter eventually became a profitable SOE – in large part due to Brazil's natural advantage in iron ore extraction but also due to an independent, technical management subject to competitive pressure from external markets (e.g. Bartel and Harrison, 2005).

Box 3.1. **Fabrica Nacional de Motores (FNM)**

In 1938, the Minister of Transportation and Public Works commissioned a study to examine the possibility of establishing an airplane engine in Brazil. The project was prepared rather rapidly, but the onset of World War II stalled any progress on it until 1942, when President Getúlio Vargas himself secured funding from the United States as part of their support for their allies. Production at the Fabrica Nacional de Motores got started in 1943, and the first airplane engines (outdated radial engines of 450 HP) were ready by 1946. After building those engines, FNM focused on repairing engines for airlines, and producing engines and industrial parts for textile mills and railways. The domestic sales of airplane engines did not really take off because as soon as World War II was over, American engine makers started selling their own products commercially around the world, including Brazil. Thus, FNM struggled financially in the next few years. Still, the company sustained its operation with internally generated funds.

In 1946, the government authorised the transformation of the engine factory into a corporation, Fabrica Nacional de Motores S.A., charging the firm with the assembly of tractors and trucks. The financing of the new firm came from the federal government, the government of Rio de Janeiro, pension funds and Caixa Economica (a state-owned bank). The new company was considered a national priority, and enjoyed tax exemptions on everything from profits to imports of inputs and capital.

Beyond tractors, FNM became a truck and bus producer after 1946 as well, while the idea of building airplane engines was scrapped altogether. In 1948, FNM signed a contract with the Italian firm Isotta-Fraschini, which led to the construction of a truck with a diesel engine (FNM D-7 300) and 30% of national content. The high national content was possible thanks to the growth in the Brazilian metal works and auto parts industry. FNM also started producing buses, selling a couple hundred units in less than five years. Yet, in 1951, with the bankruptcy of Isotta-Fraschini, FNM had to seek new partners and signed a licensing deal with Alfa Romeo, the then state-owned Italian auto maker, to make trucks. The new trucks had 31% of national content. This was accompanied by the expansion of the factory in 1953, thanks to a loan from

Box 3.1. **Fabrica Nacional de Motores (FNM)** *(cont.)*

BNDE, the national development bank. As a consequence, FNM dominated the domestic market for trucks and buses during most of the 1950s.

In 1956, diverse interest groups interested in the development of the auto industry in Brazil recommended the entry of foreign auto manufacturers to develop a strong private auto industry. These groups also recommended the dismantling of FNM, by then perceived as inefficient and lacking the required capabilities to operate in a complex industry. The government began a gradual divesting of FNM in 1956, selling almost half of its voting shares, keeping 51% of voting equity. Between 1956 and 1959 there were two equity increases in which the private sector increased its ownership share. In 1959, FNM got the license to produce a car, the Alfa Romeo 2000. Yet a financial crisis ensued at FNM as the government controlled the prices of the buses, trucks and tractors built by FNM. Additionally Scania-Vabia and Mercedes-Benz entered Brazil at the end of the 1950s, further eroding the company's market share in the truck and bus sectors. In 1967, the government ordered a recapitalisation of the company using BNDE as an investor and authorised the Ministers of Finance and Commerce to privatise the shares that belonged to the Treasury, as part of the government policy of "divesting firms that do not justify government ownership" (Decree-law 103, 1967). As a consequence of the divestiture, Alfa Romeo acquired control of the company in 1968. By 1973 Alfa Romeo had signed a joint venture agreement with Fiat (51% for Alfa, 43% for Fiat and 6% for minority shareholders), and they split the ownership of FNM after that. Thus ended the Brazilian government attempt to use state capital to own and operate an engine factory.

Source: Decree-law 8699, 1946; Decree-law 103, 1967; Dean (1969); Musacchio (2009); Wirth (1970); Triner (2011); Baer (1965); BNDES (2002); Schneider (1991).

Box 3.2. **Companhia Vale do Rio Doce (CVRD)**

An example of a firm that was created during the initial stages of state capitalism, and then managed to expand and have relatively good performance, is CVRD. One key factor for the expansion of CVRD is that it did not rely on transfers from the treasury to finance its expansion. Instead, the company used its export profits as a source of cash flow to continue financing its investments. Thus, CVRD illustrates how an SOE can leverage its operations and enhance performance if it is exposed to competition in foreign markets.

In 1942, through an agreement with the United states government, President Vargas created the Companhia Vale do Rio Doce (CVRD, or Vale), using the facilities of the Itabira Iron Ore Company, its railway network, and loans from

Box 3.2. **Companhia Vale do Rio Doce (CVRD)** *(cont.)*

the American Eximbank. Simultaneously, Vargas created the Companhia Siderúrgica Nacional (CSN) (Triner, 2011, p. 94). By the late 1940s, CVRD was already responsible for 80% of Brazilian iron ore exports. By the 1960s Vale became the most profitable SOE in Brazil and a leader in the world iron ore market. According to Trebat (1983, 103), Vale could focus on profitability and growth because of its relative autonomy from the government. Vale was profitable enough to avoid having to ask continuously for support from the Brazilian Treasury or from BNDES. Trebat (1983) estimated that Vale financed between 60% and 100% of its capital investment in the 1970s with its retained earnings. The remainder was financed by issuing long-term debt.

Under the leadership of Eliezer Batista and others, the company used its retained earnings to buy companies in other sectors, both to diversify its investment portfolio and to create joint ventures. Throughout the early 1970s, Vale "sought broad diversification in the natural-resource sector and moved aggressively through subsidiaries and minority-owned affiliates into bauxite, alumina and aluminium, manganese, phosphates, fertilisers, pulp, paper… and titanium" (Trebat, 1983, 52). Furthermore, by the 1970s, Vale's distribution network included railways, shipping lines, and a port. Thus, at the height of what Trebat called Vale's "empire building" period, the company owned 12 major subsidiaries and was an active partner in 12 joint ventures, primarily fuelled with foreign capital.

Despite being a state-owned enterprise, Vale was always one of Brazil's most profitable firms, and rival exporters forced it to become a cutting-edge mining company early on. Vale's most important investment project was the development of the Carajás iron ore deposits in the state of Amazonas – estimated to be the world's largest iron ore reserves, with at least 18 billion tons of the mineral. By 1986, Vale was exporting all of the production from the Carajás mines.

Vale's expansion came to a grinding halt in the 1980s when the government's stabilisation policies controlled expenditures, especially capital expenditures, in all SOEs (Werneck, 1987). Still, Vale was the SOE that paid the highest dividends to the Brazilian government in the 1980s and 1990s and was the SOE that contributed more to gross capital formation in those decades (Pinheiro and Giambiagi, 1994). Eventually the firm was privatised in 1997; however, with remaining (minority) state capital.

Source: Khanna, Musacchio and Reisen de Pinho (2010); Musacchio and Lazzarini (2014).

In the 1950s, the Brazilian government had a second wave of SOE creation. These firms again were created to ether provide a big push in infrastructure, as a way to either supply important inputs for domestic industry (e.g. electricity,

oil and steel) or reduce market failure, especially in capital markets. One of the most important efforts to develop a new industry and to reduce bottlenecks was the creation of Petrobras, the flagship state-owned national oil company. The creation of Petrobras came after almost two decades of political debate about the model Brazil should follow for its oil industry. In the 1940s, the demand for oil and refined products increased rapidly, and the government realised it needed to have a plan for the industry. The question was both who would control the rights to exploit oil and who would control the rights to import, refine, and distribute oil and oil products. In the end, the government created Petrobras in 1953, granting it a monopoly on the exploration, extraction, refining, and transportation of crude oil and refined products (Law 2,004 of October 1953).

This second wave also saw the creation of the giant national development bank, BNDE. While the early industrialisation in Brazil had been financed by a large stock and bond market, by the 1950s there were few initial public offers and the long-term bond market had disappeared. Since Brazil had experienced two-digit inflation since the 1930s, by the 1940s the stock of long-term loans to GDP had decreased to around 5%, from a peak of almost 20% in 1914 (Musacchio, 2009). Thus, in 1952, a series of joint studies by the governments of Brazil and the United States concerned with the expansion of Brazil's infrastructure led to the creation of the Brazilian National Bank of Economic Development (BNDE in Portuguese, later changed to BNDES when "social development" was added to its mission in 1982). BNDE soon assumed a key role in the long-term credit for infrastructure projects such as energy, steel and transportation.

BNDES started out as a vehicle to provide long-term financing for the renewal of large infrastructure projects. During its first 10 years of operation, BNDE focused on providing long-term funding for the renewal of the railway system and the construction of new hydroelectric power plants. Most of the large projects BNDE financed were carried out by SOEs. For instance, Furnas, Cemig and others SOEs built most of Brazil's largest hydroelectric plants and transmission lines with funding from BNDE and the World Bank (Tendler 1968).

In the late 1950s, the bank's focus began to switch to supporting the development of the still-burgeoning steel industry. In its infancy, BNDE operated as a giant holding company, initially providing minority equity; then, through equity injections or through convertible debt, it ended up becoming the majority shareholder of the largest steel mills. For instance, in 1956, BNDE and the government of the state of São Paulo financed the creation of a steel mill, Companhia Siderúrgica Paulista (Cosipa). Although BNDE began as a minority shareholder, subsequent capital injections made it the majority shareholder from 1968 until 1974, when the government transferred its controlling shares to a new holding company for the steel industry, Siderbras.

A similar story took place with Usiminas, another steel mill, partly financed by the government of Minas Gerais. This firm was controlled at first by a consortium of Japanese firms, but BNDE became the controlling shareholder through subsequent equity purchases in the late 1960s (BNDES, 2002; Schneider, 1991; Baer, 1965). In fact, in the 1960s BNDE financed about 70% to 80% of all capital investments in the steel industry (BNDES, 2002).

During the 1950s and 1960s, most of the loans BNDEs gave had long maturities and low real interest rates. The average interest rate was 9.5% per year. For infrastructure loans, the rates were about 8% and for industrial loans, the rates reached 11%. Yet, with double-digit interest rates, especially in the early 1960s, these loans carried a negative interest rate (Curralero, 1998, 20).

Under the military government (1964-1985), BNDES changed its focus from lending to public projects to financing private companies. Before 1964, almost 100% of the loans went to finance public projects, either directly by a government agency or indirectly by an SOE. But by 1970, the private sector received almost 70% of the loans and by the late 1970s, public projects received less than 20% (Najberg, 1989 p. 18). In 1965, as part of the push to support the domestic machinery and equipment industry, the military government created Finame, the first subsidiary of BNDE. For the Brazilian government and the BNDE technocrats, the development of a domestic machinery industry was seen as a sine qua non for industrial development that was not dependent on foreign imports. Thus, Finame had the sole objective of providing medium- and long-term funding for the purchase of equipment in Brazil (BNDES, 1987). Most of its loans went to private companies that were trying to substitute imports. Furthermore, Finame was designed to support the development of the dynamic domestic machinery sector, which, according to Leff (1968, p. 2), had average growth rate of 27% per year in the previous two decades.

In sum, before the 1970s, BNDE and the newly created SOEs were a vehicle to promote improvements in infrastructure (railway and utilities) and prop up nascent industries. In a market with severe credit rationing and high discovery costs, the Brazilian government, through BNDE, was providing long-term financing and sometimes acting as an entrepreneur itself to finance the development of new industries such as steel, electricity and chemicals.

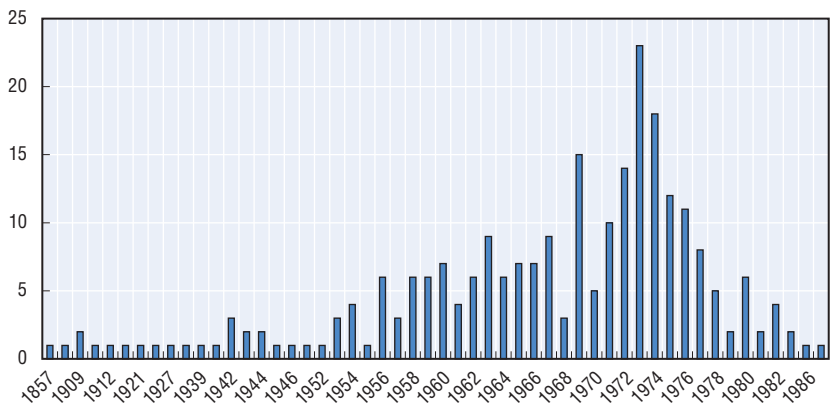
The outcome of this period of rapid growth in state-owned enterprises, however, was not an overwhelming dominance of SOEs in the Brazilian economy. The Brazilian government, instead, developed a large apparatus in sectors that were key for the industrialisation of the nation and still left the private sector as the dominant player in other sectors where state action was not perceived as necessary. The state dominated in mining, metallurgy and steel, public utilities and petroleum. For instance, by the end of the 1960s, among the 10 largest firms in those sectors, SOEs represented 60% of assets in

mining, 70% in metallurgy and steel, 86% in public utilities, and 80% in petroleum, petrochemicals, and oil and gas distribution (Baer, Kerstenetzky, and Villela, 1973). Consistent with the industrial policy view, these key industries in which the state operated were also industries with high spillovers and forward linkages. In summary, in this initial stage the Brazilian state focused on co-ordinating sectors to develop basic infrastructure and to provide basic inputs for the country's industrialisation.

3.2.3. The zenith of the state as an entrepreneur (1967-79)

In this third stage of state capitalism in Brazil, the government ventured into industries beyond utilities, mining, steel and petroleum, not necessarily by design, but due to the action of the managers of SOEs. It is in this period that state intervention in the economy, in the form of direct ownership of SOEs, reached a historical peak. Figure 3.1 shows the number of SOEs by their year of creation. The graph was built using data on SOEs observed in the 1970s and 1980s. Thus, the total number of SOEs may be underestimated due to attrition. With this caveat, a large number of SOEs were created during the military dictatorship (1964-85) and, in particular, during the administration of President Ernesto Geisel (1974-79), a general who had served as the CEO of Petrobras between 1969 and 1974. It also shows that the peak in SOE creation actually took place in the late 1970s.

Figure 3.1. **Number of SOEs established per year, 1857-1986**



Note: The sample of firms used to plot this graph excludes companies that failed or were privatised before 1973, such as FNM. After 1973, the sample includes all of the Federal SOEs and a large number of state-level SOEs.
Source: Musacchio and Lazzarini (2014).

The number of SOEs exploded once Ernesto Geisel took over as president in 1974. He was a strong believer in state planning and saw an explicit need for the

government to guide and support economic development (Gaspari, 2003, p. 298). He was also a strong supporter of ISI and believed that foreign participation was warranted only in cases where domestic technology was lacking. According to Trebat (1983), "public enterprise has been considered in Brazil as a shortcut to industrialisation – an expediency forced upon policymakers by the absence of a well-financed domestic private sector and by Brazil's reluctance to allow transnational corporations into certain strategic sectors" (p. 116).

The development of the telecommunications sector in Brazil illustrates this point. Defenders of state control of that sector argued that foreign companies tend to focus on short-term profitability and fail to promote satisfactory coverage of phone lines at cheap prices. At the same time, private domestic capital was perceived to be insufficient or unwilling to take the required risk to invest in telecommunication infrastructure; local industrialists lamented "the lack of resources and low tariffs" (Díaz-Alejandro, 1984). The Brazilian Telecommunications Code of 1963 established a state-granted monopoly, followed by the creation of Embratel in 1965 and the subsequent organisation of the Telebras system in 1972 with regional telecoms Embratel (responsible for interstate and international calls) and CPqD (an R&D unit).

One could argue that, in this period, state ownership in the Brazilian telecom sector is explained by the industrial policy argument that state-led intervention may be necessary to promote risky, co-ordinated investments. Yet, by the late 1960s the Brazilian government already had mechanisms to support domestic private entrepreneurs through subsidised credit (e.g. through BNDE). In addition, a great deal of the state-led industrial big push had already occurred in the period after the World War II and the early 1960s. A more plausible explanation, again in line with the social view, is that the government wanted to guarantee sufficient coverage at low prices, thus reducing the expected profitability of private investment. A tendency of military governments in Brazil to avoid foreign control of "strategic assets" further reduced the extent of private capital required to fund large infrastructure projects. Thus, state ownership prevailed due to the sheer desire by the government to directly control a wide range of industrial sectors.

In fact, in the 1970s state action focused on ISI and state-funded fixed capital formation. In the Second National Development Plan of 1974, created by Geisel's economic team, the government set targets for SOEs and for BNDE. According to this plan, the priorities were to change the energy matrix of Brazil (especially after the oil shock of 1979), to propel the development of a domestic raw-materials industry (to depend less on imports) and to consolidate the machinery and equipment industries (BNDES, 1987). Thus, the government ventured more heavily into petrochemicals; created firms to control the distribution and storage of foods; invested in research and development of the National Agricultural Research Company (known as Embrapa); either supported

or bailed out private firms in petrochemicals, metals, and technology; and continued using Finame to subsidise capital expenditures.

Some SOEs also resulted from the objective of promoting new technology in the realm of the state. A clear illustration is Embraer (Box 3.3): it was launched

Box 3.3. **The case of Embraer**

In 1941, the administration of Getúlio Vargas created the Ministry of Aeronautics with the objective of co-ordinating the development of a national aeronautics industry. FNM (see Box 3.1) was part of this effort. In 1949, the government furthered its efforts to develop an aeronautics industry by creating the Aerospace Technology Centre (CTA – modelled on the Massachusetts Institute of Technology). The CTA spawned a number of sister organisations specialising in various aspects of sector-specific training and research. Initially the role of this set-up was to support private-sector initiatives in the aeronautical industry. The government thus played multiple roles. It provided financing, co-ordinated actors (and by demanding planes provided the demand) and reduced discovery costs for companies by subsidising research, both in universities and SOEs such as FNM.

In an effort to develop a mass of aeronautic engineers and invest in a technology deemed as a "strategic," the government created in 1950 (through Law 27,695 of 1950) the Aeronautics Technology Institute (known as ITA), which operated in the campus of CTA in Sao Jose dos Campos, Sao Paulo state. Initially ITA offered an aeronautics engineering major, and subsequently added electrical engineering (1951), mechanical engineering (1962), computer science (1989) and others. It was also the first education institution to offer a graduate degree in engineering in Brazil. In 1954, inside CTA, the government created the Institute for Research and Development (known as IPD in Portuguese). Thus, once CTA, ITA and IPD were created, they co-ordinated to develop projects envisioned by the military, the Ministry of Aeronautics and professors at ITA. Moreover, Sao Jose dos Campos quickly became a centre for aeronautics, as private companies established in the region, working closely with CTA, IPD and ITA.

Between 1964 and 1965 the Ministry of Aeronautics tasked CTA with the development of a medium-sized airplane manufactured nationally; this was the so-called "Bandeirante" Project. By 1968, a group co-ordinated by the Ministry of Aeronautics, which included a variety of private firms, CTA, IPD and ITA, had a first prototype for the Bandeirante plane ready.

In 1969 Embraer was established as a majority SOE, taking over some core projects from CTA, including the development of the twin-engine, turbo-prop Bandeirante airplane. The creation of Embraer was not, however, part of any formal governmental plan; it actually resulted from the insistence of a former

Box 3.3. **The case of Embraer** *(cont.)*

Aeronautics colonel, Ozires Silva, who had led the Bandeirante project. The new company was supported by the state through close links with the Ministry of Aeronautics, generous tax holidays, concessionary loans and an access to offer its customers preferential financing through BNDES. Commercial production of the Bandeirante started in the 1970s in co-operation with foreign partners under co-production and licensing arrangements. Meanwhile CTA and the Brazilian Air Force developed other military planes, including the Ipanema light plane, the Tucano fighter plane and the AMX fighter jet, intended to be produced on a commercial basis by Embraer.

Embraer's production facilities were designed to limit the degree of domestic vertical integration that was thought to have dogged earlier attempts to establish a viable aircraft manufacturer. A number of light aircrafts were developed relying on Brazilian design but contracting of high-value, high-tech components abroad. A strong focus on the export market was a priority from the start, and proved crucial in offsetting the development costs.

Like some other SOEs such as Vale/CVRD, management was more or less autonomous and insulated. Half of the board of directors was appointed from among private sector corporate executives. The company's apparent success was at the time described as the outcome of a "triple alliance" between multinational enterprises, local private companies and SOEs. Yet around 1990 Embraer faced the most severe crisis in its existence. This was partly related to lingering fiscal constrains following the Latin American crisis in the early 1980s, but it has been mostly attributed to an increased politicisation and a focus on engineering over commerce in a company relying heavily on government procurement. For example, Embraer was forced into a loss-making co-operation with the military aircraft manufacturer of a neighbouring country for political reasons.

In December 1994, after several failed attempts, Embraer was privatised. Embraer recovered spectacularly under private ownership, though it should be noted that the groundwork for the recovery was done in the late 1980s with the decision to develop the company's first regional jet, the ERJ-145. The state remained with a minority equity position through BNDES and Previ, the pension fund of state-owned bank Banco do Brasil.

Source: OECD (2013); Bernardes (2000); Lazzarini and Bourgeois (2008).

in 1969 as a state-controlled SOE but actually resulted from previous state-led investments in aeronautical engineering and military technology. Like Vale, Embraer had an autonomous management and benefitted from local resources such as research and education centres. Furthermore, it was since its inception integrated in external markets and foreign production chains;

that is, Embraer did not operate as a typical SOE focused on ISI. Yet it was only after its privatisation in 1994 that the company became truly competitive, with new product lines for regional routes such as the ERJ-145 and, more recently, the "E-Jets". Also like Vale, Embraer became an example of the State as a minority investor, with capital from pension funds and especially BNDES.

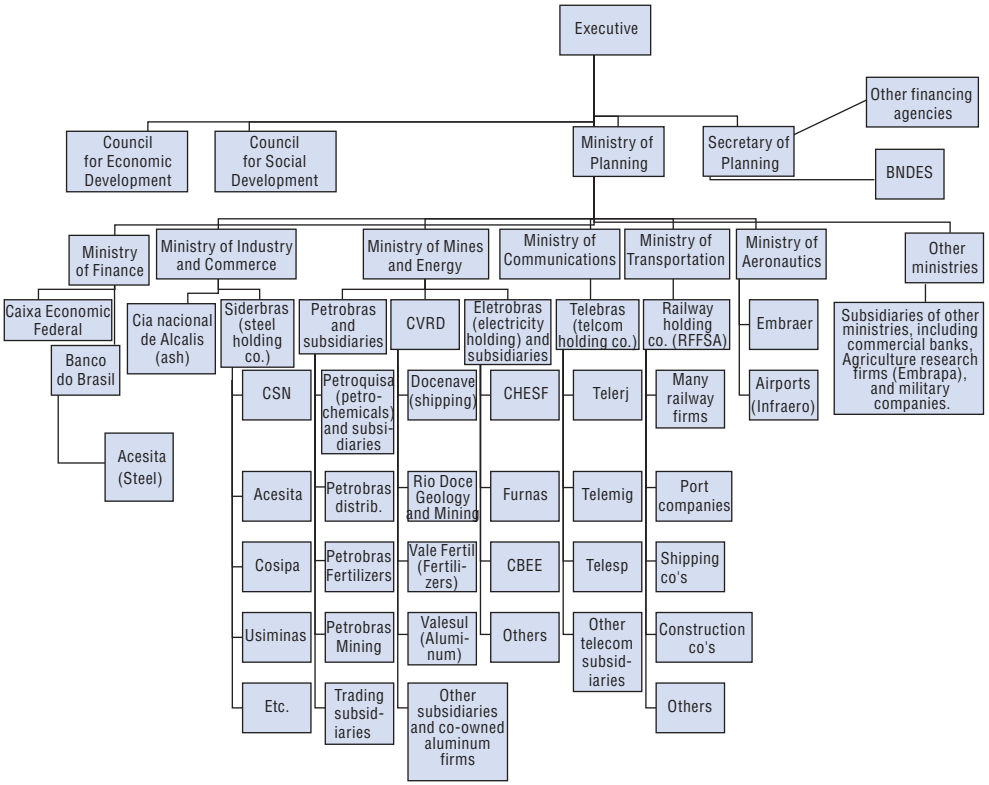
As a consequence of the investments associated with the second development plan, gross capital formation by federal SOEs jumped to 4.3% of GDP, or 16.3% of the total fixed capital formation in 1975 (Trebat, 1983: 15). Moreover, as the National Development Plan unfolded, Brazil saw its highest GDP growth rates in years. Between 1965 and 1979 Brazil grew at some 9%-10% per year. The growth came partly from the relocation of labour from agriculture to manufacturing, but also from the rapid accumulation of capital. Furthermore, value added in manufacturing grew at 10% per year between 1967 and 1980.

Yet, not everything went according to plan. Since 1967, the government had decentralised the control of SOEs among different ministries. The idea of decentralising control was based on the assumption that it would ensure faster execution because of the relevant monitoring bodies would be close to the actual operations. In practice, the decentralisation of control gave ample autonomy to SOEs, especially those that did not require continuous support by the Brazilian Treasury (Wahrlich, 1980).

Decentralisation created two problems for the federal government, however. First, the government had no control of the number of SOEs and the kind of subsidiaries each of these firms had. A census conducted by Fundação Getúlio Vargas in the early 1970s showed that the federal and state governments controlled 251 firms (1983). In 1976, another census conducted by the magazine Visão reported that the federal and state governments controlled 200 and 339 SOEs respectively (Trebat, 1983: 116). But an explicit plan to count and control federal SOEs began only in 1979 with the creation of the Secretary for SOE Control, known as SEST. Figure 3.2 shows some of the most important SOEs and the ministry in charge of monitoring them. Above the ministries were three agencies in charge of in theory co-ordinating the actions of SOEs, the Council for Economic Development, the Council for Social Development, the Ministry of Planning and the Secretary of Planning. The last two were under the direction of the Minister of Planning. Yet, in practice SOEs responded to their ministries, which in turn preferred to have larger firms with more jobs under their commend than having efficient firms achieving development goals.

Thus, decentralisation also led to "empire building," or the process by which managers of large SOEs used internally generated resources to expand their empire into sectors that were not necessarily part of their original mandate (Trebat, 1983). That is, many managers made sure their firms were

Figure 3.2. **Organisational chart of the instances of control of Brazilian SOEs, c. 1979**



Source: Created by the authors with data from Wahrlich (1980).

profitable to enjoy independence from the government and to be able to invest in the sectors they deemed relevant for their SOEs. This course of action questioned the government's capacity to co-ordinate its productive apparatus. For instance, the SOEs of three ministries invested in aluminium firms, fertilizers, shipping and chemicals. Two SOEs, controlled by different ministries, had investments in railways.

The tremendous size of the SOE sector, however, worried some government officials, such as Marcos Vianna, President of BNDES. In May 1976, Vianna wrote a confidential memorandum to the Minister of Planning, João Paulo dos Reis Velloso in which he noted that there were "few private firms among the top 100 companies of the country…". He also argued that the widespread presence of SOEs "created a problematic picture whereby national private entrepreneurs are inhibited, leaving the impression of a deliberate policy of statisation, which is definitely not the desire of the government" (Vianna, 1976). His proposed remedy was to promote a form of "co-ordinated privatisation"

whereby BNDE itself would assign sectors populated by SOEs to selected private groups. BNDE's participation, in his proposed scheme, would involve a mechanism whereby "the debt should be repaid in proportion of the net profits effectively generated" and the period of amortisation "would not be pre-specified". Thus, in essence, privatisation would entail state capital in a form very similar to minority equity investments (i.e. long term investments with no pre-specified repayment dates). Although Vianna's plan was not adopted, his proposal set the stage for the privatisation process and the subsequent model of state investment in which the state is a minority investor and in which BNDES became a central actor as a lender and shareholder.

Despite the ubiquity of SOEs in the Brazilian economy until the 1980s, it hard to precisely quantify how much they contributed to the development of the nation in the 20th century. After World War II, large SOEs progressively became important sources of country-level investment. By 1976-97, they were responsible for around 25% of the total gross fixed capital formation in Brazil. Furthermore, thanks to SOEs Brazil developed large sectors that initially were not funded by the private sector alone, such as steel, airplane manufacturing, telephony, national oil, gas, petrochemicals, mining and an integrated electric grid (which was not integrated when it was operated by private parties, e.g. Tendler, 1968). Most applied innovation efforts were also essentially executed by state agencies (such as Embrapa in agriculture) as well as large SOEs such as Petrobras and Embraer.

3.2.4. The decline of the state as an entrepreneur and the wave of privatisations (1980s-1990s)

The expansion of SOEs in the 1960s and early 1970s was partly facilitated by an external environment with cheap available credit. In the early 1970s, the government had relatively easy access to lines of credit from international banks, both directly and indirectly through SOEs focused on tradables, such as Vale do Rio Doce. According to former Minister Delfim Netto, "Arab countries would sell us oil and would deposit their profits in an American bank, which would then lend us the money."[3]

Such externally financed expansion, however, reached its limit by the late 1970s. With the second oil shock of 1979, causing a sharp increase in oil prices, the terms of trade for Brazil gradually deteriorated. Because Brazil was a net importer of oil, the new external environment strained the country's balance of trade and current account. Brazil had to borrow abroad; yet, complicating matters, the Federal Reserve Board of the United States hiked up its benchmark interest rate in 1980. Although rates began to fall by 1982, there was another external shock that destabilised the Brazilian economy. In the autumn of 1982, Mexico declared a moratorium on payments of its foreign currency and triggered a debt crisis in several developing countries. As a consequence, credit lines

from private banks, which had been abundant before 1980, dried up and the US Treasury, the International Monetary Fund, the Federal Reserve, and a group of international bankers had to ration credit globally.

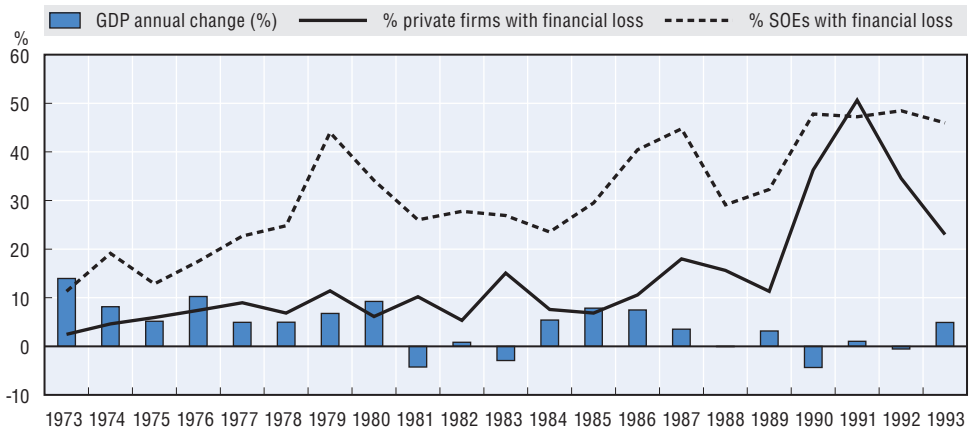
The rapid depreciation of the currency after 1982 created three complications for the Brazilian government and its SOEs. First, it made it more difficult for the federal government to meet its external debt obligations (Díaz-Alejandro, 1984). Second, currency depreciation also led to rampant inflation. Third, the rapid rise in global interest rates and the rationing of credit severely hurt the finances of some of the largest SOEs, which had been financing their current expenditures with foreign debt denominated in dollars or yen.

Between 1980 and 1983, the financial expenditures of SOEs went, on average, from 7% of total expenditures to 16.6%. SOEs belonging to the electricity conglomerate Eletrobras had their financial expenditures increased from 26% of total expenditures to almost 53%, while SOEs belonging to the steel conglomerate Siderbras had financial expenditures increased from 10% to almost 35% of total expenditures. Other firms, such as the state railways, the aircraft manufacturer Embraer and the specialty steel mill Acesita, saw their financial expenditures double as a consequence of global increases in interest rates (and the depreciation of the Brazilian currency) (Werneck, 1987).

Moreover, the government started to use SOEs to pursue "social objectives" such as price stability and low unemployment. This had two consequences for SOEs. First, as the government imposed expenditure and price controls on SOEs, their revenues stalled, while salaries and other costs skyrocketed due to domestic inflation. This led to losses and a rapid decline in capital expenditures. This is because the government controlled SOE expenditures tightly as a way to push prices down, but that also led to a dramatic fall in aggregate gross capital formation. Gross capital formation by SOEs fell from 5% to 3% of GDP two years after the 1982 crisis started and continued falling until 1990, when it reached just below 2%.

Second, SOEs were unable to adjust the size of their labour force during the pronounced recession and thus faced severe losses. Figure 3.3 shows the performance of SOEs compared with that of private firms before and after the crisis (1979-83). The percentages of SOEs versus private firms reporting losses are depicted. Underlying the figure is a database of 136 Brazilian SOEs at the federal level between 1973 and 1993. As a control group, 156 top private firms have been included in the sample (see Musacchio and Lazzarini, 2014 for further details). Having a control group of private firms is important because, in essence, the crisis is expected to affect state-owned and private firms. Nevertheless, one might expect SOEs to be more severely affected given that they pursue social and political objectives that distract them from the focus on profitability. As mentioned earlier, if governments force SOEs to control prices

Figure 3.3. **Percentage of SOEs reporting losses, compared to a control group of private firms, 1973-93**



Source: Musacchio and Lazzarini (2014).

then they should be much more negatively affected than their private counterparts. Indeed, Figure 3.3 shows that the percentage of SOEs reporting losses increased to a greater extent than private firms in the 1980s, reaching almost 50% by the early 1990s. (In 1990 and 1991, there was an unsuccessful plan to curb inflation through confiscation of savings, which affected private firms and SOEs alike.)

The social view of SOEs suggests that state-owned firms will be used not only to control prices but also to artificially hold investment and employment, even in moments of crisis. Figure 3.4 shows how SOEs and private firms comparatively behaved in terms of employment, based on estimates reported by Musacchio and Lazzarini (2014). Again, one can hypothesise that unemployment as a result of the crisis should be observed more in SOEs than in private firms. Faced with an external shock, private firms are expected to downsize, whereas SOEs may even *increase* hiring as a way to buffer the impact of the crisis on the national labour market.

A problem with comparing SOEs and private firms, however, is that they differ greatly, especially considering that many SOEs until the 1980s were operating as state-granted monopolies, thereby lacking comparable industry peers. To circumvent this potential source of bias, Musacchio and Lazzarini (2014) identify a host of company-level "fundamentals" – such as size, leverage and profitability – that would allow to match SOEs with comparable private firms. Namely, the technique of differences-in-differences estimation with propensity score matching is implemented (Heckman, Ichimura, and Todd, 1997). Employment before and after the crisis is measured in two periods: 1979-81 and 1982-84. Next, the change in employment (in logarithm form) is

computed as the difference between those two periods, for SOEs and private firms. Propensity score-matching is then used to give more weight to private firms whose fundamental traits are more similar to the sample of observed SOEs. In line with the hypothesis derived from the social view, SOEs increased employment by 7.5% after the shock, while comparable private firms downsized by 2.6% in the same period.[4]

3.2.5. Governance of remaining SOEs and the emergence of the state as a majority investor

Table 3.1 summarises the set of SOEs that remained after state control by the first decade of the 21st century. Using data from DEST, 47 enterprises are found to be controlled by the federal government, with USD 626 billion dollars in total assets. State-level SOEs, in turn, totalled 49 under direct control by the state governments, with total assets worth USD 66 billion. These numbers include only SOEs directly controlled by the government, however; some are themselves state-owned holding companies with a host of subsidiaries. Summing up SOEs with direct and indirect stakes, Musacchio and Lazzarini (2014) estimate that Brazilian governments at the federal and state levels controlled more than USD 757 billion dollars in total assets. Remaining SOEs were present in sectors deemed by the government as "strategic." Examples of top SOEs include Petrobras (oil), Eletrobras (electricity generation), Banco do Brasil (banking) and Caixa Econômica Federal (also banking) at the federal level; and Sabesp (sewage/water) Cesp (electricity) and Barisul (banking) at the state level. State banks, in particular, were used to target segments not covered by private banks, such as agricultural and housing credit.

Table 3.1. **Remaining majority-owned Brazilian SOEs, by 2009**

	Federal level	State level
Number of SOEs	47	49
Number of listed SOEs	6	16
Total assets of SOEs (USD million)	625 356	66 152
% of total assets held by listed SOEs	58.3	67.8
Top listed SOEs, by assets	Banco do Brasil (banking) Petrobras (oil) Eletrobras (electricity) Banco do Nordeste (banking) Banco da Amazônia (banking)	Cesp (electricity) Banrisul (banking) Sabesp (water/sewage) Cemig (electricity) Copel (electricity)

Source: Compiled based on data from the Securities and Exchange Commission of Brazil and the Department of Co-ordinations and Governance of State-owned Enterprises (DEST), Ministry of Planning. Total assets include only firms with direct stakes by the government.

Table 3.1 also shows that although most SOEs are not publicly traded, the largest SOEs are listed on the Brazilian stock market. Thus, by 2009 listed SOEs

comprised respectively 58% and 68% of the total assets under direct control of the federal and state governments, respectively. Although SOEs in Brazil had to report their audited financials to DEST even before they became publicly traded, listing was expected to mitigate agency problems and improve the governance of SOEs in important ways (see e.g. Gupta, 2005). For instance, SOEs had to commit, at least ostensibly, to the principles that grant legal protection to minority shareholders as defined by the Brazilian Joint Stock Company Law of 2001 (Law 10,303). Minority shareholders, for instance, have the right to elect a representative to the board of directors if their total shareholding is higher than 10%. In addition, some decisions had to be approved by a qualified majority (two-thirds) instead of a simple majority.[5] This model is referred to as the "state-majority model": the state remains the controlling shareholder, but to a great extent agrees to follow certain rules that facilitate the attraction of private minority investors (Pargendler, 2012a; Pargendler et al., 2013).

Innovations in the Brazilian regulatory system allowed some SOEs to commit to even higher governance practices. Thus, firms can follow three higher levels of corporate practices in the Brazilian stock market: the "Novo Mercado" ("New Market") and the Level 1 and Level 2 segments. In the Novo Mercado, for instance, companies are not allowed to have dual-class shares (that is, all shares must have voting power) and the board of directors must have at least 20% of external members. Firms listed in the Level 1 need to guarantee more detailed reporting, while firms listed in the Level 2 need to guarantee rights for holders of preferred shares in case of corporate mergers or acquisitions.

A key motivation to adhere to such higher governance standards was to send a signal of improved management and eventually attract external, private funding. Sabesp, the water company of the State of São Paulo, decided to join the Novo Mercado in April 2002 and simultaneously issued convertible bonds in local currency to lower its dependence on foreign debt. Interestingly, more SOEs at the state level adhered to higher governance standards than SOEs at the federal level (Musacchio and Lazzarini, 2014). Just one SOE at the federal level, Banco do Brasil, is listed on the Novo Mercado, while only Eletrobras is listed as a Level 1 company.

Although Petrobras is not in one of these higher governance segments, the company listed its shares on the New York Stock Exchange in 2000 and in Europe two years later. Petrobras was in talks to join the Level 2 segment in 2002, but abandoned the idea because firm's by-laws would not allow minority shareholders to have a significant voice in decisions pertaining to mergers and acquisitions. The company, indeed, exemplifies the limits of the state-minority model; sometimes the temptation of governments to intervene is too high even when SOEs are listed and with improved management. Box 3.4 discusses the

Box 3.4. **Petrobras: Governance reforms and remaining intervention**

President Vargas created Petrobras in 1953 and gave it a monopoly over the production of oil and gas. Yet, Petrobras was not very successful at finding oil in Brazilian soil, at least not in the amount necessary to supply the domestic market. That is why, until the 1970s, Petrobras operated mainly as a trading company, importing crude oil and refined products. In that decade it partnered with the private sector to develop the petrochemical sector in Brazil, eventually absorbing all of its private partners into Petroquisa. By the early 1990s Petrobras was one of the largest companies in the Americas, with distinct capabilities in oil exploration.

As part of the privatisation and liberalisation policies of the 1990s, President Fernando Henrique Cardoso designed the partial privatisation of the oil industry. In 1997 he enacted the "Petroleum Law", ending Petrobras's oil monopoly and opening oil and gas markets in Brazil to foreign investment. Cardoso also allowed foreigners to own shares in Petrobras. Finally, in August 2000, still under Cardoso, Petrobras listed its shares on the New York Stock Exchange, through the American Depository Receipts (ADR) program. By listing shares in New York and later in Europe (2002), Petrobras had to improve its corporate governance practices and had to become more transparent, publishing audited financial statements quarterly and adhering to the Generally Accepted Accounting Principles (GAAP). After 2001, Petrobras also had to comply with the Sarbanes-Oxley Act (which demanded further disclosure of related-party transactions and executive compensation). By listing in major stock exchanges, the company also opened itself up to the scrutiny and monitoring of ratings agencies and large mutual and pension funds from all around the world.

These reforms allowed Petrobras and the Brazilian government to gain international credibility, and the Brazilian oil sector enjoyed a boom in the first few years of the 21st century. Companies from all over the world partnered with Petrobras to pursue large exploration projects and large mutual funds from all over the world bought Petrobras shares. Kenyon (2006), referring to the listing of Petrobras, argued that "by issuing shares to private investors and adopting a commitment to transparency, politicians can raise the political costs of interference and avert policies that are damaging to [SOE's] interests" (p. 2).

In the governance reform of Petrobras, the most important items to highlight are the changes in the board of directors, which started to include independent members, as well as new statutory protections and rights for minority shareholders. Also of importance was the fact that Petrobras privatised a relevant part of its capital, keeping the majority of the voting capital and a golden share to veto major decisions of the firm. Petrobras had

Box 3.4. **Petrobras: Governance reforms and remaining intervention** *(cont.)*

traditionally chosen CEOs with technical backgrounds, but as it was listed it changed the incentives of its executives by including pay-for-performance provisions. Finally, the monitoring of the actions of the firm fell not only on a variety of institutional investors and ratings agencies, but also on the National Oil Agency (ANP), a regulatory body established in 1998.

All of these reforms, however, did not prevent government intervention in the oil industry. Two examples of intervention illustrate this point. After the Brazilian government announced the discovery of new oil reserves in deep water ("pre-salt") areas in 2007, it was decided that Petrobras itself would be single operator of the oil fields in partnership with other investors who would share part of the oil revenues. Because operations would require substantial investment, the company soon had raise external capital.

The Brazilian government wanted to increase its stake in Petrobras, however, while guaranteeing the presence of the SOE as the major operator. Thus, the government engendered a complex transaction, whereby Petrobras would pay for the rights to extract oil and the government would use the proceeds to purchase new shares. Private minority shareholders argued that the operation would dilute their participation in the company and argued that the price paid by Petrobras for the oil rights was too high.

Conflicts escalated in early 2012, when the government decided to deliberately use Petrobras to control the price of gasoline. A highly regarded oil executive was appointed as a CEO of Petrobras in February 2012. This appointment was well-received by the markets. By the time she was appointed, the price of the gasoline was kept low even though the price of imports was escalating. Right after she started her job as CEO, she declared that "it is evident that it is necessary to adjust the price." Yet the federal government refused, reflecting apparent political concern that increasing the price of the gasoline would undermine efforts to reduce inflation and raise the Central Bank's benchmark interest rates.

Source: Musacchio, Goldberg and Reisen de Pinho (2009); Musacchio and Lazzarini (2014); Pargendler (2012b); Pargendler et al. (2013); newspaper article "Graça defende correção do preço dos combustíveis," Agência Estado, 27 February 2012.

governance reforms at Petrobras and the subsequent interventions by the government, such as the control of gasoline prices.

The price control of Petrobras resembles the various instances of interference described in the previous section. Sometimes the desire to pursue objectives other than profitability makes governments willing to directly intervene in SOEs with majority state equity. Petrobras, however, was not the

sole case of such type of intervention. In September 2012, the Brazilian government reportedly also pursued a forced anticipation of concessions in the electricity generation sector. Firms with existing concessions were offered the possibility to renew their contracts as long as there was a reduction in electricity prices. With few private firms interested in the deal, Eletrobras and its affiliated SOEs had to take over the concessions with substantial losses. The President of Eletrobras, José da Costa Carvalho Neto, declared in September 2013 that the company was "losing 1 million reals [around USD 450 thousand] per hour."[6]

3.3. State-related alternatives to SOEs: The role of the Brazilian National Development Bank (BNDES)

In 1949, the Joint Brazil-United States Development Commission – comprised of technocrats from Brazil, the United States and the World Bank – came to the conclusion that Brazil needed to expand and improve its infrastructure. BNDE was created in 1952 to supplant a scarcity of long-term credit for the required infrastructure investments, especially in energy and transportation. Although Brazil had an emerging bond market in the early 20th century, the Great Depression shrunk the availability of long-term credit and most banks started focusing on short-term loans (Musacchio, 2009). Reflecting the early prominence of the model where the state was an entrepreneur, 84% of the lending activity of BNDE, an SOE itself, went to other Brazilian SOEs between 1952 and 1964 (Leff, 1968, p. 53). Over time, however, the bank greatly expanded its operations, with new lines of credit to finance machinery purchases and lending directly to many large private corporations. By the late 1970s, 87% of BNDES's loans went to the private sector (Najberg, 1989, p. 18). Besides lending, BNDE also began to invest in equity in the 1970s. To manage these shareholdings, BNDE, then renamed BNDES, created in 1982 BNDESPAR ("BNDES Participations").

This, in turn, reflects the fact that during a large part of its history BNDES did not limit itself to leverage private funding; it was repeatedly given government mandates to support developmental and industrial policy priorities. Thus, in the years of industrialisation fuelled by import-substitution (the 1950s and 1960s) BNDE was tasked with directed lending to prioritised industries. In the 1970s (reflecting the above observation) the Bank was active in assisting the expansion of SOEs in basic industries. The more recent reorientation toward the private sector went hand in hand with the privatisation processes of the 1990s.

The implication is that, even after the demise of Brazilian SOEs and the implementation of privatisation programmes, BNDES remained a central actor in the economy. When President Fernando Collor (1990-1992) started the National Privatisation Program (*Programa Nacional de Desestatização*, PND), BNDES was

selected as an "operational agent" and remained so in the subsequent wave of privatisation under President Fernando Henrique Cardoso (1995-2002). Because BNDES was run by a technical elite with expertise in many industrial sectors (Schneider, 1991), its involvement in the privatisation process was seen as a natural move to guarantee credibility and smooth execution. For each SOE that would be privatised, BNDES co-ordinated studies and hired external consultants to define minimum auction prices (Baer, 2008). BNDES also provided acquirers with loans and minority equity – which, as discussed earlier, was suggested by its former president Marcos Vianna back in the 1970s. Around 86% of the privatisation revenues came from sales of control blocks to "mixed consortia" involving domestic groups, foreign investors, and state-related entities such as BNDESPAR and pension funds of SOEs (Anuatti-Neto et al., 2005; De Paula et al., 2002; Lazzarini, 2011). Therefore, privatisation itself was a shock that reinforced the state-minority model.

In fact, BNDES retains growing importance even as of today. According to data from the Central Bank of Brazil, between October 2000 and 2013, the value of BNDES's operations to GDP more than doubled, from 4.8% to 11.1%. In the same period, its participation in the total credit to the private sector increased from 19% to 21%. By the end of 2012, the total equity held by BNDESPAR had a market value of USD 44.8 billion. The dividends from such equity investments also became a relevant source of revenue for the government. As seen in Table 3.2, the value of loans disbursed by BNDES in 2010 was more than three times the total amount provided by the World Bank. BNDES also fares well when compared with other banks in terms of return of equity and labour efficiency.

Table 3.2. **Comparison between BNDES and other development banks (2010)**

	BNDES	Inter-American Dev. Bank (IDB)	World Bank	Korea Dev. Bank	Germany's KfW	China Dev. Bank
Financials and employment (USD bn unless indicated)						
Total assets	330	87	428	123	596	751.8
Equity	40	21	166	17	21	59.2
Profit	6.0	0.3	1.7	1.3	3.5	5.5
New loans	101	10	26	n.a.	113	84.2
Outstanding loans	218	63	234	64	571	663.2
Staff	2 982	~2 000	~10 000	2 266	4 531	4 000
Performance ratios						
Return on equity (%)	15.0	1.6	1.0	7.8	16.7	9.2
Return on assets (%)	1.8	0.4	0.4	1.1	0.6	0.7
Profit/employee (USD M)	2.0	0.2	0.2	0.6	0.8	1.4
Equity/assets (%)	12.0	24.0	38.7	14.0	3.5	7.9
Assets /employee (USD M)	110.8	43.6	42.8	54.4	131.5	188.0

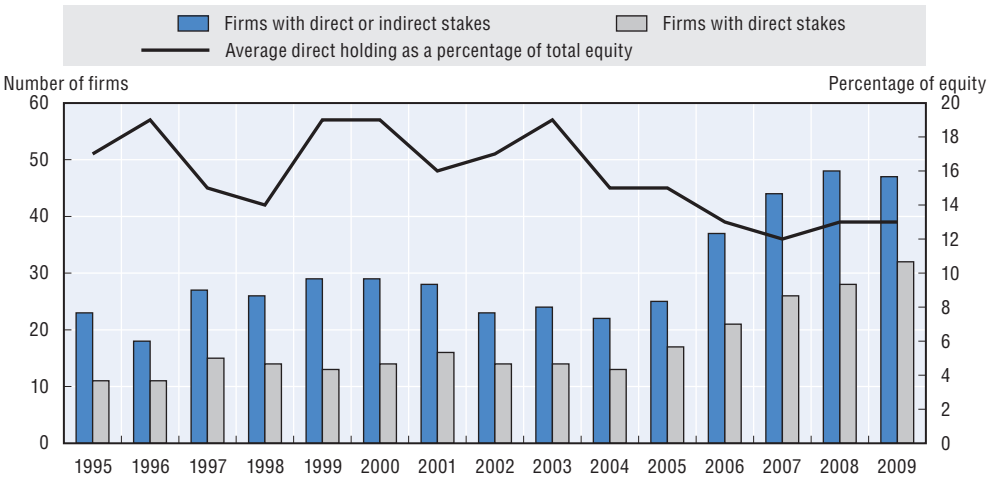
Source: Musacchio and Lazzarini (2014), based on Teixeira (2009) and annual reports of the banks. For the World Bank, the financial year is from June 2009 to June 2010.

3.3.1. BNDES as a minority shareholder

Figure 3.4 shows how BNDES's holdings (through BNDESPAR) increased in a sample of listed firms between 1995 and 2009. Holdings can be *direct* or *indirect*. Direct stakes are observed when BNDESPAR appears in the direct shareholding structure of the target firm. Indirect stakes, in turn, occur when BNDESPAR is the owner of an intermediate organisation that is the direct owner of a target firm. For instance, Vale is directly controlled by Valepar, which is a consortium of owners including BNDES, Japanese group Mitsui, Brazilian banking group Bradesco and a host of pension funds of SOEs such as Previ (from Banco do Brasil) and Petros (from Petrobras). BNDESPAR indirectly owns Vale through Valepar.

Figure 3.4 shows that there was an increase in publicly listed firms directly or indirectly owned by BNDESPAR. There was, however, a moderate reduction in the percentage of equity directly held by BNDESPAR, from around 17% in 1995 to 13% in 2009. Apparently BNDEPAR sought to increase its portfolio with a larger number of firms while slightly diluting its share in the equity of the target companies. Unfortunately, data are not available on the extent of equity stakes in the case of indirect stakes because these stakes involve complex ownership pyramids for which data are not always available.

Figure 3.4. **Equity participations of BNDESPAR in a sample of publicly listed firms (1995-2009)**



Note: Indirect stakes occur when BNDESPAR buys a company that is part of a pyramidal ownership structure; that is, when it owns a company that, in turn, is a shareholder in another corporation (e.g., BNDES owns Valepar, which in turn owns Vale; see Figure 12).
Source: Created based on data presented in Musacchio and Lazzarini (2014).

One may examine the implications of BNDESPAR's equity stakes in two complementary ways: from the point of view of the target companies receiving

minority state equity and from the point of view of BNDES (and ultimately the state) as an investor. Using the sample of publicly listed firms summarised in the Figure, Inoue, Lazzarini and Musacchio (2013) examined what happens when BNDESPAR participate as a minority shareholder in terms of firm-level variables such as profitability and investment. Because BNDESPAR does not choose its target firms randomly, substantial care must be taken to avoid spurious inference. The authors then perform regressions with firm- and industry-year fixed effects to control for fixed unobservable factors at the firm level and time-varying unobservable factors at the industry level. They also run alternative specifications using propensity score matching to build a comparable control group of firms without BNDESPAR. Thus, they essentially measure variations in firm-level outcomes as a function of variations in state equity compared to similar firms without such stakes.

The industrial policy view suggests that equity investments by BNDESPAR can increase firm-level profitability as long as they reduce the financing constraints of entrepreneurs with latent capabilities (Amsden, 1989; Rodrik, 2004). The literature on development banks, in particular, emphasises that such banks are specialised in long-term credit (Armendáriz de Aghion, 1999) and their technical bureaucracy can help screen and support projects that would otherwise remain unfunded (Amsden, 2001; Gerschenkron, 1962). It this is the case, one should expect a positive effect on profitability and investment; for instance, an entrepreneur may be able to increase the scale of its operations and invest in new technology, all of which will positively affect firm-level performance. Drawing from Williamson (1988), Inoue et al. (2013) also suggest that equity may have another beneficial feature: compared with debt, equity yields greater flexibility to provide required adjustments in strategy, given the highly uncertain nature of projects devised to revamp latent capabilities. Debt holders, in contrast, are expected to require a fixed return irrespective of the future evolution of the project. Not less important, because stakes are *minority*, at least in theory the government will not have sufficient power to intervene in the target company as per the social and political views; also, because target firms are usually private, the inefficiencies predicted by the agency view when firms are state-controlled are also expected to be less relevant.

Box 3.5. **BNDES as a minority shareholder: Aracruz and NET (Globo)**

Aracruz, a leading worldwide producer of cellulose pulp, was a vertically integrated firm with forest cultivation technology as well as in processing plants. Highly focused on exports, Aracruz was considered a highly competitive firm. With 38% of voting shares in 1975, BNDES helped fund approximately 55% of the industrial investments that enabled the firm to initiate pulp production

Box 3.5. **BNDES as a minority shareholder: Aracruz and NET (Globo)** *(cont.)*

in 1978 (Spers, 1997). In the 1990s, production efficiency was substantially improved through new capital expenditures; processing capacity jumped from 400 000 tonnes of cellulose per year in 1978 to 1 070 000 tonnes in 1994 and 1 240 000 tonnes in 1998. Despite the presence of some families as owners, Aracruz was practically managed as a standalone firm with improved governance. In 1992, Aracruz pioneered in Brazil the use of NYSE American Depository Shares (ADS) with enhanced transparency and external monitoring. The case of Aracruz thus shows how state equity can be used to promote initial fixed investments by well-run, standalone private firms.

In contrast, BNDESPAR also supported NET, a cable firm belonging to Globo, a powerful media group in Brazil owned by the Marinho family. Through Globopar, the Marinho family held stakes in various firms in publishing, printing, cable, satellite and internet services, among many others. By 1999, the Marinho family, through Globopar, had acquired majority control of Globo Cabo, also known as NET. BNDESPAR agreed to purchase shares of the company worth BRA 160 million (around USD 89 million). Before that, BNDES had also provided Globo with loans to support its expansion in newspapers and satellite broadcasting. However, NET's market expansion proved successful yet the group as a whole, with escalating debt from its expansion plan, had to be rescued. BNDES agreed to make another capital injection through BNDESPAR, part of which being used to buy equity while the other used to buy debentures issued by Globo. Eleazar de Carvalho, who was appointed president of BNDES in 2001, declared that governance was a "basic and primordial" cause of the problem; the bank had no control of the expansion strategy of the group and how injections of capital would be used. This case thus illustrates the risk of allocating state capital to groups with complex shareholdings and potential shareholder conflict.

Source: Inoue et al. (2013); Spers (1997); interview by Eleazar de Carvalho in the article "Para BNDES, ajuda à Globo não é garantida", O Estado de São Paulo, 17 March 2002.

3.3.2. BNDES as a lender

The volume of loans disbursed by BNDES is massive. As seen above, in 2010 BNDES's new loans were more than three times the total amount provided by the World Bank in the same year (Table 3.3). In 2013, most loans (58.2%) went to large firms with revenues higher than BRA $300 million (around USD 130 million) (OECD, 2013).[7] Although BNDES does not disclose firm-level data on loans for confidentiality reasons, it is possible to observe the borrowing activity of publicly traded firms because they need to declare the origin (and rate) of their loans. Lazzarini et al. (2011), for instance, collected data from the annual

Table 3.3. **Distribution of loans by BNDES in a sample of publicly listed firms**

Company	Percentage of total loans in the database	
	In 2004	In 2009
Petrobras (oil)	14.5	39.4
Telemar Norte Leste (telecom)	10.4	7.7
Vale do Rio Doce (mining)	n.a.	8.5
Suzano (paper and energy)	3.4	2.6
Brasil Telecom	n.a.	3.2
Neoenergia (electricity)	3.2	2.5
CPFL Energia (electricity)	6.8	n.a.
VBC Energia (electricity)	2.7	2.0
CSN (steel)	4.2	2.3
Klabin (paper)	1.3	2.1
Aracruz (cellulose)	2.4	n.a.
Cesp (electricity)	11.2	n.a.
Sadia (food and agribusiness)	3.2	n.a.
CPFL Geração (electricity)	n.a.	2.1
Embraer (airplanes)	n.a.	1.4

Source: Musacchio and Lazzarini (2014), using the database employed by Lazzarini et al. (2011).

reports of 286 listed Brazilian firms between 2002 and 2009. They measure the presence and extent of loans in two ways: through a direct inspection of the declared source of funding or, in cases where this information was not available, through an examination of the reported the interest rate paid. BNDES lends at a subsidised rate, called *Taxa de Juros de Longo Prazo* (TJLP, "long-term interest rate"), which is lower than the benchmark market rate.

Table 6 shows the distribution of loans by firm, i.e. which firms got a larger bulk of loans among publicly listed companies for which the origin of funding could be identified. Although by 2004 loans were more or less distributed across firms and sectors, by 2009 Petrobras became by far the largest borrower, with almost 40% of total loans held by listed corporations. In addition, although industrial policy scholars recommend that state capital preferably stimulate novel learning instead of reinforced specialisation (Amsden, 1989; Rodrik, 2004), the largest borrowers, as first noticed by Almeida (2009), are either utilities or large firms established commodity sectors such as mining, oil, steel and agribusiness. After 2007, as mentioned above, BNDES sought to promote national champions: large, existing firms that could grow bigger with new acquisitions and internationalisation efforts. Luciano Coutinho, President of BNDES, justified such industrial targeting as follows: "We chose sectors in which Brazil had superior competitiveness, agribusiness and commodities… Brazil was a great exporter, but it was not possible to prop up international companies in these sectors. For this reason, one may argue that, whenever there was competitive capacity, such internationalisation would be implemented" (interview in Dieguez, 2010).

The somewhat unusual role of BNDES as a lender must be seen in the context of certain characteristics of the Brazilian economy. First and foremost, Brazil has traditionally been a chronically credit-constrained country: internationally very high interest rates, decades of high inflation and limited access to international capital markets, plus the fact that private credit had to compete with a highly liquid government bond market, are among the challenges that it had to face. On top of this the long-term interest rate (Portuguese abbreviation: TJLP) is fixed by the monetary authorities at comparatively low levels, which has traditionally led to an inverted yield curve. In this economic climate few financial institutions were willing to extend long-term loans to private enterprises and SOEs. Instead, BNDES was sent into the fray as a "lender of last instance", financing itself mostly from a mixture of treasury outlays and funds from the workers' fund FAT.

Unsurprisingly, as also alluded to above, the lending by a public institution at subsidised rates became directed at politically prioritised activities. Critics of BNDES have noted (*inter alia* Musacchio and Lazzarini (2014) drawing on the information presented in Table 3.3) a strong concentration of lending to large companies and a strong sectoral concentration. BNDES has argued against this that the Brazilian economy overall is concentrated in the resource industries and that, even if the Bank were driven solely by profit maximisation objectives, this would in itself lead to a concentration of its loan portfolio. The question does arise, however, whether the market imperfections that once justified BNDES's dominant presence in the financial markets still exist. If this is not the case, then the Bank's subsidised lending is effectively at risk of crowding out more efficient alternative allocation of financial resources.

A recent study by the OECD has raised this question.[8] The Organisation opined that in today's financial markets prioritised lending to large companies makes little sense since they are the ones best-placed to get credit from other sources. The OECD noted BNDES's important role as a market maker in secondary markets (e.g. in connection with the equity investment described above) but argued that lending should increasingly be directed to sectors with more apparent market imperfections – such as credit to small and medium-sized enterprises, infrastructure projects and innovation. It acknowledged some recent progress in this respect, but recommended that BNDES progress faster and emulate good practices from other countries such as requiring private co-financing of its loans to minimise the risk of deadweight losses.

3.4. Conclusions and lessons

As in many other countries, early development and industrialisation in Brazil were led by the state through fully-controlled SOEs – the state-entrepreneur model. In a sense, as proposed by the industrial policy view of

SOEs, this model resulted from the sheer lack of private capital willing to take substantial risk and the need to co-ordinate multiple infrastructure investments. Yet, the state (as per the social view) also attempted to control prices and the profitability of private projects. Thus, it is not clear what would have happened if the government had been less willing to intervene, focusing instead on activities that entail higher risk or require co-ordinated effort. In other words, although early development stages may require some degree of state entrepreneurship, it seems possible to do this in a more selective way, leaving room for a diversified and competitive private sector to thrive. It has been argued that in the late 19th century Brazil already had some embryonic institutional conditions allowing for the attraction foreign capital and private investment in infrastructure projects.

An unusually large SOE sector also creates important downstream risk. The shock that affected Brazil and other development countries in the late 1970s hit SOEs particularly hard and created a spiralling cycle whereby SOEs were used to control macroeconomic distortions (such as high inflation or unemployment), which in turn further undermined their performance and ability to invest.

The experience of some SOEs that evolved in the heyday of Brazil's "state capitalism", such as Vale and Embraer, also suggests two conditions that might improve the performance of firms under state ownership. First, SOEs with more autonomous governance and funding can better develop technical capabilities and execute their own, performance-enhancing growth strategies. Yet the downside of autonomy is that SOE managers may engage in empire building, thus further reinforcing the tendency of an excessively augmented SOE sector. For this reason, second, whenever possible SOEs should also be subject to competition to discipline managers and lead to more efficient choices. This is precisely the case of SOEs operating in competitive foreign markets.

Like a number of other countries Brazil has transformed many SOEs through corporatisation and public listing. Although privatisation was a way to solve myriad problems that plagued SOEs, many remaining state-controlled firms adopted new governance practices to solve agency problems and restrain governmental interference as a way to lure private investors acting as minority shareholders or debt-holders. A new state-majority model emerged. Perhaps paradoxically, this model requires a rather sophisticated capital market not only to attract private capital but also to promote external monitoring and transparency. In other words, when stimulating the public listing of SOEs, governments should also encourage the development of private capital markets, organised exchanges and institutional rules to protect minority investors.

Even when an SOE has minority investors whose interests should in principle be safeguarded, sometimes the temptation to intervene becomes too

great. During the global economic slowdown following the 2008 crisis, the Brazilian government used many state-controlled SOEs to directly control customer prices. Therefore, it is also important to have a broader institutional framework to create checks and balances against uncertain governmental interference. The presence of strong, independent regulatory agencies appears to be critical.

A question often heard in public debate is: why should firms remain state-owned if governments tie their hands to *not* follow social objectives? A possible answer is that, in many countries, ideology or path-dependency creates strong opposition to privatisation. Also, the pursuit of social objectives is not *per se* a problem. If such strategy is communicated *ex ante* to investors, then they will change their expectations (and reservation prices) accordingly. The problem is when there is *uncertain* intervention; that is, successive governments changing how they approach and influence SOEs *ex post facto*. A robust regulatory system can increase governmental commitment to follow more stable rules, even when they are designed to guarantee aspects other than pure profitability.

Brazil also offers lessons for the model where the state is a minority investor, especially with respect to the role of development banks. BNDES was and continues to be a large and important actor in the Brazilian financial system. In the case where the state acts as a minority shareholder, the Brazilian experience suggests that equity will work under particular conditions. The state should target private firms with clear constrained opportunity; that is, firms exhibiting latent capabilities but limited by their lack of resources to invest and grow. In addition, the state should avoid firms belonging to complex, pyramidal groups that either have their own internal capital markets or that entail substantial risk of expropriation. Minority equity stakes should also be more beneficial at moderate stages of capital market development. As new instruments of capitalisation emerge, and local stock exchanges develop and new investors are lured to the market, the state should progressively exit firms. This was, however, exactly the opposite of what BNDES did in Brazil.

BNDES also greatly expanded its loan business and created novel ways to fund their operations with direct transfers from the government, beyond the more traditional model whereby forced savings (from corporate taxes) are allocated to support its lending activity. Yet, all these actions increase public debt and the tax burden in the Brazilian economy, already at high levels. Furthermore, subsidies accompanying loans entail important costs whose clear benefits are seldom assessed. Development banks should strive to show how each dollar in subsidies generate gains in terms of new investment and other externalities that would not have been observed without the subsidies. The extant literature examining the effects of BNDES's loans on firm-level profitability, productivity or investment is inconclusive at best.

Notes

1. This chapter was prepared by the OECD Secretariat based on original work by Prof. Sergio Lazzarini, Insper Institute of Education and Research, Brazil, and Aldo Musacchio, Harvard Business School, United States.
2. For the history of railway subsidies in Brazil, see David et al. (2006).
3. Interview with Delfim Netto, Former Minister of Finance and Minister of Planning, Sao Paulo, Brazil, August 2012.
4. This is not a result of legal impediments of SOEs to fire employees. In 1967, the military government passed the Administrative Reform Law (Decree-Law 200, 1967), which granted SOEs the same treatment as private companies.
5. See e.g. the new Joint Stock Company Law, No. 10303 of 2001. In particular, Section IV on controlling shareholders and Section XIX on "Mixed Enterprises" or SOEs.
6. "Eletrobras: perda de R$ 1 milhão por hora," O Globo, 2 June 2013.
7. From *www.bndes.gov.br/SiteBNDES/bndes/bndes_pt/Institucional/BNDES_Transparente/Estatisticas_Operacionais/porte.html* (accessed on 3 January 2014).
8. See OECD (2013), *OECD Economic Surveys: Brazil*, October 2013.

PART II

Chapter 4

SOEs in India's economic development[1]

4.1. Aspects of India's economic history

When India achieved independence in 1947, the political consensus was in favour of a rapid industrialisation of the economy, which was seen as a key not only to economic development but also to economic sovereignty. In the subsequent years, India's industrial policy evolved through successive Industrial Policy Resolutions and Industrial Policy Statements. Specific priorities for industrial development were also laid down in the successive Five-Year Plans (FYPs). Building on the "Bombay Plan" in the pre-independence era, the first Industrial Policy Resolution announced in 1948 set forth broad contours of the industrial development strategy.

Important distinctions were made among industries to be kept under the exclusive ownership of the government, *i.e.* the public sector, those reserved for the private sector and the joint sector. Subsequently, the Industrial Department and Regulation Act (IDR Act) was enacted in 1951 with the objective of empowering the government to take necessary steps to regulate the pattern of industrial development through licensing. This paved the way for the Industrial Policy Resolution of 1956, the first comprehensive statement on the strategy for industrial development in India.

Since India's independence, its economy has been premised on the concept of planning. India initiated planning for national economic development with the establishment in 1905 of the Planning Commission, chaired by the Prime Minister. The Commission's main tool has been India's successive Five-Year Plans. The developmental exercise arguably started in 1951 with the formulation and implementation of the First FYP. India has had 12 proper FYPs and three *ad hoc* ones since 1951 (the main directions of each FYP and other Plans are summarised in Table 4.1.). The current, twelfth, Plan began on 1 April 2012 and ends on 31 March 2017. Since independence the political economy of India has undergone a complete transformation, from one-party dominance of the central government, provinces and union territories to a diverse coalition of several political parties at the various levels of government.

The objective of India's development strategy was at the outset to establish a socialistic pattern of society through economic growth with self-reliance, social justice and the alleviation of poverty. These objectives were to be achieved within a democratic political framework using the mechanism of a mixed economy in which the public and private sectors coexist.

Table 4.1. **Economic development strategy of India**

	Development strategy	Contribution
1951-56	First Five-Year Plan	It played a great role in the launching of Indian development after Independence. It built a particular system of "mixed economy", with a strong role for the public sector, as well as a growing private sector.
1956-61	Second FYP	The plan particularly focussed on the development of the public sector. Hydroelectric power projects and five steel plants at Bhilai, Durgapur, and Rourkela were established. Coal production was increased. More railway lines were added in the northeast.
1961-66	Third FYP	The brief Sino-Indian War of 1962 exposed weaknesses in the economy. State road transportation corporations were formed, and local road building became a state responsibility. The target growth rate was 5.6%, but the actual growth rate was 2.4%.
1966-69	Plan Holidays	The main reasons for plan holidays were the war, lack of resources and an increase in inflation.
1969-74	Fourth FYP	The government nationalised 14 major Indian banks. The target growth rate was 5.6%, but the actual growth rate was 3.3%.
1974-79	Fifth FYP	The Plan stressed employment, poverty alleviation, and justice. The Electricity Supply Act was amended in 1975, which enabled the central government to enter into power generation and transmission. The target growth rate was 4.4% and the actual growth rate was 5%.
1978-80	Rolling Plan	In 1978, the Janata Party government rejected the Fifth FYP and introduced a new Sixth FYP. This Plan was then rejected by the Congress-Party led government in 1980.
1980-85	Sixth FYP	The Plan marked the beginning of economic liberalisation. The Sixth FYP was declared a success for the Indian economy. The target average annual growth rate was 5.2% and the actual growth rate was 5.4%.
1985-90	Seventh FYP	The main objectives were to establish growth in areas of increasing economic productivity, production of food grains, and generating employment. The target growth rate was 5% and the actual growth rate was 6.%.
1990-92	Annual Plans	1989-91 was a period of economic instability in India; hence, there were only Annual Plans. India launched its free-market reforms that brought the fiscally struggling nation back from the edge. It was the beginning of privatisation and liberalisation in India, where the new economic policy was introduced in July 1991.
1992-97	Eighth FYP	Modernisation of industries was a major highlight of the Eighth Plan. India became a member of the World Trade Organization on 1 January 1995. Energy was given priority, with 26.6% of the outlay. An average annual growth rate of 6.78% against the target 5.6% was achieved.
1998-2002	Ninth FYP	The Ninth FYP saw joint efforts from the public and the private sectors in ensuring economic development of the country. The Plan saw contributions towards development from the general public as well as governmental agencies in both the rural and urban areas. The Plan achieved a growth rate of 5.4% against a target of 6.5%.
2002-07	Tenth FYP	The main objectives were the following: inversing GDP growth, reducing poverty and introducing 20-point program to eradicate poverty. The target growth was 8.1% and growth achieved was 7.7%.
2007-12	Eleventh FYP	The plan emphasises faster and more inclusive growth.
2012-17	Twelfth FYP	The target growth rate is 8%, and the government intends to reduce poverty by 10%.

Source: Authors.

4.1.1. Early developments

The seeds of India's industrial policy were sown in the pre-independence era, more precisely in the report of the National Economic Planning Committee established by the All-India Congress Committee in 1937. The report recommended vigorous efforts for India's industrial development through a mixed economy, with a dominant role for the public sector. This was followed by the "People's Plan", which provided an all-in-all role to the public sector and financing of the industrial plan through internal resources. The Tata-Birla plan of industrial development, also known as the Bombay Plan, prepared in 1944-45, recommended government support for industrialisation, including a direct role in the production of capital goods. It called for a substantial role of the private sector in the industrial development.

The interim rule put into place by the British government in 1945 under the Defence of India Rules charted a path for India's industrial development. A plan for industrial development categorised industries into four groups, of which two were exclusively reserved for the public sector; namely, those related to "core" and "heavy" industrial sectors. Of the remaining two, public and private operators were both allowed access to intermediate industries forming the third sector. The consumer goods industry was reserved for the private sector. The first Industrial Policy Resolution of 1948 was actually a restatement of the 1945 categorisation as adopted by the interim government. The role of the state in the national development was debated intensively since the declaration of the Industrial Policy Statement of 1948 in the Parliament.

Generally, therefore, the Indian government chose to rely on SOEs rather than subsidise and regulate private enterprises, and this has affected the ownership structure of the SOE sector and the governance of individual SOEs. Owing to the close connection between policy priorities and the enterprises charged with implementing them, Indian SOEs are subject to multiple sources of regulation and policy guidance. "Public enterprise policy" is enunciated in the Industrial Policy Resolutions, National Common Minimum Programmes adopted by the United Progressive Alliance Government I and II, and the various Five-Year Plans. Public Enterprise Policy is enunciated in the Industrial Policy Resolutions, National Common Minimum Programmes (NCMP) and the respective FYPs.

The Industrial Policy Resolution of 1956 made the public sector responsible for the future development of the industries mentioned in the Industrial Policy Resolution of 1948. It indicated a set of industries in the second category that were to be progressively state-owned, and the state was to take the initiative to establish new undertakings. The private enterprise was also expected to supplement the state's efforts. The evolving industrial focus is noted in Table 4.2.

Table 4.2. **Industrial policy and sector**

No.	Plan	Sectors and priorities
1	Industrial Policy Resolution, 1948	Coal, iron and steel; aircraft manufacture; shipbuilding; manufacture of telephone, telegraph and wireless apparatus
2	Industrial Policy Resolution, 1956	Coal, iron and steel; aircraft manufacture; shipbuilding; manufacture of telephone, telegraph and wireless apparatus; heavy plant and machinery; heavy electrical plants; mining and iron; machine tools; copper processing; atomic energy; generation and distribution of electricity
3	Industrial Policy Resolution, 1977	Production of important strategic goods of a basic nature, essential supplies for consumers, ancillary industries, small-scale and cottage industries
4	Industrial Policy Resolution, 1991	High-tech and essential infrastructure, review of ailing industries, Memoranda of understanding, performance improvements

Source: Authors.

4.1.2. SOE ownership policies enunciated by the Five-Year Plans

The FYP presented to the government by the Planning Commission in December 1952 indicated the need for "a rapid expansion of the economic and social responsibilities of the state" to satisfy the "legitimate expectations of the people". It stated, however, that this "need not involve complete nationalisation of the means of production or elimination of private agencies in agriculture or business and industry". Only a "progressive widening of the public sector and a re-orientation of the private sector to the needs of planned economy" were envisaged.

Under the Five-Year Plan certain objectives for SOEs were set forth. Targets were fixed. Public-sector enterprises would serve as an effective tool for a better and rapid implementation of planned programmes. The public sector was considered more suitable than the private sector to achieve the national goals and priorities. The Industrial Policy Resolutions of 1948 and 1956 also laid the foundation for a mixed economy, where the public and private sectors were to coexist. The 1980 Industrial Policy also emphasised the active and dynamic role of the public sector. India's colonial past had hindered comprehensive development of infrastructure, so vital for economic development. The government believed that the development of infrastructure such as roads, railways, telecommunications, bridges, power, water supply, irrigation, etc., could be properly developed only when the state steps in. Elements of what in OECD vernacular would be called "SOE ownership policies" can be gleaned from the various Plans. These are summarised in Table 4.3.

4.1.3. Statement on Industrial Policy of 1991

The Industrial Policy Statement of 1991 stated that "the Government will continue to pursue a sound policy framework encompassing encouragement of entrepreneurship, development of indigenous technology through

Table 4.3. **SOE policies in Five-Year Plans**

The First Five-Year Plan (1951-56)	The First Five-Year Plan described the concept of private and stated that "the private and the public sectors cannot be looked upon anything like two separate entities; they are and must function as parts of a single organism".
The Second FYP (1956-61)	The Second Plan viewed the two sectors as parts of a single mechanism. The Plan aimed to secure an appropriate devolution of function and to ensure to public enterprises the fullest freedom to operate within a framework of broad directives or rules of the game.
The Third FYP (1961-66)	The Third FYP prevented concentration of economic power and growth of monopolistic tendencies. The public sector, with its growing strength in the economy, was also to be used to determine the character and functioning of the economy as a whole.
The Fourth Plan (1969-74)	The Fourth Plan envisaged that the public sector would be the dominant and effective area of the economy and that the private sector would function within the framework of national planning and in harmony with its overall aims, with an understanding of its obligations towards the community as a whole.
The Fifth and Sixth FYPs (1974-79, 1980-85)	The Fifth and Sixth Plans seemed to have no significant pronouncement regarding public enterprises policy, except that the latter plan envisaged SOEs to steer the distribution of essential commodities and the provision of infrastructure facilities for low-income people.
The Seventh FYP (1985-90)	The plan document de-emphasised public enterprises (PEs) because the Industrial Policy Resolution of 1956 aimed at PEs' operating as a dominant and pervasive force and the private sector was only to complement and supplement it.
The Eighth FYP (1992-97)	The Eighth Plan was for managing the transition from centrally planned economy to a market-led economy. The plan aimed to "roll back" the public-sector investment from those sectors of the economy where the private sector could move in. The problems afflicting SOEs in strategic, high-tech and essential infrastructure were to be squarely addressed, with a view to making this sector strong and dynamic.
The Ninth FYP (1997-2002)	The Vajpayee government's policy reduced the required state stake in SOEs to provide the corporate freedom they need to function efficiently in a competitive market.
The Tenth FYP (2002-07)	The Tenth Plan pursued the policy of disinvestment of SOEs for the industrial growth with high performance of the private sector.
The Eleventh FYP (2007-12)	The Eleventh plan envisaged greater autonomy, delegation of more powers to PE boards, freedom from informal levels of control exercised by the administrative ministries, and a clear statement from the government on future ownership of SOEs.
The Twelfth FYP (2012-17)	The Twelfth Plan envisages public enterprises to be on their own, approaching capital markets for garnering funding, becoming competitive, upgrading technologies, partnering with the private sector, internationalizing their operations, going for inorganic growth through mergers and acquisitions, and yielding money to the state though disinvestments.

investment in research and development, bringing in new technology, dismantling of the regulatory system, development of the capital markets and increased competitiveness for the benefit of common man". It further added that "the spread of industrialization to backward areas of the country will be actively promoted through appropriate incentives, institutions and infrastructure investments".

The objective of this Statement was to maintain sustained growth in productivity, enhance gainful employment and achieve optimal use of human resources in order to attain international competitiveness and transform India

into a major partner and player in the global arena. Quite clearly, the focus of the policy was to unshackle the Indian industry from bureaucratic controls. This called for a number of far-reaching reforms:

- A substantial modification of Industry Licensing Policy was deemed necessary with, a view to easing restraints on capacity creation, responding to emerging domestic and global opportunities by improving productivity. Accordingly, the Statement included the abolition of industrial licensing for most industries, barring a handful for reasons of security and strategic, social and environmental concerns. Compulsory licensing was required only in respect of 18 industries. These included coal and lignite, distillation and brewing of alcoholic drinks, cigars and cigarettes, drugs and pharmaceuticals, white goods and hazardous chemicals. The small-scale sector continued to be reserved. Norms for setting up industries (except those subject to compulsory licensing) in cities with populations over one million were further liberalised.
- Recognising the complementarity of domestic and foreign investment, FDI was accorded a significant role (FDI up to 51% of equity was permitted in high-priority industries requiring large investments and advanced technology). Foreign equity up to 51% was also allowed in trading companies primarily engaged in export activities. These important initiatives were expected to provide a boost to investment besides enabling access to the high technology and marketing expertise of foreign companies.
- With a view to injecting technological dynamism into Indian industry, the government provided automatic approval for technological agreements related to high-priority industries and eased procedures for hiring of foreign technical experts.
- Major initiatives towards restructuring of Public Sector Units (PSUs) were initiated, in view of their low productivity, over-staffing, lack of technological up-gradation and low rate of return. In order to raise resources and ensure wider public participation of PSUs, the government decided to offer its shareholding stake to mutual funds, financial institutions, workers and the general public. Similarly, in order to revive and rehabilitate chronically ailing PSUs, the government referred these to the Board for Industrial and Financial Reconstruction (BIFR). The Policy also provided for greater managerial autonomy to PSU boards.
- The Industrial Policy Statement of 1991 recognised that the government's intervention in investment decisions of large companies through the MRTP Act had proved deleterious to industrial growth. Accordingly, pre-entry scrutiny of investment decisions of MRTP companies was abolished. The policy thrust was more on controlling unfair and restrictive trade practices. The provisions restricting mergers, amalgamations and take-overs were also repealed.

4.1.4. *A reform process starting in 1991*

As may be inferred from the previous tables, an important change took place between 1991 and 1992. The 1991 Resolution exposed the industrial economy in general, and the public sector participants in particular, to significant economic reforms. It marked the beginning of de-licensing in a number of sectors – economic deregulation as well as the dismantling of what was known as the "inspection raj". A programme of partial disinvestments of government equity in selected SOEs began. In order to encourage wider participation and promote greater accountability, the government equity in selected SOEs was offered to mutual funds, financial institutions, workers and the general public. A number of areas reserved for the public sector were opened up to the private sector, and budgetary support was significantly reduced for the public sector. Further details of the reforms of 1991 are provided in Box 4.1.

Box 4.1. **Industrial Policy Resolution of 1991**

The Industrial Policy Resolution of 1991 included, *inter alia*, public-Sector policy and contained the following decisions:

- The portfolio of public-sector investments will be reviewed with a view to focus the public sector on strategic, high-tech and essential infrastructure. Whereas some reservation for the public sector is being retained, there would be no bar for area of exclusivity to be opened up to the private sector selectivity. Similarly, the public sector will also be allowed entry in areas not reserved for it.
- Public enterprises which are chronically sick and which are unlikely to be turned around will, for the formulation of revival/rehabilitation schemes, be referred to the Board for Industrial and Financial Reconstruction (BIFR), or other similar high level institutions created for the purpose.
- A social-security mechanism will be created to protect the interests of workers likely to be affected by such rehabilitation packages.
- In order to raise resources and encourage wider public participation, a part of the government's shareholding in the public sector would be offered to mutual funds, financial institutions, general public and workers.
- The boards of public-sector companies would be made more professional and given greater powers.
- There will be a greater thrust on performance improvement through the Memorandum of Understanding (MoU) system through which managements would be granted greater autonomy and will be held accountable. Technical expertise on the part of the government would be upgraded to make the MoU negotiations and implementation more effective.

Box 4.1. **Industrial Policy Resolution of 1991** *(cont.)*

- To facilitate a fuller discussion on performance, the MoU signed between the government and the public enterprises would be placed in Parliament. While focusing on major management issues, this would also help place matters on day-to-day operations of public enterprises in their correct perspective.

The government policy towards state-owned enterprises set forth in the National Common Minimum Programme (a common designation for the political programmes of India's coalition governments) can be summarised by the following seven principles: i) to devolve full managerial and commercial autonomy to successful, profit-making companies will operate in a competitive environment; ii) profit-making companies will not be privatised; iii) every effort will be made to modernise and restructure ailing public-sector companies and revive weak industries; iv) chronically loss-making companies will be either sold or closed after all workers have received their legitimate dues and compensation; v) private industry will be induced to turn around companies that have the potential for revival; vi) privatisation revenues will be used for designated social schemes; vii) public-sector companies will be encouraged to enter the capital markets to raise resources and offer new investment avenues to retail investors.

Among the lasting legacies of the 1991 reform was the introduction (by 1997) of a special class of SOEs, the "Navratna" enterprises. The name was first given to nine enterprises that the government identified as "public-sector companies that have comparative advantages", giving them greater autonomy to compete in the global market so as to "support [them] in their drive to become global giants". The Navratnas were rewarded with greater financial autonomy, notably in the form of higher ceilings for the amounts of capital spending they could undertake without prior government approval. In later years the Navratnas were supplemented by two additional classes of SOEs, namely "Maharatnas" (with even greater financial freedom) and two classes of"Miniratnas" (more limited freedom).

The underlying idea is that, for SOEs in search of greater financial freedom, a "promotional stairway" has been created by which companies can aspire to a higher classification in return for a better corporate track record. Table 4.4 provides a list of the enterprises in the first two categories. It bears mentioning that a number of the highest-ranked Indian SOEs are found in sectors with strong monopolistic or oligopolistic elements, which may arguably make it easier to display the requested financial soundness. Table 11 provides a summary of inclusion in the various categories.

Table 4.4. **Overview of Maharatna and Navratna SOEs (as of 2014)**

Company name:	Sector:
Maharatnas	
Coal India	Mining and minerals
Indian Oil Corporation	Hydrocarbons
NTPC	Electricity
Steel Authority of India	Metal industry
Bharat Heavy Electricals	Electricity
GAIL (India)	Hydrocarbons
Oil and Natural Gas Corporation	Hydrocarbons
Navratnas	
Engineers India	Hydrocarbons
Bharat Electronics	Manufacturing
Bharat Petroleum Corporation	Hydrocarbons
Hindustan Aeronautics	Manufacturing
Hindustan Petroleum Corporation	Hydrocarbons
Mahanagar Telephone Nigam	Telecommunication
National Aluminium Company	Metal industry
National Mineral Development Corporation	Mining and minerals
Neyveli Lignite Corporation	Mining and minerals
Oil India	Hydrocarbons
Power Finance Corporation	Finance
Power Grid Corporation of India	Electricity
Rashtriya Ispat Nigam	Metal industry
Rural Electrification Corporation	Electricity
Shipping Corporation of India	Transportation
National Buildings Construction Corporation	Construction
Container Corporation of India (CONCOR)	Transportation

The shareholding pattern of the SOEs, especially the profitable ones, has furthermore undergone a fundamental transformation, in the sense that in the case of 40 large SOEs the government shareholdings have been reduced from 100% to 52%.[2] A "government enterprise" is defined as one that has a shareholding of 51% or more of the central government, state government or both. As per Article 211 of the Indian Constitution, the government cannot reduce its shareholdings below 51% in these enterprises. The impact of reduction in the shareholding has been somewhat positive. The SOEs have been made more accountable for their performance through greater delegation of financial powers.

4.1.5. *Summing up*

To summarise, SOEs in the economic development history in India were preferred to private enterprises to achieve the goals of public policy. In the strategic and core sectors of industry, the government wanted to keep ownership and

Table 4.5. **Classification criteria**

Miniratna I	• Should have made profit for the past three years and have a positive net worth • Have not defaulted on loans/interest repayment of the government • No dependency up on budgetary support or government guarantees • Boards restructured with presence of at least three non-official directors
Miniratna II	• Should have reported profits in the last three years with pre-tax profit of IND 30 crore or more in any one of the past three years • Have not defaulted on loans/interest • No dependency on budgetary support of government guarantees • Boards restructured with presence of at least three non-official directors
Navratna	• Should have Miniratna status • Should have excellent or very good rating in three of the past five MoUs • Have secured composite score of 60 or more for 7 identified parameters
Maharatna	• Should have Navratna status • Listed on Indian stock exchange, with minimum prescribed public shareholding under SEBI regulation • Average annual turnover of over IND 25 000 crore in the past three years • Average annual net profit after tax of over IND 5 000 crore in the past three years • Notable global presence or international operations

control. Thus, publicly owned financial, commercial, industrial, developmental, promotional and welfare institutions become relevant and have played an important role in the economy. In 1955, India resolved to establish a socialist pattern of society. The private sector was to play an effective role in it, yet basic, key and strategic industries of great importance for the economic regeneration of the country were entrusted to the public sector. Gradually, insurance, banking, finance and many other sectors that were considered vital for the promotion of socialist objectives in the country were brought under the public sector. Thus on ideological grounds the increasing participation of the state in industrial and commercial enterprises was at the time perceived as compulsory and inevitable.

It also follows from the Indian past perception of a state-driven economic development that any enterprise in need of, say, financial assistance or foreign partnership was in a better position if it was placed in the public sector. For instance, it could more easily assure a guaranteed return to the foreign participant. Besides, the countries of the "socialist bloc" with which India initially preferred to partner were more willing to render technical and financial assistance to SOEs than private firms. Public enterprises could also be used as a tool for reducing regional disparities in economic development.

4.2. The role, performance and distribution of SOEs

The role of SOEs in India's developmental strategies differs from that of most other countries. Given the central role assigned to the state and the plans-based economic policy approach, it is perhaps unsurprising that a number of SOEs (not unlike in China) have been perceived as executive agents

for various government ministries. Unlike in many other Asian countries, however, the Indian authorities have only to a limited extent attempted to nurture SOEs as "ice breakers" in prioritised industrial niches or to develop and disseminate new technology. The emphasis has been on the resources sector, infrastructure and traditional heavy industries. The main role of SOEs has been to provide the basic platform (e.g. energy, communication, machinery) on which private or mixed sectors of the economy depend for their productive activities.

Another important difference relates to the political economy of the development strategies. In many other Asian countries, the attitude to development has been "let people get rich at different paces", and quite a few countries have actually welcomed the demonstration effect of certain social groups or geographic regions prospering in the early phases of development. Yet the historical, geographic and political realities of India have induced governments to favour consensus and cohesion. The SOE sector has played a central role by pursuing, as described below, public-policy goals such as developing certain regions of the country or providing jobs to certain social groups. This was most recently illustrated by the publication in 2013 of guidelines on corporate social responsibility[3] covering areas of spending that in many other jurisdictions would be considered as "corporate charity" or squarely as general government responsibilities.

4.2.1. A granular look: Individual SOEs in the development process

- Steel Authority of India Limited (SAIL)

SAIL developed an on-line Employee Performance Management System (EPMS) which is a transparent process and follows a KPA (Key Performance Area) based a performance appraisal system whereby KPAs for individuals/a department are finalised by breaking down the organisation objectives to the individual/departmental level. An individual is expected to maintain an on-line performance diary and is assessed through a multi-stage assessment (self, reporting and reviewing). Based on the performance rating, employees' annual salary increments and career progression are determined. Further, the process of 360-degree feedback was initiated during 2009-10. The EPMS drives a performance-based culture by i) incentivising high performers by identifying their major achievements during the assessment by the Performance Management Committee (PMC) and ii) developing the skills of poor performers by identifying their shortcomings during assessment phase and preparing specific development plans for them. IOCL also has invested around IND 7 000 crore in state-of-the-art technologies at its refineries for production of green fuels, meeting global environmental standards. In terms of social initiatives, SAIL serves the community through the establishment and maintenance of more than 17 hospitals throughout the country, of which 7 are specialty hospitals

and 54 primary health centres. SAIL has established 146 schools in its townships and 286 schools outside townships.

- Indian Oil Corporation Limited (IOCL)

IOCL has had an on-line Performance Monitoring System (e-PMS) since 2005-06, and has been able to successfully link departmental promotions with incentives for individuals. The e-PMS is transparent and involves goal setting across all grades through KRAs with specific weightages, and the appraisal is founded on role-based KRA and competencies as well as level-based values and potential. Some key initiatives of IOCL with regard to community-focused initiatives include i) the allotment of petrol/diesel station dealerships and LPG distributorships to beneficiaries from among Scheduled Castes, Scheduled Tribes, the physically handicapped, former servicemen, war widows, et al., ii) the establishment of the Indian Oil Foundation (IOF) as a non-profit trust to protect, preserve and promote national heritage monuments.

- National Thermal Power Corporation (NTPC)

NTPC has adopted various environment planning and preservation activities, including the establishment of the Centre for Power Efficiency and Environmental Protection (CenPEEP) in collaboration with USAID with a mandate to reduce Greenhouse Gas emissions per unit of electricity generated by improving the overall performance of coal-fired power plants. NTPC also operates some 48 schools in its power project townships, benefitting 40 000 students and providing high-quality education. These schools are managed by premier academic societies such as the DPS Society, the DAV Society, the Chinmaya Mission Trust, St. Joseph's Society and the Kendriya Vidyalaya Sangathan.

- Bharat Heavy Electricals Limited (BHEL)

BHEL has adopted a Balanced Scorecard (BSC) based system to plan, monitor and measure performance at various levels. Prepared at organisation level, the BSC is cascaded to manufacturing/business unit level and further to department/function/section level. KRAs for employees in these departments/functions/sections are finalised such that they are aligned with the company targets and objectives. This entire process has been e-enabled wherein the relevant parameters and targets get cascaded automatically.

4.2.2. Macro-indicators: Financial and other performance

The performance of SOEs could be studied in terms of financial and non-financial parameters. Table 4.6 depicts the share of SOEs in the domestic output of key sectors of the economy. It is clear that the SOEs form the backbone of important production items such as coal, petroleum products, nuclear power generation and telecommunication services through wired lines.

Table 4.6. **Share of SOEs in the domestic output in key sectors, 2010-11**

No.	Selected Item	Units	Domestic production/output	Total output by SOEs	Share of SOEs in domestic output (%)
1			**Coal**		
	Hard coal (Non-coking coal)	Million tonnes	483.543	390.219	81
	Coking coal	Million tonnes	49.533	42.496	86
2			**Petroleum Products**		
	Crude oil	MMT	37.7	27.9	74
	Natural gas	BCM	52.2	25.5	49
	Refineries throughput	MMT	196.5	115.1	59
3			**Power Generation**		
	Thermal	GWh	665 008	273 775	41
	Hydro	GWh	114 257	46 049	40
	Nuclear	GWh	26 266	26 266	100
4			**Telecommunication Services**		
	Wired lines	Nos. (in Cr)	3.5	2.9	83
	Wireless	Nos. (in Cr)	81.2	9.7	12
5			**Fertilisers**		
	Nitrogenous	Lakh MT	121.6	31.7	26
	Phosphotic	Lakh MT	4.2	2.3	5

Source: Public Enterprise Survey 2012-13, Department of Public Enterprise, GoI Vol. 1.

Table 4.6 provides the macro view of SOEs' financial performance in India during 2006-07 and 2012-13. The table shows that 229 SOEs had a paid-up capital of IND 1 510 373 crore (USD 257.75 billion) in 2013. The total turnover of these enterprises during this period was IND 1 945 777 crore (USD 332.06 billion). The overall net profit earned by the SOEs was IND 851 245 crore (USD 145.27 billion). The ratio of sales to capital employed for SOEs was 128.83% in 2012-13. The ratio of net profit to capital employed during this period was 7.63%. The net profit to turnover ratio stood at 5.93%. The dividend pay-out ratio was 43.11%. The interest to gross profit ratio was 19.86%.

It is noteworthy that during the economic liberalisation regime, contrary to the popular public perception, SOEs have performed generally well. Their profitability ratios have risen, and sectoral performance has improved phenomenally, especially in the oil and natural gas, mining and steel and electricity generation sectors. The number of loss making SOEs has declined steeply whereas the number of profit making enterprises has gone up significantly. SOEs have become a formidable source of non-tax revenue for the State. The dividend pay-out ratio has varied in the region of 25%-50%. The turnover of SOEs is increasing year-on-year at a rate of 15%.

At the same time, it should be borne in mind that the divestments since the early 1990s have focussed on sectors that were seen as non-strategic. Thus, the remaining SOEs likely enjoy generally high degrees of market powers and

may in some cases incur monopoly rents. Perhaps related to this point, although SOEs have seen significant financial improvement –, there have been contradictory claims comparing public-sector profitability and productivity to those of private-sector enterprises (Mishra, 2007).

Table 4.7. **Macro-financial profile of SOEs (IND in crore)**

	2006-07	2012-13
Operating enterprises (in numbers)	217	229
Capital employed	661 338	1 510 373
Turnover	964 890	1 945 777
Total income	970 356	1 931 149
Net profit	454 134	851 245
Interest	27 481	37 789
Dividends	26 819	49 701
Profit of profit-making SOEs	89 581	143 559
Loss of loss-making SOEs	8 526	28 260
Profit-making SOEs (no.)	154	149
Loss-making SOEs (no.)	61	79
Sales to capital employed ratio (%)	145	128.83
Net profit to turnover ratio (%)	8	5.93
Net profit to capital employed ratio (%)	12	7.63
Dividend payout ratio (%)	33	43.11
Interest to gross profit ratio (%)	20	19.86

Source: Public Enterprise Survey 2012-13, Department of Public Enterprise, GoI Vol. 1.

SOEs in India also contribute to the Central Exchequer by way of dividend payments, interest on government loans, and payment of taxes and duties. There was a significant increase in the total contribution of SOEs to the Central Exchequer, which increased from IND 160 801 crore in 2011-12 (USD 30.09 billion) to IND 162 761 during 2012-13 (USD 27.78 billion). This was primarily due to an increase in contribution towards corporate tax and excise duty, which increased from IND 44 358 crore (USD 8.30 billion) to IND 44 612 crore (USD 7.61 billion) during 2011-12 to 2012-13. There was, however, a decline in customs duty, other duties and taxes, and dividend tax during the year as compared with the previous year. There was also a marginal decline in SOEs' payment of central sales tax.

4.2.3. Employment

SOEs have taken the lead in generating productive employment, historically a major problem facing the Indian economy. Further, SOEs have also provided contract employment to one-third of the regular workforce. As staff members

of a model employer, their salaries and perquisites far exceed those of their counterparts in the private sector. To enforce equity and social justice, SOEs have taken special care to provide employment to socially and economically lagging communities by reserving a quota varying from 53% to 77% in various groups of SOEs (Table 4.8).

Table 4.8. **Group-wise percentage of employees**

Category	Groups A and B	Group C	Group D
Scheduled castes (%)	15.0	15.0	15.0
Scheduled tribes (%)	7.5	7.5	7.5
Other lagging classes (%)	27.0	27.0	27.0
Physically handicapped persons (%)	3.0	3.0	3.0
Former servicemen and dependents of those killed in action (%)	-	14.5	24.5

Source: Public Enterprise Survey 2011-12, Department of Public Enterprise, GoI Vol. 1, p. 106.

4.2.4. *Performance evaluation*

To evaluate the performance of enterprises, India has Memoranda of Understanding,[4] patterned on French and Korean Models. This is based on the vision and mission, objectives, targets and performance score on the part of the enterprise and the obligations of the government to the enterprise. The system was introduced as a performance-evaluation measure in the SOEs in 1986-87 within four enterprises. During 1991-92, as a part of the economic liberalisation policy, the government decided to extend the MoU system to as many SOEs as possible, resulting in 195 signing MoUs with the government during 2011-12. The introduction of MoU has given an opportunity both to the government and SOEs to negotiate certain performance measures and compare the *ex post* with the *ex ante* performance.

Box 4.2. **Revamping MoUs**

The MoU system was revamped in 2004-05 with the Nation Council of Applied Economic Research recommendations. Equal weight (50%) to financial and non-financial parameters was assigned following the Balanced Scorecard approach. Financial parameters presented in absolute values as well as ratios, while non-financial parameters further divided into dynamic parameters, enterprise-specific parameters and sector-specific parameters. Another set of changes were brought about in 2008 with the recommendations of Ashok Chandra Committee. It suggested that target setting process in an enterprise must be based on its past five-year performance record. Focus was provided on the working of Task Force and its strengthened role. Based on the Management Development Institute's report, sector-specific formats for MoUs

Box 4.2. **Revamping MoUs** *(cont.)*

were developed (manufacturing and mining, trading and consulting, social sector, financial sector and ailing enterprises). Additional enterprise-specific parameters were introduced. notably physical production, globalisation, capital expenditure, expansion plans, economy measures to cut costs etc. of 10 marks each against the 10 marks meant for enterprise-specific variations.

Source: Public Enterprise Survey 2011-12, Department of Public Enterprise, GoI.

Most of the MoU-signing enterprises have shown a great deal of appreciation for the MoU system, which distinguishes managerial performance in SOEs from the enterprise performance. The system also presents an objective solution to the problem of conflicting interests of principals with the agent. The Arjun Sengupta Committee Report of MoUs has undergone changes, with the current generation of MoUs based on the scrutiny of the Cabinet Secretariat of the expert committee report prepared by the National Council of Applied Economic Research. The revised system relies more on dynamic indicators, as compared to the static indicators that formed the basis of the first-generation MoUs. Table 4.6 shows the rankings of MoUs and the number of enterprises signing MoUs with the government.

Table 4.9. **MoU entered by SOEs between 2008-09 to 2012-13**

Particulars	2008-09	2009-10	2010-11	2011-12	2012-13
Excellent	47	74	67	76	75
Very good	34	30	44	39	39
Good	25	0	24	33	38
Fair	17	20	24	25	36
Poor	1	1	2	0	2
No. of enterprises with MoUs	125	145	161	175	190

4.3. Challenges of SOEs

One of the major challenges that SOEs face is to continuously reinvent themselves as relevant organisations in a changing scenario and to develop a shared vision and objective in sync with the national priorities and goals. A growing number of SOEs operate in a highly competitive environment and face immense challenges in terms of accountability and oversight by multiple authorities, outdated processes and lack of new technology, weak internal controls marring the corporate governance practices, working in silos, mindset issues and lack of motivation in employees to excel.

Box 4.3. **Governance highlight**

There is a widely held view that it is difficult for any organisation to sustain and grow if it lacks a proper governance structure. The same holds true for public-sector enterprises. If several reporting agencies exist with their own specific agendas that may conflict with the objectives of the enterprise, the efficiency of the enterprise is likely to be impaired. Thus, many SOEs have reorganised their governance structure to bring about "ownership management".

Source: Report on Public Enterprises, KPMG, 2011, p. 16.

An absence of clear ownership strategy for SOEs is also a typical challenge, as a government owned-organisations that have yet to see a clear demarcation between ownership and management. This is partly grounded in the Constitution of India, under which all majority-owned SOEs are considered as part of the state. In consequence, SOEs are expected to achieve a wider variety of non-commercial objectives than in most other economies – many of which are not development-enhancing. A chief example is "employment reservation": every SOE must adhere to affirmative-action norms and ensure that the share of employment under reserved categories is identical to that of the central government ministries (Goswami, 2003). While a social case can certainly be made for these practices, they do not necessarily bolster corporate efficiency.

As a consequence, the government often interferes in the working of these entities and enterprises not functioning as board-managed organisations. This leads to slow and poor decision making and the bureaucratisation of SOEs. For instance, investment decisions in many SOEs are not based upon proper evaluation of demand and supply, a cost-benefit analysis and technical feasibility. A lack of a precise criteria and flaws in planning have caused undue delays and inflated costs in the commissioning of projects. Sometimes, projects are launched without clear objectives. Many public-sector projects have not been finished according to schedule.[5]

Due to inefficient financial planning, a lack of effective financial control and easy availability of money from the government, several public enterprises suffer from over-capitalisation.[6] This has resulted in high capital-output ratio and wastage of scare capital resources. SOEs incur heavy expenditures on social overheads such as townships, schools and hospitals. In many cases such expenditures amount to 10% of the total project cost. Recurring expenditures are required for the maintenance of such overhead and welfare facilities. Hindustan Steel alone incurred an outlay of IND 78.2 crore on townships. While such amenities may be desirable, the expenditure on them should not be unreasonably high.

Because labour planning is ineffective, several public enterprises such as Bhilai Steel have excess staff. Recruitment is not based on sound labour projections. On the other hand, posts of Chief Executives can remain unfilled for years despite the availability of required personnel. Managerial efficiency of public enterprises has been low due to inept management, uninspiring leadership, too much centralisation, frequent transfers and a lack of a personal stake. Civil servants who are tasked with managing the enterprises often lack proper training in bureaucratic practices. Motivations and morale of both executives and workers are often low due to the lack of appropriate incentives.

Another problem has been low use of installed capacity. Many undertakings have failed to make full use of their fixed assets absent definite production targets, effective production planning and control, proper assessment of future needs, adequate supply of power and industrial peace. The average capacity use in more than 5% of public enterprises has been less than 75%. Thus, there is considerable idle capacity. In some cases productivity is low owing to poor materials management or ineffective inventory control. Various public enterprises depend on one another, as the output of one is the input of another. For instance, the efficient functioning of power and steel plants depends on the production and transportation of coal, which in turn depends on supplies of heavy equipment machinery. Despite such interdependence, materials management and research has not been achieved. Co-ordination in the production programmes of different enterprises at various stages would help to reduce excess stocks and shortages of vital inputs.

There is no clear price policy for public enterprises, and the government has not established guidelines for the rate of return that different undertakings are to earn. Public enterprises are expected to achieve various socioeconomic objectives, and in the absence of a clear directive, pricing decisions are not always based on a rational analysis. In addition to dogmatic price policies, there is a lack of cost-consciousness, quality consciousness, and effective control of waste and efficiency. In several public enterprises, relations between management and labour are far from cordial. There has been serious and frequent labour trouble in Durgapur Steel Plant, Bharat Heavy Electrical, Bhopal and in Bangalore-based undertakings. Millions of staff days and output worth crores of rupees have been lost due to strikes and "gherao" demonstrations. Wage disparities have been the main cause of labour trouble in the public sector.

The ongoing limitations of SOEs have created conditions for the government to initiate some radical changes to enable them to function as business entities staffed by competent professionals. The government has imposed on itself the corporate governance code formulated by the Securities and Exchange Board of India (SEBI)[7] for the listed companies. As per section 49 of the Listing Agreement of the SEBI, the listed SOEs must have 50% of independent directors as board members, to enrich the company strategy, formulation and

implementation. The SEBI guidelines also require such enterprises to appoint the audit committee, and a nominations and remuneration committee. The SOEs now have to give full-fledged and special treatment to the disclosure of related-party transactions. The relationship between the holding company and its subsidiaries in terms of financial transactions must be disclosed fully, and the any loan giving by the holding company to subsidies is completely barred.

Box 4.4. **Important highlights on boards' role in SOEs from the Companies Act, 2013**

- Disclosures in the Directors' Responsibility Statement by all companies.
- The boards would now have to articulate their policy on directors' appointment and remuneration [Sec.178(4)].
- The boards would have to explain if there are any qualifications in the secretarial audit report [Sec. 134(3)].
- The boards would have to lay down its policies for regulatory compliance and risk management and ensure these are operating effectively [Sec. 134(3)].
- The boards would have to devise proper systems to ensure compliance with the provisions of all applicable laws and that such systems were adequate and operating effectively [Sec. 134(5)].
- The boards have to make annual assessment of the internal financial controls and may consider getting an independent expert assurance on such systems.
- The boards would have to lay down the manner of formal evaluation of performance of the board, its committees and individual directors for listed and public companies.

Source: Companies Act 2013, Ministry of Corporate Affairs, Government of India.

Concerning transparency, Indian SOEs are mandated to follow provision of Right to Information Act, 2005, under which all public agencies must put all organisational information in the public domain, including processes, financial transactions, human resource management related information, procurement and tendering related information through the web, annual reports, press briefing, parliamentary questions and corporate week interactions. Implementation of the Act has changed the secrecy culture of organisations and is slowly introducing transparency and openness. SOEs are no exception and are also going a transformation. The Integrity Pact (IP) is a tool developed in 1990s by Transparency International (TI) to help governments, businesses and civil society fight corruption in public contracting and

procurements. It establishes mutual contractual rights and obligations to reduce the high cost and effects of corruption. IP is intended to make public contracting and procurement transparent by making ethical conduct binding on all parties.[8]

4.4. Alternatives to SOEs

To combat the menace of burgeoning current account deficits and increasing fiscal deficits, giving rise to hard-to-tame inflation, the government has introduced some important policy instruments to contain the growth of SOEs and has taken steps to progressively reduce its investments therein – though, as mentioned earlier, not below 51% of the shareholdings. Some of these vital initiatives relate to the promotion of special economic zones (SEZs), provision of direct or indirect subsidies to the concerned clientele, and promotion of entrepreneurship not only to supplement and supplant ongoing development efforts through SOEs but also to strengthen the private sector so that the need to continue with the SOEs becomes minimal.

4.4.1. *Special Economic Zones*

India was one of the first countries in Asia to recognise the effectiveness of the export processing zone (EPZ) model in promoting exports, with Asia's first EPZ established in Kandla in 1965. The Special Economic Zones Policy was announced in April 2000 with a view to overcoming the shortcomings experienced due to multiple controls and clearances, absence of world-class infrastructure, and an unstable fiscal regime, as well as to attract larger foreign investments in India. The major difference between an SEZ and an EPZ is that the former is an integrated township with fully developed infrastructure whereas an EPZ is simply an industrial enclave.

The SEZ policy of 2000 was intended to make SEZs an engine for economic growth supported by high-quality infrastructure complemented by an attractive fiscal package, at both the central and state government levels, with the minimum possible regulations. Under the new scheme, all eight existing EPZs located at Kandla and Surat (Gujarat), Santa Cruz (Maharashtra), Cochin (Kerala), Chennai (Tamil Nadu), Vishakhapatnam (Andhra Pradesh), Falta (West Bengal) and Noida (U.P) were converted into SEZs. The salient features of the SEZ scheme are: i) a designated duty-free enclave, to be treated as foreign territory only for trade operations and duties and tariffs; ii) no license required for import; iii) manufacturing or service activates allowed; iv) SEZ units to be positive net foreign exchange earners within three years; v) domestic sales subject to full customs duty and import policy in force; vi) full freedom for subcontracting and vii) no routing examination by customs authorities of export and import cargo.

Box 4.5. **Special Economic Zones Act, 2005**

A comprehensive draft SEZ Bill was prepared, after extensive discussions with important economic stakeholders, to instil confidence in investors and signal the government's commitment to a stable SEZ policy regime and with a view to impart stability to the SEZ regime thereby generating greater economic activity and employment through the establishment of SEZs. The Special Economic Zones Act, 2005, was passed by Parliament in May 2005, supported by SEZ Rules, which came into effect on 10 February, 2006, providing for drastic simplification of procedures and for single-window clearance on matters relating to the central as well as state governments. The main objectives of the SEZ Act are: i) generation of additional economic activity; ii) promotion of exports of goods and services; iii) promotion of investment from domestic and foreign sources; iv) creation of employment opportunities and v) development of infrastructure facilities. Overall, the SEZ Act is intended to trigger a large flow of foreign and domestic investment in SEZs, in infrastructure and productive capacity, leading to generation of additional economic activity and creation of employment.

The SEZ Act 2005 envisages key role for the state governments in export promotion and the creation of related infrastructure. A Single-Window SEZ approval mechanism has been provided through a 19 member inter-ministerial SEZ Board of Approval (BoA) constituted by the central government. The applications duly recommended by the respective state governments/UT administration are considered by this BoA periodically. All decisions of the board of approvals are by consensus. The SEZ Rules provide for different minimum land requirements for different classes of SEZ. Every SEZ is divided into a processing area where the SEZ units alone would come up and the non-processing area, where the supporting infrastructure is to be created.

The developer submits the proposal for establishment of an SEZ to the concerned state government. This government forwards the proposal with its recommendation to the Board of Approval within 45 days. The applicant may also submit the proposal directly to the Board of Approval. The functioning of the SEZs is governed by a three-tier administration. The Board of Approval is the apex and is headed by the Secretary of Commerce. The Approval Committee at the zone level deals with approval of units in the SEZs and with other related issues. Each zone is headed by a Development Commissioner, who is *ex officio* chairperson of the Approval Committee.

Once an SEZ has been approved by the Board of Approval and the central government has notified the relevant area of the SEZ, units may be established in the SEZ. All proposals for setting up units are approved at the zone level by the Approval Committee consisting of the Development Commissioner,

Customs Authorities and state-government representatives. All post-approval clearances, including the grant of importer-exporter code numbers, changes in the name of the company or implementing agency, broad-banding diversification, etc., are given at the zone level by the Development Commissioner. The performance of the SEZ units is periodically monitored by the Approval Committee, and units are liable for penal action under the provision of Foreign Trade (Development and Regulation) Act in case of violations of the approval conditions.

The incentives and facilities offered to the units in SEZs for attracting investments, including foreign investment, are described in Box 4.6.

Box 4.6. **Incentives and facilities offered to the SEZs and SEZs developers**

Incentives and facilities offered to the SEZs:

- Duty-free import/domestic procurement of goods for development, operation and maintenance of SEZ units
- 100% income-tax exemption on export income for SEZ units under Section 10AA of the Income Tax Act for first five years, 50% for the next five years and 50% of the ploughed back export profit for following five years
- Exemption from minimum alternate tax under section 115JB of the Income Tax Act
- External commercial borrowing by SEZ units up to USD 500 million in a year without any maturity restriction through recognised banking channels
- Exemption from central sales tax
- Exemption from service tax.
- Single window clearance for central- and state-level approvals
- Exemption from state sales tax and other levies as extended by the respective state governments.

The major incentives and facilities available to SEZ developers:

- Exemption from customs/excise duties for development of SEZs for authorised operations approved by the BOA
- Income-tax exemption on income derived from the business of development of the SEZ in a block of 10 years in 15 years
- Exemption from minimum alternate tax
- Exemption from dividend distribution tax
- Exemption from central sales tax
- Exemption from service tax

Some controversy has arisen surrounding the government's reliance on SEZs. The biggest challenge that SEZs face today is the expropriation of agricultural land from the farmers. The compensation paid to the farmers is commonly regarded as inadequate given current land prices. One of the best recent examples is arguably the case of farmers from Kalinganagar in Orissa, where the compensation paid was reportedly only one-tenth of the market rates. Another contentious issue has concerned the procedures involved in the acquisition of land for these zones. SEZs have highlighted existing ambiguities in the laws on land acquisition through expropriation. In recent months, SEZs' financial viabilities have been scrutinised, with certain zone developers contemplating an exit due to poor economic prospects.

As evidence over the years has shown, the single-minded pursuit of growth has lowered the efficiency and effectiveness of economic policies, besides incurring great resource and environmental costs. The Chinese experience offers a valuable lesson for India. Neither the international nor the Indian experience with SEZs has been particularly happy. Globally, only a handful of SEZs have generated substantial exports, along with significant domestic spin-offs in demand or technology up-gradation. For each successful Shannon (Ireland) or Shenzhen (China), there are a number of failures. The Reserve Bank of India says that large tax incentives can be justified only if SEZ units establish strong "backward and forward linkages with the domestic economy", a dubious proposition. It has been argued that not only will the SEZs make the government forgo revenues it can ill afford to lose, they also offer firms an incentive to shift existing production to the new zones at substantial cost to society. As much as 75% of the SEZ area can be used for non-core activities, including the development of residential or commercial properties, shopping malls and hospitals. Developers will surely use this to make money via the real estate route rather through export promotion. This represents a potentially enormous urban property racket of incalculable dimensions.

4.4.2. Public Private Partnerships

Like many other developing countries, India is adopting Public-Private Partnerships (PPPs) models on a wide scale for infrastructure. Be it for airports, highways, ports or power, PPPs are fast emerging as a solution for infrastructure bottlenecks. They are being considered seriously as a panacea for infrastructure inadequacies – not just the physical infrastructure, but even economic infrastructure, such as for education and health. There are currently 750 such projects in India.

PPPs as an alternative delivery system

In the past decade and half countries all over the world have experienced problems with service delivery, and have been looking at alternative service

delivery methods and new project finance options. Governments have come under intense pressure to provide better, affordable public services. Therefore they are contemplating partnership arrangements with the private sector to meet the growing demands.

PPPs permit an expansion of infrastructure provision beyond what the government could achieve on its own given budgetary constraints. The Twelfth FYP approach paper mentions the following about infrastructure development based on PPP: Inadequate infrastructure was recognised in the Eleventh Plan as a major constraint on rapid growth. The Plan had, therefore, emphasised the need for massive expansion infrastructure investment based on a combination of public and private investment, the latter through various forms of public-private partnerships. Substantial progress has been made in this respect.

The total investment in infrastructure, which includes roads, railways, ports, airports, electricity, telecommunications, oil and gas pipelines, and irrigation, is estimated to have increased from 5.7% of GDP in the base year of the Eleventh Plan to around 8.0% in the last year of the Plan. The pace of investment has been especially buoyant in some sectors, notably telecommunications and oil and gas pipelines, while falling short of targets in electricity railways, roads and ports. Efforts to attract private investment into infrastructure through the PPP route have met with considerable success, not only at the level of the central government, but also at the level of the individual states.

Private-sector participation in the power sector has been one of the key areas of reforms since 1991, when the reforms began. India's current installed power generation capacity is about 228 000 megawatt (MW). By 2031-32 the generation capacity required would be 800 000 MW (Integrated Energy Policy – Report of the Expert Committee, 2006). In spite of expected strong growth in capacity addition, India's power shortage is likely to remain very high. By the end of 2009 the peak power shortage exceeded 14% (position paper on The Power Sector in India, 2009). The 17th Electric Power Survey, conducted by Central Electricity Authority, has forecast that the peak demand will grow at a compound annual growth rate (CAGR) of 7.8% during Eleventh Plan (*ibid*. 2009). This calls for encouraging private participation in the sector, as the public sector alone would not be able to achieve the targets. The private actors in the power sector have announced a target of 100 GW of capacity addition (*ibid*. 2009). The PPP model is being hailed as a harbinger of change in power sector. Although the impetus for PPPs dates to the second generation reforms, they existed even before that in power sector. The first PPP effort was the Dabhol power plant in Maharahstra, which started in 1992. The American company Enron owned about 85%, along with other American companies, and the Maharashtra State Electricity Board owned 15%. The project got bogged down by various problems, however, and had to be closed.

Box 4.7. **Evolution of Public Private Partnerships in India**

- Phase 1, from 19th and early 20th centuries: Some of the notable PPPs during this time were: the great Indian Peninsular Railway company in 1853 and the Bombay Tramway Company's tramway services in Mumbai in 1874. PPP models were there in power generation and distribution in Mumbai and Kolkata in the early 20th century.
- Phase 2, from 1991-2006: Only 86 PPP projects worth IND 340 billion were awarded until 2004. Most of the projects were in bridges and the road sector.
- Phase 3, after 2006: The PPP model gained increasing acceptance due to favourable policy reforms and innovative PPP structures.

Source: Accelerating public private partnerships in India, FICCI and Ernst & Young Report, 2012.

The roads/highways sector consists of some 405 projects, accounting for 53% of the total number and 46% of the total value of PPP projects. The most common form of PPP in national highways is Build-Own-Transfer (BOT) concession contracts and Special Purpose Vehicles (SPVs) with joint ownership. The state governments of Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Rajasthan and Madhya Pradesh are taking initiatives to promote PPP-based state highways. The railway sector recently signed four PPP contracts, awarded through either domestic competitive bidding or negotiated MoUs. Some of the PPP projects initiatives are the Container Corporation of India Ltd., Pipavav Railway Corp. Ltd. and Rail Vikas Nigam Ltd. The urban infrastructure sector has seen about 152 projects. The government launched the Jawaharlal Nehru National Urban Renewal Mission in order to promote PPPs in state and urban governments. The integrated solid-waste management project in Chennai and water supply sewerage project in Kolkata are some of the significant PPP initiatives in urban infrastructure.

Challenges to be managed

Public Private Partnerships constitute a significant policy measure. Their inherent challenges, however, cannot be ignored:

- An independent regulator is required for PPP-related projects. Eventually, this will establish a strong regulatory environment, which would attract international funding.
- A database consisting of various documents, such as feasibility reports and concession agreements, is required.
- The dependency of the private sector on the commercial banks to raise debt for PPP projects is another issue. Commercial banks have reached their sectoral exposure limits. There is also the problem of highly leveraged Indian infrastructure companies, owing to which funding has become difficult.

- PPP projects are hindered by limited institutional capacities at various central ministries, hampering the translation of targets into projects. The recent developments of Ultra Mega Power Projects and the developments pertaining to PPPs in the roads sector have bought these problems to the fore.

Box 4.8. **PPPs in the power sector**

1. Tala Transmission Project: This PPP is a joint venture between PGCIL, which has a 49% stake, and Tata Power, with 51%. The project is meant to evacuate surplus power from 1 020 MW Tala hydroelectric power plant in Bhutan and bring it to India.
2. Franchisee model of UPPCL and MSEDCL: In this case the PPP model is based on a management contract. The selected private player will be a franchisee to purchase and distribute electricity in the franchisee area. As a distribution franchisee the discom acquires all rights. The torrent power, which is the distribution franchisee for the Bhiwandi Circle of Mumbai, has been successful in reducing the distribution losses.
3. AP Gas Power Corporation Ltd.: This is an example of a PPP that existed even before the reforms in power sector were envisaged. It is joint venture between erstwhile APSEB and several companies from the public and private sectors. It was successful in meeting the objectives for which it was promoted. For example, it was effective in supplementing power from grids, meeting the energy demands of the participating industries without restrictions.
4. Ultra Mega Power Projects (UMPPs): UMPPs are very large projects of 4 000 MW each, involving an estimated investment of IND 16 000 crore. They are being developed on Build Own and Operate (BOO) basis. It has now become a thrust area in the reforms of power sector. These UMPPs are expected to generate power at a cheaper rate, which would ultimately create affordable tariffs for the consumers because the generation costs are a pass-through in the consumer tariff. The Electricity Act, the National Electricity Policy and the National Tariff Policy emphasise that it is competition among the multiple power suppliers that will drive down consumer tariffs.

4.4.3. Development banks

The private financing initiative has caught on in India, in line with the global trend whereby specialised institutions have been created to finance medium and large industries in the private sector. It is common knowledge that in developing countries the private sector has experience and knowledge but lacks funds. This has been well understood in India since its independence.

The Industrial Finance Corporation of India (IFCI) was established in 1948, followed by the Industrial Development Bank of India (IDBI) in 1964. Both institutions were set up in public sector. To facilitate drawing financial support from the International Finance Corporation to the private sector, the Industrial Credit and Investment Corporation of India (ICICI) was set up in 1955. A host of development banks were set up thereafter. Some of these include the National Bank for Agriculture and Rural Development (NABARD, 1982), Industrial Investment Bank of India (IIBI, 1971), Small Industries Development Bank of India (SIDBI, 1990), and Export Import Bank of India (EXIMB, 1982). The provincial governments also established a chain of development banks, including the State Financial Corporations (SFCs), the State Industrial Development Banks (SIDCs), Small-Scale Industries Developments Corporations (SSIDCs) and the State Industrial Infrastructure Development Corporations (SIIDCs).

The corporations among banks provide project financing for medium and long-term periods at lower interest rates than the short-term lending rates that commercial banks charge. The credit provided is a for longer period and for higher volumes. However, these banks have faced the problem of a large gap between sanctions and disbursements, realising principal and interest within the time period granted. The time taken to process loans has turned out to be inordinately long, and the project-appraisal systems have been found wanting. The executives in the development banks generally lack sensitivity to the philosophy of development banking. The genuineness of the applicants seeking loans from these banks and the quality of project proposals have also been found to be questionable. The global trends of economic sectors targeted by development banks include services, industry/manufacturing, agribusiness, construction, energy, infrastructure, health, education and mining. The Indian development-bank scenario, by and large, follows this pattern. To strengthen these banks in India, it would be desirable to add to their capital base, ensure capital adequacy, re-orient their systems and procedures to finance new industries and professionalise their personnel.

4.5. Conclusions and lessons

SOEs have held commanding heights of the Indian economy by acting as growth engines; operating in infrastructure sectors; redressing socioeconomic inequities; generating productive employment; and providing the wherewithal for economic development, thereby achieving the objectives of socioeconomic development of India. SOEs have faced many limitations, ranging from governance challenges to excessive oversight. Many vital steps have been taken to remove these defects, bringing about far-reaching changes in the ownership policies in regard to SOEs and creating a level playing field between them and their counterparts in the private sector.

At the national level, the change in India's growth rate and prospects – following policy reforms that opened the economy to foreign trade and investment, and substantially removed domestic industrial controls – seems to provide strong support for the view that policy matters; this is an important lesson for emerging and developing economies. It is also plausible that some of the areas where India faces significant challenges, such as agriculture and higher education, are precisely ones where reform has been almost non-existent, leaving the old control regime with artificial scarcities and allocation distortions in place; again, an experience from which other economies can learn. India's development has attracted worldwide attention, notably because this growth has been pursuant to the wide range of economic reforms introduced in the early 1990s. Many other developing economies also intensified liberalisation during this period but were unable to generate similar spurts in their economic growth.

One of the distinctive features of the Indian liberalisation experience is the gradual and calibrated manner in which reforms were introduced, especially with respect to external liberalisation, be it in the financial, agricultural or industrial sector. India embarked on a path of slow and steady liberalisation and still maintains high tariffs on many agricultural products. It has also given limited access to foreign investors in many sectors. While the industrial sector grew quickly, especially post-liberalisation, it did not grow as fast as the services sector, which India thereafter nurtured well. Since then, much of the GDP growth has been contributed by the services sector.

A main lesson to learn from India is the need to establish appropriate institutions to formulate and promote industrial policy and the need for these to gain wide social acceptance. The optimal industrial policy for other countries can be defined only by examining their economic history, the kind of economic constraints that they face and their global economic environment, both current and prospective. Industrial policy should be concerned with charting a long-term sustainable path for the economy that is both ambitious and feasible.

Among other lessons, it could be pointed out that the infrastructure development and growth promoted by the SOEs in India have paved the way for many other enterprises to establish themselves and contribute to growth. The SOEs filled the entrepreneurial void through corporate action, preparing fertile ground for the private financial initiative (PFI). This resulted in the decline of public-sector investment as a part of the total planned investments, allowing private sector to take command, albeit modestly, of the economy. The SOEs in India adopted the public corporation model of organisation initially, but later the government opted for the company form of organisation. This was positive in terms of establishing a public-sector organisation. Eventually, though, it robbed the SOEs of their autonomy. In the beginning, it made sense

to set up enterprises under the various ministries. However, this led to fragmentation of control and impeded autonomy. Many other countries have brought all the SOEs under the umbrella of one ministry. The Indian model of reforms is partial in the sense that the government does not divest its stake below 51%. This has impeded the disinvested enterprises from having a level playing field with their private-sector counterparts in private sector.

The government of India has taken many initiatives in terms of introducing a performance contracting system to improve accountability in the working of these agencies, and providing considerable financial leverage to the management of SOEs for taking effective decisions. Despite all of these efforts, SOEs still face performance challenges: coping with inadequate systems, processes, technology and organisational structures; building a strategic vision; enhancing competitiveness; and freeing boards from the clutches of the government by setting a proper ownership policy and an appropriate performance culture. Cultural and mindset aspects will be the keys to any success in this direction. Promoting a performance culture and blending it with the national psyche is critical not only for India but also for other countries. The Indian model of SOEs has been different from the models adopted in several other countries, in that Indian SOEs must perform as a part of the mixed economy and compete with the private sector and their counterparts in other countries, yet they retain their identity as SOEs. The Indian model has created *inter se* competition by classifying SOEs in different categories such as Miniratnas, Navratnas and Maharatnas. Thus, the SOEs in India are subjected to regulation the same way that private-sector enterprises are regulated.

To conclude, the SOEs have played a pivotal role in India's economic development. In the liberalised economic regime and in line with the global policy and practices in respect of economic development, the role and functioning of these enterprises have undergone a significant transformation, yet SOEs continue to play a vital role in India's socioeconomic development. India's experience with SOEs as a part of its development strategy and industrial policy shows clearly that given the requisite autonomy, these enterprises can continue to make significant contribution.

Notes

1. This chapter was prepared by the OECD Secretariat based on original work by Prof. Ram Kumar Mishra, Institute for Public Enterprises, Hyderabad, India.
2. *www.bsepsu.com/list-cpse.asp*.
3. Department of Public Enterprises (2013), *Guidelines on Corporate Social Responsibility and Sustainability for Central Public Sector Enterprises,* New Delhi.

4. Report of the Committee on MoU System – 2012 (Mankad Committee Report), Department of Public Enterprise, Government of India.
5. For example, Barauni Refinery was commissioned two years behind schedule and the Tromby fertiliser plant was delayed by three years thereby causing an increase of IND 13 crore in the original cost estimates.
6. The Administrative Reforms Commission found that Hindustan Aeronautics, Heavy Engineering Corporation and Indian Drugs and Pharmaceuticals Ltd. were over-capitalised.
7. Report of Panel of Experts on Reforms in Central Public Sector Enterprises (CPSEs) (Roongta Committee Report), Ministry of Corporate Affairs, Government of India, pp. 9-16.
8. Guide on Right to Information Act, 2005, Ministry of Personnel and Public Grievance and Pension, Training, Government of India.

PART II

Chapter 5

SOEs in China's economic development[1]

5.1. Developmental strategies, industrial policy and changes in the overall status of SOEs

Comparing the role of SOEs in China with that of most other countries is far from straightforward. Unlike an average emerging economy, where the government makes political decisions about which activities to allocate to the state, modern China has emerged from a Soviet-style system in which all production resources were the property of the state and the exercise of ownership rights was seen as an extension of the executive power. The effect is still visible in China's SOE sector. For example, the CEOs of several of the largest enterprises hold an *ex officio* ministerial rank in the Chinese government. The current portfolio of SOEs has developed largely in consequence of corporatisation and divestments since the beginning of the Chinese pro-market reform process in 1978.

The Chinese SOE sector has been further shaped by evolving policy priorities and has been influenced by external factors such as the experiences of the Russian economy in the 1990s. It is widely perceived that the Russian example convinced the Chinese leadership not to allow a class of private-sector "oligarchs" to develop in China (e.g. Lee, 2009). As a default position the largest SOEs had to remain under government control, as also accentuated in the "grasp the big, let go of the small" strategy underpinning the 1997 reforms of the business sector. Conversely, in order to ensure a competitive environment, the state made sure that at least three SOEs operate and compete in each significant segment of the economy that remains dominated by state ownership.

5.1.1. *Economic development strategy in China*

Since the establishment of the People's Republic of China in 1949, there were always clear development goals, which were to meet the increasing material and cultural needs of the people, to catch up with developed countries in economic and social development, and to achieve the rejuvenation of the Chinese nation. The modern history of Chinese state-owned enterprises began essentially in 1978, when the Party Secretary Deng Xiaoping embraced market-oriented economic reform. Before that, in the absence of a market economy, there was no significant distinction between an SOE and a government agency in charge of elements of the production process.

Before the reforms and liberalisation, the emphasis was on developing the production of iron and steel, electricity, coal, petroleum, metallurgy, nonferrous

metals, machinery and equipment, and other heavy industries. Even these entirely state-controlled processes encountered occasional major upsets (notably the Cultural Revolution), but the foundations for the future Chinese industrial structure were basically established.

In the decades after 1978, the economic development strategy has encompassed the goal of establishing a "socialist market economic system" as a key element of building a well-off society. The ways in which the goal has been pursued are commonly cited as follows: First, "placing economic construction as the centre" – i.e. effectively a Chinese approach to what the OECD refers to as structural reform. Second, to gradually abandon the long-practiced reliance on planning and on heavy industries and replace it with a greater dependence on competition and market mechanisms in order to improve the efficiency of the enterprise sector. It was envisaged that this would trigger widespread SOE reform, which would release economic vitality and pave the way for eventual multiple ownership of enterprises.

A framework for analysis

In his book *Competitive Advantage of Nations* (Porter, 1990), Michael Porter provides a useful analytical framework to assess China's recent economic history. This work asserts that economic development generally occurs in four related but distinct states (listed in Table 5.1). In the first stage, development is driven by the mobilisation or better use of available production factors, such as the labour force, natural capital endowment and any other specific national advantages. The second stage is dominated by heavy investment in imported or off-the-shelf capital equipment (effectively a form of "catch-up industrialisation"). Historically, this stage is reinforced where there is widespread willingness among the population at large to save and invest in preference to engaging in short-term consumption. The third stage occurs when the production processes reach a level of sophistication where significant technological innovation becomes necessary to push the production frontier. At this stage, technology can no longer be freely acquired but needs to be developed in a national context. In the fourth and last stage wealthy, maturing economies

Table 5.1. **Stages of economic development**

Driver of development	Sources of competitive advantage
Production factors	Basic factors of production (national resources, geographic advantages, manual labour)
Investment	• Acquisitions of capital equipment • Transfer of technology • National consensus to defer consumption
Innovation	All determinants of national advantage interact to drive the creation of new technology
Wealth	Maximising the efficiency of existent capital and competencies

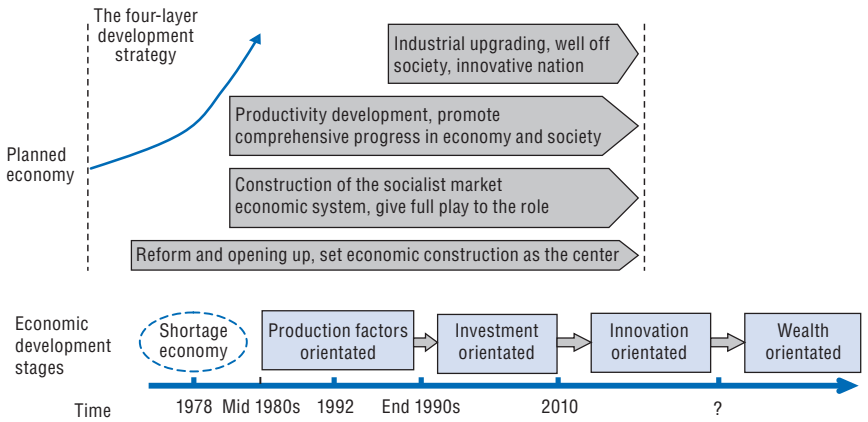
Source: Porter (1990).

focus on enhancing the efficiencies of the market-leading industries and technologies that they have developed.

An overview of Chinese development

It would appear that, since the beginning of the reform processes, China has gone through the first two development stages (for a graphic illustration, see Figure 5.1). At present, China appears to have entered into the innovation-orientated stage. The production-factor-orientated stage extended generally from the middle of 1980s to the end of 1990s with, as its main feature, "[A]lmost all the successful enterprises were depending on the basic productive factors". For China, the basic production factors included mainly: the availability of cheap labour, resulting from temporarily favourable demographic trends and rural depopulation; skills, enhanced by education and training; and the exploitation and use of land and mineral resources. During this period, there was not much product differentiation within individual industrial sectors. Competition among enterprises was mainly over price, and the technology employed in production processes was generic and easily obtainable.

Figure 5.1. **Three developmental stages and four layers of economic development strategies**



Source: Authors.

The investment-oriented stage extended approximately from the end of 1990s to 2010. Its main characteristics were the public authorities and enterprises that were both willing and financially able to be active investors. The enterprises largely invested in effective equipment and production plants, with the purpose of obtaining high-end technology from the international market. The comprehensive market-based reforms released a pent-up demand within the Chinese economy, with attendant capacity restrictions and a need

for further investment in the producing sectors. At the same time, the development of national capital markets gradually improved the availability of non-government financing for productive investments in industry and the business sector. Moreover, in response to a quickened pace of urbanisation, the Chinese government has also invested heavily in infrastructure. These factors have contributed to raising gross capital formation in China from 40% of GDP at the beginning of the 21st century to 50% today.

It would appear that after the financial crisis of 2008 – and the CNY 4 trillion investment plan that the Chinese government embarked upon afterward – China has entered into an innovation-orientated stage. Several indicators point in this direction: First, the government has attempted to identify strategic emerging industries that are considered priority areas for future innovative efforts. Second, a need for innovation is increasingly perceived in individual enterprises, resulting mostly from market pressures after the financial crisis. Third, the rapid development of the Internet and information-technology (IT) industries has set a higher bar for innovation. Nevertheless, there are still questions concerning how far China can reach during the innovation-orientated stage and even whether the country can complete this stage or will get stuck in what some researchers call the "middle-income trap".

Thus, over past 35 years, since the liberalisations, Chinese economic and social development strategies can be summarised as: i) reform and opening up, focusing on economic construction;[2] ii) the establishment of the socialist market economic mechanism and fostering the market system to allow the market to fully play its role;[3] iii) the development of the productivity and the promotion of comprehensive progress in economy and society; iv) the realisation of a stable and healthy development in the economy and society;[4] v) the catching up with and even surpassing other countries in industrial upgrading, and the building of a well-off society and an innovative nation.

5.1.2. *A detailed review of developmental policies, by period*

The early years

From 1978 to 1992, the main development policies in this period focused on liberalisation and economic regeneration. During this period, what was expected of SOEs was mainly that they expand their autonomy, and establish appropriate mechanisms for allocating incentives and responsibilities. By delegating rights and devolving powers, and using measures such as performance contracting, the authorities greatly enhanced SOEs' decision-making powers and motivation. In the meantime, the emerging private economy and the foreign-owned enterprises entering into China began to compete with the SOEs, resulting in greater economic specialisation and

subsidiarity. To cite a popular Chinese phrase, "Rocket engineers can't compete with those who sell the eggs, and surgeons can't compete with barbers".

In this period, China's economy was essentially transformed from a planned economy to a market economy, and no specific industrial policies were formulated. Some "implicit policies" could be observed, however, such as: structural policy changes in the planned economy; improvements to economic effectiveness; the allocation of resources to the heavy industries and industries supporting agriculture; and the light industry focusing on certain limited major areas.

According to the important policies that may influence or even decide the development of the national economy and the reformation of the SOEs, the development and reformation of the SOEs can be divided into four stages. During the first, the number of enterprises owned by all the people saw a slight change. The private enterprises and mixed-ownership enterprises appeared and expanded rapidly. There was a slight change in the number of industrial and building industry enterprises, but there was a trend that the revenue and profit were increasing in the SOEs while decreasing in the collectively owned enterprises. A significant increase occurred in joint and individual enterprises.

Table 5.2. **The changing sectoral and ownership distribution of the corporate sector 1980 to 2012 (by employment)**

Ownership:	1980	1992	1997[1]	2003	2012[2]
			Manufacturing		
SOEs (%)	70.0	63.9	65.0	37.6	26.1
Collective (%)	30.0	28.1	21.4	8.4	1.3
Others (%)	0.0	8.1	13.6	54.0	72.6
			Construction		
SOEs (%)	49.0	58.9	39.4	21.7	10.7
Collectives (%)	51.0	41.2	54.6	20.9	5.1
Others (%)	0.0	0.0	5.9	57.4	84.2
			Trade and distribution[3]		
SOEs (%)	30.4	17.9	21.5	27.5	9.7
Collective (%)	62.2	30.2	17.1	6.0	0.9
Others (%)	7.5	51.9	55.4	66.5	89.4

1. For trade and distribution, 1996 figures have been used.
2. In the manufacturing sector, no employment data are available for 2012. The distribution is based on operating revenues.
3. Includes mainly retain and wholesale trade, accommodation and catering.

Note: The category SOEs includes "people-owned enterprises" in the beginning of the period and "state owned and state holding" in the latter part. The category Others includes foreign-owned, private Chinese ownership and companies with mixed or undisclosed ownership.

Source: *Statistical Yearbook of China*, various issues.

The 1990s

Considering the large proportion of SOEs in the economy during most of the period since the reforms and liberalisation, better-performing SOEs contributed greatly to macroeconomic growth. Reforming the SOEs and introducing them to competition was, as mentioned above, approached from several angles. Before 1992, the main methods included decentralisation, greater rights of SOEs to reinvest profits, a general strengthening of corporate autonomy and various types of accountability-enhancing measures (such as a performance contract system). President Deng Xiaoping noted that many defects existed in the SOE sector, including an excessive centralisation of powers that had made enterprises entirely dependent on the government. He opined that to encourage risk willingness on the part of the enterprises, and initiative and creativity of their staff, the principle of enlarging autonomy of individual SOEs must be a key focus of reforms.

The policies from 1993 to 1997 were mainly the establishment of the socialist market economic system and the modern enterprise systems at the level of enterprises.[5] In the meantime, the problems of SOES' huge losses had been addressed through non-ownership policies, such as merger and acquisitions; the division of the major ones and the minor ones; the dealing with the bad assets in the bank; policy bankruptcy; and the redirection of laid-off workers. The landmark events were: the establishment of the stock exchanges in Shanghai and Shenzhen, the formulation of a series of "company laws", the pilot project of the modern enterprise system in a selected 100 enterprises, the addressing of difficulties for SOEs in a variety of ways, the building of the social-security system as the condition for the reformation of enterprises, and the development of the capital market to release the pressure from the reformation of SOEs.

Box 5.1. **The development of Vanke Co., Ltd.**

China Vanke Co., Ltd., is the largest professional residential developer and one of the earliest companies to have gone through the shareholding system reform and issued publicly traded shares in China. Its headquarters are located in Shenzhen, Gunagdong province. By 2009 its subsidiaries covered more than 20 cities. The main businesses focus is on residential real estate development. Vanke has been described by some as the epitome of Chinese economic system reformation and economic development. Its developing stages were as follows:

- From 1984 to 1988, Vanke experienced its first stage of entrepreneurship, which included reforms of its shareholding system. It began operating in the import and export business of office equipment and video appliances.

Box 5.1. **The development of Vanke Co., Ltd.** *(cont.)*

On 15 Oct. 1986, the Shenzhen municipal government enacted "the provisional rules of demutualisation pilot for state-owned enterprises in the Shenzhen special economic zone"; Vanke thus began to think about its shareholdership. In December 1988, overseen by the Shenzhen municipal government and the People's Bank of China Shenzhen Branch, Vanke publicly issued its shares.

- From 1988 to 1994, Vanke entered into another stage: diversification. It began to invest in some new areas, such as industrial production, real estate, chain retailing, movie production, etc. It also developed specialised corporate structures to conduct business in each of these areas. At the end of this stage, Vanke started to think about developing brands and patterns.
- From 1995 to 2001, Vanke entered into a stage of specialisation. It issued B shares, raising a lot of funds, which were used mostly for expanding its real estate projects. For the other investments – widely perceived as having been scattered to broadly – many activities became subject to a shortage of funds. In 1995, Vanke decided to transform from diversification to specialisation and began to reduce and sell its business (except in real estate). It gradually became a pure residential developer, and the coverage of its business was reduced to four cities in 1999.
- From 2001 to the present, Vanke has entered into a stage of "elaboration", during which the company successfully transited from the stage of specialisation through reforming the corporate organisation and management, using the US firm Pulte Homes as its model.

During this period, there were systematic industrial policies. "The national industrial policy framework in 1994" posited that "formulating national industrial policy is an important mean to strengthen and improve macro-control. It will effectively adjust and optimise the industrial structure, and improve industrial quality. It can also promote a sustained, rapid and healthy development." The orientations of the industrial policies in this period were to: strengthen the fundamental status of agriculture; comprehensively develop the rural economy, strengthen the fundamental industries, relieve the situation where the infrastructure and basic industry lagged far behind, hasten the development of the pillar industry, help the national economy undergo a comprehensive rejuvenation, properly adjust the economic structure of the foreign trade, strengthen the international competitiveness, quicken the steps of the development of the high-tech industry and support the emerging industries, vigorously develop the third industry, optimise the structure of industry and enhance the level of high-tech industry in order to make the industry structure more proper.

As of 1998, the SOEs entered into the stage of diversified equities and shareholding reform. In 1997, the 15th National Congress had made clear its commitment to the policy dubbed "grab the big and let go of the small" and to the implementation "strategic reorganisation on SOEs". Afterwards, the 4th Plenary Session in 1999 further made clear the requirements of restructuring enterprises and emphasised the strategic adjustment of state-owned economy and the establishment of an effective system of enterprise governance. During this stage, many SOEs (including such large enterprises such as CNPC, CMCC, Baosteel Corporation) separated their core assets from the original enterprises and proceeded to reform their shareholding system, including through initial public offerings (IPOs). A main purpose of the separation was to put the non-core assets, non-performing loans and surplus staff in the remaining companies.

The policy promoted the restructuring and sale of small and medium-sized SOEs. As a result, these SOEs became private enterprises and, as a large number of collective enterprises were reorganised into corporations, the result was a leap forward in the development of enterprises other than SOEs. In 1998, the government administration was reformed. In particular, some specialised governmental departments were discontinued, which caused the separation of the direct relationship between the SOEs and the specialised units of the state to which they had previously reported. As a result, some more "central" departments such as the Ministry of Finance, the Department of Organisation and the work committees of individual enterprises gained a more direct influence over SOE management. This situation triggered concerns about insider control in the SOE sector which, in reality, pushed forward the reforms of the ownership structure that occurred in the following decade.

The new millennium

From 1998 to 2002, the main focus was to solve problems of inefficiency and widespread operating losses in the SOE sector. The measures universally used in this stage were: i) the establishment of strategies to resolve any corporate difficulties within three years, ii) the redirecting of any employees laid off during the restructuring and iii) divestment from a number of small and medium enterprises (through a broadening of the investor base, trade sales, management buy-outs, etc.).

Box 5.2. **The development of Shenzhen Stock Exchange**

The Shenzhen Stock Exchange is one of the two stock exchanges on mainland China, alongside the Shanghai Stock Exchange. It was founded on 1 December 1990 and is directly governed by China Securities Regulatory Commission (CSRC). Its main functions are to: provide the place and facilities

Box 5.2. **The development of Shenzhen Stock Exchange** *(cont.)*

for securities transactions; organise and supervise the organisation and transaction; supervise its members and the listed companies; manage and publish market information and perform the other functions allowed by CSRC. Its developing stages are as follows:

On 1 April 1988, Shenzhen Development Bank pioneered China's first security transaction through and over-the-counter transaction in Shenzhen Special Zone. In November 1989, Shenzhen municipal government decided to establish the Shenzhen Stock Exchange. On 1 December 1990, the Shenzhen Stock Exchange officially started its operations. In April 1993, the supervisory function of Shenzhen Stock Exchange was transferred from the People's Bank of China to the Shenzhen Security Regulatory Committee. In August 1997, The State Council decided to transfer the supervisory right to CSRC.

In May, 2004, at the initiative of the State Council and approved by CSRC, a trading segment for small and medium-sized enterprises ("the SME Board") was established as part of the main market, establishing for the first time a multi-tier stock market in China. The final step in this sequence of developments came in October 2009, when the SME Board was rolled into ChiNext, a stock market not unlike NASDAQ, aiming at attracting innovative and high-growth enterprises. Within a year, 123 companies were traded on the ChiNext, which had raised total equity financing of CHI 84.132 billion.

As of 31 December 2013, 1536 companies were listed on the Shenzhen Stock Exchange, with a total market capitalisation of CHI 8791.192 billion, corresponding to 16.9% of GDP. Chinese market participants perceive the Shenzhen Stock Exchange as having played an important role in establishing the modern Chinese enterprise system, promoting the economic efficiency and disseminating market information.

The industrial policies in this period were not inconsistent with those of the previous years. On the one hand, they promoted the construction of infrastructure, and the development and upgrading of prioritised industries. On the other hand, they encouraged the transformation of the overall structural economy, including by establishing and transferring shareholder rights.

Since 2002, the focus of Chinese development goals has included a continued effort to bolster the investment of society as a whole, as well as efforts to expand internationally. Critical features of the policies in this period were the economic development of the western parts of China, the overcoming of the obstacles of what had been regionally segmented economic markets, the deepening and upgrading of the capital structure in manufactures and the development of the service industry.

At the 16th National Congress in 2002, a new management system of state assets was established, and the state-owned Assets Supervision and Administration Commission (SASAC) was founded. With SASAC in place a reform process was initiated including, with regards to setting and monitoring financial and non-financial objectives, corporate restructuring (*inter alia* through separation of secondary lines of business from core business, separation of social functions and the creation of mechanisms for asset management), mergers of small SOEs and a number of pilot projects to establish boards of directors in the holding companies. At the same time, systems of cost control and financial supervision were established.

Following the previous period of restructuring, divestment and mergers of small SOEs into larger groups, the remaining SOEs had somewhat stronger capacities in terms of both their scale and their capitalisation. They also showed relatively good financial performance reflecting, among other things, a light debt load. This, in turn, placed them advantageously to pursue the government's goal of continued high levels of capital formation. A significant proportion of the investment went into real estate development, energy and the raw-materials sectors.

5.1.3. The change of the overall status of the SOEs

At the end of 2011, China had 144.700 state-owned and state holding enterprises (not including financial enterprises). These held CHI 85.4 trillion worth of total assets, had a value of CHI 29.2 trillion in terms of equity value and recorded CHI 2.6 trillion of profits. The business income, profit and taxes together accounted for around 40% of all industrial and commercial enterprises of the entire economy.

Box 5.3. **The Development of SANY Group Co., Ltd.**

SANY Group Co., Ltd., is China's largest and the world's fifth engineering machinery manufacturer, the world's largest concrete machinery manufacturer, one of China's TOP500 enterprises, one of Forbes's elite manufacturers of China and one of the TOP500 brands in Asia. Its headquarters are located in Changsha, Hunan province, with more than 100 marketing and service institutions. It has 56 service networks and 6 green passages for service. It has 12 subsidiaries overseas, and its business covers more than 150 countries. Its products have been exported to more than 110 countries and regions. SANY focuses on developing, manufacturing and selling engineering machinery. Its products cover 25 categories and more than 120 varieties, ranging from building machinery to road construction machinery to lifting machinery, etc. SANY Group's experience in the past more than 20 years is the epitome of China's economic system reformation and economic development.

Box 5.3. **The Development of SANY Group Co., Ltd.** *(cont.)*

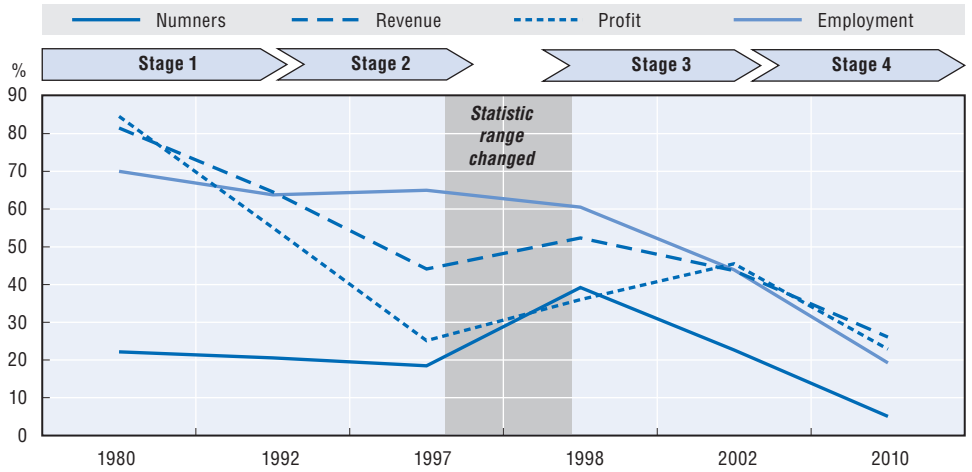
SANY Group Co., Ltd., was founded in 1986. SANY Heavy Industry Co., Ltd., was established on 22 Nov 1994. Its main developing stages are as follows:

- From 1986 to 1993, SANY was mainly in the stage of capital accumulation. In 1993, SANY Group was officially established. With the increase of the sales revenue, the company began its exploration of "diversification".
- From 1993 to 2003, SANY entered into the stage of "specialisation", with policy support for the infrastructure from Chinese government. In 1994, SANY decided to engage in the area of heavy industry. In 1996, SANY achieved a technological breakthrough through introducing talents. It thus got 40% of market share. Later, SANY set up its own brand through self-innovation and changed the international image of Chinese products.
- In July, 2003, SANY was listed with A shares, accumulating more than CHI 900 million in funds and thus entered into a stage of diversification. It started to expand its business in manufacturing of dag pumps, pump truck, road roller, bulldozer, etc. In 2004, the macro control of government resulted in the upgrading of the market access, which has greatly affected SANY. Therefore, SANY diverted its goal into overseas markets, entering into the stage of internalisation, which peaked in 2006. It successively set up bases in India, North America, and Europe, with Germany as its centre. On 10 July 2005, SANY achieved its success in equity division reform, which has helped the company gain brand recognition.

Until 2012, SANY Group had achieved about CHI 100 billion of sales revenue. By 31 Oct. 2013, the company had applied for 7 116 Chinese patents, 341 PCT international patents, and 189 overseas patents. It has been conferred 4 769 authorised domestic patents and 18 overseas patents, ranking as first among its peers. SANY owes its success to the development of the Chinese economy, and the cultural precept of "Living for China" and the mission of "Building up the best enterprise, the best talents, and making the best contribution".

At the macro level, the relative importance SOEs has been greatly reduced since the inception of the reform and liberalisation policies. Already in 1993, the role of SOEs in providing corporate revenues and earnings began to drop. After 1998, the proportion of SOEs also began to decline in terms of their share of employment (as well as the number of companies), as demonstrated by Figure 5.2. The main trends that can be detected from this Figure are explained as follows: i) after the serious political discussions about divestment of state assets that took place in 2004, the reorganisation and sale of SOEs were was approached more cautiously; ii) after the establishment of an ownership

Figure 5.2. **Status changes of SOEs in the manufactory sector**



architecture for state assets, more rigorous demands were made regarding the operating revenues and profits of SOEs and in consequence the earnings of these enterprises improved; and iii) in a number of regulated industries – such as tobacco, oil and gas exploration, electricity and heating – the ownership controls were strengthened, which led to an increase in their revenue proportions.

The output proportion of SOEs in the manufacturing industry has decreased steadily, from 77.6% in 1998 to 26.6% in 2010 (Table 5.3). Further data published in China's annual Statistical Yearbooks indicate that, in parallel, the number of subsectors in manufacturing in which SOEs had a dominant share of revenues has been equally reduced. Few of the subsectors currently have a proportion of SOEs exceeding 30%.

Table 5.3. **Numbers and proportion in output value of SOEs in manufacturing sector**

	1978	1990	1995	2000	2005	2009	2010
The proportion of output value (%)	77.6	54.6	47.1	47.3	33.3	26.7	26.6
The number of enterprises (10,000s)	8.4	7.4	11.8	5.3	2.7	2.1	2.0

Source: Statistical Yearbook of China.

There have also been major changes in the relative importance of SOEs in the non-financial services sector. The proportion of SOEs is generally small in subsectors where the business units are themselves small, including retail trade, catering, housing, etc. Conversely, SOEs enjoy a certain position in construction, real estate and wholesale commerce, with shares of the activity mostly exceeding 20% (Table 19). In these subsectors quite a few SOEs are the

Table 5.4. **Economic weight of SOEs in the services sector (2010)**

	Construction	Non-financial service industry					Financial industry	
		Real estate	Wholesale	Retail	Communication	Aviation	Banking	Securities
Revenue	20	Around 30	27	8	95	80		
Net profit	13		33	10			62	91
Total asset	21	Around 30	31	10	97		57	86
Net asset	14	Around 30	34	9	97		57	87

Source: Statistical Yearbook of China.

leading enterprises in the industries, exerting a non-trivial degree of market power. The share of SOEs in "strategic" subsectors such as communication and aviation services is estimated at 80%-90%, which means that the state effectively controls these activities.

It also appears that the proportion of SOEs in labour-intensive activities has declined continuously. Taking the construction industry as an example, the proportion of revenues provided by SOEs in this sector was 70.2% in 1978. By 1993 it had decreased to 37.4%, and at present it stands at around 20%. The proportion of SOEs in retail sales has also decreased continuously. In 1978 it exceeded 50%, and today the share is less than 10%.

In financial services, SOEs and other state-controlled entities remain dominant. Within the banking sector, the net assets and profits of only five large commercial banks controlled by the state accounted for 49% and 57%, respectively, in 2010. In development banks and commercial banks where the state has partial ownership, the proportions rise to 71% and 75%. respectively. As for the insurance and securities sectors, as previously mentioned the main operating entities are all SOEs or are otherwise government-linked.

5.2. Public policy functions of SOEs and their effectiveness

5.2.1. *Public policy functions of SOEs in China*

In the past 35 years, the government has never clearly announced that SOEs are charged with public policy objectives. Most of the publicly declared policies have concerned the above-mentioned processes of reform, reorganisation and transformation of SOEs. That said, elements of the role of SOEs in implementing public policies can be practically observed. As already mentioned, SOEs were the object of reform and transformation that aimed to build functional economic markets. Comparing the features of current SOEs with those at the beginning of the reform process, important differences appear in at least four contexts (see also Table 5.5):

1. From the perspective of relative economic importance, the output value of SOEs accounted for 78% of the whole society in the early period of reform

Table 5.5. **Comparison of SOE characteristics, early periods of reform and the present**

	Characteristics of SOEs			
	Status	Business competition	Ownership rights	Governance
In 1978	There hardly existed privately-run economy and the output value of SOEs attained about 78% Publicly-owned enterprises almost accounted for 99.9% of the total industrial and commercial enterprises.	The SOEs were the workshops of the big social factory: plans were transmitted by leaders; goods and materials were allocated; finance revenues and expenditures were unified; all goods are purchased and marketed by state commercial agencies; price was fixed; staff were deployed by the state; wages were allocated by government.	Ownership by the whole people	Soft budget constraints Social organisations were set up by enterprises, including schools, hospitals, etc. Lifetime employment system Unified and average wages
In 2012	In terms of numbers of enterprises SOEs accounted for 5% of total industry; SOEs' revenue and profit accounted for about 25%. In the service sector the revenue proportion of SOEs in construction, business, and real estate was not high, while in communication, aviation, publishing and finance industries, the revenue proportion of SOEs accounted for more than 80%.	The SOEs were mostly active in competitive markets. Many SOEs and private firms practiced methods of co-operation and division of labour in the upstream and downstream of their value chains. The expansion of invest was strongly promoted. Diversification of SOEs and collectively Non-commercial "social functions" disappeared from majority of enterprises.	New patterns of ownership emerged, including solely state-owned, state-controlled firms and joint ventures. The holding companies in the state-controlled business groups are all (with six exceptions) wholly state-owned. Thirty-eight percent of the listed enterprises are SOEs; they accounted for about 51% of the market capitalisation.	About 20% of the SOEs were governed by a general manager without the oversight of a board of directors. Other enterprises were registered on the basis of *Law on Enterprises*, and set up such governance systems as shareholder meetings, board of directors and supervisory board. At the level of the holding companies, boards of directors had become the norm.

and liberalisation. At present, except for a small number of industries (such as oil exploration, tobacco-related products, supply of electricity and heating, communication, aviation, publishing and finance), the revenue proportion of SOEs is generally below 30%.

2. From the perspective of business competition, all of the SOEs were originally carrying out mandatory plans from central planners in a process involving a unified allocation of resources, as well as standardised processes of manufacturing, procurement and marketing. Hence, prices, staffing and wage costs were very inflexible. Most of these "social functions" of SOEs, however, have since been abandoned. Faced with market competition, diversification, and in some cases a broadening of the ownership, the SOEs have increased their co-operation with private firms upstream and downstream in the value chains. In terms of business models, objectives and investment patterns, most of the SOEs have become more like private Chinese firms and more like foreign SOEs.

3. In the early period of reform and liberalisation, ownership rights formally resided with the whole people. Now, various models can be seen, including enterprises wholly owned by the state, companies controlled by the state and state-invested jointly controlled capital companies. About 1/3 of the listed companies in China (and close to 2/3 if measured by market capitalisation) have a controlling stake owned by the state.
4. Great changes have also occurred in governance mechanisms. A previous system of soft budget constraints, lifetime employment and rigid wage structures has changed into more modern governance, including boards of directors and internal company management boards. The compensation of staff and other incentives, as well as accountability for business performance, have also changed significantly.

The main public policy functions that SOEs generally undertake include: promoting economic development, assuming a dominant position in important sectors, developing a co-operative as well as a competitive relationship with non-state-owned enterprises, avoiding abusive usage of their often-dominant market position and providing public services to society.

The leading position of the state in the national economy is enshrined in the Chinese Constitution. Moreover, the 16th, 17th and 18th National Congress of the CPC emphasised and re-emphasised that China practices "a basic economic system of keeping public ownership as the mainstay of the economy while allowing diverse forms of ownership to develop side by side". According to this basic economic system, the SOEs and state funds are, by their very nature, one of the main tools for national economic development.

The Fourth Plenary Session of the Fifteenth Central Committee of the Communist Party of China pointed out that SOEs play a dominant role in important industries and key areas related to the "lifelines" of the national economy. They sustain and lead the development of the economy, exerting significant influence on the state macro-control goal. In fact, the Session identified the leading intended functions of state-owned enterprises, as follows:

1. *Promote the overall development of the national economy.* This requires more than good performance of state-owned enterprises. They cannot focus simply on their own development, but also need to pay attention to the influence their activities have on the overall national economy. Besides, when there are risks in national economy system, the government can demand "economic adjustment and rescue functions" from several specially designated SOEs.
2. *Assume a dominant role in key areas and industries.* Those areas were cited in the Fourth Plenary Session. They refer to "sectors relevant to national security, natural monopolies, important public products, the service

industry, key industries, and key enterprises in high-tech industry". The list effectively combines sectors that are vital for economic development and sectors where there is some form of market failure.

3. *Maintain a presence in other important industries*. The relationship between state-owned and other enterprises involves both competition and co-operation. Except for certain specific circumstances, the government's policies should not generally support the private enterprises (or SOEs) in these fields.
4. *Ensure fair competition between the SOEs and other enterprises*. This is important when SOEs act as market participants at par with other competitors and co-operators. They should not abuse their dominant positions, where such exist, in specific industries or activities. They must pay dividends and various taxes (including a resources tax) on an equal scale as other comparable firms.

Insofar as SOEs have been able to operate according to the criteria mentioned above, the state-owned economy has been playing a positive role. Nonetheless, there have been some problems. Observers of the Chinese SOE sector have repeatedly criticised the profitability of SOEs, as well as a financial architecture that systematically seems to favour enterprises in state ownership. This may be partly by design, but apparently it is also related to a lack of clarity on the government's political priorities and the degree to which SOEs act as agents of these priorities.

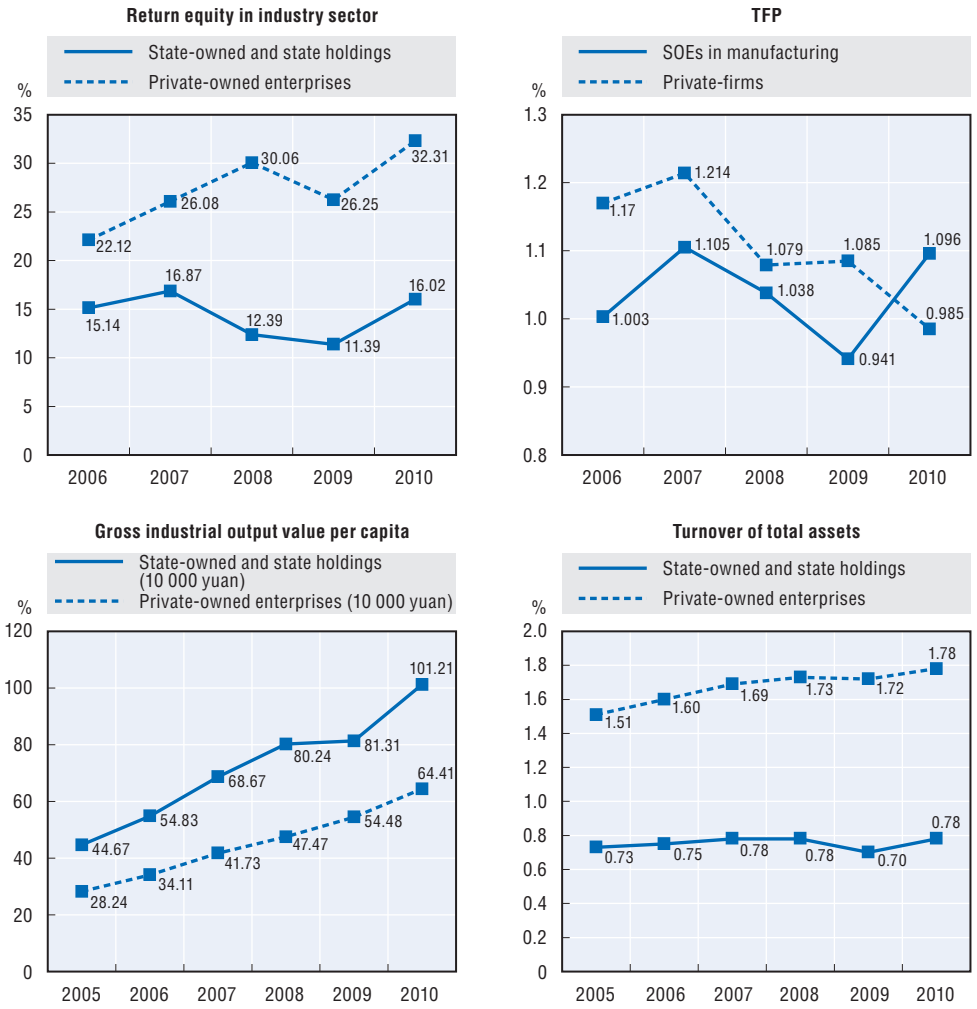
5.2.2. *Effectiveness, shortcomings, and impact of SOEs*

There is no systematic research on the overall efficiency of state-owned enterprises. This section analyses the issue from three perspectives: the financial performance, the reform and the effectiveness of public policy delivery by SOEs.

An empirical comparison of the performance of SOEs and private enterprises can be attempted, including the sectors' return on equity (ROE), total factor productivity (TFP), gross industrial output value per capita and total assets ratio (Figure 5.3). It appears that from 2006 to 2010, although this was a period of rapid economic growth, the ROE, TFP and total assets ratio of SOEs were clearly lower than those in the private sector. The gross industrial output value per capita – i.e. a crude level of labour productivity – was the only indicator higher in SOEs than in private enterprises, which mainly reflects composition effects because of an increasing specialisation of SOEs in capital-intensive sectors.

The activeness in the economy of state-owned enterprises can be gleaned from their high propensity to engage in mergers and acquisitions. In 2010 there were 1 112 mergers and acquisitions among the national top 500 enterprises,

Figure 5.3. **A comparison of the performance between SOEs and the private enterprises, 2005-10**



most of which were undertaken by SOEs. Each individual SOE furthermore engaged in a larger number of transactions on average than their private-sector counterparts (Table 5.6).

As regards enterprise reform, the effectiveness of reform in the SOE sector is most readily observed in the companies that participate in competitive markets. A number of such enterprises have responded flexibly in response to the new openness to markets and competition, and have rid themselves of the operating losses that in earlier periods dogged their performance. Moreover,

Table 5.6. **Mergers and acquisitions of large companies, 2010**

Buyer company	No. of companies	No. of companies being merged	No. of companies being merged per buyer company
Chinese 500	182	1 112	6.1
SOEs	134	903	6.7
Private firms	48	209	4.3

Source: Author's calculations.

following up on the previous point, these newly competitive SOEs predominate among the Chinese enterprises that have made direct investments and/or engaged in mergers and acquisitions abroad. For example, in 2010 the net amount of non-financial investment abroad was USD 68.5 billion, among which centrally owned SOEs accounted for USD 49.9 billion.

Owing to the aforementioned reforms, most of the medium-sized and small SOEs that used to exist have been changed into either listed companies with non-state shareholders or have been taken over by private competitors. It is perceived that the technologies, management skills and capital assets of those SOEs strengthened the capabilities and competitiveness of the then-fledgling private economy. In consequence, the reform can be said to have both created space for private business activities and strengthened the viability of those activities.

Conversely, in some fields – especially where companies have elements of a natural or legal monopoly in their value chains – reforms are still slow, and market mechanisms have not yet been made to play a leading role. In utilities sectors such as power transmission and communications, which are mainly owned by the state, a continued monopoly may be justified by a need to stabilise the networks and maintain universal service. But the problem of pricing, efficiency and the deepening of reform has led to various controversies. Critics within China have pointed to factors such as discriminatory pricing in mobile communication services, apparent sluggishness in developing transmission and distribution assets in the electricity sector, slow progress in developing renewable energy and high prices in a number of industries as evidence of lack of efficiency in state-controlled sectors that are not directly exposed to competition.

In sectors focussed on the provision of public services – typical examples include the postal service, urban road construction and public transport, as well as the water, electricity and heating supply – SOEs continue to play a dominant role. In those fields, state-owned enterprises are perceived to be effective in the sense that they have a good track record of delivering universal and stable services. The main criticism focusses on their efficiency and quality of service.

Another argument for state ownership is the existence of large externalities in certain sectors or activities. A classic example is airports, where indeed many emerging economies have built infrastructure in advance of a proven need, which later contributed to the development of economy. In the case of China, however, several airports have been left unused because of a persistent lack of passengers.

The potential role of SOEs in research, development and dissemination of technology is well documented, including in this report. In the case of China, at the end of 2011 SOEs owned 214 000 independent intellectual-property-rights assets (mostly patents) and the SOE sector employed 1.25 million technical personnel, which includes 226 members of the Academy of Science. An estimated half of all enterprise laboratories and three-fourths of the national energy technology development are located within SOEs under central government ownership.

Under certain circumstances, state-owned enterprises have played a significant role in underwriting the "social economy". For example, the inversion of price in some energy enterprises guarantees the supply of electricity and petroleum products; the telecom and power networks played a key role in "Connectivity in Every Village Projects". Moreover, SOEs are thought to be greater contributors to corporate taxation and social-security funds than private firms in like circumstances. In addition to contributing to social spending at the national level, SOEs provide 16.553 million retired workers with pensions, plus in many cases housing and health services. Finally, in dealing with natural disasters such as snowstorms and the Wen Chuan earthquakes, state-owned enterprises have often played a prominent role.

Partly because of many SOEs' multiple priorities, the government has generally not provided sufficient subsidies to compensate for the costs of carrying out the public policy objectives. At the same time, the assessment mechanism that the government applies to SOEs is mainly about scale and financial returns, so individual enterprises have a strong inclination to earn profits. This creates incentives for SOEs operating as monopolies or within oligopolistic markets to make full use of their pricing powers. It has also led many SOEs to begin to invest in real estate and finance, areas traditionally perceived as offering quick and large returns.

5.3. Alternatives to SOEs

5.3.1. Development banks and similar institutions

In 1994, three "policy banks" were established in China; namely, the China Development Bank, the Export Import Bank of China and the Agricultural Development Bank of China. They are under the direct control of the Chinese State Council. The main stated purposes of the China Development Bank (which

is the main focus of the present section) were to: i) prepare the necessary funds for key construction projects affecting the overall economic and social development and ii) centralise the state investment funds, which had been managed separately in the past. In the process, an investment loan review system was established, giving the Bank decision-making powers in investment credits while also giving it responsibility for avoiding ill-informed investment and redundant construction.

The main aim of establishing the Export Import Bank was to expand the export of, in particular, mechanical and electrical products through the provision of export credit guarantees. Special priority was given to types of equipment and products perceived as high-tech and generating high added value. The purpose of establishing the Agricultural Development Bank was mostly to provide funding to modernise and develop the agricultural sector, as well as to promote the operations of purchasing funds charged with co-ordinated buying of agricultural products in less-developed areas.

The main goal of the China Development Bank is to support the development of the national economy through the supply of financial services, such as long-term credit and investment. Its operational objectives include the following: i) promote the development of economic markets and planning through financing; ii) support the development of national infrastructure for basic industries, prioritised industries, strategic emerging industries and key national construction projects; iii) promote harmonious regional development and urban development; iv) support small and medium enterprises; v) support the "three rural" projects for agricultural development; vi) bolster a number of other fields including education, support to low-income families, the development of medical and health services and environmental protection. Additionally, the Bank is expected to support the national strategy of "going out", expanding the international presence of Chinese businesses.

China Development Bank's fundraising works mainly through the issuance of renminbi bonds, including short-term (up to one year), long-term (one through five years), long-term (five through ten years) and the long period (more than ten years). Examples of the Bank's delivery of its operational objectives have included:

- *Support infrastructure, basic industries and pillar industries of construction.* Since 1994, the China Development Bank has provided CHI 40.5 billion, plus USD 1.22 billion in foreign exchange, of financing for the construction, development and marketing of the Three Gorges dam project. It was further involved in numerous other large infrastructure projects on the Chinese mainland. In 2004, the Bank provided financing for the Beijing Olympics (held in 2008) toward 27 construction projects. The total amount of loans reached CHI 43.7 billion. In 2005, the Bank launched long-term loans of CHI

12.6 billion and foreign exchange loans USD 5.9 billion to support the strategic co-operation of CNPC, Sinopec, CNOOC and other SOEs.

- *Promote the restructuring, innovation and upgrading of the national economy*. On 6 January 2013, the China Development Bank granted financing of CHI 20 billion to support BOE Technology Group's efforts to develop an LCD solar-panel industry.
- *Support social undertakings and the development of small and medium-sized enterprises*. In 2012, the China Development Bank played a leading role in mobilising social forces to support development in areas including housing, health care, employment, education, agriculture and new rural construction. It also granted emergency loans of CHI 6.3 billion to mitigate the effects of natural disasters. In 2012, the Bank increased its loans to the SME sector by CHI 264.5 billion. The funding targeted some 20 areas, mainly in manufacturing, agriculture, forestry, animal husbandry and fishery.
- *Promote internationalisation*. At the end of 2011, the foreign exchange loans that had been issued by the China Development Bank amounted to USD 187.3 billion. Responding to Chinese concerns about energy resource security, the Bank has responded actively to the "going out" strategy. It has supported numerous international projects, such as: "Oil Co-operation Projects between China and Russia"; "the Oil Co-operation Project between China and Brazil", "China and Turkmenistan Natural Gas Co-operation"; and "the Fund Project between China and Africa".

Although the China Development Bank had a strong policy orientation when it was established, it appears to be transitioning toward being more of an investment bank. In December 2008, approved by the State Council, the China Development Bank was transformed into a limited liability company, and a process of commercialising its operations has been ongoing. Still, during this process it continues to function as a main backer of the government's long-term development strategy through loans and investments. Currently it describes its main business areas as "planning, credit and loan, financing, clearing, intermediary business, financial co-operation and innovation, and business through subsidiary companies".

In a development not unlike that seen earlier in Brazilian development banks (described earlier in this report), the China Development Bank has added a new function of equity investment and investment banking to its corporate profile. Two subsidiary companies called "bank of equity investment" and "bank of investment" have been established.

5.3.2. Economic Development Zone and Business Incubator

Economic Development Zones, in the Chinese vernacular, generally encompass several types, ranging from an Economic and Technological

Development Zone, high-tech industrial park and high-tech Development Zone, to all kinds of industrial parks (such as an agriculture development zone, chemical industrial park, automobile industrial park, etc.). According to the scale of development zone, they can be divided into national development zones, development zones at the provincial level, municipal development zones, and so forth. As of May 2011, the number of national economic and Technological Development Zone had reached 128.

The purposes of establishing economic development zone differ. Some are for promoting scientific research and developing a high-technology industry, and some are for attracting foreign investment and expanding exports. Development zones are generally created in accordance with the relevant national industrial policy on encouraging foreign enterprises to invest by providing tax exemptions, land on preferential terms and other incentives. In some places, the local economy has developed very rapidly owing to the opening of development zones. Examples frequently cited include the Shenzhen Special Economic Zone, Shanghai Pudong New Area (described below), Suzhou Industrial Park and Tianjin Development Zone.

Case study: The Shanghai Pudong New Area

The development of the Pudong New Area in early 1990s, at the instruction of President Deng Xiaoping, was seen by many in China as a symbol of the reform and liberalisation process. In October 1992, the State Council approved the establishment of the area in Shanghai. In January 1993, the Pudong New Area's management committee was established. In August 2000, the People's Government of the Pudong New Area was established. A sequence of legal and administrative changes then enlarged the area and enhanced its autonomy.

The policy goal was to develop the Pudong area and provide it with the following characteristics: eased administrative requirements, quick access to information and infrastructure facilities on a par with any other modern international metropolis. In fact, the revitalisation and transformation were undertaken with the express goal of helping to build Shanghai into one of the biggest economic trade centres along the west Pacific coast.

The Pudong New Area's economic development strategy is part of the central government's overall developmental strategy. Individual aspects of the programme, such as infrastructure development, the targeting of selected industries and investment incentives, are carried out with government authorisation. There are relatively few individually run corporations or small and medium corporations in Pudong. Large companies – mainly SOEs and foreign-invested enterprises – occupy most of the area.

The main strategic priorities underpinning the activities are as follows. First, a strategy of "focusing on finance" was declared at the beginning of the development of Pudong. At the end of 2009, the number of the financial institutions totalled 603, accounting for about 80% of the entire space. Most of these were global or regional headquarters of multinational financial companies. A total of 132 such entities constituted 51% of the city. Second, a strategy of "focusing on Zhangjiang zone" was put into place in 1999 as part of implementing the national innovation strategy. In this part of Pudong, economic activities related to integrated circuit, software and biological medicine were to be the leading industries. Third, a strategy of showcasing advanced elements of China's manufacturing industry was put forward. Within the Jinqiao area, designated for processing export goods, a modern science park was built in which high and new technology were the leading industries. These included automobiles and subcomponents, modern household appliances, office equipment, electronic information, biological medicine and food processing. Fourth, to build an international shipping centre, the construction of an international "trade demonstration area" in Waigaoqiao was carried out, with the purpose of enhancing trade capability and promoting the integrated development of domestic and foreign trade.

According to official Chinese sources, the governance of Pudong New Area is poised to be transformed, using among other things international benchmarks to develop the functioning of the city. Five autonomous zones are been planned: the Lujiazui finance and trade zone, the Jinqiao export processing zone, the Waaigaoqiao free trade zone, the Zhangjiang high-tech zone and the Sunqiao modern agricultural development zone.

Looking back, it would appear that Pudong's successful experiences can be summarised as follows: face international competition, make plans well in advance, establish the mechanism of resource allocation with market-oriented features, allow the market to allocate resources and give full display to the function of the government. As regards the role of the government, an important feature has been its intervention through administrative measures that, to the extent feasible, have combined market efficiency and government regulation dynamically.

Some shortcomings can also be cited. First and foremost, the development of the Pudong New Area is facing increasingly severe resource constraints, so a shift in strategy seems imperative. During more than the past decade, business costs have increased rapidly, and a scarcity of basic resources like land and energy is becoming more and more serious. In these and other areas, Pudong appears to be losing some of its attractiveness to foreign investors. Among the remedies being considered is allowing an increase in the settlement rate within the existing area.

5.4. Conclusions and policy implications

On the whole, the Chinese authorities appear to have attempted to assign public policy goals to SOEs in order to compensate for market failure rather than basing them on random aspirations. At the same time, Chinese SOEs are universally perceived as being rather inefficient and difficult to govern, so the assignation of policy roles has necessarily gone hand-in-hand with efforts to improve SOEs' governance structure and strengthen their marketisation. The main sources of market failure, and areas of economic activity that have necessarily fallen to SOEs, can be summarised as follows:

1. They providepublic services, or activities with a strong public-service element, including urban public utilities such as electricity, district heating, road construction and maintenance and communications.
2. They are found in areas with strong externalities, including airports, aviation, infrastructure, and public transport, as well as general research and development.
3. They cover natural monopoly areas, including power, oil and gas pipeline network and backbone communications networks.
4. They undertake projects involving particularly large "sunk costs", including inter-regional infrastructure, subway systems and airports.
5. There are intrinsic weaknesses in a number of Chinese markets. The mechanisms of the capital production factor and technology markets are not well developed, which leads to high transaction costs. This leads, for example, to difficulties in involving private investors in a number of activities, including public-private partnerships, where it is often necessary for the public sector to act as "investor of first instance". Another example, directly related to China's position as an emerging economy, is that the main capital markets until relatively recently did not have the capacity to act as a conduit for funding large-scale projects and long-term strategic investment.
6. At its current stage of economic transition, China still faces problems in its regulatory systems and legal enforcement. If there were only private enterprises in the marketplace competition, consumer rights could in many cases not be protected. Also, regulatory measures to capture externalities, where such exist, would be notoriously difficult to implement. The direct participation of the state has in some cases been deemed necessary to compensate for these problems.

The Chinese experience suggests that there is a need to make a comparative assessment of the costs and benefits of state ownership, which needs to be conducted in the broader context of industrial policy and regulatory alternatives. State ownership, if carried out competently, can be a flexible

industry policy tool. It may be adopted by governments to address market failure and to achieve certain social goals. At the same time, it should act as a complement to market mechanisms and regulation. It is particularly when a country lacks the capacity to implement a more flexible industrial policy that market mechanism and regulation that state ownership can provide a flexible tool for government. In consequence, the balance of state and private ownership should depend on the degree of market failure as well as the availability of alternative policy instruments.

Consequently, with the gradual improvement of market mechanisms, the government should leave a larger scope for the private sector, whether through privatisation or the exposure of SOEs to direct competition. It China this has mainly manifested itself through more private capital entering into the ownership structure of large SOEs operating in fully commercialised areas of the economy, and through the divestment of many small and medium-sized SOEs.

Thus, it follows that the case for using SOEs as an instrument of industrial policy is strong mainly at relatively backward stages of development or when the economy is in a generally weak condition. At the same time, it is at this stage that the foundations for future development are laid. The features of this stage are: financial shortages, skills shortages, imperfect market mechanisms, a secular shortage of public services, a lacklustre investment environment and weak competition and sector regulation. At this stage a government's development goal would almost certainly focus on catching up with other countries. At its disposal it would normally have a pool of untapped resources, including natural resources. The ultimate success of state-led development strategies – in view of the weakness of the state's legislative and regulatory capabilities – may in practice depend on whether the government has a strong administrative capacity (i.e. a "competent and empowered bureaucracy" as mentioned in an earlier chapter).

In the course of the development process, and as the state's portfolio of enterprises narrows, the exercise of ownership rights over SOEs often become more concentrated within the state, which may help avoid oversight and agency problems. They ownership and corporate governance mechanisms are generally reformed, which helps further boost efficiency and development, and the SOEs generally become more oriented toward value creation and profitability. For the enterprises that continue to mix commercial and non-commercial objectives, a certain separation (at least of accounts) between the two types of activities should generally be attempted. Competition in international markets should at this point also be attempted, or at least has prepared as a future option.

Notes

1. This chapter was prepared by the OECD Secretariat based on original work by Dr. Zhenjun Zhang, Parallel Consulting, Beijing, China.
2. Decision from the 11th Plenary Session of the Third Central Committee of the Communist Party of China.
3. The Report in the Fourteenth National Congress.
4. Deng Xiaoping's "Southern Tour Speech". He also commented that science and technology are the primary drivers of productivity.
5. The modern enterprises system was defined in The 14th and 15th National People's Congress. It includes"property clearness, clear responsibility, dividing of political power and enterprises, scientific management."

PART II

Chapter 6

The evolution of SOEs in South Africa[1]

6.1. Introduction

Over the 20th century, the growth and development of the South African economy was overwhelmingly based on the mining and export of diamonds and gold and, in the second half of the century, on the export of bulk and some processed resources such as coal, iron ore, aluminium and manganese. The establishment, operational and commercial practices, and culture of the key infrastructure utilities were integrally shaped by their role in the resource-based economy, although they originated in state's wish to move beyond a dependence on mining and foreign enterprises. The state-owned resource processing companies established in the first half of the century were part of a project to diversify the economy, although their growth was often enabled by, and dependent upon, the mining houses. The electricity utility company (ESCOM, later to become Eskom in the 1980s) also enabled the establishment of an energy-intensive resource-processing sector, such as in steel and aluminium production. To the extent that an industrialisation process specifically related to manufacturing took place in South Africa during the 20th century, it was overwhelmingly driven by investments from, and the markets created by, the large mining houses, particularly Anglo American. This process was unsustainable, however, given the inward-looking, isolated nature of the apartheid economy and the contradictions between the needs of a technologically dynamic industrialisation process and the apartheid policy of cheap, poorly skilled, often transient migrant labour.

When the African National Congress (ANC) assumed power in 1994, the new government was largely captured by a neo-liberal economic project, accompanied by a series of policies to further the goals of black economic empowerment (to address gross racial inequalities in the economy). The state ownership agency (Department of Public Enterprises – DPE), also called the Office for Privatisation, had an overarching mandate to sell its portfolio of SOEs. Intrinsic to this position was that government has no active role to play in the economy. This policy was modified into a strategy of "Restructuring", the focus of which was to prioritise the introduction of the private sector into key areas of the SOEs value chain, whilst continuing with IPOs (which was a form of privatisation). The privatisation and restructuring policies and their associated processes resulted in a range of suboptimal developmental impacts. For instance, some privatised utilities effectively became rent-seeking private monopolies.

In 2004, the government formally decided to retain ownership of key SOEs and gave them strategic economic mandates to guide their strategies and business plans. SOEs were instructed to establish aggressive investment programmes. These were later expanded to support the needs of the growing economy, rather than focus on what their balance sheets could comfortably accommodate. The process took place absent any formal government policy relating to the role of SOEs or their capitalisation. Over time, given the often contradictory policy and regulatory regimes, these investment processes stretched the SOEs' operations and balance sheets to breaking point. For example, a broadband infrastructure provider SOE was established to compete with Telkom, which dramatically lowered broadband costs.

As the debate around the building of a developmental state has progressed, the Department of Public Enterprises has created an ownership model for SOEs and a development-oriented vision for their role. The new vision focusses on optimising SOEs' impact on their customers and suppliers, with an emphasis on driving industrialisation and the racial transformation of the economy whilst ensuring that the SOEs remain financially sustainable. The supplier and skills development programmes have made significant progress and point to the role of the shareholder as change manager. Nevertheless, an apparent need for SOEs to support emerging industrial sectors has proved complex and highlights the intrinsic tension between the centrality and profitability of resource-sector customers vis-à-vis the complexity and relatively small scale of emerging industrial sectors. Managing this tension will require specific revisions to the ownership model.

6.2. SOEs and economic development

In the 1980s, an effort was made to transform state-owned corporations from not-for-profit entities, which were operating more like government departments than corporations, into commercial-based SOEs. In addition, two enterprises, Sasol and Iscor, were privatised. When the ANC assumed power, former privatisation policies were modified into the restructuring strategy. During this period, SOEs (including key infrastructure providers) were prevented from investing in new capacity, despite the growing economy. Between 1994 and 2004, the following restructuring processes took place:

- An equity stake of 20% was sold in South African Airlines in June 1999 to Swissair, but the deal was reversed in November 2001 after a global recession threatened the latter's survival.
- An equity stake of 20% was sold in the airports company to Italian Aeroporti di Roma in April 1998 but reversed in September 2005 and sold to the Public Investment Corporation

- Strategic foreign investment partners were introduced to Telkom in 1997 – in 2003 Telkom Initial Public Offering was concluded and the foreign strategic investors exited in 2004.
- 236,000 hectares of SAFCOL forests were privatised as of 1998, until competition problems reversed the sale of the final allotment.
- In Transnet around 40 non-core business units were sold over 24 months to enable greater focus, although the enterprise remained active in a range of non-strategic infrastructure provision areas. Concessioning of the Durban Container Terminal Port and the Sishen Saldhanna Iron Ore Rail Line was attempted but stopped by effective labour-union resistance (probably with management support).
- In Alexkor (a diamond mining company) a strategic equity partner was sought in 1998, but a land claim by 3 000 people dating back 156 years derailed the process.

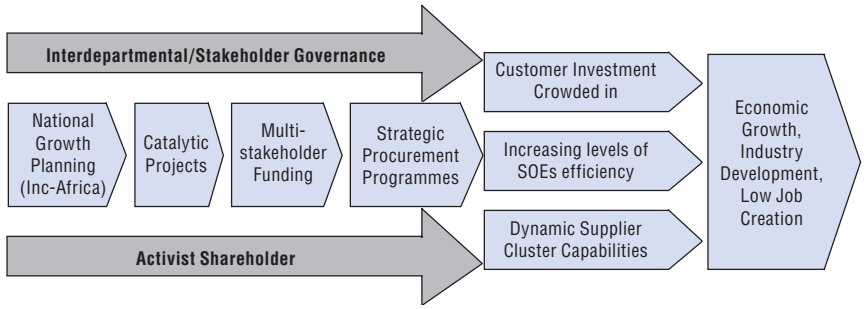
The policy environment before 2004 was essentially antagonistic to SOEs. Consequently, infrastructure SOEs were prohibited from investing in fixed assets and were induced to close down their capital procurement capabilities. In addition, major maintenance projects were put on hold. The economic impact of these policies was significant:

- Gross fixed capital investment stayed between 4% and 5% of GDP between 1994 and 2004, which was low by comparable international standards, apparently creating an infrastructure backlog and associated constraints on growth.
- The economic impact resulted in the drastic decline in the capital equipment manufacturing sectors that supplied the infrastructure sector in terms of investment, output and employment, which contributed to the de-industrialisation process.
- No funds were set aside for future investment, creating significant problems as prices needed to drastically correct.
- The economic impact fed the consumer boom and created an economy built around the inefficient use of infrastructure, particularly energy, because of underpricing.

In 2004, the privatisation and restructuring agenda was subordinated to the objective of deploying SOEs to achieve strategic nation objectives, which over time were to become formally defined by the state-ownership function through strategic intent statements and shareholder compacts. At a national level, the notion of building South Africa as a "developmental state" became increasingly hegemonic. This resulted in the redefinition of the Department of Public Enterprises vision to: "drive investment, efficiencies and transformation in its portfolio of State Owned Companies, their customers and their suppliers to unlock growth, drive industrialisation, create jobs and develop skills."

The vision required that the DPE oversee the SOEs to ensure they were financially stable and that their developmental impact on the economy would be optimised. In particular, there was a concern to drive the SOEs' positive developmental impacts on their suppliers and customers. This required a change in the investment planning paradigm, from a balance-sheet focus to one of investing at a sustained rate that would unlock growth in the economy. The increased and predictable rate of investment would then provide a demand platform for investment in SOE capital goods supplier industries. The targeted model is shown in Figure 6.1.

Figure 6.1. **Shareholder management with a growth focus**



Source: Authors.

Box 6.1. **Intervening in telecommunications – Broadband Infraco**

Before the early 1990s and during the apartheid era, South African Post and Telecommunications (SAPT), a government department, functioned as both the monopoly provider and regulator of telecommunications. As might be expected, the provision of telecommunications was characterised by extreme racial inequality. For example, in 1978 teledensity (lines per 100 households) was 71.5 in the white community while in black rural communities it was only 1.8 (White, 2004b).

The late 1980s saw aspects of the telecommunications market liberalised, with the PABX and value-added network services (VANS) markets opened up to competition, but the SAPT continued to be run as a government department until 1991, when postal and telecommunications services were separated by law. In 1992 the SAPT was corporatised. A new company, Telkom SA Limited (Telkom), was established as a state-owned entity to provide telecommunications services while a much smaller government department (of Communications) acted as the industry regulator. In substance, however – although there were changes to corporate governance – Telkom's monopoly position remained largely unaltered.

Box 6.1. **Intervening in telecommunications – Broadband Infraco** *(cont.)*

After 1994, the government focussed on providing broad-based, affordable access to communications services. A first wave of telecommunications reform began, and a highly consultative process resulted in the 1996 Telecommunications Act. The Act gave effect to the developmental objectives of the preceding White Paper and legislated for the provision of universal service, consumer protection, competition and innovation, growth and investment and the ownership and control of services by historically disadvantaged groups. It also established the first telecommunications regulator, the South African Telecommunications Regulator (SATRA), and put in place a three-tiered approach to the sector, separating policy making, operations and regulation. Importantly, the Act granted Telkom an initial five-year period of exclusivity to provide PSTN fixed-line services in exchange for meeting certain specified universal service targets, as well as an option to extend its monopoly for a further year should the targets be met.

In 1997, Telkom was partially privatised through the conclusion of a strategic equity partnership worth USD 1.26 billion. Driven by the need to attract capital and management experience to transform the debt-ridden monopoly, prepare it for competition and facilitate universal service access, the government sold a 30% stake to Thintana Communications giving it effective management control. Telkom was managed for profit maximisation and became a classic monopoly rent-seeker.

In 2001 a second wave of reform took place after the government revisited the way in which state assets, including telecommunications, were being restructured. The focus of the policy was on "managed liberalisation", with the emphasis on optimising the value of state assets and seeking to secure investment through protectionist incentives. May 2002 saw Telkom's *de jure* monopoly end, but due to delays in the licensing of the second national operator (SNO), it enjoyed a *de facto* monopoly for an additional four years and beyond. In 2003, there was an initial public offering in which the government disposed of a further 25% share of its interest in Telkom, and the company was listed on the Johannesburg and New York Stock Exchanges. In 2004, Telkom's initial strategic equity partner, Thinthana, sold 15.1% of its stake to the state-owned Public Investment Corporation and 14.9% to a consortium led by the former Director-General of the Department of Communications, known as the Elephant Consortium.

In this interim, Telkom charged generally high prices for access to broadband and stopped investing in new capacity whilst large dividends were paid out to its shareholders. The situation was further complicated by the fact that the Department of Communications, which was also the regulator, held Telkom's shares on behalf of government. This created a conflict of interest between the

Box 6.1. **Intervening in telecommunications – Broadband Infraco** *(cont.)*

Department's role to protect the consumer and its wish to optimise the value of its investment. This situation completely undermined the under-resourced regulator. The consequences were that South Africa's competitiveness was significantly weakened as a result of an extremely high price for broadband and very low market penetration.

In response to the situation, the DPE initiated a project to establish a competitor to Telkom in the broadband space. The Department drove a process of stripping out Eskom and Transnet's broadband infrastructure and associated software. In addition, the rights of the two SOEs to lay infrastructure along rail-lines and power cables was extremely valuable in expediting new investment without having to get new servitudes. These assets were placed in a new SOE called Broadband Infraco (BBI).

The process of licensing BBI was not without conflict, as it effectively created a competitor to the DoC's investment in Telkom. Eventually BBI was established through an Act in 2007 which states that the main object of the company is as follows: "To expand the availability and affordability of access to electronic communications, including but not limited to underdeveloped and under serviced areas, in accordance with the Electronic Communications Act and commensurate with international best practice and pricing."

Since its establishment, Infraco has invested just over ZAF 1 billion on 8 000 kilometres of fibre optic cable, which includes a core network linking the main cities, a regional network linking South Africa with its neighbours and an interface with the EASSY submarine cable linking South Africa with the world. Although there have been a multitude of management problems and financial challenges in BBI, the impact of BBI's establishment was dramatic. Since 2009 the cost of national transmission for wholesale broadband decreased by 75%. Between 2007 and 2010, broadband penetration increased fourfold, from 0.5% to 2%. BBI was also able to enter into deals with a number of scientific initiatives (such as the Square Kilometre Array telescope) that require inexpensive access to large amounts of international broadband connectivity. Currently, BBI is investigating how it can enhance access to rural communities, particularly schools and clinics.

The DPE's organisational structure was changed to establish more capabilities to support the new direction. A Strategic Partnerships Division was established with the objective of catalyse projects, develop guidelines, accumulate and disseminate knowledge, and facilitate the building of partnerships that substantively enhanced the developmental impact of SOEs beyond their conventional business horizons. In the coming sections of this

chapter, a number of case studies will illustrate different dynamics associated with shareholder oversight of SOE to achieve specific developmental objectives.

In 2004, Eskom and Transnet's organisational culture and capabilities reflected South Africa's history. The SOEs had retained a strongly technical, rather than commercial, culture and had relatively unsophisticated procurement organisations, with almost no experience of procuring as commercial organisations in a global economy. In turn, the national supplier sector was significantly depleted, with an inward-looking culture lacking in technological dynamism.

Given this background, when Eskom and Transnet announced their first major capital investment programmes in 2004-05, the Department of Public Enterprises with the Industrial Development Corporation modelled the impact of the programme on the national economy and on manufacturing in particular. This exercise suggested that, given existing industry capacity and capability, approximately 40% of the build programme would need to be imported. This created both a security-of-supply problem for the SOE (particularly in the context of a then over-heated and volatile global market) and a balance-of-payments constraint at a macroeconomic level. In this context, the Department launched the Competitive Supplier Development Programme to leverage the capital-expenditure procurement in order to create a platform for investment and capability building amongst the SOE capital goods supplier industries.

Box 6.2. **Planning to unlock growth: The Transnet market demand strategy**

Transnet is the SOE responsible for rail, port and pipeline infrastructure and operations. It has total assets valued in the range of USD 20 billion and annual revenues of around USD 5 billion. Transnet Freight Rail has over 20 000 km of rail and transports 210 million tonnes of cargo per year. The ports process just under 5 million containers per year and 140 million tonnes of exported bulk cargo.

In 2004, under shareholder direction, Transnet commenced an infrastructure investment program. The initial plan was to invest ZAF 36 billion over five years, all off Transnet's not particularly strong balance sheet. Over the next seven years, as Transnet's balance sheet was consolidated and revenues increased (often owing to price increases, rather than efficiency improvements) the five-year investment plan grew to around ZAF 100 billion. However, the great bulk of this investment went into replacing capacity that had reached the end of its useful life, rather than to creating new capacity to facilitate the growth of the economy. It is also notable that the plan was adjusted downwards in 2008 and 2009, when Transnet's revenues dropped as a result of the global recession. This had a strong pro-cyclical impact on the South African economy.

Box 6.2. **Planning to unlock growth: The Transnet market demand strategy** *(cont.)*

In 2011, in response to the DPE's request to plan based on unlocking national economic growth, Transnet developed the Market Demand Strategy (MDS). The immediate consequence was to increase the corporate planning period from five to seven years and to increase the investment plan from around ZAF 110 billion (over five years) to ZAF 300 billion (over seven years). The plan was overwhelmingly going to be funded on the balance sheet through increasing revenue by 16% per year as a result of setting ambitious productivity-improvement targets, which would increase profitability. Two-thirds of the plan was focussed on increasing rail capacity, which was proving to be the largest constraint on growth. Of note is that 55% of the investment plan would result in the creation of qualitatively new capacity. By the end of the plan, the coal export corridor capacity would increase from 68 mt to 97.5 mt and the iron ore corridor would increase from 52.8 mt to 82.5 mt. The manganese corridor would also have significant capacity growth, from around 7 mt to 12 mt. Container-handling capacity in the ports would increase from 4.3 mn TEUs to 7.6 mn TEUs.

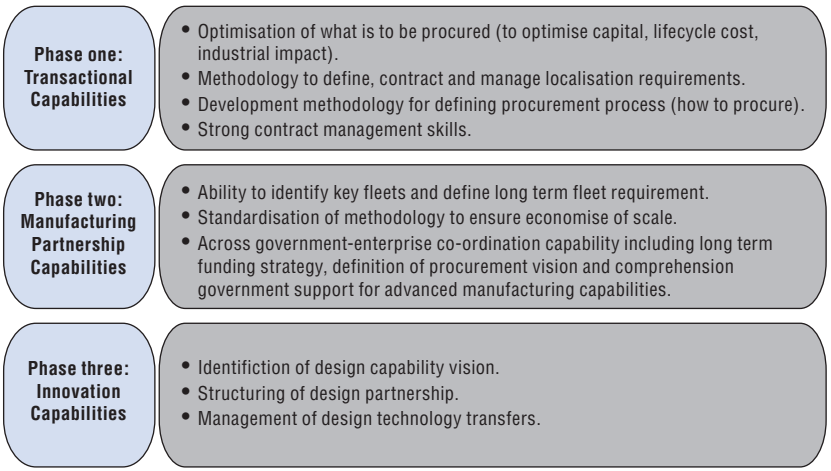
The MDS opened the door for future private participation in the core rail and port logistics system through placing the "Durban dig out port", which would require an estimated ZAF 100 billion investment, in Transnet's planning system. In the MDS, some provision was made at the margins for private participation in inland bulk terminals and in the operations of (marginal) branch rail lines, but this has yet to transpire.

At this point, Transnet has not achieved its productivity and revenue targets for a range of reasons, some in management's control and some beyond its control. Nevertheless, the company has been able to sustain the momentum of the investment programme, and there is little doubt that the ambitious targets set by the MDS have resulted in a greater sense of urgency and a focus within the enterprise than in the decade before the Strategy. Whether private-sector funding (through customers or pension funds) will be required to supplement the balance sheet in order to deliver on the ZAF 300 billion remains to be seen.

In 2007 the DPE established the Competitive Supplier Development Programme (CSDP), with the aim of promoting investment in and enhancing the competitiveness of SOE supplier industries so as to lower costs, decrease imports and enhance security of supply. The key focus was to leverage the investment programmes to promote investment in shallow and intermediate manufacturing capabilities. Consequently, the programme was conceptualised in a phased manner, with the first phase focussed on a learning-by-doing

process at a transactional level. The second phase focussed on building strategic partnerships with suppliers and the third on promoting national innovation (Figure 6.2).

Figure 6.2. **Phases of the Competitive Supplier Development Programme**



Source: Authors.

Since 2008, procurement policies, processes and related systems have been revised to ensure that supplier development concerns are integrated into all significant procurements and that supplier development related Key Performance Indicators are now embedded in the shareholder compact. Thus far Eskom has leveraged commitments of over ZAF 1.37 billion in investment in manufacturing capacity by suppliers, ZAF 824 million of which has already been invested, with 40 000 jobs created in the process. Transnet has entered into contracts valued at ZAF 18.5 billion with supplier development commitments of ZAF 8.5 billion, ZAF 4.8 billion of which has been delivered to date.

In March 2014 the winners of the first locomotive fleet procurement, involving the acquisition of 465 diesel and 599 electric locomotives, were announced. The procurement will cost on the order of ZAF 50 billion. It will create a foundation for a sustained strategic partnership between Transnet and the chosen Original Equipment Manufacturers (OEM). Four OEMs were chosen, two for each technology, to ensure that if one does not deliver, the volumes can be transferred to the other.

The strategic partnership will also result in OEMs' implementing supplier development programmes that go far beyond their direct relationship with Transnet and will involve developing the capabilities of South African manufacturers serving a range of sectors. One OEM as already launched a

supplier development fund and an "innovation centre" to support this process. The DPE, Department of Trade and Industry, and Department of Science and Technology have established a co-ordinating committee to systematically support the process. In addition, the home governments of key OEMs are now supporting the implementation of ambitious industrial development programmes in South Africa as part of building their relationship with what they now perceive as a key trade and investment partner.

It is critical that the supplier development, localisation and transformation process become more than an SOE practice, but part of a national movement of the way business is done in South Africa, in order to optimise the national demand platform. To further this goal, the DPE has taken a number of initiatives:

- A "knowledge forum" has been established involving all interested SOE (including those that don't report to the DPE) so that the lessons that have been learnt and the capabilities that have been developed can be shared across organisations through both knowledge sharing, and at times, a more active organisational coaching and mentoring process.
- The DPE has hosted intensive training "boot camps" for all SOE and government departments.
- A two-day summit was held, to which public and private stakeholders were invited and where Eskom and Transnet shared their methodologies and plans.
- Introductory workshops are now being held with a broad range of government departments and agencies (including the large metropolitan government), as well as with large private-sector companies in the mining sector.
- A joint supplier development fund has been established between Transnet, Anglo American and the Industrial Development Corporation, with the objective of giving companies both funding and access to common capital goods requirements across the logistics and mining industries.

6.3. Cases of SOEs and industrialisation

A number of SOEs were established in the early decades of the 20th century. These included:

- The Department of Posts and Telegraphs in 1910. The department oversaw the development of postal, telephony and broadcasting infrastructure and related services.
- The South African Rail and Harbors (SARH) company in 1916.
- The Electricity Supply Commission (ESCOM) in 1922 to build generation, transmission and distribution infrastructure. It became a corporatised company (Eskom) in the 1980s.
- The Iron and Steel Corporation (Iscor) in 1928 to promote South Africa's industrial development.

The underlying motivation for the establishment of these corporations was to provide the state with the instruments to enable the building of a diversified industrial economy. In particular, the state was concerned with the security of supply of strategic inputs at competitive, if not development-oriented, prices in a context where the gold mining companies were economically dominant and the country was completely dependent on the importation of foreign equipment and technology. In practice, over the course of the century, the corporations were to also play a critical role in racially based job segregation and Afrikaner empowerment, although this was not a simple process, particularly in the first half of the century as the corporations struggled to survive.

The following case studies on the establishment and growth of Eskom and Iscor gives texture to the complex relationships between SOEs, the mining industry and foreign producers, as well as the role that SOEs played in the economy before 1994.

6.3.1. Case of electricity: Escom

ESCOM was established in 1922 to build generation, transmission and distribution infrastructure in order to supply electricity at the lowest possible cost. It was constitutionally not allowed to make a profit or loss and was exempt from corporate income tax. While there were a number of economic and technical motivations for the establishment of ESCOM, it is important not to underestimate the centrality of SOEs' role as an intervention in a political economy dominated by foreign-owned mining companies and infrastructure providers. Some motivations for ESCOM's establishment include:

- To start a process of building a single national grid or network through linking different generators.
- To support the development of the railways by providing a secure and cheap electricity supply to key routes in the rail network and to adjacent towns.
- To support industrialisation, particularly by providing cheap electricity to an emerging steel and manufacturing industry and consequently diminishing dependence on gold exports.
- To ensure security of electricity supply by having direct control of the production process (particularly labour and its cost) in the context of strong labour unrest in private enterprises.
- To localise ownership of the electricity supply industry: the Victoria Falls Power Company (VFPC), which dominated the sector was "financed in Europe and serving the mines, the VFPC was a successful conduit for exporting capital outside the country, rather than assisting local capital accumulation".

- To counteract the dominance of the mining companies in the economy – the VFPC was established by Rhodes and the shares were held by British Financiers and gold mining companies (particularly Consolidated Gold Fields of South Africa). The company held supply contract with all the major mining groups on the Rand and reaped large profits from its monopoly.

The development paradigm underlying the establishment of ESCOM was thus based on two premises:

- The state is the only stakeholder with an interest in ensuring the continuous security of electricity supply at as low cost as possible in order to support an industrialisation process, and it needs to make direct investments in operational capacity to ensure that this is achieved.
- In an emerging economy, it is critical that the state systematically build national champions with economies of scale and scope to optimise the national economy as well as compete globally in order to avoid the economy's being "colonised" and controlled, and rents' being extracted by international players in strategic areas.

For a period after its establishment, an accommodation was reached between ESCOM and the VFPC. ESCOM would finance and own new power stations, and the VFPC would build and operate them. The industry started using cheap, low-grade coal and producing very low-priced electricity. These savings were not passed onto end customers, however, particularly in the mines as VFPC was effectively extracting monopoly rents from the captive sector.

In 1948, when the VFPC's initial operating concession on the Rand expired, ESCOM purchased the VFPC. Anglo American provided over half the capital required for this acquisition. The motivation for the loan was that the VFPC was abusing its monopoly position and the mining sector preferred to have an SOE with a development mandate controlling the electricity industry. Anglo American immediately benefited through a rebate (or profit share) and further benefited when, in 1952, ESCOM halved the unit price of electricity to the mines. Anglo American mines supplying ESCOM with coal were also incentivised to keep prices down, as Anglo American did not want to provoke an electricity price increase. ESCOM became the overwhelmingly dominant player in the industry, controlling most power stations as well as high-voltage transmission lines.

In the 1970s it became apparent that investment in electricity infrastructure had not kept pace with growing demand, as the reserve margin dropped below 15%. In addition, central to industrial policy was to leverage ESCOM to beneficiate coal into electricity so as to develop other mineral processing activities. The result was an extremely energy-intensive growth, with electricity demand more or less double that of GDP growth. ESCOM/Eskom started a power build programme that added, between 1976 and 1993, 26 GW of

generating capacity to the network (Table 6.1). The programme was characterised by the construction of very large "six pack" generators close to coal mines in order to realise large economies of scale.

Table 6.1. **Dates of commissioning of major Eskom power stations**

Name of Eskom power station	Date of commercial service First-Last unit	Net maximum capacity MW
Komati	1961-1966	906
Camden	1966-1969	1 520
Grootvlei	1969-1977	1 130
Hendrina	1970-1977	1 900
Arnot	1971-1975	1 980
Kriel	1976-1979	2 850
Koeberg	1976-1985	1 840
Matla	1979-1983	3 450
Duvha	1980-1984	3 450
Tutuka	1985-1990	3 510
Lethabo	1985-1990	3 558
Matimba	1987-1991	3 690
Kendal	1988-1993	3 840
Majuba	1992-2001	3 843

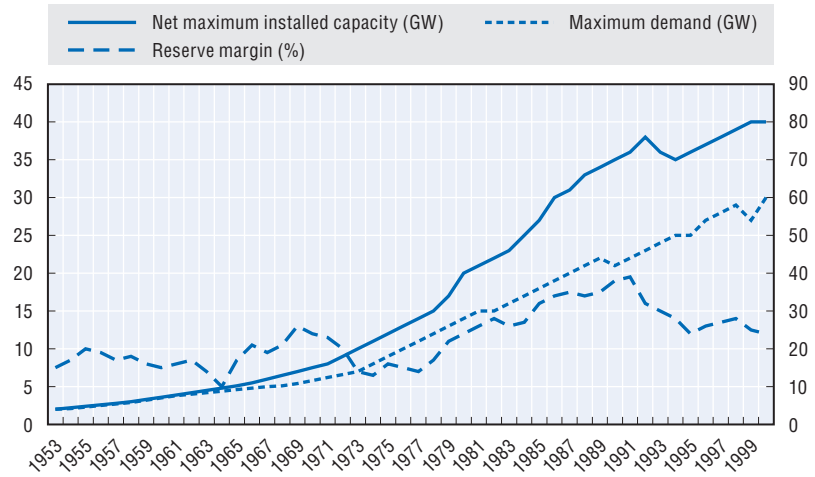
Source: Eberhard, Anton (2004).

Eskom has been criticised for an apparent over-investment in infrastructure during the 1980s build programme. (Figure 6.3) However, this must be seen in the context of an economy that grew on average at 0.7% per year between 1980 and 1992, versus an average of 3.5% between 1970 and 1980. Energy growth decreased from 9.3% per year on average between 1970 and 1980 to 4.8%, a decline of nearly 50%. Had growth been sustained at the previous rates in this period, Eskom would have required additional build during the 1980s (over and above what was actually built in that period).

In 1994, the focus of the Energy Policy Department was on "managed liberalisation" to realise the "benefits of competition and the Multi Market Model". In 1998, the Energy White Paper objectives were to reduce Eskom's share of existing generation capacity to 70% and to introduce the private sector for the remainder. Eskom was prohibited from investing in new generation capacity in the domestic market and was from building a new Capital Projects Capability. The transmission network was first to be corporatized and then placed in a separate state-owned company, which could then "impartially" manage the market. Until this company was established, policy dictated that no new investment in generating capacity would be allowed.

In addition, as part of comprehensively removing oversight of the system from Eskom and establishing a "neutral" environment in which the private

Figure 6.3. **Historical growth in maximum demand and capacity at Eskom**



Source: Eberhard, Anton (2004).

sector could invest, the Policy Department would now be responsible for a range of processes associated with the role of supplier of last resort. The liberalisation approach complemented the strategy of the Department of Public Enterprises, which emphasised and was built around "an Accelerated Agenda towards the Restructuring of State Owned Enterprises". In practice, in the case of Eskom, this resulted in the DPE's support for the DOE's liberalisation strategy.

The Liberalisation Policy also had the support of elements of the black economic empowerment movement that aimed to privatise "into the hands of black business leaders a portion of the SOE" and to create further business opportunities for empowerment through additional market liberalisation. In addition, large industrial/mining electricity users were also strongly supportive. The only stakeholder that staunchly resisted the policy was the trade unions (COSATU), which opposed privatisation and argued for the "maintenance of a vertically integrated, public owned utility that should be used as an agent of government".

It was in this context, and based on its experience in the 1970s and 1980s, that in 1998 Eskom made representations to the Department of Energy and the Department of Public Enterprises that:

- Eskom's demand projections suggested that there would be a shortage of electricity by 2008, and it was important to start planning a build programme.
- Eskom should be given a mandate to start building a capital projects capability and conducting detailed planning for a build programme and, if necessary, any capacity built by Eskom could later be sold to the private sector.

- Following the end of the tariff compact in 2000, the tariff formulation model should be adjusted to more closely reflect the real costs of producing electricity (it was below a price determination formula using either historical or current cost methodologies), so that any future tariff increase for a new programme would not be as extreme as had occurred in the 1970s and that the government could choose to use any return on equity accrued in Eskom to subsidise a future build programme should this be required. Eskom (and other independent commentators) reiterated that the historical cost determination methodology would, even if followed correctly, result in major price spikes when there was a need for additional capacity.

The Departments rejected the proposals on the basis that Eskom was trying to find a means of maintaining its dominance in the system.

In 2001, the government took a firm decision and made a definitive announcement that Eskom would never again build a power station in South Africa and that all new power stations would be built by private-sector companies. Despite the continued growth of demand and the narrowing reserve margin, the focus remained on the process of restructuring the industry, involving corporatising transmission, grouping Eskom power stations into "competing clusters" and taking initiatives to develop a multi-market model. Attempts to attract private investment did not get anywhere because of institutional and regulatory uncertainty and a sub-economic tariff. As late as 2003, the Minister of Public Enterprises effectively interfered with the price determination process by stating that Eskom should not be allowed more than an inflation-linked price increase in 2004. In addition, a portion of retained earnings in Eskom were paid out as dividends to the fiscus between 2003 and 2006. Such was the power of the liberalisation ideology, that restructuring the industry and introducing private producers became *de facto* more important than the security of supply.

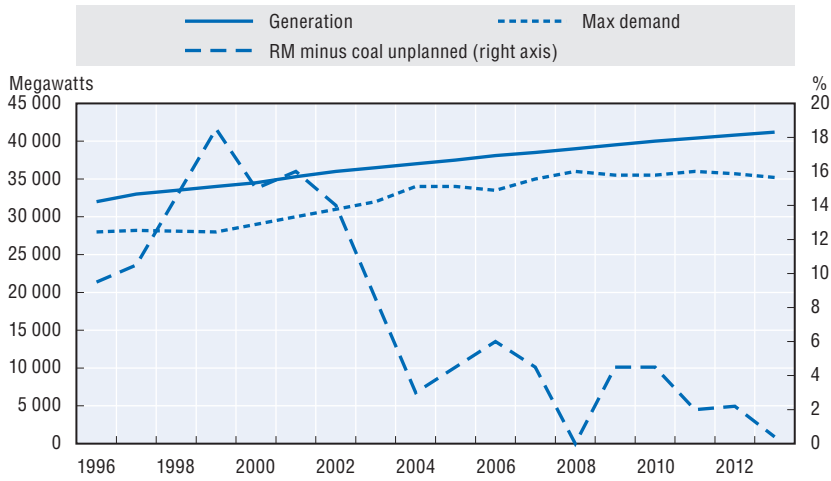
Eventually, in 2004, in recognition that the obligation to ensure security of supply practically still lay with Eskom, a compromise (though not a particularly coherent one) was reached, whereby Eskom and the regulator agreed that Eskom would be allowed to incur costs for new build on the basis that it was ring-fenced and could be transferred to an independent developer at any stage in the new build process. Later in the year, however, a cabinet decision was made that Eskom would be the government's champion in the energy sector, that Eskom would be responsible for 70% of all future new builds and that no existing generating facilities would be privatised. On this basis, (arguably at least four years too late), Eskom started an aggressive new build programme involving (amongst a range of other investments) the construction of two 4 800 MW coal power stations.

The first obstacle that Eskom faced was the uncertain policy and regulatory environment, driven by political as well as economic considerations. In practice,

the electricity price had not kept pace with the increasing costs of coal, the replacement cost for equipment and the need to provide an adequate return on assets to fund future investment. In addition, the regulatory formula, based on the historical cost of equipment, exacerbated price spikes. Hence, the application of the regulatory rules in 2008 caused Eskom to apply for a 62% price increase. Ultimately, Eskom got a 26% increase for three years, resulting in a major cash shortage that was solved only through a ZAF 60 billion subordinated loan from the government and ZAF 230 billion of loan guarantees from the Treasury. The regulatory uncertainty persists and, ultimately, it is only government ownership and support that has kept the build programme viable.

By 2012, the electricity-supply situation was on a knife's edge. The reserve margin of dispatchable base load, excluding half of available peak capacity and minus unplanned outages, was 2% (Figure 6.4). The aging fleet had been running beyond its design capability since 2004, and planned maintenance had been deferred many times since 2010 in order to keep the lights on. All of this resulted in an increase in unplanned outages to 9% since 2010, as the reliability of the plant has been compromised by inadequate maintenance, beyond design utilisation and poor coal quality. Moreover, Eskom faces a need to increase planned maintenance to compensate for the period of deferred maintenance. Finally, Eskom is struggling to deliver maintenance processes on schedule due to capacity problems and additional issues discovered in the equipment during the course of the maintenance process.

Figure 6.4. **The reserve margin based on dispatchable energy and unplanned outages**



Source: Author.

It is apparent that the governance system as it stands today is not responding effectively to the challenges of an extremely tight power supply that is escalating the risks of unnecessary load-shedding. This needs to be corrected urgently as the costs of uncertainty and load-shedding on the economy are extremely high. Consequently, it is necessary to review the governance arrangements in the electricity sector to put into place an appropriate balance between enabling private investment and leveraging Eskom's capabilities as the national energy champion. In other words, it is necessary to reform those elements of the system that reflect an ideological and impractical bias towards managed liberalisation, so as to optimise the security of supply and efficiency of the system. This should be done through allocating implementation responsibility where the strongest institutional capabilities are located.

6.3.2. Case of the mining industry

The relationship between SOEs and the mining industry is historically complex. Over time, the interests of the mining industry, particularly at Anglo American, and the SOEs became increasingly aligned against the rent-seeking practices of foreign infrastructure providers and input producers as the gold mines sought to lower costs.

Sasol was established in 1950 to beneficiate coals, alleviate balance-of-trade pressures and enhance national fuel security in the context of the apartheid state that was constantly threatened by sanctions. It was only in 1976 and 1979, however, with the establishment of Sasol II and III – which produced fuel from coal of sufficient quantity to meet half the country's petrol requirements – that Sasol achieved major scale. The period 1950 to 1994 saw the rise of energy-intensive resource-processing industries as Eskom implemented a massive build programme to beneficiate the country's coal reserves and create an energy platform for industrialisation. This paved the way for the emergence of the "minerals-energy complex", consisting of the upstream and downstream linkages between resource extraction constituted by resource processing, infrastructure provision and capital goods manufacture.

Fine and Rustomjee (1996) demonstrate that the mining industry made a disproportional number of investments in energy-intensive resource-processing plants (in areas such as specialised steels, aluminium, and ferrochrome smelters) in the 1960-80s in response to this incentive. These were made in partnership with a state-owned development-finance institution, the Industrial Development Corporation. By 1989, the complex accounted for around 30% of GDP and up to 95% of exports. It is noteworthy that a small group of energy-intensive users (around 30 companies) linked to mining and resource processing consumed over 50% of Eskom's electricity production and that the iron ore and coal export lines, constructed in the 1970s, made up only 6.7% of the network but by the new millennium accounted for 56% of the tonnage and

about 60% of the tonne-km carried by the railway. The transport of bulk resources by rail made up over 90% of the rail's revenues. The SOE's dependence on revenues from mining and resource processing customers cannot be overemphasised.

Finally, a special note should also be made of the state's involvement in defence-related industries, initially consolidated under Armscor in 1968 and corporatised into Denel in 1992. Through defence industries, advanced engineering capabilities were developed –, although there were limited opportunities to manufacture at the scale required to be globally competitive.

Much has been written about the historical relationship between the mining sector and oppressive labour practices both within and outside of the mines in South Africa. At another level, however, it should also be acknowledged that to the extent the economy was industrialised, it was overwhelmingly owing to a resource-driven process. This gave rise to the minerals-energy complex, the driving force or which was effectively a partnership between the mining sector and the state.

Box 6.3. **The Iron and Steel Corporation (Iscor)**

Iscor was established in steel manufacturing in 1928 to promote South Africa's industrial development in a context where the government was seriously concerned about the country's steel supply because European producers were forming a cartel that threatened to raise import prices. Both to survive and to catalyse manufacturing development, Iscor set about establishing subsidiary industries in partnership with private companies that were, in effect, its future customers. Iscor formed marketing organisations with importers that had established customer bases which resulted in these sectors substituting Iscor steel for imported steel at the same price as British imports.

After it became apparent that Iscor could not compete with imports to supply rails to the South African railways, the company began to systematically build a market for its output by contributing funding for the establishment of new factories in partnership with foreign firms, which provided the technical expertise, and mining houses, which provided additional capital. This included the establishment of wire-works, the expansion of bolt and nut production, the establishment of factories that produced drill and tool steel, agricultural implements, electricity cables and fabricated steel products. Iscor also expanded upstream into coal mining and purchased a road construction company in order to use the tar produced as a by-product of the steel production. Iscor came to a pragmatic agreement with the European cartel that effectively limited imports and put a floor on prices, guaranteeing everyone profits (at the expense of consumers).

Box 6.3. **The Iron and Steel Corporation (Iscor)** *(cont.)*

As a result of a process of consolidation in the mining industry, Anglo American became Iscor's *de facto* key partner through its stakes in the downstream factories established by Iscor (as well as a number of companies that provided equipment, such as steel pipes, to the mines). Anglo American now had a vested interest in facilitating the growth of steel production in South Africa. This had immediate benefit as it ensured Iscor a good coal price, as Anglo American "would probably not raise its coal prices to businesses in which it held investment". Despite some initial hiccups when the National Party (which was suspicious of Iscor's relationship with the mining sector and overseas companies) came to power, in 1950 the company, with Anglo American's support, was able to raise the capital to build a vertically integrated steel plant at Vanderbijlpark, which was completed in 1952. By 1955, the company was producing 70% of the country's steel requirements. In the following decades, the company expanded its facilities at Vanderbijlpark and established a new integrated steelworks in Newcastle in 1971.

By the 1950s, the mining sector had an intrinsic interest in investing in, and supporting, an industrialisation process. Sporadically, through the first half of the 20th century, the different mining groups had invested in supplier industries as a way to secure supply, gain a comparative advantage (e.g. in specialist drilling equipment) and diversify their investments. With the rapid expansion of the gold mines in the 1950s, this process of investing in mining-related activities gained momentum, partly driven by import tariffs and the need to keep the mine cost structure down, so that by 1960 the mining houses' interests in industry ranged from 5% to 22% of their total assets The mining houses also made investments in downstream activities such as ferro-alloys and stainless steel. It is essential to recognise that the mining groups were "better placed to produce these commodities than most local industrialists, since not only did they have the financial resources to embark upon large scale production, but they also had at their disposal the means to meet the complex technical needs of the mines. As large institutions with a network of international connections, the groups were able to gain access to and benefit from the technical advances being made in the developed centres of capitalist production. Consequently, most of the industrial concerns under group control entered into technical agreements of one kind or another with important overseas industrial concerns in order to apply that expertise to South African conditions" (Fine and Rustomjee, 1996).

Innes (1984) argues that while the introduction of the "Blocked Rand" in 1961 (which impeded the export of capital from South Africa) created some pressure to invest locally, it was not decisive as the system did not prevent the

repatriation of dividends. Consequently, the diversification of investment by the mining houses, which began on an observable scale in the 1950s and accelerated in the 1960s, was also driven by strategic business considerations from within the mining houses. The massive infrastructure build programme of the 1960s-70s, combined with local content rules, also created a significant market for investments in the heavy-engineering industry. The result was rapid growth of GDP (at 9.3% between 1963 and 1968), with manufacturing expanding at 8.4%. Anglo American alone had investments in African Explosives Highveld Steel and Vanadium, Boart and Hard Metals, Transalloys, Forest Industries and Veneers and Mondi Valley Paper. In a similar strategy to that followed by Iscor in the 1930s, these anchor investments resulted in additional investments by the group as Anglo American brought into companies that would purchase their output. For example, the investment in Highveld Steel resulted in investments by Anglo American in Scaw Metals, Stewarts and Lloyds, Union Carriage and Wagon and Hall Longmore.

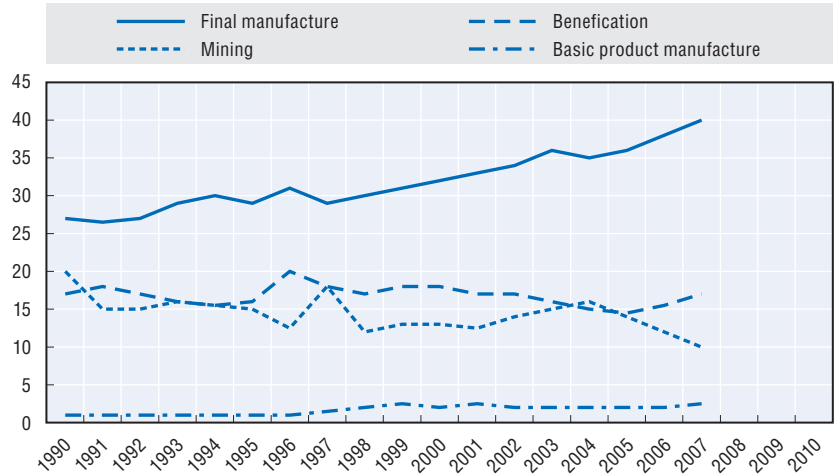
Although significant investment in industrial plants took place, the development of globally competitive manufacturing capabilities remained weak, with the exception of a few capabilities directly related to the design and manufacture of mining equipment. This was attributable to a number of factors:

- The entire apartheid "eco-system" focus on cheap, transient, unskilled labour was incompatible with building an adequately skilled labour force or a large enough middle class to support an industrialisation programme.
- Because of a combination of sanctions and crude local content rules, industry consolidation in capital goods manufacturing focussed on achieving a monopoly position in the local market, rather than building scale and capabilities to engage globally.
- Given the relative isolation of the market, there was limited pressure on South African manufacturers to become technologically dynamic and benchmark their activities globally.
- Mining houses were often at best reluctant owners of manufacturing concerns and divested from these companies as soon as they could use their capital in resource extraction.

Between 1994 and 2004, the government was dominated by a "neo-liberal" agenda, based on "freeing up the market" and removing the state from any direct involvement in the economy. Tariffs were removed faster and to a greater extent than the schedule required by the World Trade Organisation. A process of fiscal consolidation took place, and government (including SOE) investment in infrastructure (or gross fixed assets) dropped from the 1976 high of 16% of GDP to around 4%-5% over the decade from 1994. SOEs were not allowed to invest (even off their balance sheets), as they were supposed to be privatised (see next section). The result was a flood of imports and a dramatic drop in local

demand for capital goods, which had a catastrophic impact on key national manufacturing industries (Figure 6.5).

Figure 6.5. **Growth of manufactured imports into South Africa**
Per cent of imports



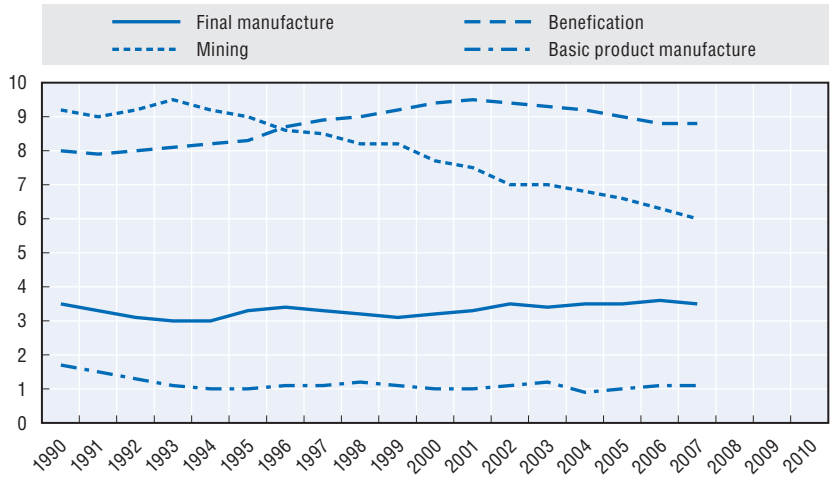
Source: IDC.

The political economy of the mining sector was particularly fraught during this period given the centrality of the sector to South Africa's history and the debates about the rents associated with mining and the extraordinary wealth that some families accumulated as a result of their ownership of mining companies. Government policy focused on redistributing ownership by linking a reformed licensing process to black economic empowerment. The consequence of this focus, combined with the failure to invest in new infrastructure and the decline of gold mining, was a relatively stagnant sector that ultimately was unable to take advantage of the commodities boom in the new millennium. While the overall economy grew at 3.6% per year between 1998 and 2008 and the global mining industry grew at 5%, the South African mining industry actually shrank by 0.8% per year (Figure 6.6).

It has become apparent that the economic incentives driving private-company behaviour in a range of strategic areas of the economy are not aligned to a national industrialisation objective. The propensity of private companies to cherry-pick value chains and exploit market power is a reality, even when a national development finance institution or state pension fund is a significant shareholder: this is particularly true of privatised SOEs. As can be seen from the discussion above, the fact that a company had a history of state ownership did not impede predatory economic behaviour when it was

Figure 6.6. **The relative decline of mining**

Per cent of GDP



Source: IDC.

privatised. Similarly, the government gave special concessions to underwrite many of these companies in the event of a downturn, but failed to get a share of the upside in the event of super-profits.

6.4. The state ownership model

In the South African context, there is a contradiction between enterprise-level incentives and government objectives relating to emerging industrial sectors. Historically, SOEs focussed on supporting very large mining and processing customers. In the case of Transnet, for example, long-distance bulk corridors are extremely profitable and are associated with relatively simple continuous processes. This plays into rail's core competitive advantage over road in moving heavy, large volumes over long distances. The optimisation of Transnet's financial returns would lead to an overwhelming investment and operational focus on the mining sector. Yet, government's industrial policy focusses on supporting emerging manufacturing industries that have a range of positive externalities, such as increasing returns to scale, maintaining stable prices and requiring a skilled stable labour force. These industries, such as automotive, are relatively small, require complex logistics processes, are not as profitable and can use road as an alternative mode of transport to rail. This situation creates a challenge, in that if the enterprise is to optimise its returns so as to fund the investment program, it should put its efforts into servicing the most profitable customers. The management of the situation requires special shareholder attention and oversight. The following discussion will provide an example of different levels of shareholder intervention.

6.4.1. *Transnet service and the automotive sector*

The automotive sector is a priority for development in the Industrial Policy Action Plan through the Automotive Production and Development Programme. The strategy involves providing incentives to both incite OEMs to invest in South African plants and encourage the development of manufacturing capabilities throughout the automotive supply chain. The programme includes capital incentives and import rebates based on local content and export performance, although these will be phased out over time. The sector is a strategic centre of manufacturing excellence in South Africa owing to the introduction of globally cutting-edge manufacturing and supply chain management technologies.

The automotive industry aspires to more than double its annual domestic vehicle production, to 1.2 million vehicles by 2020, in order to reach 1% of global production. The South African automotive sector is suffering from a double locational disadvantage resulting, first, from the country's relative isolation from world markets and, second, from the dispersed location of different OEMs and their suppliers within South Africa. This makes it hard to consolidate cargos across OEMs to achieve economies of scale.

The Minister of Public Enterprises launched the SOE-Automotive Competitiveness Forum on 20 September 2012 with the primary objectives of:

- promoting collaboration between SOEs and the automotive industry to ensure that infrastructure capacity and service delivery enhance competitiveness and to promote increased investment in both infrastructure and in the cluster as a whole;
- sending a clear signal to investors that SOEs will be responsive to their needs within sensible commercial constraints; and
- enabling the identification of priority cluster infrastructure-related projects that will be overseen by the Minister of Public Enterprises.

In response to this process, the Department of Public Enterprises conducted a study to determine the scale of problems and the kinds of interventions that would make a meaningful difference in the current situation. All OEMs were interviewed. The key findings included that the logistics costs, particularly for OEMs based inland, place the industry at a core disadvantage. Indeed, the most fundamental challenge has been to provide the industry with a reliable and efficient rail service – train departures and arrivals are often considerably late. In addition, a significant portion of train capacity contractually booked by OEMs was not supplied by Transnet, which increases costs, makes planning difficult and increases cargoes on the road.

6.4.2. The state ownership model for SOEs

The state's recognition of SOEs as developmental instruments and the focus on ensuring that the enterprises are financially sustainable whilst optimising their impact on customers and suppliers has clearly resulted in SOEs' having considerable developmental impact. There are, however, a number of areas where this impact can be enhanced:

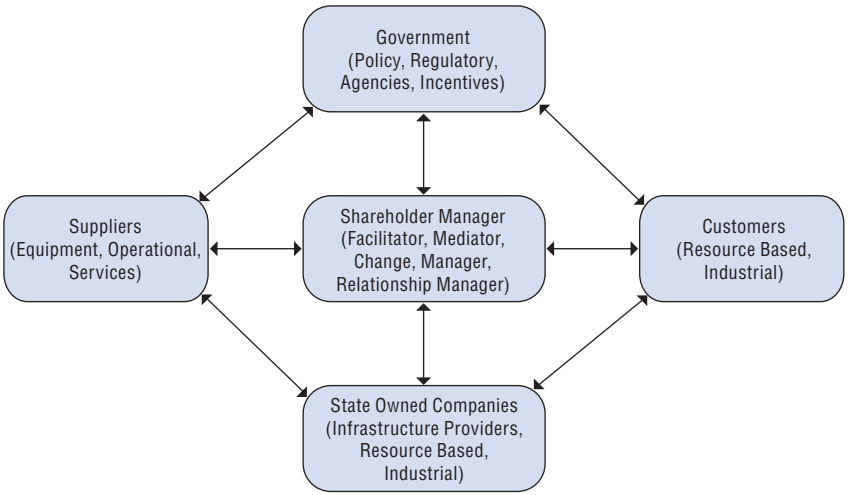
- In some sectors, the investment programmes have been limited to the SOEs' balance sheets, which are ultimately insufficient to unlock growth.
- Private funding from friendly institutional shareholders and customers has not been leveraged to accelerate investment.
- Efficiency improvements in some areas of SOE operations are extremely slow, and little progress has been made in introducing the private sector to either establish an effective competitive dynamic or supplement SOE capabilities.
- There is a lack of sector and procurement policy alignment (and sector departmental practices) with the strategic intent of SOEs (often because of a continued preoccupation of introducing the private sector as the key strategic consideration), which creates a disenabling environment for the SOE.
- There remains a profound lack of alignment between the Department of Defence and the leveraging of defence SOEs as a key industrial policy instrument, which is limiting their growth and impact.

The biggest shortcoming in the contemporary programme is the lack of any co-ordinated development programme involving the SOEs, the mining sector and the resource processing sectors. The mining sector remains strategic to the South African economy. It constitutes 19% of GDP and 50% of exports, employs 1.3 million people and pays over 17% of corporate taxes. It is extremely unlikely that there will be an industrialisation process of anything on the scale of that experienced in the 1960s-70s without a pragmatic alignment with these sectors. The SOEs, with support from the shareholders by virtue of their strategic position. are in an ideal position to form developmental coalitions to align and mobilise targeted stakeholders behind strategic programmes (Figure 6.7). For example, in the case of the mining industry, a coalition can be formed to support the sector's growth through the provision of competitive infrastructure in exchange.

In conclusion, in the context of driving ambitious developmental goals, the state's role as an owner involves a number of dimensions:

- Overseeing the financial sustainability of the SOE through the ownership model.
- Acting as a change manager to oversee and support the implementation of new development initiatives, particularly those requiring a learning by doing process.

Figure 6.7. **Shareholder managers and SOEs as conveners of development coalitions**



Source: Author.

- Acting as an overarching stakeholder relationship manager, with a particular focus on SOE suppliers, customers and communities affected by SOE operations.

The focus of the change-management and stakeholder relationship manager role overwhelmingly involves a continuous dialogue with the SOE boards and senior and middle management to achieve an alignment. In other words, the extent to which the SOE management identifies the achievement of a range of development goals as being core to its identity and role is more critical to successfully achieving these objectives than the imposition of a compliance system.

The introduction of new developmental objectives requires experimentation and risk taking, and attempting to impose these objectives through an arm's length compact process can contribute to agency problems between shareholders and enterprises. Consequently, specific teams need to work with the SOEs on new developmental objectives that live, breathe and dream a different culture from that in the core ownership model. The systemic integration of these objectives into the shareholder-enterprise relationship should be seen as a step-by-step negotiated process as management internalises relevant developmental policies, practices and systems.

6.4.3. Policy implications

Given the history of South African SOEs as supporting a resource-based economy, there is an intrinsic tension between promoting emerging industrial sectors and SOEs' enterprise profitability, and consequently the SOEs' return

on assets. This is exacerbated in the context of an aggressive build programme, where it will take time for new assets to generate a full return. In addition, the financial targets associated with shareholder compacts tend to be set at a high level, creating strong pressure for the SOEs to focus on resource industries where they will get the highest return at the lowest risk on any new investment. In the case of Transnet, responsiveness to industrial customers is further diluted by the system of capital being rationed at the group level, based on achieving compact targets, rather than at the business-unit level, where the customer voice may resonate in spite of the enterprise's monopoly position.

If the rebalancing of objectives from financial performance to developmental impact is to be sustained, there is a need to adjust the core ownership model to include a specific process of developing targets associated with providing special support to emerging industrial sectors. Moreover, it will be necessary to determine the impact on overall revenues and profitability of achieving developmental targets relating to emerging industrial sectors. Once this impact is understood, the high level financial targets in the compact should be adjusted to take into account the impact of the developmental targets. In the absence of such a process, in setting aggressive targets for investment and return on assets, the shareholder compact may undermine SOEs' ability to support industrialisation.

Note

1. This chapter was prepared by the OECD Secretariat based on original work by Edwin Ritchken, Pretoria, South Africa.

PART III

State-owned enterprises in the international marketplace

PART III

Chapter 7

International investment by SOEs[1]

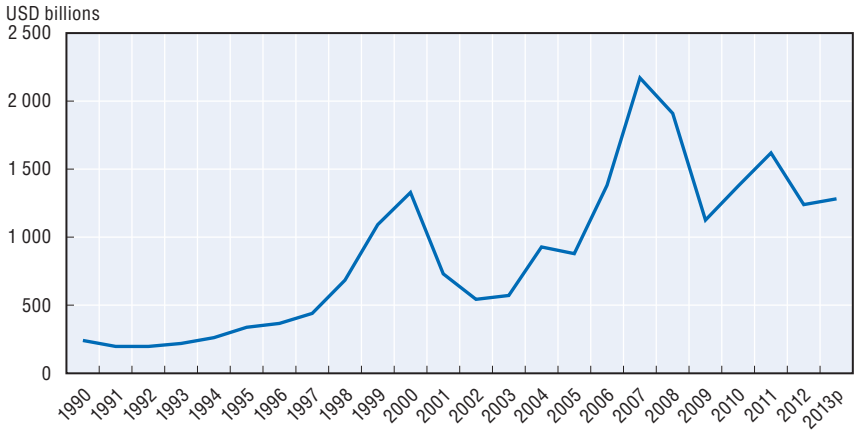
7.1. Trends in international investment by SOEs

This section examines trends in international investment flows, starting with a global overview, followed by an analysis of regional trends, and concluding with an examination of the role of SOEs in these trends.

7.1.1. Global overview[2]

Six years since the start of the global financial crisis, international investment continues to struggle. Global FDI outflows increased by only 3.4% in 2013, to USD 1.3 trillion, leaving global flows 40% below the record levels reached in 2007.[3]

Figure 7.1. **Global FDI outflows**



Source: OECD International Direct Investment Statistics Database.

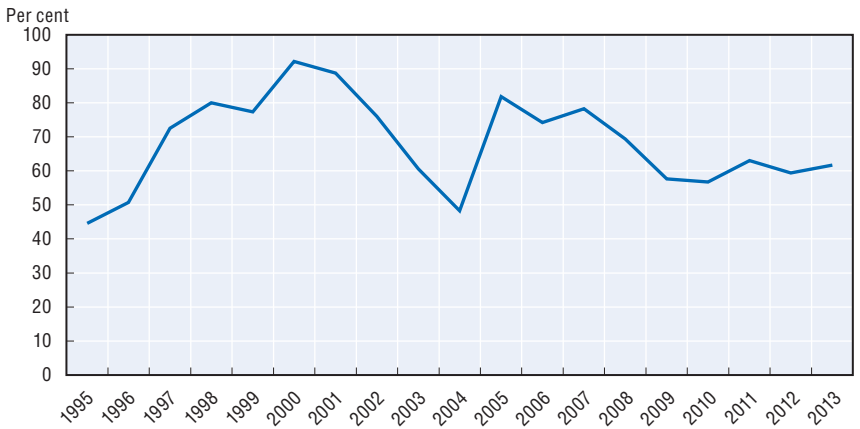
The sluggishness of global FDI flows is attributable to multiple factors that are discouraging multinational enterprises (MNEs) from investing, including persistent Eurozone sluggishness, slowing growth in China and fears about the financial stability of emerging markets in general. Heightened geopolitical tensions in Ukraine, the Middle East and North Africa, and various parts of Asia are also adversely affecting the global investment climate.

Furthermore, even though global FDI flows increased in 2013, the equity component of FDI outflows for the countries that reported this breakdown[4]

declined by 40%, from USD 347 billion in 2012 to USD 215 billion in 2013, while the debt component of FDI outflows for these same countries increased twenty-fold, from USD 4.5 billion in 2012 to USD 87 billion in 2013. This suggests that the modest increases in overall FDI flows recorded in 2013 probably generated limited new international productive capacity and that international investments by MNEs are currently more focussed on managing existing international operations and financial resources.

One of the characteristics of past FDI booms has been an increase in the share of international mergers and acquisitions (IM&A) in FDI. For example, as global FDI flows reached a record USD 1.3 trillion in 2000, the ratio of IM&A to FDI also reached a record high of 92%. When FDI flows collapsed starting in 2001, the ratio of IM&A to FDI declined to an average of 68% over the next four years, reaching 48% in 2004, before climbing again and averaging around 80% in the three years of rapid FDI growth between 2005 and 2007. Once the global financial crisis started, the IM&A/FDI ratio dropped to 60% and has not shown any signs of the sort of upward trend that characterised previous periods of FDI growth (Figure 7.2).

Figure 7.2. **The ratio of IM&A to FDI**



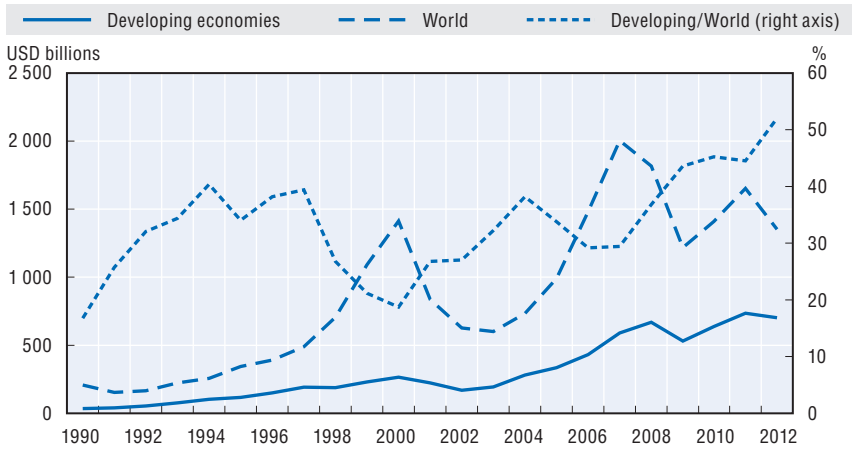
Source: OECD International Direct Investment Statistics Database.

7.1.2. Regional trends[5]

The sharp declines in international investment flows described above have been accompanied by important changes to the geographic composition of these flows. Figure 7.3 shows global FDI inflows and inflows into the emerging economies[6] (left axis) and the emerging economies' share of global flows on the right axis.

The figure highlights a number of interesting characteristics of international flows to the emerging economies over time. First, it shows their countercyclical

Figure 7.3. **Inward FDI into the emerging economies: 1990-2012**



Source: *www.unctadstat.org*; author's calculations.

nature. The share of these countries in global inward FDI tends to shrink during boom years and grow when FDI flows are in decline. In the three-year lead-up to the FDI peak of 2000, the share of emerging economies was halved, falling from around 40% to 20%. Over the next three years (2000-03), as global flows declined by 57%, the share of emerging economies again rose, to around 40%. The same pattern repeats itself in the years leading up to and following the 2007 peak.

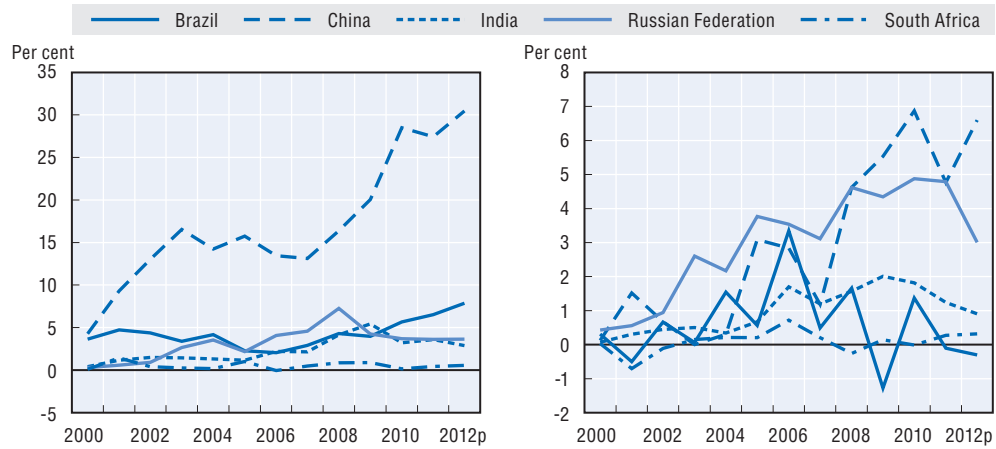
In effect, the emerging economies have enjoyed gentler FDI cycles, growing less rapidly during the boom periods and falling less violently during the FDI recessions. These milder FDI cycles are linked to the tendency for the IM&A/FDI ratio to increase during the expansionary phase of FDI cycles and fall during FDI recessions (Figure 7.3). International M&A tends to be more concentrated in the developed economies, while emerging economies receive more FDI in the form of greenfield investments. During the FDI recessions that started in 2001 and 2008, IM&A fell more sharply than overall FDI, thus having a greater negative impact on FDI inflows into the countries that receive a greater share of their FDI in the form of IM&A, i.e. the developed economies.

A second trend highlighted in the figure is the strong increase in the share of global FDI that emerging economies received during the crisis. Their share was quite high in the mid-1990s, mainly due to the important share of total FDI accounted for by the extractive industries and oil at that time. The more recent growth in the share of FDI going to emerging economies has been driven to a greater extent by FDI in manufacturing and services. Emerging economies received over 50% of global FDI for the first time in 2012 and did so again in 2013.

This strong performance of the emerging economies during the crisis, with FDI inflows increasing by over USD 100 billion between 2007 and 2012, occurred as outward FDI from OECD countries – the source of around 80% of the world's FDI – declined by almost USD 800 billion. The main explanation for this somewhat counterintuitive combination is the increase in "south-south FDI". In 2013, 75% of Africa's inward IM&A came from emerging economies, and over half of this was from China.

The significant increase in inward and outward FDI to and from the emerging economies over the past few years has been largely attributable to China. Figures 7.4 and 7.5 show the BRICS'[7] share of G20 inward and outward FDI flows, respectively. While China has always tended to attract more inward investment than the other emerging G20 economies, it doubled its share from 15% to 30% during 2009-12. With respect to outward investment, there is a similar pattern. In 2007, China was similar to India and below Russia. But by 2012, five years into the crisis, China's FDI outflows quadrupled and its share of G20 outflows increased by a factor of seven. By 2012 China had become the fifth-largest outward investor in the world, accounting for 5% of global flows.

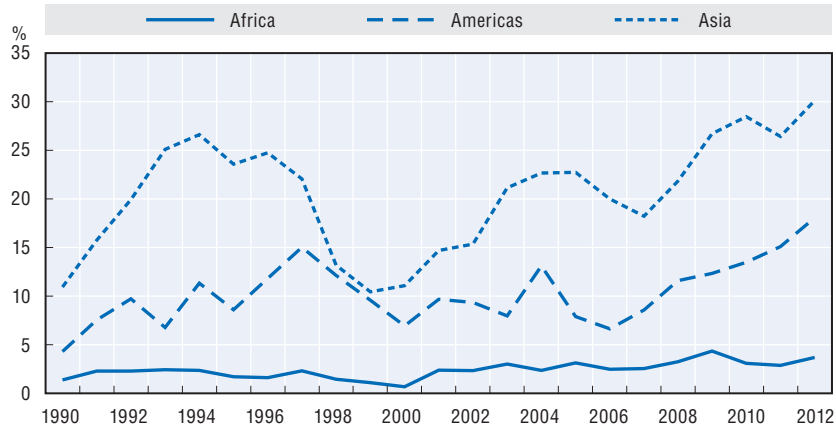
Figure 7.4. **The BRICS' share of G20 inward and outward FDI**



Source: *www.unctadstat.org*; author's calculations.

Notwithstanding the emergence of China as a leading home and host emerging economy for FDI, the distribution of FDI going to the emerging economies has become more balanced. At the regional level, Asia receives the lion's share, at 30% (of which China receives a third), followed by Latin America and the Caribbean at just under 20%, and Africa receives around 5% (Figure 20). Despite the relatively low share received by Africa, its FDI-to-GDP ratio, at 2.7%, shows that it is receiving a level of flows proportional to the size of the regional

Figure 7.5. **Inward FDI shares of emerging economies by region: 1990-2012**



Source: *www.unctadstat.org*; author's calculations.

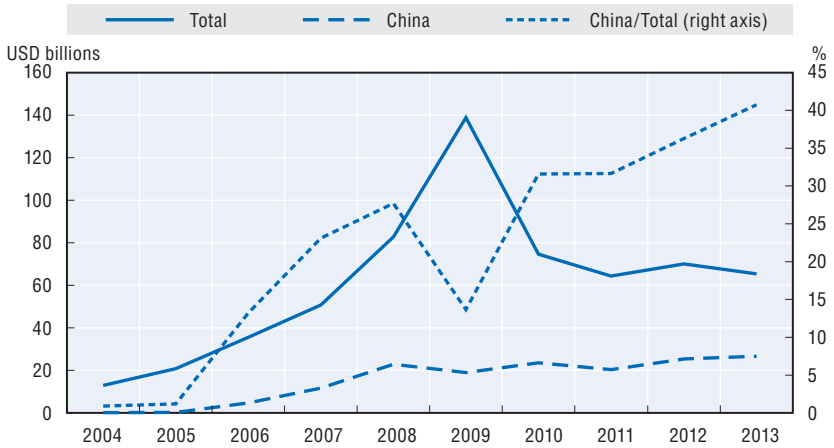
economy. Seventeen African countries received more than USD 1 billion in FDI in 2012. The FDI-to-GDP ratio for Asia is higher, at 3.8%, while the ratio for Latin America is 2.5%.

7.1.3. The rise of the MNSOE[8]

Although the majority of SOEs are either domestic or still in the early stages of internationalisation compared with their counterparts in the private sector, international investment activity by SOEs increased sharply at the start of the global financial crisis in 2008. The rapid expansion of international investment by SOEs has been a natural extension of the more general expansion of the SOE sector. China has been the driving force behind the increase in the number of SOEs among the world's largest firms, but not the only nation contributing to this trend. Figure 7.6 shows the growth in international investment by wholly-government-owned SOEs over time. As with most charts showing various dimensions of China's outward investment performance, the forty-fold increase in the country's share of total outward IM&A by wholly-government-owned SOEs over eight years is spectacular (see right vertical axis).

Based upon an analysis of all international M&A activity in 2012,[9] one of the clear differences between SOE international investments and international investments by privately owned enterprises (POEs) relates to average deal size. On average IM&A transactions by SOEs are four times larger than those by POEs. One possible explanation is that SOEs are generally larger than privately owned firms and might therefore also generally engage in bigger transactions. Another possible explanation would be if SOE IM&A was concentrated in sectors where deals are generally larger; however, the data show that this is

Figure 7.6. **IM&A by wholly-government-owned SOEs**



Source: Dealogic, M&A Analytics database; author's calculations.

not the case. Within sectors, SOE investments are generally several times larger than private investments.

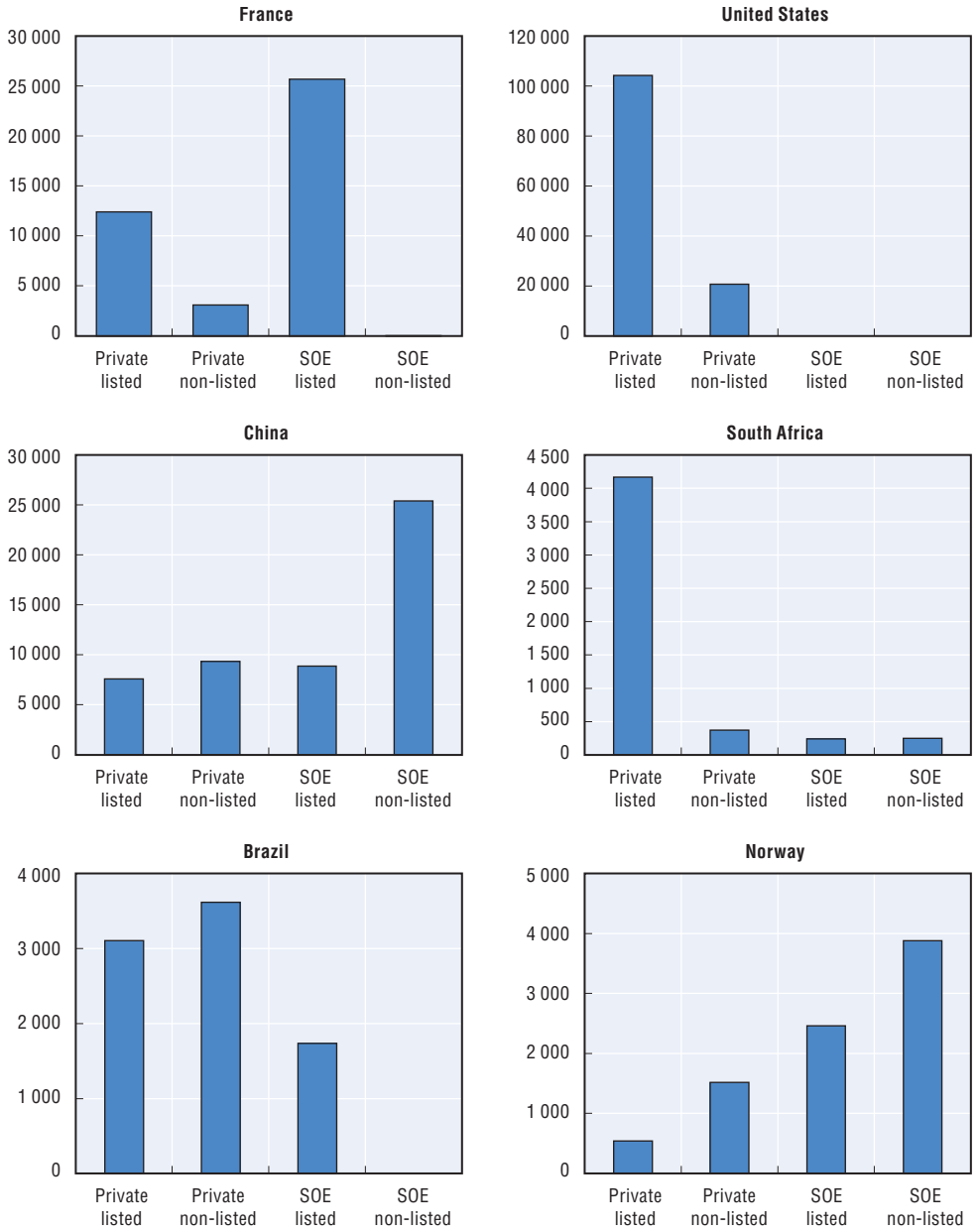
For example, the average value of SOE IM&A transactions in the mining sector in 2012 was USD 836 million, whereas the average value of IM&A transactions by private firms in mining was USD 91 million. Average SOE investments are much larger than private ones across all sectors except services and wholesale trade.

A question raised by these significant differences in the average size of investments by SOEs versus by private firms is whether this might crowd out private investors. This could occur if the larger average deal values for SOEs are due to advantages these enjoy, allowing them to pay more for targets than private firms. Such crowding out could affect not only private investment from third countries but also private outward investment from the SOEs' home country.

With respect to countries' outward IM&A, there is an eclectic mix of profiles. One interesting feature is the difficulty in identifying any clear "north-south" typology. While it remains true that the emerging economies generally do have more significant SOE sectors, and thus tend to have a greater SOE presence in their outward international investments, similar profiles can be found across countries at different levels of development, suggesting that the challenges for policy makers of maintaining level playing fields for private and SOE investors cut across north-south lines.

Figure 7.7 presents comparisons of the outward IM&A profiles for six sample countries; Brazil, China, France, Norway, South Africa and the United

Figure 7.7. **Outward IM&A profiles of six countries, 2012**



Source: Dealogic M&A Analytics Database; authors' calculations.

States. Thus, private listed investors account for 83% of the outward IM&A for South Africa and the United States, and both are below-average sources of SOE IM&A. At the other end of the spectrum, China and Norway[10] have very high levels of outward IM&A by non-listed SOEs, and France has the highest levels of IM&A by listed SOEs.

With respect to the target countries for IM&A, similar country snapshots show which countries are the main recipients of SOE IM&A (and those that are not). Figure 7.8 presents the inward IM&A profiles of six countries. From this, we see, for example, that Canada and Australia receive above-average inward IM&A by SOE investors. This could explain why both of these countries have been among the more active in formulating and communicating policy positions specifically addressed to SOE investments.

An interesting contrast with Figure 7.8 can be found in a comparison of Norway and China. Whereas these countries share similarities in terms of the significant role of SOEs in their outward investments, they are quite different when it comes to inward SOE investment. Norway receives above-average international investment from SOEs, whereas China receives only 5% of its inward IM&A from SOEs. The United States also receives a below-average share of inward IM&A from SOE investors, at 8%.

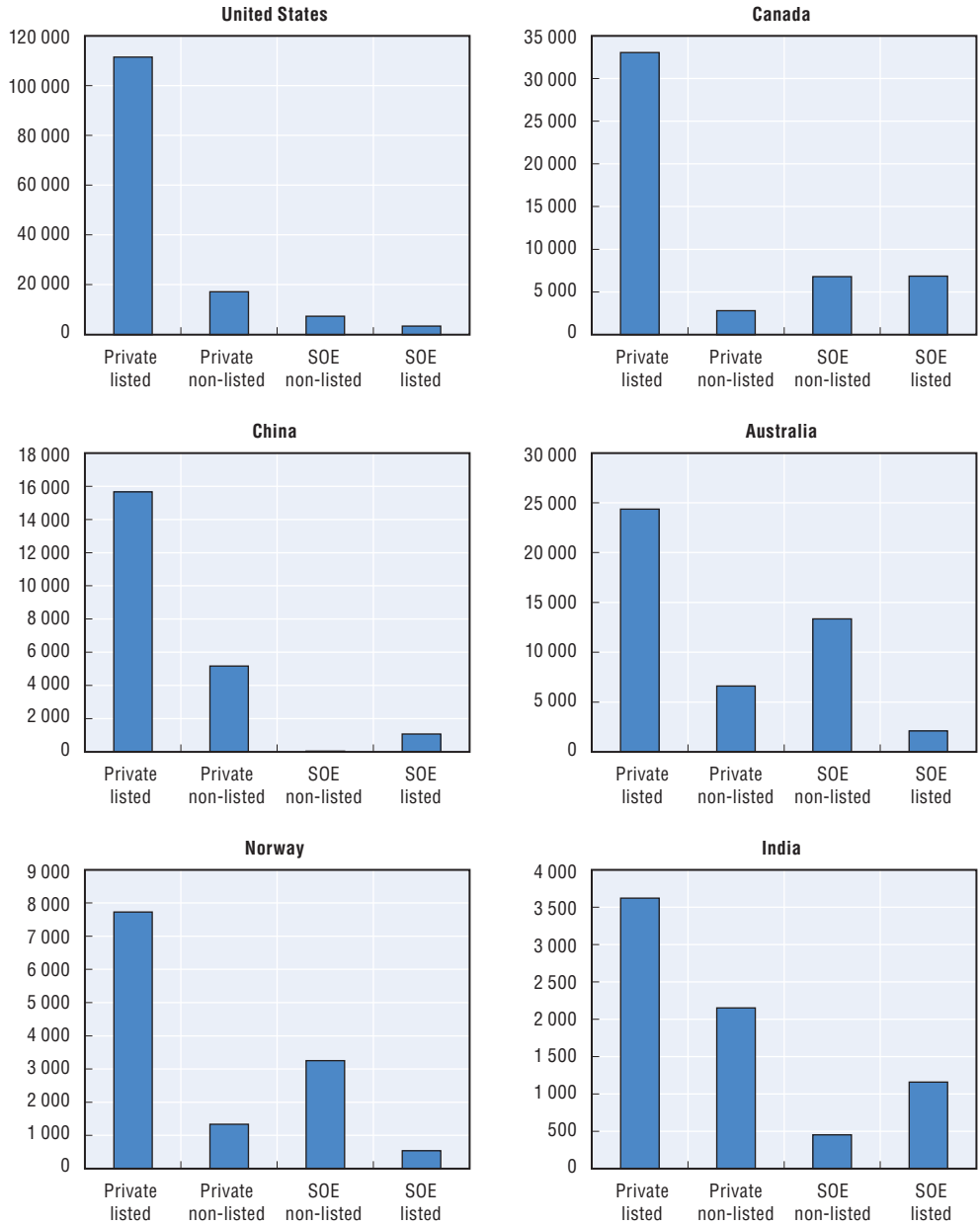
Table 7.1 presents the sector breakdown for all IM&A by SOEs in 2012, classified according to the 10 Standard Industrial Classification (SIC) Groupings. Manufacturing was the top sector, with USD 222 billion in international investment, followed by finance, insurance and real estate with USD 191 billion, and transportation and public utilities and the mining sector with USD88 billion and USD 87 billion, respectively. These four sectors accounted for 83% of all IM&A in 2012.

With respect to IM&A by SOEs, the sectorial patterns change significantly between listed and non-listed SOEs. In the case of listed SOEs, over 70% of their investments went into transportation and public utilities and manufacturing. In the case of non-listed SOEs, over half of their IM&A was in finance, insurance and real estate. This same pattern is also observed in the non-listed private firms. Although non-listed firms account for only about a quarter of total IM&A, they account for 54% of IM&A in the finance sector. Less than 20% of IM&A by listed firms (private and SOE) goes into the finance sector.

An initial analysis of the firm-level and deal-level data in the financial sector suggests that IM&A transactions in this sector take two forms: actual M&A activity involving combinations of firms in the financial sector on the one hand, and transactions that represent financing activities, including the establishment of holding companies and other special-purpose entities (SPEs) on the other.

In sum, international investment by SOEs has grown significantly in recent years, and it seems likely that this phenomenon will grow in economic

Figure 7.8. **Inward IM&A profiles of six countries, 2012**



Source: Dealogic M&A Analytics Database; author's calculations.

Table 7.1. **Sectorial distribution of IM&A, 2012**

Primary SIC Industry group	No. of deals	Total value of deals	Average deal value	Average equity stake
Manufacturing	1 225	222 424	182	56
Finance, insurance and real estate	1 336	191 439	143	51
Transportation and public utilities	327	88 088	268	63
Mining	688	86 517	126	58
Services	531	43 010	81	80
Wholesale trade	271	36 077	133	63
Retail trade	97	21 172	218	33
Construction	68	9 399	138	31
Agriculture, forestry, and fishing	37	4 234	114	45
Public administration	11	1 389	126	33
Total	4 591	703 747	153	56

Source: Dealogic M&A Analytics Database; author's calculations.

importance. Interest in this issue mainly centres on questions concerning the impact that these new multinational SOEs (MNSOEs) will have on markets and competition. For developing countries, MNSOEs represent a mixed blessing. On the plus side, they have come to represent an important new source of investment at a time when other sources have been shrinking.

For some smaller developing countries, individual SOE investments can have a dramatic development impact. For example, in 2011 Sierra Leone's stock of inward FDI stood at USD 313 million. Between 2011 and 2013, Chinese SOEs invested USD 2.5 billion into the Tonkolili iron ore project and associated infrastructure upgrading, including 200 km of new heavy-duty rail lines and a new deep-water port. In other words, in only three years Sierra Leone received from SOEs eight times the value of its historical stock of foreign investment and almost double the value of official development assistance received between 2010 and 2012 (USD 1.3 billion).[11]

On the negative side, large-scale foreign investments can put a strain on a country. They can create "islands" of wealth and employment within the society and a rapid widening of income gaps due to inflation. They can strain a country's infrastructure and the government's capacity to meet increased demand for various public services. And they can give rise to macroeconomic imbalances, including, in the case of major investments in the extractive industries, the "Dutch disease".[12] While these negative implications of sudden large-scale foreign investments in developing countries are not specific to international investments by SOEs, the tendency for SOE investments to be more concentrated in the extractive industries and to be much larger than POE investments in the same sectors suggests that such issues might be more common in the case of investments in developing countries by SOEs.

The next section considers recent developments with respect to how international investments by SOEs are treated in international agreements.

7.2. The international policy framework for SOE investments

Policy responses to international investments by SOEs are at a fledgling stage of development, as governments seek to strike a balance between keeping markets open to international investment, irrespective of ownership, while ensuring that MNSOEs and privately owned firms compete on a level playing field. It is known that a number of major international negotiations that will include provisions dealing with international investment, including the Trans-Pacific Partnership (TPP) and the Trans-Atlantic Trade and Investment Partnership (TTIP), intend to address the issue of "competitive neutrality" (OECD, 2012), but it is not clear how they will go about this.

Investment treaty law is based mainly in several thousand bilateral international investment agreements (IIAs) that provide substantive protections to foreign investors and establish procedures for enforcement of these protections. IIAs have important implications for both investors and state parties to such treaties, and the recent upsurge of treaty-based challenges by investors to state actions has focussed public attention on these treaties. The definition of "investor", along with that of "investment", is a key treaty feature that delimits the scope of primary beneficiaries of the protections provided by the treaty, including the rights to bring claims before international arbitral tribunals. An investment agreement applies only to investors and investments made by investors who qualify for coverage under the relevant provision.[13] From the perspective of a capital-exporting country, the definition of investor identifies the group of investors whose foreign investment the country is seeking to protect through the agreement, while from the capital-importing country perspective, it identifies the investors that the country wishes to attract.[14] Thus, the definition of investor provision plays an important role in determining which type of investors are protected, in particular in examining whether or not government-controlled investors (GCIs) are specifically covered under IIAs.

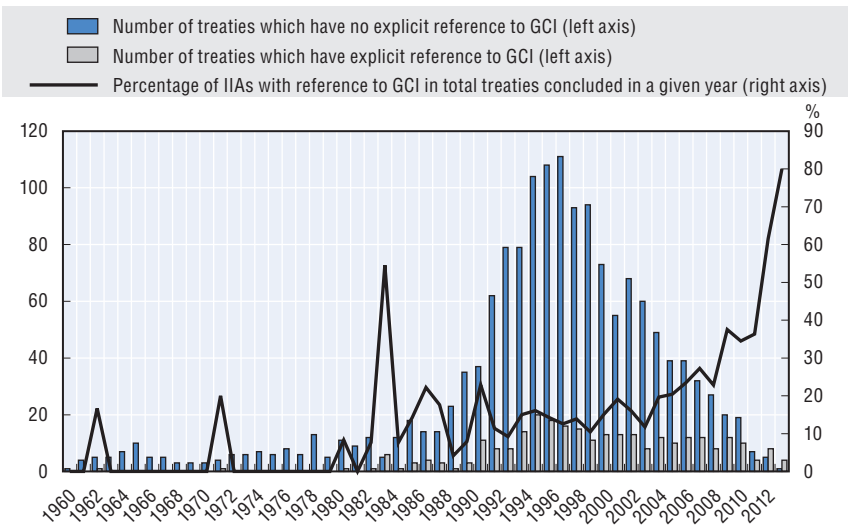
This section presents the results of a treaty survey designed to examine whether or not GCIs are explicitly included or excluded from the protections provided by IIAs, as well as other provisions relating to GCIs.

7.2.1. Overview of the survey results

The majority of IIAs do not distinguish between investors on the basis of ownership. Of the 1 813 agreements surveyed, 1 524 (84%) do not explicitly mention either type of GCIs, which are i) state-owned enterprises, ii) state-owned investment funds such as sovereign wealth funds (SWFs) or iii) a government itself as investor, in the investor definition.[15]

Figure 7.9 presents the number of IIAs concluded annually between 1960 and 2013 (left axis). It also shows the share of IIAs that explicitly refer to one or more categories of GCIs in the investor definition (right axis). The frequency of treaties that explicitly include GCIs among the protected investors is clearly rising (see red line plotted on the right axis). Until the early 1980s, very few treaties mentioned GCIs in the investor definition. The number of treaties referring to GCIs gradually increased along with the increase of number of IIAs starting in the early 1990s.[16] In the past few years, IIAs have come to address GCIs regularly. All five of the surveyed IIAs concluded in 2013 explicitly cover international investments by GCIs.[17] At the same time, a general trend towards more sophisticated and detailed treaties has been observed,[18] thus the trend toward more frequent treaty references to GCIs would be part of a broader development in investment treaty practice. In addition, since most of the existing treaties were drafted before GCIs became prominent in the global marketplace, the relative infrequency of explicit references to GCIs may reflect the fact that not much attention would have been paid to them as investors at the time of drafting.

Figure 7.9. **Total number of IIAs concluded per year in comparison with International Investment Agreements with an explicit reference to government-controlled investors**



Source: Author's calculations.

The fact that the majority of the IIAs do not mention GCIs in the definition of investor could give rise to some uncertainty with respect to the coverage of these agreements to GCIs, although it may be reasonably assumed that they

are nonetheless covered by the treaties unless explicitly excluded. As the issue has not yet been tested frequently in treaty-based arbitration cases or considered fully, however, this assumption remains preliminary. In addition, the recent trend that more countries have started to include an explicit coverage of such types of investors in IIAs and the general increase in the specificities of these investors may in the future accelerate the need for clarification.

7.2.2. Specific reference to state-owned enterprises

In most cases where a treaty refers to either type of GCIs, it mentions SOEs only, and explicit reference to state-owned investment funds or a government itself in the investor definition is rare. Thus, among three categories of GCIs, SOEs are most frequently referred to in the definition of investor of the surveyed IIAs: 287 (16%) IIAs specify that SOEs are covered, and three specify that they are not covered. SOEs are typically defined as either "governmentally owned" or "governmentally owned or controlled" under the surveyed IIAs. Expressions such as "public institutions",[19] "state corporations and agencies", "governmental institutions" are also used. For example, the Mexico–India bilateral investment treaty (BIT) (2007) defines an investor of a contracting party as a natural person or an enterprise of a contracting party and separately defines an enterprise as "any entity…whether privately or governmentally owned…". The Austria-Georgia BIT (2001) likewise defines investors so as to explicitly cover SOEs; "a legal person or any entity…whether private or government owned or controlled…".

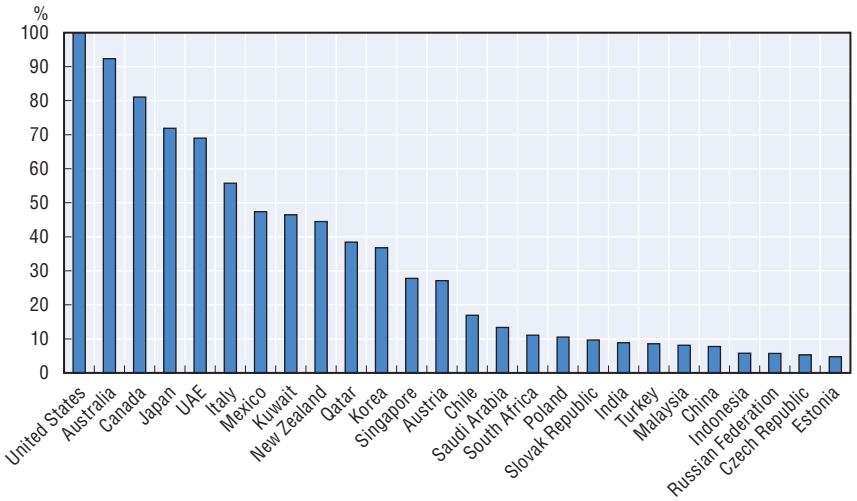
Figure 7.10 presents the share of IIAs that explicitly include SOEs in the definition of investors in the IIAs of 26 countries.[20] The United States (100%), Australia (92%) and Canada (81%) are the countries that most often include SOEs explicitly in the investor definition. Japan (72%) and the United Arab Emirates (69%) also tend to explicitly mention SOE in the investor definition of their IIAs.

Explicit exclusion of SOEs from IIA coverage is rare. Only three BITs with Panama exclude SOEs by providing that "companies" mean "all those juridical persons constituted in accordance with legislation in force in Panama…which have their domicile in the territory of the Republic of Panama, excluding State-owned enterprises."[21] Interestingly, this exclusion is asymmetrical insofar as it does not apply to SOEs of the treaty partners (the United Kingdom, Germany and Switzerland) in these agreements.[22]

7.2.3. Government itself as investor under IIAs

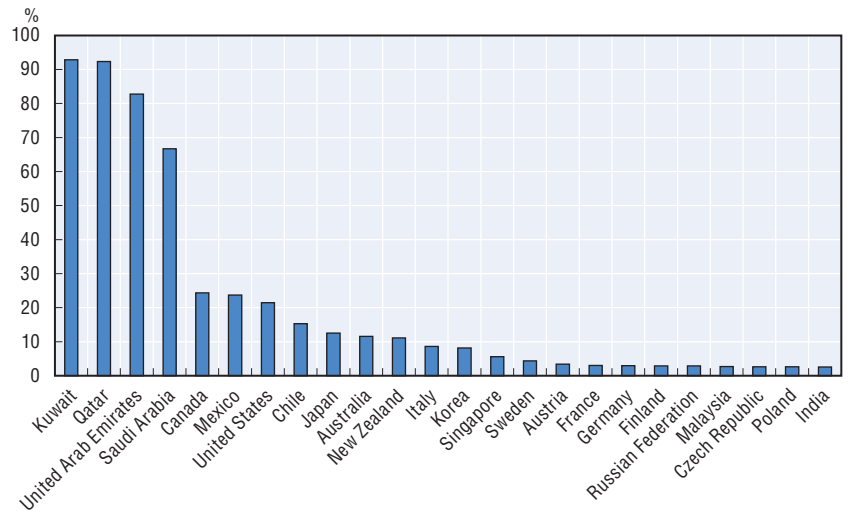
Some treaties include a contracting party or a government of a party itself in the investor definition (approximately 6% of the total IIAs surveyed). Figure 7.11 presents the share of IIAs by country that explicitly cover governments as investors.[23] Kuwait, Qatar, the United Arab Emirates (UAE)

Figure 7.10. **Share of IIAs by country that explicitly cover SOEs under investor definition**



Source: Author's calculations.

Figure 7.11. **Share of IIAs by country that explicitly cover governments under investor definition**



Source: Author's calculations.

and Saudi Arabia most frequently contain their governments in the definition of investor of IIAs that they concluded. This approach has clearly been taken in agreements involving countries where the government itself often plays a direct role as an international investor.

For example, the Kuwait–South Africa BIT (2005) includes "the Contracting Party itself" and "any State entity" in the definition of investor.[24] "State entity" is defined as "a department of government, corporation, institution or undertaking wholly or partially owned or controlled by government and engaged in activities of a commercial nature". Likewise, the definition of UAE investors in UAE-China BIT (1993) explicitly includes the federal governments of the UAE, as well as the local governments and their local and financial institutions.[25] Since the investor definition for China does not include its government, the UAE's intention to include government investors appears to be distinctive.

7.2.4. Specific reference to state-owned investment funds

Very few treaties mention state-owned investment funds such as SWFs specifically – less than 1% of the surveyed IIAs contain an explicit reference to those investors in the investor definition. Such specific references are limited to IIAs concluded by countries that have large SWFs. These include Saudi Arabia, Kuwait and the UAE, which are a similar set of countries to those that tend to include explicit references in their treaties to the "government" or state parties in their definition of investor, as mentioned earlier.

For example, the Saudi Arabia-India BIT (2006) provides that, in respect of Saudi Arabia, the term "investor" means "the Government of the Kingdom of Saudi Arabia and its financial institutions and authorities such as the Saudi Arabian Monetary Agency, public funds and other similar governmental institutions existing in Saudi Arabia". The definition of investor for India has no such reference. In the Kuwait-Germany BIT (1994), the term "investor", in respect of Kuwait, is defined to include "the Government of the State of Kuwait acting either directly or indirectly through the Kuwait Investment Authority (KIA) or its offices abroad, as well as development funds, agencies or other similar government institutions having their seats in Kuwait". The definition for German investors has no mention of government or SWFs. The UAE-Germany BIT (1997) likewise covers "the Government of the State of the UAE acting either directly or indirectly through their local and federal financial institutions as well as development funds, agencies or other similar government institutions" in the investor definition.

7.2.5. Provisions on competition between SOEs and privately owned enterprises

Some IIAs contain specific provisions relating to GCIs. For instance, certain IIAs include provisions that attempt to ensure fair competition between SOEs and privately owned enterprises, or specifically mention the principles of competitive neutrality (CN). This is mainly the case in IIAs negotiated by the United States, Australia, New Zealand and Singapore. These provisions can usually be found in the competition or state-enterprise chapters of FTAs

concluded since the 2000s, while they can be also found in relatively old BITs concluded by the United States.

Box 7.1. **The case in IIAs negotiated by the United States**

Some IIAs concluded by the United States include provisions referring to competition between SOE investments and privately owned or controlled investments, including some relatively old BITs. For example, the US-Panama BIT (1982) provides an example of early treaty practice dealing with competition between private and government investors. Article II.3 provides that:

"Each Party agrees to provide fair and equitable treatment and, in particular, the treatment provided for in paragraph 1 of this Article, to privately owned or controlled investment of nationals or companies of the other Party, where such investment is in competition, within the territory of the first Party, with investment owned or controlled by the first Party or its agencies or instrumentalities. In no case shall such treatment differ from that provided to any privately owned or controlled investment of nationals or companies of the first Party which is also in competition with investment owned or controlled by the Party or its agencies or instrumentalities."

The US-Senegal BIT (1983) contains provisions that intend to maintain competitive equality between investments governmentally owned or controlled by one Party and privately owned or controlled investments of nationals or companies of the other Party. The US-Congo BIT (1984) and US-Turkey BIT (1985) have similar provisions. For example, Article II.7 of US-Senegal BIT (1983) provides:

"The Parties recognize that, consistent with paragraphs 1 and 2 of this Article, conditions of competitive equality should be maintained where investments owned or controlled by a Party or its agencies or instrumentalities are in competition, within the territory of such Party, with privately owned or controlled investments of nationals or companies of the other Party."

US-Bangladesh BIT (1986) has similar provisions, with additional language aimed at ensuring that private investors enjoy similar economic advantages granted to SOEs. Article II.5 provides that:

"The Parties recognize that, consistent with paragraph I of this Article, conditions of competitive equality should be maintained where investments owned or controlled by a Party or its agencies or instrumentalities are in competition, within the territory of such Party, with privately owned or controlled investments of nationals or companies of the other Party. In such situations, the privately owned or controlled investments shall receive treatment which is equivalent with regard to any special economic advantage accorded the governmentally owned or controlled investments."

The Singapore-Australia FTA (SAFTA) (2003) contains provisions under Article 4 of Chapter 12 (Competition Policy) stating that "[t]he Parties shall take reasonable measures to ensure that governments at all levels do not provide any competitive advantage to any government-owned businesses in their business activities simply because they are government owned". It clarifies that this article applies to business activities of government-owned businesses and not to non-business, non-commercial activities. Similar provisions are found in Article 15.4 of Singapore-Korea FTA (2005) and Article 14.5 of Australia-Chile FTA (2008).

The US-Australia FTA (AFTA) (2004) (Article 14.4 on State Enterprises and Related Matters) provides that "the Parties recognize that state enterprises should not operate in a manner that creates obstacles to trade and investment" and describes different commitments that each party made. Australia specifically committed to competitive neutrality by promising that "Australia shall take reasonable measures, including through its policy of competitive neutrality, to ensure that its governments at all levels do not provide any competitive advantage to any government businesses simply because they are government-owned". As in the SAFTA, this provision excludes non-business/non-commercial activities of SOEs from its scope. The commitments of the United States provide that "the United States shall ensure that anticompetitive activities by sub-federal state enterprises are not excluded from the reach of its national antitrust laws solely by reason of their status as sub-federal state enterprises". The term "state enterprise" is defined as "an enterprise that is owned, or controlled through ownership interests, by the central or a regional government of a Party".

The free trade agreement between New Zealand and Chinese Taipei (2013) contains provisions that ensure equal application of competition policies to public and private business activities. Article 2 (b) of Chapter 8 (Competition) provides that the Parties will apply competition policies to economic activities, including public and private business activities, in a manner that does not discriminate between or among economic entities in like circumstances.

The TPP, which is under negotiation among 12 countries[26] could contain provisions on SOEs. Also, the TTIP which is under negotiation between the United States and the European Union, could also eventually include rules on SOEs. The press release by the United States Trade Representative stated that the TTIP would aim to "develop rules, principles, and new modes of co-operation on issues of global concern, including intellectual property and market-based disciplines addressing state-owned enterprises and discriminatory localization barriers to trade".[27]

7.3. Conclusions

This chapter has examined recent trends in and economic characteristics of international investments by SOEs, as well as recent developments in policies

dealing with such investments and the implications for development. The main conclusions of this chapter can be synthesised as follows:

- International investment by SOEs increased dramatically during the global financial crisis that began in 2008 and, although this is a relatively new phenomenon, it seems likely that SOEs will continue to be an important source of international investment.
- This source of investment has been important for emerging economies and has contributed to their growing share of global direct investment flows, now over 50%.
- China is an important part of the SOE-FDI story. As one of the top five sources of FDI, it now accounts for approximately 5% of global flows, and around half of this is by SOEs.
- Governments have become more active in their efforts to formulate policies for dealing with international investments by SOEs, including in international investment agreements.
- Most of these initiatives would seem aimed at clarifying the treatment of SOE FDI, and there is little indication of a protectionist backlash – yet it remains true that there is a widely held perception that SOE investors present particular risks and challenges compared with private investors and therefore need to be monitored more closely.
- A number of major negotiations, including the Trans-Pacific Partnership and the Trans-Atlantic Trade and Investment Partnership, could include provisions on SOE investments, but the exact form these will take will not become clear until these negotiations have been completed.

This report has shown that SOEs have become a much more important source of investment for emerging economies in recent years. One of the outstanding questions in this regard is, "Will it last?". The SOE sector today is quite different than it was even 10 years ago. Today there are SOEs that are economically competitive and highly innovative firms. However, the rise of SOEs as important international investors over such a short period of time contrasts with the well-documented challenges that privately owned MNEs have often faced in their internationalisation strategies.

The international expansion strategies of firms are often bumpy processes. To the extent that the rapid expansion of SOE investments, especially in developing countries, has been driven by both macro-economic circumstances (e.g. the recycling of China's foreign exchange reserves via outward FDI) and the increasingly frequent adoption by governments of outward investment promotion strategies, rather than real firm-level competitive advantages needed to compete internationally, there is a possibility that the current SOE FDI boom might eventually crash.

The collapse of global FDI flows starting in 2008 would have been a lot worse had it not been for the countercyclical growth of FDI by SOEs. If this relatively new major source of FDI proves short-lived, however, it will be the countries that have arguably benefited the most from this investment that will be the hardest hit.

Notes

1. This chapter was prepared by Michael Gestrin and Yuri Shima, Directorate of Finance and Enterprise Affairs, OECD Secretariat.
2. The analysis in this section is based upon OECD (2014) "FDI in Figures" (April 2014) and OECD *OECD International Direct Investment Statistics 2014* (forthcoming).
3. Global FDI inflows did somewhat better, increasing by 5.5% in 2013. The difference between reported inflows and outflows is mainly due to statistical discrepancies.
4. At time of this writing, 28 countries had reported data on the equity component of their FDI outflows. These countries accounted for 70% of global FDI flows in 2013.
5. The analysis in this section is largely based upon Gestrin (2014; forthcoming).
6. Emerging economies are defined according to the United Nations classification of developing economies.
7. The BRICS include Brazil, Russia, India, China, and South Africa.
8. This section synthesises analysis undertaken for the OECD Investment Committee's Freedom of Investment Roundtable in October 2014, as well as work presented at OECD workshops on the role of SOEs in the global economy held in April and June 2014.
9. This survey covered 4 591 international M&A deals with a combined value of USD 703 billion.
10. In the case of Norway, all of this investment takes place through Norges Bank Investment Management (NBIM), which is a separate part of Norges Bank (the Norwegian Central Bank) and is responsible for managing the Government Pension Fund. NBIM also manages the country's foreign-exchange reserves.
11. *www.oecd.org/countries/sierraleone/aid-at-a-glance.htm*.
12. "The term 'Dutch disease' originates from a crisis in the Netherlands in the 1960s that resulted from discoveries of vast natural gas deposits in the North Sea. The newfound wealth caused the Dutch guilder to rise, making exports of all non-oil products less competitive on the world market.", *www.investopedia.com/terms/d/dutchdisease.asp*.
13. See also OECD (2008), "Definition of Investor and Investment in International Investment Agreements", International Investment Law: Understanding Concepts and Tracking Innovations.
14. Ibid.
15. See also "State-controlled entities as 'investors' under international investment agreements" by Jo En Low, which examined the definition of "investor" and investor-state dispute resolution clauses in 851 international investment agreements.

16. Six of eleven IIAs in 1983 covered SOE investments. Three of these involved IIAs with Panama, which expressly excluded state-owned enterprises.

17. These are Canada-Benin (BIT), Canada-Tanzania (BIT), Colombia-Korea (FTA), Japan-Mozambique (BIT), and Japan-Saudi Arabia (BIT).

18. See "Dispute settlement provisions in international investment agreements: A large sample survey" by Joachim Pohl, Kekeletso Mashigo, Alexis Nohen (2012), *OECD Working Papers on International Investment*, No. 2012/2, OECD Investment Division (*www.oecd.org/daf/investment/workingpapers*).

19. For example, some treaties involving Italy contain the word "public institutions" (istituti pubblici). A public institution in Italy is a juridical person established according to public law through which the public administration exercises its functions in the general interest. P. 330, Brown, C. (2013).

20. Figure 24 excludes the following 20 countries surveyed, which have no or a nominal share (less than 5%) of IIAs with a reference to SOE in the investor definition: Sweden, Hungary, Belgium/Luxembourg, Germany, Switzerland, Finland, the United Kingdom, Brazil, Denmark, France, Greece, Iceland, Ireland, Israel, Netherlands, Norway, Portugal, Slovenia and Spain.

21. Article 1(d)(i) of Panama-United Kingdom BIT (1983).

22. Panama-Germany BIT (1983), Panama-Switzerland BIT (1983) and Panama-United Kingdom BIT (1983).

23. Figure 25 excludes the following 22 countries which have no or a nominal share (less than 3%) of IIAs with a reference to a contracting party or a government of a contracting party: Belgium/Luxembourg, South Africa, Denmark, Hungary, Switzerland, Turkey, the United Kingdom, Netherlands, Brazil, China, Estonia, Greece, Iceland, Ireland, Indonesia, Israel, Norway, Portugal, Slovakia, Slovenia and Spain.

24. Article 1 (Definitions) (2) provides that "investor" with respect to a Contracting Party means: a) a natural person holding the nationality of that Contracting Party in accordance with its applicable domestic law; b) the Contracting Party itself; and c) any State entity or judicial person or other entity…

25. Article 1 (Definitions) (2)(b) provides that the term "investor" shall mean for the United Arab Emirates: 1. the Federal Government of the UAE 2. the Local Governments and their local and financial institutions. 3. the natural and legal persons who have the nationality of the UAE 4. companies incorporated in the UAE.

26. Participating countries are: Singapore, Brunei, Chile, New Zealand, the United States, Australia, Malaysia, Vietnam, Peru, Mexico, Canada and Japan.

27. *www.ustr.gov/about-us/press-office/fact-sheets/2013/june/wh-ttip*. See also *press release by European Commission* dated 12 July 2013.

PART III

Chapter 8

SOEs in international trade[1]

8.1. The increasing presence of state enterprises in the global economy

Recent empirical research[2] indicates that state-owned, state-controlled or otherwise state-influenced enterprises – referred to flexibly as "state enterprises" in the remainder of this chapter[3] – are increasingly competing with private firms in the global marketplace for natural resources, intermediate products, consumer markets, ideas and investment opportunities. Such enterprises have always been an important element of most economies, particularly at early stages of economic development. Traditionally, the state sector was oriented towards domestic markets and often was characterised by lagging business performance. A recent series of studies has shown, however, that the presence of state enterprises in the global economy has grown considerably in recent years and that today these feature prominently among the wold's largest and most influential enterprises.

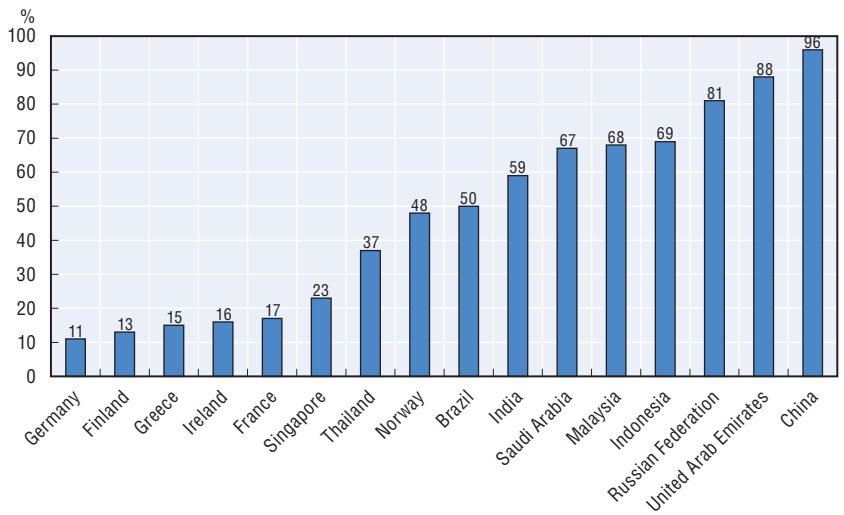
For example, Kowalski Buge, Sztajerowska and Egeland (2013) estimate that in the business year 2010-11 approximately 10% of the 2000 world's largest firms on the Forbes' Global list were majority SOEs. The value of their sales approached an equivalent of 6% of world gross national income (GNI) and exceeded the gross domestic product (GDP) values of countries like Germany, France or the UK. Estimates provided by Christiansen and Kim (2014) suggest that the share of SOEs among the 2 000 largest firms may have increased to as much as 14% in the business year 2012-13. Gestrin and Shima (2013) find an even higher incidence (19%) of state ownership among the Fortune's Global 500 wold's largest firms in 2011. They also show that these firms' importance has grown strongly during the past decade or so, with the share of SOE revenues among the Fortune Global 500 increasing from 6% in 2000 to 20% in 2011 and the share of SOE employment among the largest firms increasing respectively from 19% to 30%.

This new trend, dubbed by some "state capitalism", has attracted the attention of the media, policy makers and business, and has led to calls for "levelling of the playing field" in international markets.[4] The recent sensitivity about the state enterprises is driven, at least in part, by the increasing interconnectedness of national economies via deepening trade and investment links and proliferating international supply chains. Today, the effects of state policies – even those oriented primarily towards specific domestic firms and sectors – span more easily across the whole economy and

national borders. Another contributing factor is the recent dynamic growth and trade expansion of some of the large emerging market economies with important state sectors, as well as the adoption by some of deliberate policies supporting foreign expansion of their state enterprises (Kowalski et al., 2013).

Indeed, state ownership has been estimated to be most prominent in – although not restricted to – the large emerging economies: 70 of the 204 SOEs identified by Kowalski et al. (2013) among the 2000 world's largest companies were owned by central or local governments of China, followed by India (30 enterprises), Russia (9), the United Arab Emirates (9) and Malaysia (8). These countries also tended to have the highest shares of state-ownership among their largest firms (Figure 8.1). In industrialised countries, following large-scale privatisations in the 1980s and 1990s, the state sector is significantly smaller than in emerging countries but remains important across the board in a few industrialised economies, in particular in network industries (energy, telecommunications, and transport) and the banking sector. The industrialised countries with prominent incidence of state ownership include Norway, France, Ireland, Greece and Finland (Figure 8.1).

Figure 8.1. **Importance of SOEs among countries' top ten firms**

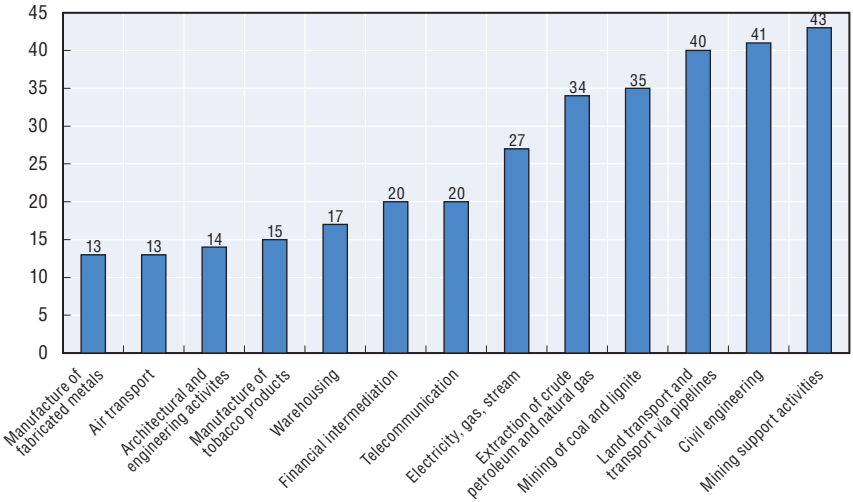


Note: The shares refer to equally-weighted average of shares of SOEs in sales, assets and market value of country's top 10 firms (see Kowalski et al., 2013). Only countries with shares above 10% are shown.
Source: Kowalski et al. (2013).

Several in principle internationally contestable economic sectors, including in natural resources, manufacturing and services, record high incidence of state ownership. These include, for example, mining of coal and lignite and mining support activities, civil engineering, land transport and transport via

pipelines, extraction of crude petroleum and gas, and telecommunication and financial services (Figure 8.2). Many of these sectors have been shown to play important upstream and downstream roles in international supply chains.

Figure 8.2. **SOE share by sector (%)**



Note: Only sectors with shares above 10% are shown.
Source: Kowalski et al. (2013).

While the lack of consistent firm-level data does not permit a precise assessment of the importance of state enterprises in international trade and investment, many sectors with a strong SOE presence are intensely traded, and it is estimated that approximately 90% of the world's largest SOEs have at least one foreign subsidiary (Kowalski et al., 2013). Gestrin and Shima (2013) calculate that the share of global international mergers and acquisitions involving a fully government owned enterprise increased for from 5% in 2005 to approximately 10% in 2014. All this indicates that international activity accounts for an important and growing part endeavours of these enterprises.

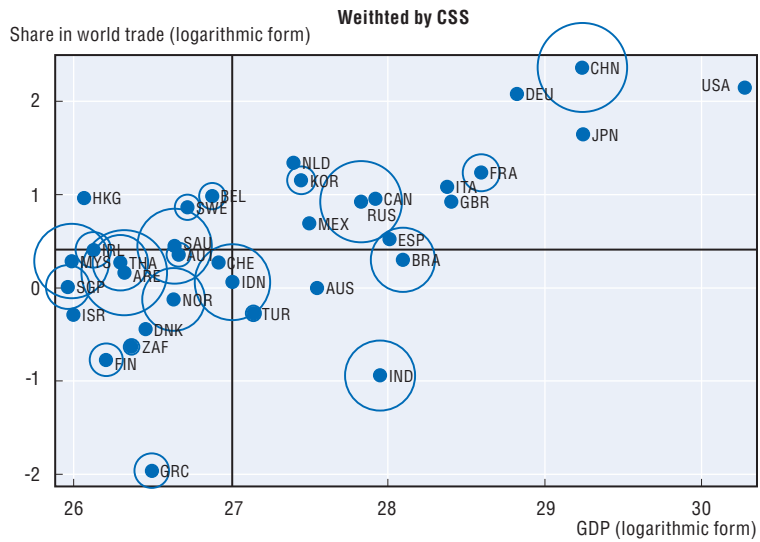
Some of the countries with the highest incidence of state enterprises are important traders – most notably the case of China, the world's second-largest importer and largest exporter accounting for approximately 10% of global merchandise trade in gross terms (Figure 8.2). This explains to some extent why discussions about the cross-border effects of state enterprises often focus on China. Yet, the seven countries following China in terms of the share of the state sector in the economy (the United Arab Emirates, Russia, Indonesia, Malaysia, Saudi Arabia, India and Brazil) account for another 10% of world merchandise trade. Overall, the countries where on average at least 5 of the

10 largest entities are state-owned account together for approximately 20% of global merchandise trade.

8.2. A cause for concern?

There are legitimate economic and non-economic reasons for establishing and maintaining state enterprises, and views on their role in the economy differ across countries, depending on their history, political system, access to resources and structural characteristics. Typically, the incidence of state enterprises (measured by country SOE shares – CSS) is higher at lower levels of economic development (Figure 8.3). Particularly at lower stages of development, correcting domestic market failures, providing public goods, and fostering economic development – as discussed at length in this report – may in some cases require control over enterprises as well as granting explicit or implicit economic advantages to some of them.

Figure 8.3. **Country's share in world merchandise trade and incidence of state ownership (2010)**

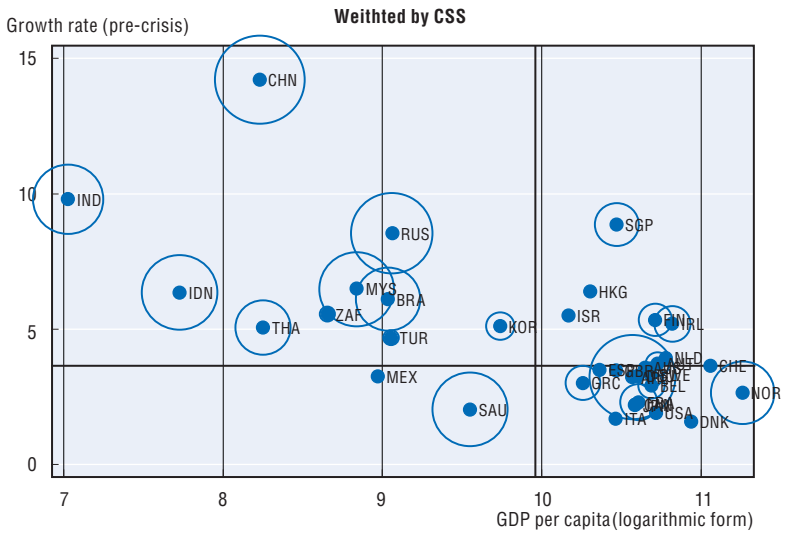


Note: Black lines indicate respective medians.
Source: Kowalski et al. (2013).

For example, state monopolies may be a sensible economic policy in industries with substantial economies of scale and important externalities where optimal social efficiency is not reached when the output is supplied by a private monopolistic producer. Such "natural monopolies" can often be found in sectors that require an interlocking supply network for the provision of goods and services (e.g. electricity or gas provision, railways).[5]

State enterprises can also be useful as instruments providing public or merit goods that would not be supplied by competitive markets at socially optimal levels. A typical example is the provision of postal services in remote geographic areas, which is often commercially non-viable and thus performed by state operators. Similar is the case of merit goods, such as basic nutrition or health services.

Figure 8.4. **Growth rate (pre-crisis) vs. GDP per capita, weighted by CSS**



Source: Kowalski et al. *(2013) Note:* Data from Forbes *Global 2000* are for the year 2011 and data from WDI for the year 2010 (GDP per capita) and 2007 (Growth rate). The vertical and horizontal axes show, respectively, the annual growth rate and the level of GDP per capita, with the vertical and the horizontal lines indicating respective medians. The size of circles denoting higher shares of state ownership among the country's largest enterprises.

State enterprises have also been used to foster the development of industries that are considered economically desirable and that would not otherwise be developed through private investment (e.g. OECDb, 2012). When nascent industries are associated with externalities that cannot be incorporated in pricing strategies, or when information is asymmetric or capital or insurance markets are imperfect, private investors can be reluctant to invest. When these industries have positive spillovers, it may be socially optimal for the state to fill in this investment gap. In fact, it is often argued that many now-successful private-sector firms in advanced countries owe their success – at least in part – to state investment or a state-enterprise status in the past.

These are some of the classic specific cases where intervention through state enterprises may deliver outcomes that may be preferred to those that would be attained by unregulated, or poorly regulated, competitive markets.

Nevertheless, there are several reasons why in general commercial state enterprises may be less efficient than their private counterparts. For example, objectives pursued by state enterprises are often blurry and transient in the context of changing policies and administrations (Gosh and Whalley, 2008; Megginson and Netter, 2001). They are more likely than private firms to have lesser budget constraints, to enjoy politically motivated state funding and be exempted from bankruptcy rules (Bai and Wang, 1998; MacCarthaigh, 2012; Liu et al., 2011). State enterprises are also more likely to be pressured to hire management or employees for politically motivated reasons, rather than commercial need or qualification (Krueger, 1990). Shareholders of private firms are more likely to internalise the costs of monitoring and conduct more efficient management control, compared with the supervision of state enterprises by bureaucrats (Shleifer and Vishny, 1996).

Overall, the positive contributions that state enterprises can make to economic development need to be considered together with their potential pitfalls. As long as the private-sector development is an important element of the development strategy – as it is in the overwhelming majority of countries today – both the government and the general public have an ultimate interest in minimising the undue advantages granted to state enterprises so that goods and services can be produced by the firms that can produce them most efficiently, not those that receive the greatest advantage. To achieve this in a domestic context, provisions that curb some of the unwelcome effects associated with state enterprises can be included in domestic company law, competition and state aid regulations, special regulations with respect to state sector governance, or specific competitive neutrality provisions (e.g. Kowalski et al., 2013; OECD, 2013).

Minimising negative effects that may be associated with state enterprises is more challenging, however, in an international context. For example, the public in different countries may have diverging views on the role of such enterprises in the economy, thus the domestic rules pertaining to their governance may differ from one country to another. In addition, there is the question of whether domestic rules, even if they exist, are enforced in a similar way when state enterprises compete in foreign markets. In fact, some countries may deliberately support their state enterprises to pursue commercial or non-commercial objectives abroad to the detriment of their foreign competitors. Disclosure and transparency, which take on a particular importance in state sector management, can also become more problematic in an international context.

Having effects on the global market, financial or regulatory advantages[6] granted to internationally active state enterprises may be incompatible with the principles of the World Trade Organisation (WTO) rules-based multilateral trading system where 160 countries – including most of the developing and

least-developed world – have mutually undertaken market access and other obligations under the condition of non-discrimination and in respect of market principles. At the same time, establishing and operating state enterprises remains a sovereign choice of WTO members. There is thus also a strong interest in ensuring that trade and investment by state enterprises that operate according to market principles are not unduly hindered or discriminated against.

8.3. The existing and emerging international rules

It is in this context that the emergence of state enterprises as global players led to pleas for a reflection on how to, on the one hand, minimise any potential anti-competitive effects and, on the other, restrain undue protectionism directed at them. Yet it is not clear whether this can be achieved more efficiently through international co-ordination and promotion of domestic reforms, guidelines and soft laws,[7] or through additional binding international rules. On the one hand, the public and economic development policy purposes that state enterprises often pursue may not easily yield themselves to a more stringent regulation at the international level. On the other hand, some relevant international rules already exist, most notably in the WTO as well as some regional trading agreements (RTAs) and bilateral investment treaties (BITs), as well as some new ones are being negotiated.

The current WTO rules bind governments, not enterprises, and are thus, in principle, neutral in respect of the type of enterprises engaging in international trade.[8] They still discipline, however, some of the trade-distorting government policies that may concern state enterprises. For example, the current rules of the Subsidies and Countervailing Measures Agreement (SCMA) prohibit or discipline various forms of trade-distorting financial preferences, irrespective of whether they are granted to state or independent firms. Another example is General Agreement on Tariffs and Trade (GATT) Article III on national treatment, which bans discrimination favouring domestic producers, including state enterprises.

In addition, all WTO obligations (e.g. the most-favoured nation and national treatment principles or the bans on import and export restrictions), which normally bind governments and not enterprises, can be applied to state enterprises if the complainant in a WTO dispute is able to demonstrate that such enterprises are acting under governmental instructions. For example, this is the case with the SCMA rules, where state enterprises can in some circumstances be disciplined as grantors of subsidies.

Finally, a number of specific WTO provisions explicitly discipline some practices in which certain types of enterprises can be used by governments as vehicles to influence international trade. For example, GATT Article XVII aims

to discipline cases where the level of purchases or sales conducted by "state-trading enterprises" (STEs) is not based on economic principles but rather on political considerations.

These rules were developed when the state firms were oriented primarily towards domestic markets, or were concentrated in declining or special sectors. Thus, they may not be sufficiently effective in ensuring competitive behaviour of the large globally active state firms observed today (e.g. Kowalski, 2013).

For example, while in the WTO state ownership is a relevant criterion in the determination of whether an enterprise can be considered a grantor of a subsidy, it is not a determining factor. One of the potential areas for improvement could be thus to develop rules where complainants would no longer have to prove a relationship of influence between certain enterprises (e.g. majority SOEs) and the government.

Similarly, in its current interpretation, the Article XVII on STEs[9] concerns only a narrowly defined group of enterprises that are "granted exclusive or special rights or privileges" and engage in discrimination across trading partners from different countries. Thus, otherwise state-linked enterprises, which cannot be proven to have been granted exclusive or special rights or privileges, or engage in other forms of anti-competitive behaviour, are not considered STEs even though their actions may be trade-distorting.

Another important gap in the WTO rules is the absence of general rules – equivalent to the SCMA in the area of goods – on subsidies in the services sectors. This can be seen as a significant omission considering the important presence of state enterprises in the services sector, as well as the vertical links observed between goods and services sectors.

All these examples provide clues for eventual amendments of WTO rules, but the subjects of state enterprises, trade and competition or investment are currently not on the WTO negotiating agenda. It is in this context that some of the more recent RTAs and BITs include specific provisions on SOEs, attempting to fill gaps in existing multilateral provisions. Some explicitly specify that their provisions apply similarly to certain specifically defined state enterprises, clarify some of the definitional lacunae in the WTO context, or include additional state enterprise-specific disciplines. For example, in NAFTA, the US-Korea or Colombia-US RTAs, state enterprises are obliged by the same non-discriminatory obligations as the governments themselves. The US-Singapore RTA has additional transparency provisions, prohibiting direct government influence on SOEs, collusion and other anti-competitive activities, and foresees a gradual reduction in the number of Singapore's SOEs. The Singapore-Australia FTA also has extensive references to competitive neutrality. In addition to including specific SOE definitions, some RTAs contain

"trade +" provisions on intellectual property rights, technical barriers to trade, or investment and competition, which may also be extended to state enterprises. Given the close links between trade and investment, BITs are also very relevant (see the previous chapter).

Currently, 12 countries throughout the Asia-Pacific region – including countries with important state sectors such as Malaysia, Singapore or Viet Nam – are tackling the issue of additional disciplines on state enterprises in ongoing negotiations on the TPP. While the negotiations have been reported to be difficult and the final shape of new provisions is not yet known, they are likely to build on and fill some of the gaps in the existing WTO rules by providing more precise definitions and interpretations. The most significant addition might be the departure from the enterprise-type neutral approach of the WTO and inclusion of disciplines that will restrain advantages granted to specific types of state enterprises, likely taking into account state ownership as well as some notion of effective government control (Kawase, 2014).

Disciplines on state enterprises have also been indicated as a negotiating issue in another potentially major trade deal – the TTIP between the United States and the European Union – which will inevitably involve several economies with important state sectors from both Western and Eastern Europe.

8.4. Conclusions

This chapter has discussed recent empirical evidence on state enterprises, which suggests that they are increasingly competing with private firms in the global marketplace. While state enterprises were always an important element of the economy, they were traditionally orientated towards domestic markets and often lagged behind private firms in terms of business performance. Today, they feature prominently among the wold's largest and most influential enterprises and are important players in several internationally contestable and vertically-linked economic sectors. Many countries characterised by large state sectors are also important traders.

In some circumstances, intervention through state enterprises may deliver outcomes that may be preferred to those that would be attained by unregulated, or poorly regulated, competitive markets. Particularly at lower stages of economic and institutional development, correcting domestic market failures, providing public goods, and fostering economic development may require control or support of certain entities. Nevertheless, private-sector development remains an important element of economic development strategies in most of countries. Thus all have an interest in minimising the undue advantages granted to state enterprises so that goods and services can be produced by the most efficient firms.

However, levelling the playing field is more challenging in an international context. As views on the role of such enterprises in the economy vary, some countries support their state enterprises to pursue commercial or non-commercial objectives abroad. Indeed, a key challenge arising from the neo-developmentalist approach is that it implies the participation of subsidised or protected industries in the global marketplace. Additionally, as discussed in earlier chapters, some of the more successful countries have used the prioritised SOEs' export performance as an indicator of success and worthiness to obtain continued support. From the perspective of the home country authorities this may make perfect economic sense, but in the international environment there is a strong probability that such practices may spark a backlash abroad.[10]

It is in this context that the recent emergence of state enterprises as global players led to pleas for a reflection on how to minimise the potential anti-competitive effects while restraining undue protectionist policies that may be directed at foreign state firms. The jury is still out as to whether this can be achieved more efficiently through international co-ordination, support for domestic reforms of the state sector and soft guidelines and laws, or more binding international rules.

Some relevant international rules already exist, most notably in the WTO as well as a number of more recent regional trading agreements and bilateral investment treaties, and some new ones are being negotiated in the Trans-Pacific Partnership and the Transatlantic Trade and Investment Partnership negotiations. Given the important positive and negative roles that state enterprises can play in economic development, any new provisions that might be agreed in these negotiations will have important implications not only for the concerned parties but also for the third countries as well as for the shape of future bilateral, regional and multilateral trade and investment agreements.

Notes

1. This chapter was prepared by Premyslaw Kowalski of the Directorate for Trade and Agriculture, OECD Secretariat. The views expressed here are strictly those of the author and do not implicate the OECD Secretariat or any of the OECD member countries. The topic is an area of ongoing policy debate.
2. The most recent data collection efforts are: OECD (2014); Kowalski, Büge, Sztajerowska and Egeland (2013); and Gestrin and Shima (2013); Christiansen and Kim (2014).
3. Ownership is neither necessary for governments to influence enterprises' operations, nor does it inevitably entail such influence. But it implies certain interests, rights and obligations characteristic to an owner, and is directly observable.
4. For example, the January 2012 special issue of The Economist had the following heading: "The rise of state capitalism – the spread of a new sort of business in the emerging world will cause increasing problems."

5. Appropriate regulation of a private monopoly operator can in principle be a viable alternative, but it can sometimes be hard or too expensive to achieve and enforce, especially in countries with poorer institutions.
6. These advantages can take the form of direct subsidies, concessionary financing, state-backed guarantees, preferential regulatory treatment, or exemptions from antitrust enforcement or bankruptcy rules (Capobianco and Christiansen, 2011).
7. One prominent initiative in this respect are the 2005 OECD Guidelines on Corporate Governance of State-Owned Enterprises, currently being revised.
8. There are some departures from this principle, most notably in the WTO Accession Protocols of China and Russia, which explicitly refer to state ownership and similar concepts. See Kowalski et al. (2013).
9. See the WTO Understanding on the Interpretation of Article XVII.
10. This possibility might be discarded only where (as has been the case in some ASEAN economies) the state newcomers compete in market segments that other countries have already come to consider as "sunset industries" and are prepared to discard in their domestic economy.

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(26 2015 01 1 P) ISBN 978-92-64-22960-0 – 2015

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ISBN 978-92-64-22960-0
26 2015 01 1 P