

Introduction

State-owned enterprises (SOEs) influence the economy and people's lives through the provision of goods and services in ways that are distinct from, and more varied than, the direct action of governments.¹ In many countries, SOEs provide basic services such as water, electricity, and transportation to people and firms, as well as loans to businesses. SOEs are diverse, varying in size, sector of operation, complexity, sophistication, and extent of government ownership and control. Some are essentially an arm of the government, whereas others have a mix of public and private owners (mixed ownership) and a greater commercial focus. Many SOEs are among the largest companies in low-income developing countries, emerging markets, and advanced economies.

SOEs have become more prominent in global markets, stimulating renewed interest and debate about their international impacts. Although a few SOEs have had operations abroad for decades, especially in the natural resources sector, SOE cross-border activity has diversified and increased in this century (Cuervo-Cazurra and others 2014). The growing internationalization of SOEs has fueled apprehension about their potential pursuit of noncommercial objectives or unfair competition given that they often benefit from government support, including subsidies or cheaper finance.

At the same time, many governments struggle to manage SOEs effectively. Widespread concerns exist that many SOEs are inefficient, involve significant risks to government budgets, and are a conduit for corruption (April 2019 *Fiscal Monitor*; Musacchio and Pineda

¹Although no commonly accepted definition of an SOE (European Commission 2013; IMF 2014; OECD 2015) exists, there are some shared elements: (1) the entity has its own, separate legal personality; (2) the entity is at least partially controlled by a government unit; and (3) the entity engages predominantly in commercial or economic activities. As noted in the *Government Financial Statistics Manual 2014* (IMF 2014), assessing government control of an entity involves judgment. A government may exercise significant influence over corporate decisions even when it owns a small number of shares. For the quantitative empirical analyses in this chapter, a firm is considered state owned if the government owns at least 50 percent of its equity; in some exercises, the analysis focuses on cases where the governments owns at least 20 percent.

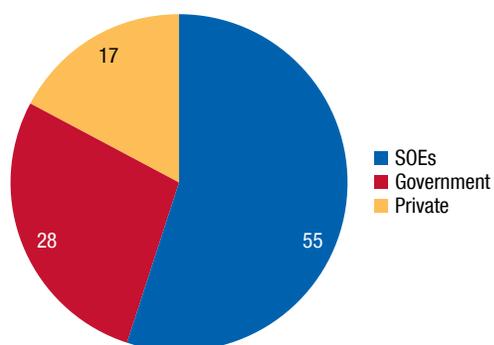
Ayerbe 2019; OECD 2018b; Richmond and others 2019; Wilkinson 2018). Getting the most out of SOEs is critical because many governments rely on them to serve their citizens and to foster economic and social development. Drawing from countries' experiences with SOEs, this chapter focuses on how to use them wisely and improve their performance and addresses the following questions to guide the discussion, analysis, and recommendations:

- Do SOEs deliver value for taxpayers' money? Specifically, are they fulfilling their economic and social policy mandates, while operating efficiently and not burdening the budget? Are policy mandates well defined, adequately funded, and contributing to economic and social goals?
- How can governments manage the challenges and risks associated with SOEs? Do governments have clear strategies and institutions with which to regularly evaluate SOE performance and assess whether each SOE is the best tool to achieve a policy goal?
- Does the internationalization of SOEs bring new challenges? SOEs frequently benefit from explicit or implicit government support. Does this support compensate only for the cost of pursuing policy mandates, or does it give SOEs competitive advantages over private firms? Can SOEs contribute to other global goals (for example, curbing domestic pollution and mitigating climate change)?

SOEs' Evolving Landscape

SOEs grew in size and importance throughout most of the twentieth century. European governments began nationalizing key industries in the early 1900s (France, Germany, Italy, Spain, United Kingdom). The trend continued in Central and Eastern Europe in the aftermath of World War II (Allen and Vani 2013; Musacchio and Lazzarini 2014) and in Africa and Asia with the end of colonialism in the 1950s and 1960s. By the early 1980s, SOEs accounted for 8 percent of output, on average, in advanced economies and 15 percent in developing countries (Sheshinski and Lopez-Calva 2003).

Figure 3.1. SOEs' Share of Infrastructure Investments in Emerging Markets and Low-Income Developing Countries
(Percent of total investment value, 2017)



Source: World Bank 2017.
Note: SOEs = state-owned enterprises.

Beginning in the 1980s, disappointment led to efforts to introduce a profit motive in SOEs through corporatization (that is, incorporating SOEs under the same commercial laws as private firms) and partial or full privatization in many countries. The transition to market economies that followed the dissolution of the Soviet Union in 1991 reinforced these trends. More recently, China's rapid growth combined with the large presence of SOEs in its domestic economy has generated renewed interest in whether SOEs can be used as vehicles for development. In contrast, other countries have recently announced new privatization plans (Brazil, Egypt, India, Morocco).

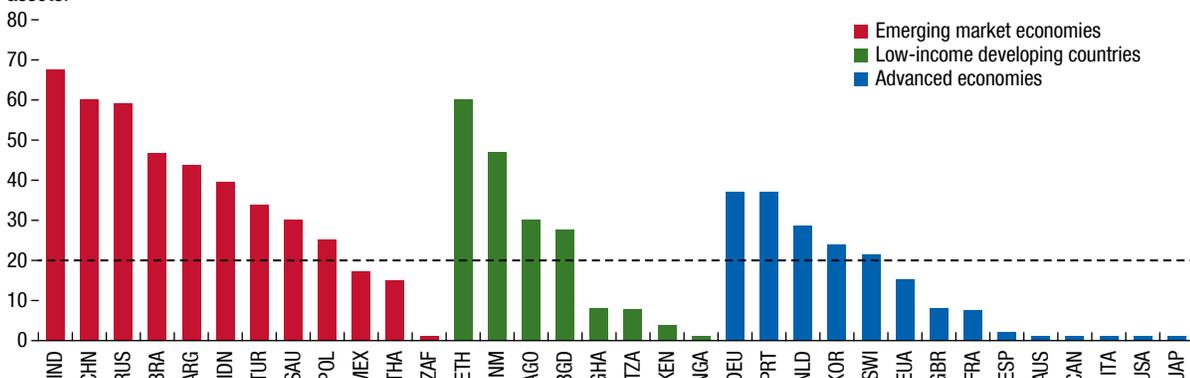
SOEs Are Diverse and Dominant in Core Sectors of Modern Economies

SOEs operate in virtually every country in the world. In some, they number in the thousands (China, Germany, Italy, Russia, Sweden, Ukraine) and are owned by national or subnational governments. SOEs owned by subnational governments, such as local bus, sewer, and water services, often outnumber SOEs owned by the central government. SOEs are among the largest corporations in some advanced economies (France, Italy, Norway) and comprise one-third or more of the largest firms in several emerging markets (China, India, Indonesia, Malaysia, Russia, Saudi Arabia, United Arab Emirates) (Kowalski and others 2013).

SOEs provide goods and services in almost all sectors of the economy but are especially prevalent in the key network sectors—banking, utilities, and transportation. They also manufacture everything from shoes to locomotive engines, manage real estate, and provide phone services. In Africa and Asia, SOEs dominate power generation. SOEs accounted for more than half of all infrastructure project commitments in emerging market economies and low-income developing countries in 2017 (Figure 3.1). Moreover, banking sector SOEs account for 40 percent or more of banking system assets in the BRIC economies (Brazil, Russia, India, China) and some low-income developing countries, and one-third or more in Germany and Portugal among advanced economies (Figure 3.2).

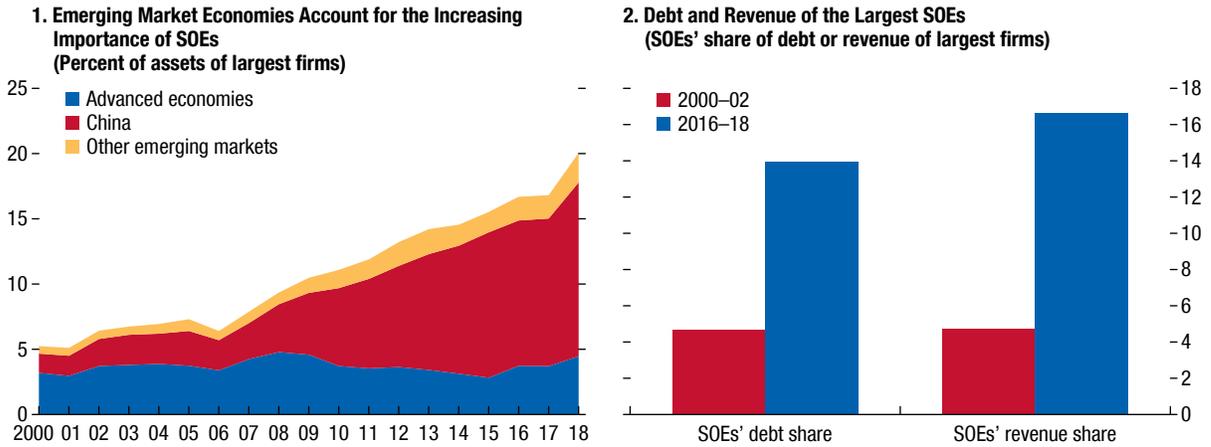
Figure 3.2. Public Banks' Share of Banking System Assets, 2016
(Percent)

In half of the G20 countries and several large developing economies, public banks hold around 20 to 60 percent of the banking system assets.



Sources: CEIC (China); central banks (Ethiopia, Italy, Japan); World Bank, Bank Regulation and Supervision Survey 2019.
Note: State-owned banks are those with at least 50 percent of equity owned by national or subnational governments. Data labels use International Organization for Standardization (ISO) country codes.

Figure 3.3. Share of Nonfinancial SOEs among the Largest Firms



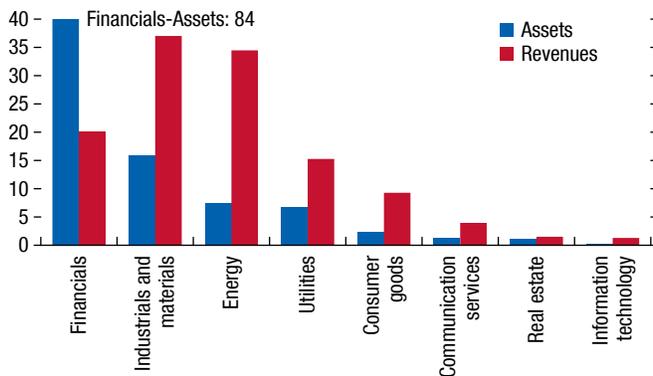
Sources: S&P Capital IQ; UNCTAD; S&P Global UDI World Electric Power Plant database; and IMF staff estimates.
 Note: Panel 1 shows the share of SOE assets among the world’s 2,000 largest firms. Panel 2 shows aggregate average values of SOE debt and revenue among the world’s 2,000 largest firms. The latter is a composite ranking of separate rankings of 2018 revenue and assets obtained from Capital IQ. SOE = state-owned enterprise.

The Largest SOEs Have Become Global Players

Over the past decade, the share of SOE assets among the world’s 2,000 largest firms has doubled to 20 percent (Figure 3.3, panel 1). At \$45 trillion in 2018, these assets are equivalent to 50 percent of global GDP. An important factor has been the relatively high economic growth rate of emerging market economies and especially of China, where SOEs still play a large role in the domestic economy (see the country case study in Online Annex 3.1). However, the balance sheet expansion also reflects international activities, for example SOEs have

accounted for 5–15 percent of annual cross-border acquisitions since 2008 (UNCTAD 2019). The same dynamics are behind the doubling of SOEs’ share of debt and revenue of the world’s largest firms since early 2000 (Figure 3.3, panel 2). The debt of the largest SOEs is \$7.4 trillion, compared with \$1.4 trillion in 2000. SOEs have become big players in global corporate debt markets. They now comprise one-third of the entire emerging market sovereign hard currency debt tracked in the most widely followed emerging market sovereign bond index (October 2019 *Global Financial Stability Report*). In terms of sectors, large SOEs are especially active in banking, energy, industrials, and utilities (Figure 3.4). For example, national oil companies are among the biggest oil companies in the world and control more than half of the global oil and gas production.

Figure 3.4. SOEs’ Share of Assets, by Sector
 (Percent of assets or revenues of largest firms, by sector)



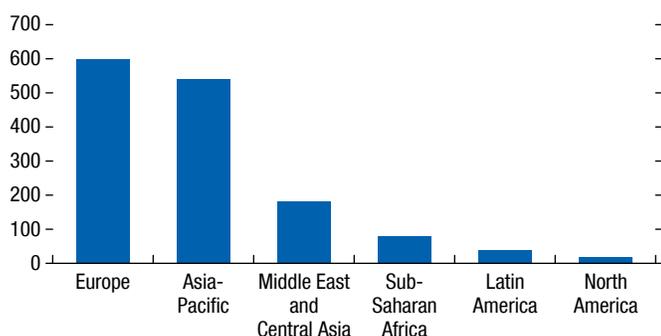
Sources: S&P Capital IQ; UNCTAD; S&P Global UDI World Electric Power Plant database; and IMF staff calculations.
 Note: The figure shows the share of SOE assets and revenues by sector among the world’s 2,000 largest firms. The latter is a composite ranking of separate rankings of 2018 revenue and assets obtained from Capital IQ. SOE = state-owned enterprise.

Many SOEs are no longer wholly owned by the government. Among the largest SOEs in the world, almost 60 percent have a mix of public and private sector owners. Greater prominence of mixed ownership originates in the European privatization strategies that began in the 1980s, in which governments chose to preserve a majority, or in some cases minority, position in the firms (OECD 2016a).^{2,3} This approach

²The motivations for these approaches varied but included the intention to privatize gradually and to keep a presence in sectors viewed as strategic.

³At the end of 2000, governments retained control of more than 60 percent of the 141 privatized firms from developed economies that Bortolotti and Faccio (2009) analyzed.

Figure 3.5. Multinational SOEs around the World
(Number of firms per region)



Sources: UNCTAD; and IMF staff calculations.
Note: SOEs = state-owned enterprises.

to privatization subsequently gained traction with emerging markets (for example, Brazil and China) and emerging market and developing economies.

Today, many of the largest SOEs are also multinationals (state-owned multinational enterprises, or SOMNEs), several with mixed ownership. A SOMNE is an SOE that controls assets of other entities in countries other than its home country. SOMNEs are spread around the world (Figure 3.5), but most originate in China, members of the European Union, India, Malaysia, Russia, South Africa, and the United Arab Emirates (UNCTAD 2019).⁴ Some are regional, whereas others are global players. In 2018, half of the top 10 (as measured by revenue) nonfinancial firms globally were SOMNEs. The list of the largest nonfinancial SOEs includes China National Petroleum, Volkswagen AG, Saudi Arabian Oil Company, and Russian firms Gazprom and Rosneft (Figure 3.6). SOEs evolve into SOMNEs for various reasons. Some desire to raise profitability, secure access to natural resources, or obtain technological knowledge. In other cases, some authors (for example, Cuervo-Cazurra and others 2014) have suggested that the objectives may have been partly political, as the business case seemed to be limited.

The Evolving Nature of SOEs Exacerbates Policy Challenges

The evolution of SOEs accentuates existing challenges. Mixed ownership blurs the distinction between *state owned* and *privately owned*—making it more

⁴The UNCTAD data set contains 1,500 SOMNEs identified by the United Nations as of 2018 and includes both publicly traded and non-publicly traded state-owned firms in 109 countries.

difficult to ascertain when governments are influencing a firm's business decisions. For example, the state may have only a direct minority shareholding in a company but exercise significant control over strategic decisions through a golden share, which can give it special voting privileges, or through other mechanisms (such as indirect ownership whereby the government owns stakes in public banks, public pensions funds, or sovereign wealth funds, that in turn own shares in a company).⁵

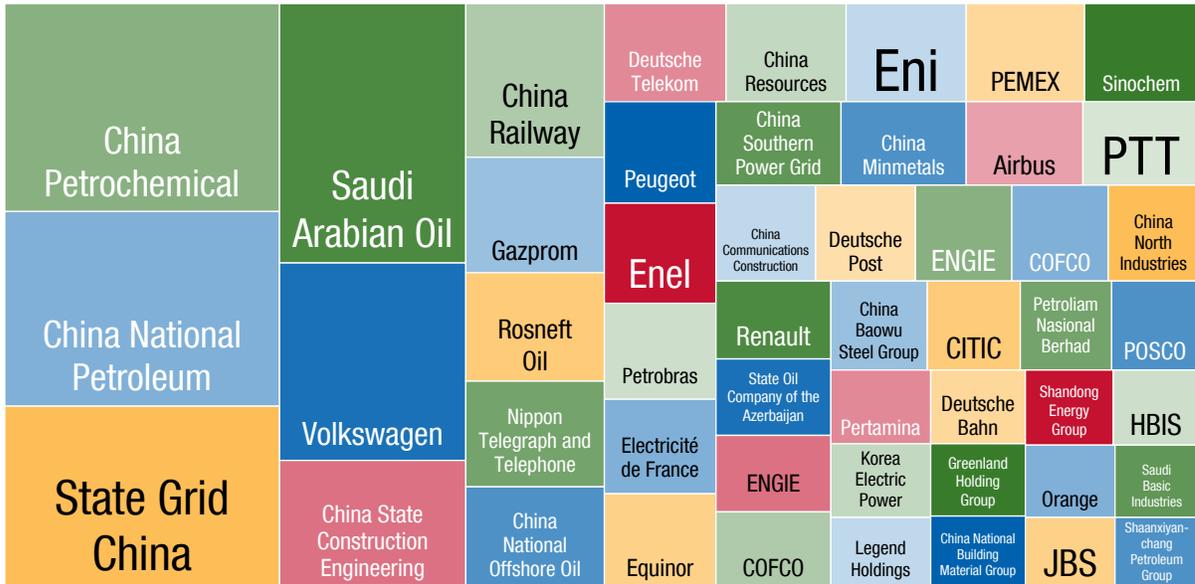
The growing global reach of SOEs means SOE-induced competitive distortions in the home market may be spilling over to the global market. Governments often provide support to SOEs to compensate them for pursuing policy goals. This support can be in the form of budget compensation (such as subsidies or capital transfers) but can also include cheap debt and equity financing, special tax and regulatory provisions, a privileged market position, superior access to information, and rescues from bankruptcy. However, government support may not be linked to a specific public mandate or may exceed the net cost of the mandate. In this case, government support can give the SOE a competitive advantage over private firms. For example, Deutsche Post (and its predecessors) over a period of 25 years until 2000 used profits from its letter delivery monopoly to cross-subsidize below-cost selling in the market for business parcel delivery (Capobianco and Christiansen 2011). More fundamentally, public ownership itself can be a source of implicit government support. Private creditors may offer more favorable terms to an SOE than they would to similar private firms and expect that the government would bail out the SOE if needed. IMF staff estimates based on a sample of SOEs in 65 countries suggest that SOEs benefit from lower debt-financing costs, on average, relative to private firms (Figure 3.7).⁶

SOEs' government-bestowed competitive advantages can have economic and fiscal implications domestically and internationally. For example, the advantages may distort competition (that is, tilt the playing field in favor of SOEs) or sustain inefficient SOEs, possibly lowering growth and tax revenues. The concerns with

⁵For example, the German state of Lower Saxony has only 20 percent of the voting rights in Volkswagen but, legally, also has a veto right over key decisions such as factory closures, mergers, and acquisitions (Cremer 2017).

⁶For example, in Vietnam, the state-owned bus company has higher operational costs than its private competitors but benefits from lower borrowing costs resulting from government guarantees (PPIAF 2016).

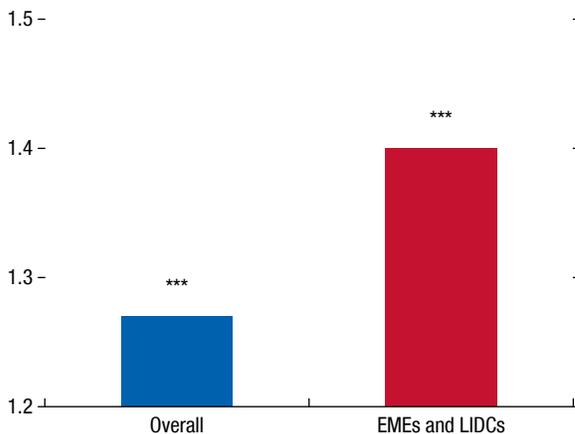
Figure 3.6. Top 50 Nonfinancial SOEs
(Percent of revenues relative to total revenues in largest 2,000 firms)



Sources: S&P Capital IQ; S&P Global UDI World Electric Power Plant database; UNCTAD; and IMF staff calculations.
Note: The largest 2,000 firms is a composite ranking of separate rankings of 2018 revenue and assets obtained from Capital IQ.

government support, for example, are present in the aluminum, semiconductor, and steel sectors. Recent studies of the aluminum and semiconductor sectors estimated that firms, including SOEs, in these industries received sizable government support through

Figure 3.7. Private Firms' Interest Premium, 2000–17
(Percentage point difference to SOEs' interest rate)



Sources: Orbis; and IMF staff estimates.
Note: The sample includes 65 countries, of which 37 are emerging market and developing economies. Interest was calculated as firm interest paid in (t) divided by the stock of debt in $(t-1)$. The analysis controls for firms' size and economic sector. EMEs = emerging market economies; LIDCs = low-income developing countries; SOEs = state-owned enterprises.
*** indicates statistical difference from zero at 1 percent significance level.

budget support, subsidized inputs, below-market loans, and equity financing (OECD 2019a, 2019b). Another study estimated that SOEs produced one-third of global steel output in 2016 amid private sector complaints that SOE peers received unfair government support (Mattera and Silva 2018). In all three sectors, overcapacity is a concern. Moreover, if foreign governments view SOEs' expansion abroad, either directly or indirectly supported by the home government, as a means to achieve foreign policy or national security goals, they may unilaterally take measures to counteract that expansion.

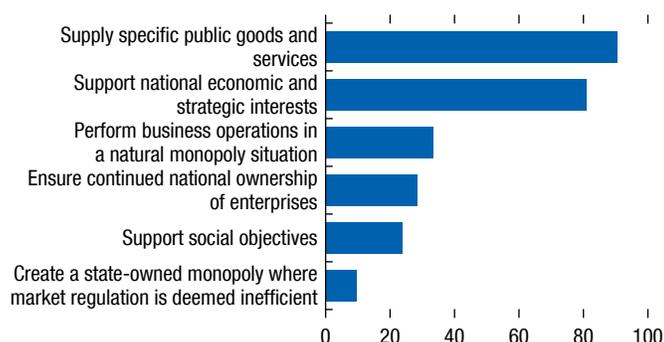
In the next sections, the chapter reviews international experiences on the old and new challenges that governments face in managing SOEs. The chapter also discusses how countries can boost SOEs ability to meet their public mandates in an efficient manner, while promoting fair competition.

Achieving Policy Objectives

Struggling to Meet Policy Mandates

Governments mandate SOEs to pursue a diverse set of policy goals (Figure 3.8). In general, government intervention through SOEs is often justified to correct market failures. One example of market failure is a natural monopoly, wherein the initial cost of building the

Figure 3.8. Objectives of SOEs in CESEE Countries
(Percent of respondents)



Source: Richmond and others 2019.

Note: Responses from governments of CESEE countries to a survey about the nonfinancial objectives of SOE ownership. CESEE = Central, Eastern and Southeastern European; SOE = state-owned enterprise.

infrastructure to provide the good or service, such as water and sewer systems, is so large that private firms may be reluctant to enter the market. Another example is when it is not possible to charge individuals for use of the good (for example, street lighting), which means that private firms may not provide enough of it. In other instances, SOEs are established to develop new sectors, especially in developing countries, such as the copper-mining sector in Chile in 1976 or the oil and gas sector in Ghana in 1983. However, SOEs can also be found producing goods and services in a competitive environment (for example, soft drinks, cars, or cleaning services) without a clear, specific policy mandate. SOEs are sometimes used to pursue broad macroeconomic goals, such as promoting credit growth.

SOEs, especially in emerging market economies and low-income developing countries, have faced challenges in trying to achieve policy mandates, often multiple ones, within a sustainable business model. A core problem has been that these mandates are not clearly specified or adequately costed. Another common weakness is limited transparency of SOE operations and their financial relations with government. These challenges lead to the following problems:

- *Unfunded mandates:* The lack of clear and funded mandates can weaken the financial health of SOEs.⁷ For example, firms' lack of freedom to set prices

⁷Petri and Taube (2003) estimate quasi-fiscal activities in the energy sector at 26.7 percent of GDP in Azerbaijan in 1999 and 6.5 percent in Ukraine in 2000.

or tariffs to cost-recovery levels—in an attempt to ensure the affordability of goods or services—could lead to systematic losses. This can result in a buildup of SOE debt, including arrears, and inefficient provision of the good or service (such as deterioration of the railway network from lack of maintenance) or limited accessibility (for example, the electricity grid not reaching rural areas) (Ter-Minassian 2017). Similarly, if an SOE is asked to promote employment, higher labor costs may weaken the firm's efficiency and financial viability.

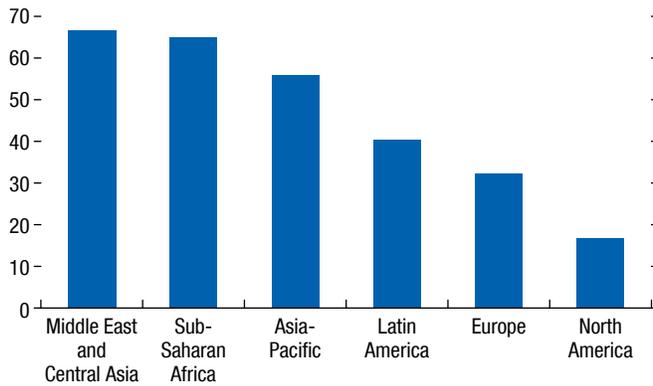
- *Government bailouts:* The expectation that governments will eventually compensate, or bail out, the SOE for losses may provide managers with incentives to not pursue efficiency, to take larger risks, or to borrow excessively.
- *Weak governance and oversight:* In many countries, government agencies do not have sufficient information or capacity to properly monitor SOEs, and others lack guidelines for financial reporting by SOEs (Allen and Vani 2013). More generally, weak governance and corruption are among the main sources of the difficulties that SOEs face (April 2019 *Fiscal Monitor*; Wilkinson 2018).
- *Costly government dividend and tax policies:* SOEs should share their profits with the government; however, excessive dividend payouts, dictated by budgetary needs, could have implications for SOEs' ability to operate. For example, Argentina's state-owned oil company, YPF, paid dividends of \$602 million in 2016 despite incurring a loss of more than \$1 billion that year.

These challenges are particularly relevant in critical nonfinancial network sectors (power, water, ground transportation, energy) as well as in public banks. The rest of this section delves into these sectors.

Network Sectors: Special Challenges

Network industries, sectors in which a fixed infrastructure and a degree of standardization is needed to deliver the goods or services efficiently to end users, are critical for generating economic growth and achieving the Sustainable Development Goals. Safe water is essential for life and health. Reliable electricity saves businesses and consumers from having to invest in expensive backup systems. Affordable transportation underpins business activities and is key to generating

Figure 3.9. SOEs' Power Generation Capacity, 2017
(Percentage of total, by region)



Sources: S&P Global; UDI World Electric Power Plant database; and IMF staff calculations.
Note: SOEs = state-owned enterprises.

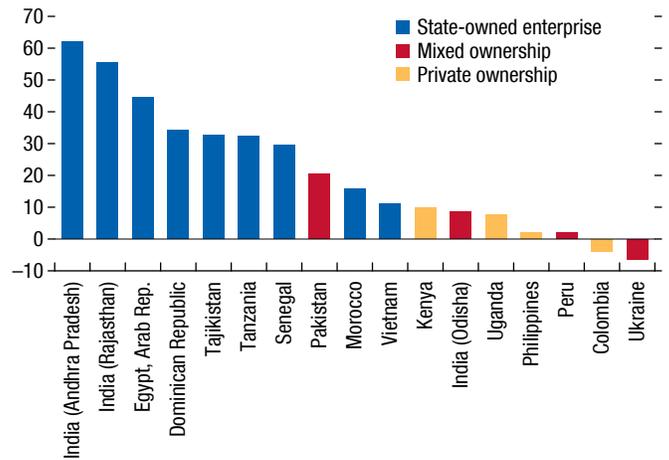
employment and advancing economic development. Thus, it is not surprising that the government intervenes in many of these industries, especially where the private sector has not begun operating.

SOEs dominate the power sector, especially transmission and distribution, given that these segments have characteristics of natural monopolies. Private investors are involved mainly in the generation of electricity, but SOEs are major players even there (Figure 3.9). In advanced economies, evidence is mixed on whether reforms, including privatization, delivered the anticipated efficiency gains (Gathon and Pestiau 1996, see Box 3.1). Government efforts to expand access and promote greater efficiency in power sectors in low-income developing countries have yielded mixed results. Access remains an urgent challenge—notable progress has been made, but 840 million people live without electricity, most in Africa.⁸ Although private sector entrants contributed to expanding generation capacity, network expansion and access relied largely on SOEs. A common problem is the failure to achieve cost recovery (Figure 3.10). Below-cost tariffs reduce an SOE's capacity to invest—hurting access and growth—and weaken the financial situation of the firm.

Specific features of the water sector also provide a rationale for government intervention (Menard and Peeroo 2011; World Bank 2004). Delivery systems require major investments in infrastructure, and potable water and adequate sewerage are essential for

⁸See <https://www.worldbank.org/en/news/press-release/2019/05/22/tracking-sdg7-the-energy-progress-report-2019>

Figure 3.10. Gap between Costs and Electricity Tariffs
(Percent of total cost)

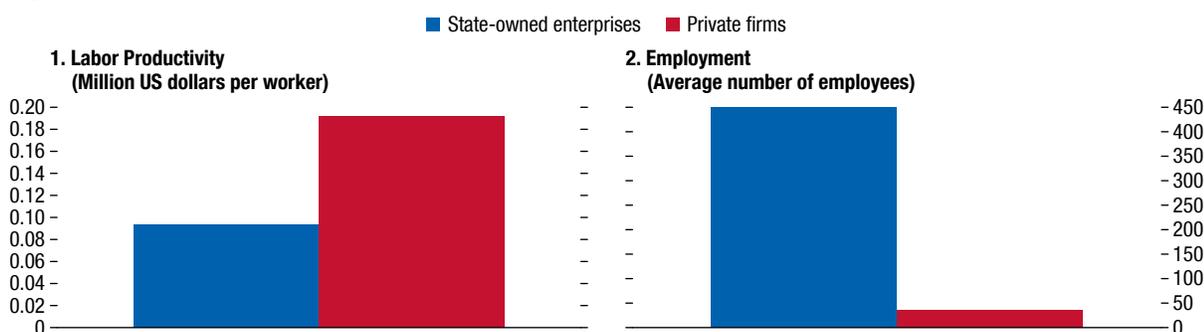


Source: World Bank 2019.
Note: Percent of total cost is the gap (the difference between total cost and the tariff) divided by total cost.

public health. Most countries have opted for a high degree of public provision through SOEs. Among advanced economies, public provision is dominant in the majority (for example, Australia, Germany, Japan, and the United States); only a few rely significantly on private providers (for example, Czech Republic, France, and England) (Pérard 2009). Recently, Paris (France), Berlin (Germany), and several US municipalities have remunicipalized water management (Warner and Aldag 2019).⁹

In developing countries, the challenge in the water sector is staggering. More than 2 billion people lack safely managed services, partly reflecting weak SOE performance (WHO and UNICEF 2017; World Bank 2004). The solutions are not easy but possible. There is growing awareness of the need for cost recovery, to ensure sustainability and improve service, while safeguarding provision to the poor. For example, in Burkina Faso, the public water utility has been instrumental in doubling the population's access to drinking water over the past two decades by introducing a progressive tariff grid (IMF 2015). In Mali, however, a private concession on water and electricity failed, despite having an independent regulator, owing to disagreement over the level of tariffs, political interference, and the government not paying its own

⁹Studies do not show significant performance differences between private and public provision of water; see, for example Pérard (2009) and Suárez-Varela and others (2016).

Figure 3.11. National Oil Companies' Productivity and Employment

Sources: Orbis; Natural Resource Governance Institute; and IMF staff estimates.

Note: The sample includes 98 national oil companies and 1,520 private firms.

utility bills (Balance and Tremolet 2005; Estache and Wren-Lewis 2009).

Transportation is another crucial sector for economic activity and public well-being. The provision of public transportation, especially at the local level (trains, subways, buses), has involved significant government intervention justified by the need to ensure affordability as well as to address congestion, pollution, or accidents. Local SOEs commonly provide ground transportation in advanced economies, whereas informal private transportation services—often less safe and more polluting—are widespread in emerging market and economies. Allowing SOEs (or even private operators) to charge prices that cover investment and maintenance needs has proven challenging.¹⁰

Many oil-exporting countries have created national oil companies (NOCs) to exercise control over oil and gas exploration and garner potentially large profits for the state. However, NOCs are significantly less profitable and efficient than their private peers, partly owing to pressures from the government to engage in excessive hiring (Figure 3.11). Another issue is governments often have NOCs sell fuel at subsidized retail prices and undertake social spending. In some cases, NOCs

take on most of the exploration of oil and gas, leaving governments with the costs and risks of exploration, instead of simply taxing profits. Moreover, the large profits create strong incentives for corruption (April 2019 *Fiscal Monitor*).

Are Public Banks an Appropriate Tool for Macro-Fiscal Management?

Government intervention in the financial system, including through public banks, is significant in many countries.¹¹ Although the presence of public banks—commercial banks that provide corporate and retail banking services to the general population and development banks that provide credit for development-related projects—has declined sharply since the 1990s as economic liberalization and financial globalization gained traction, they still have significant market share in several large economies.¹² State ownership of banks has been justified by the need to address market failures and promote economic development, although many banks also pursue profit maximization (see Box 3.2).¹³ There is some recent renewed government interest in public banks, especially development

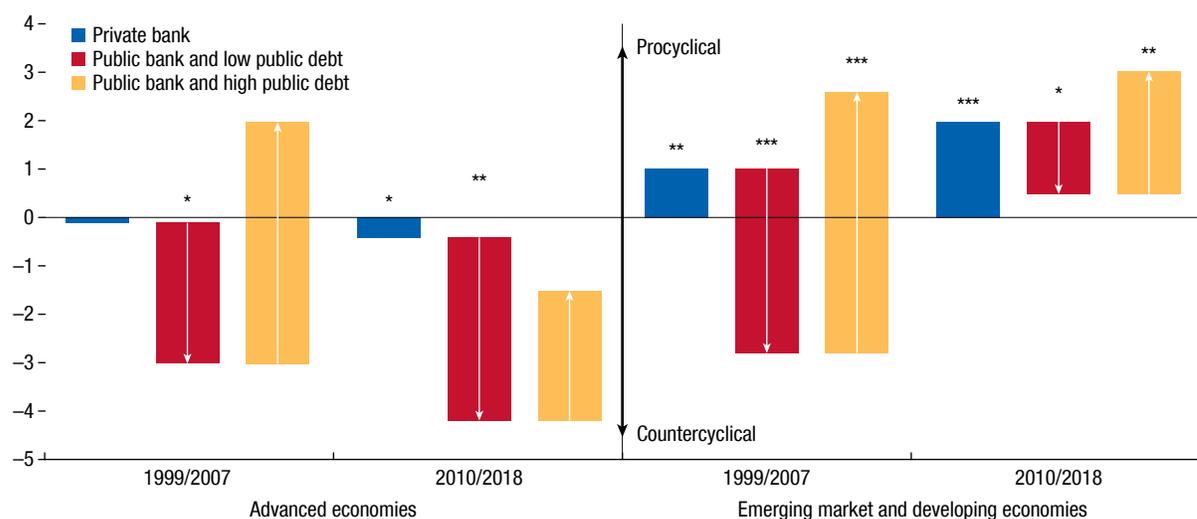
¹⁰For example, protests in Chile after a metro fare increase are in part rooted in the failed 2007 reform of the informal bus transportation system in the capital. The reform was intended to reduce congestion, pollution, and accidents through additional dedicated bus lines, modernization of the bus fleet, and fare integration with the metro (Gomez-Lobo 2012). The massive influx of passengers after the reform called for large investments that could not be covered by tariffs. The financial viability of the SOE operating the metro deteriorated rapidly, resulting in large direct subsidies from the government.

¹¹This section focuses on public banks, but governments have also used SOEs in other financial areas, including insurance and mortgage markets (for example, in Canada and the United States, among many others).

¹²The global financial crisis led to a wave of large-scale recapitalizations and nationalizations of failing banks, notably in advanced economies, that has not been completely unwound (Igan and others 2019).

¹³On the role of public banks, see also Cull, Martinez-Peria, and Verrier (2017); Ferrari, Mare, and Skamnelos (2017); World Bank (2012); and Yeyati, Eduardo, and Panizza (2005).

Figure 3.12. Change in Loan Growth over the Cycle
(When GDP grows 1 percentage point above trend; percentage points)



Sources: Fitch Connect; and IMF staff estimates.

Note: Regressions control for several factors, including other bank characteristics (see Online Annex 3.3). Public banks are defined as banks with over 25 percent of equity owned by the government. Countries with high public debt are those above the 75th percentile of the distribution across the whole sample, roughly corresponding to 100 percent of GDP for AEs and 60 percent of GDP for EMDEs. AEs = advanced economies; EMDEs = emerging market and developing economies. ***, **, and * indicate statistical significance of the bars at the 1, 5, and 10 percent level, respectively. Bars indicate distance from zero for blue bar or preceding bars for the others.

banks, owing to their potential role in funding infrastructure investment.¹⁴

Governments also call on public banks to fight recessions. Public banks were used widely for this purpose during the global financial crisis, often financed by direct support from the governments' budgets (for example, loans or capital injections by Brazil, Canada, and India). Countries also raised credit ceilings of their public banks (for example, Finland and Korea) or issued special guarantees (for example, Mexico) for public banks to support key markets and firms (World Bank 2013).

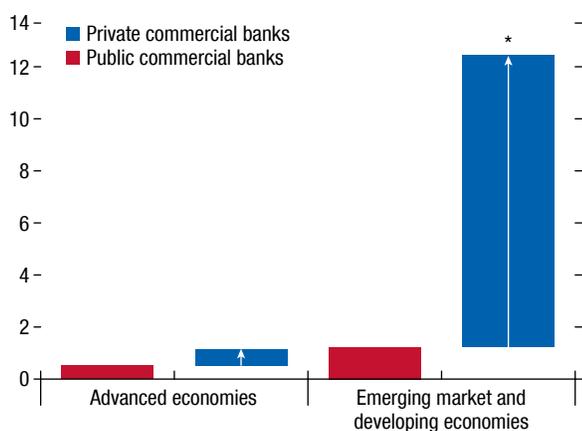
There are, however, limits to the effectiveness of public banks in stabilizing the economy. Public bank lending has been less procyclical than private bank lending, on average, in the past 20 years but not in developing countries with high public debt levels (Figure 3.12). This different behavior likely reflects higher financing costs of and lower government subsi-

dies to public banks in economies with tighter budget constraints. For example, in the case of the Brazilian development bank, BNDES, credit surged during the global financial crisis and for a few years during the strong postcrisis recovery but declined sharply during the recession of 2014–16, in part because soaring public deficits and debt closed the door on government lending to public banks (case study for Brazil, Online Annex 3.2). The quality of this rapid credit growth may not have been adequately assessed in the haste to extend credit, potentially leading to nonperforming loans in the future.

Public banks may also be used to fund the government and simultaneously receive support from the government. This sovereign-bank nexus potentially exacerbates the financial vulnerabilities of both (April 2019 *Global Financial Stability Report*; Dell'Ariccia and others 2018). Public banks tend to hold larger amounts of sovereign debt than do private banks, especially in emerging market and developing economies with higher public debt vulnerabilities (Figure 3.13). Moreover, during the sovereign debt crisis in Europe, domestic banks, particularly state-owned ones, were more likely to increase their holdings of domestic government bonds in fiscally distressed economies, suggesting a

¹⁴See, for instance, “National development banks are back in vogue” (*The Economist* 2019). Several new public development banks have been established since the global financial crisis, including PT Sarana Multi Infrastruktur in Indonesia (2008), Bpifrance (2012) and Société de financement local (2013) in France, the Development Bank of Nigeria (2013), and FinDev Canada (2017).

Figure 3.13. Bank Holdings of Government Bonds in Countries with High Public Debt
(Relative to countries with low public debt in percent of assets, 1999–2018)



Sources: Fitch Connect; and IMF staff estimates.

Note: The regressions control for several factors including bank characteristics (see Online Annex 3.3). Public banks are defined as those with more than 25 percent of equity owned by the government.

* indicates statistical difference from zero at 10 percent significance level.

“moral suasion” mechanism (Ongena, Popov, and Van Horen 2019). In India, government guarantees allowed public banks—even vulnerable ones—to expand credit during the global financial crisis with deposits moving from vulnerable private to “safer” public banks. However, the loan quality of these public banks soon deteriorated, increasing financial sector fragility and contingent liability risks for the government (Acharya and Kulkarni 2019).

Are SOEs Performing Efficiently?

Many governments demand that SOEs achieve their public mandates, perform efficiently, and compete with private firms. This section compares SOEs’ financial performance with that of private firms and analyzes its determinants using data for about 1 million individual firms across 109 countries.¹⁵ It also reviews evidence on governments’ exposure to fiscal risks from SOEs.

¹⁵Of the 969,000 firms in the sample, about 949,000 are fully private, 15,000 are majority state owned, and 4,000 are minority state owned. The database includes mainly firms from advanced and emerging market economies with a smaller sample from low-income countries. The results are robust when constraining the analysis to countries where the coverage of firms is high. See Online Annex 3.4 for details.

SOE Financial Performance

A simple comparison reveals that profits and labor productivity are lower in SOEs than in private firms (Figure 3.14).¹⁶ This finding is consistent with country or regional studies for China, Russia, and other countries in the Central, Eastern, and Southeastern European region (Abramov and others 2017; Lardy 2019; Richmond and others 2019). In part, this difference could reflect the cost of public mandates—for example, providing services at below-cost prices to underserved communities or promoting employment beyond what is efficient for the firm—but other factors may be at play. It is important to note that if the differences are because SOEs are less efficient, the resulting misallocation of resources can reduce economywide productivity (Song, Storesleten, and Zilibotti 2011).

The Role of Economic Sectors and State Ownership in SOE Performance

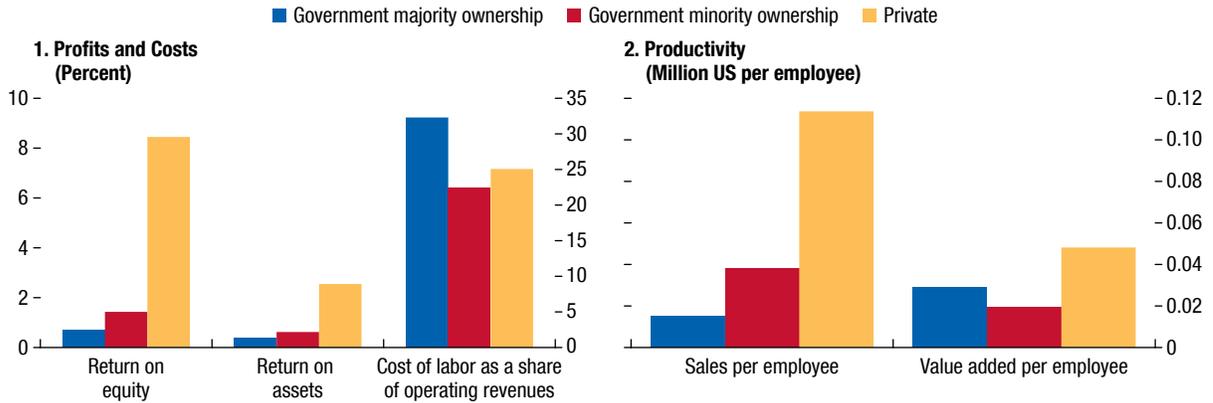
SOEs’ performance gaps may reflect differences in the sectors in which they operate or in ownership. Cross-country evidence shows that SOEs are less productive than private firms in the same sectors¹⁷ and that the productivity gap tends to be larger in sectors where there is usually more competition (for example, agriculture and manufacturing). In some of the regulated sectors (such as utilities), the gap is lower (Figure 3.15).

Mixed ownership also makes a difference in firm performance. Private owners put greater emphasis on profits and efficiency. Listed mixed-ownership enterprises are subject to greater monitoring by private investors and analysts (Biglaiser and Brown 2003; D’Souza, Megginson, and Nash 2005; Pargendler, Musacchio, and Lazzarini 2013). The evidence confirms that partial involvement of the private sector is beneficial (Megginson and Netter 2001; Vining and Boardman 1992). The analysis in this chapter indicates that firm productivity is lowest when the government has a majority position—private firms are three times more productive—but the gap is narrower when the government has a minority position (Figure 3.16).

¹⁶The analysis is based on SOE financial data, given that it is available for a large set of firms. For example, labor productivity is proxied by sales per employee, which does not necessarily only reflect differences in technical efficiency. If SOEs are restricted to charging lower prices relative to private firms, this would have a negative effect on sales per employee.

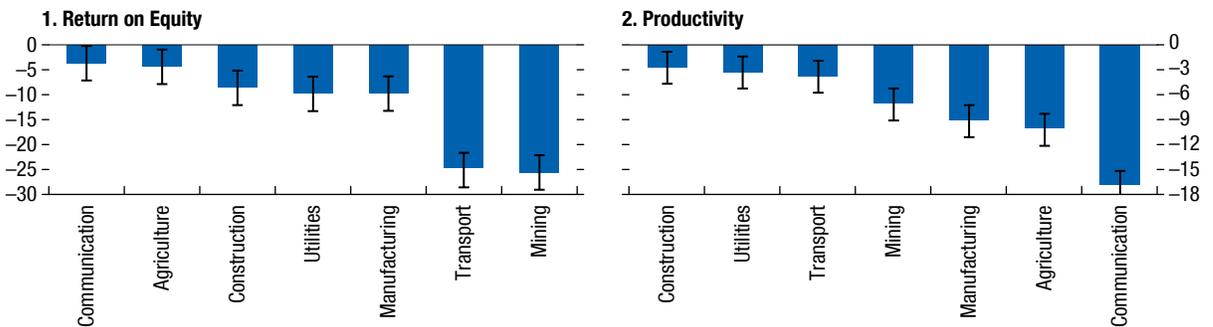
¹⁷The results in this section are similar for other performance measures. See Online Annex 3.4.

Figure 3.14. SOEs' Performance Relative to Private Firms



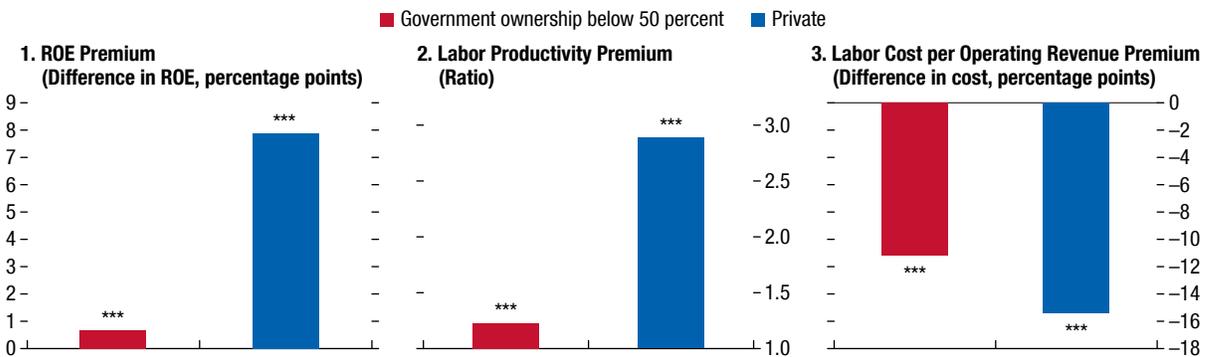
Sources: Authorities' annual reports on SOEs; Natural Resource Governance Institute; Orbis; and IMF staff estimates.
 Note: The panels are based on median values. Weighted averages show a similar pattern. SOEs = state-owned enterprises.

Figure 3.15. Relative Performance of SOEs, by Sector
 (Percentage point difference in SOEs performance relative to private firms)

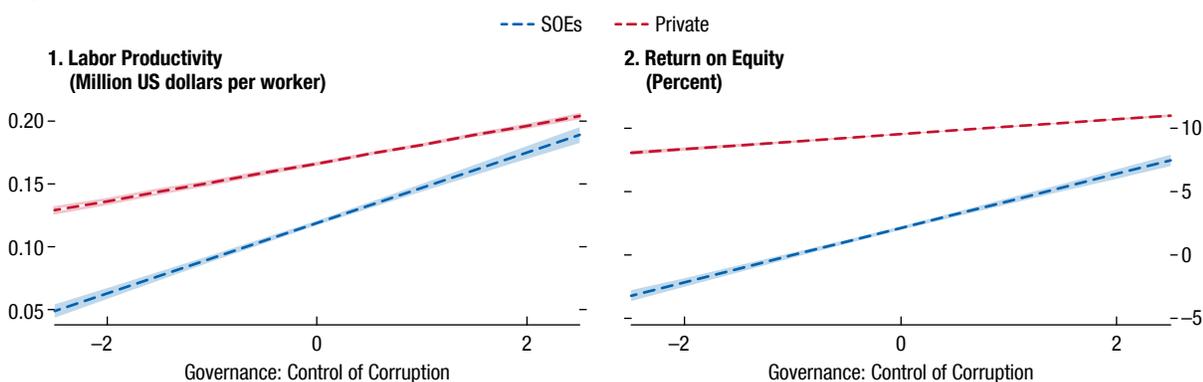


Sources: Authorities' annual reports on SOEs; Natural Resource Governance Institute; Orbis; and IMF staff estimates.
 Note: For productivity (sales per employee), sales data are based on 2017 prices. SOEs are firms with 50–100 percent public sector ownership. Data are from 1999 to 2017. SOEs = state-owned enterprises.

Figure 3.16. Degree of State Ownership and Firms' Performance



Sources: Authorities' annual reports on SOEs; Natural Resource Governance Institute; Orbis; and IMF staff estimates.
 Note: The panels show the performance of firms depending on the degree of state ownership and controlling for other factors. "Minority ownership" means that the government owns less than 50 percent of the company; "majority ownership" means that the government owns 50 percent or more. For productivity (sales per employee), sales data are based on 2017 prices. Data are from 1999 to 2017. The coefficients are relative to firms with government majority ownership. ROE = return on equity; SOEs = state-owned enterprises. *** indicate statistical difference from zero at 1 percent significance level.

Figure 3.17. Governance and Firms' Performance

Sources: Authorities' annual reports on SOEs; Natural Resource Governance Institute; Orbis, World Bank, Worldwide Governance Indicators; and IMF staff estimates.

Note: The panels illustrate the effect of control of corruption on firms' performance depending on the type of ownership. SOEs are firms for which the government owns 50 percent or more. The analysis controls for firm-specific characteristics, country-specific variables, and sector where the firm operates. The Control of Corruption Index provides a relative measure of perceived corruption. Data are from 1999 to 2017. SOE = state-owned enterprise.

There are also significant differences for return on equity, labor costs, and other measures of performance. Empirical studies on privatization complement these results (see Box 3.1).

Good Governance Is Critical

Weak governance in government harms all firms but has an especially deleterious effect on SOEs (Baum and others 2019). This subsection reports on the relationship between financial performance and a measure of countrywide perceived governance (control of corruption), controlling for the level of development and other factors.¹⁸ The results show that as countrywide perceived governance improves, SOEs' performance and productivity gaps relative to private firms shrinks (Figure 3.17). SOEs that operate in countries with high levels of perceived corruption are one-third as productive as private firms, on average; in countries with strong governance, the productivity gap is 7 percent. Regarding profitability, the gap with private firms declines but remains significant—a difference of 4 percentage points in return on equity between SOEs and private firms in countries with good governance scores—which may reflect, at least in part, unfunded public mandates.

¹⁸The Control of Corruption index from the Worldwide Governance Indicators (WGI), available since 1996, aggregates information from more than 30 different sources. Caution is needed in interpreting scores for any individual country given measurement error because the quality of underlying data can vary across countries and data sources.

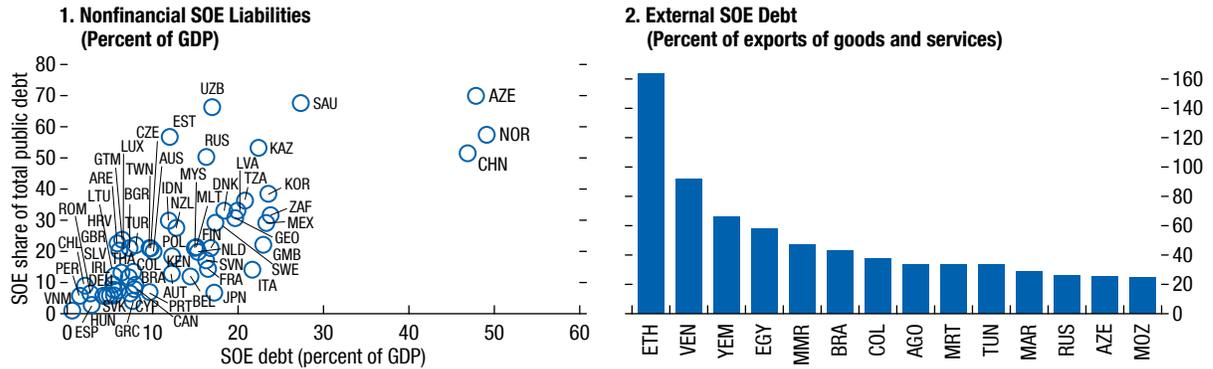
One possible driver of performance across different degrees of governance is the sector in which the SOE operates. Countries with better governance scores seem to be more selective, having SOEs in specific sectors, especially utilities and transportation, in which there is a stronger reason for intervention and the performance of SOEs is closer to that of private firms. These countries have fewer SOEs in areas in which private firms have significantly superior performance (for example, manufacturing).

Fiscal Costs and Risks to the Government

SOE performance and the realization of fiscal risks from SOEs can significantly affect public finances. Over the years, governments have provided significant support to financial SOEs (mainly capital injections) and nonfinancial SOEs (predominantly recapitalizations and debt assumptions), with the maximum annual support to financial and nonfinancial SOEs reaching 18 and 16 percent of GDP, respectively (updated version of database by Bova and others 2016).¹⁹ SOEs that operate in the airline, banking, mining, railway and utility sectors are among those that required costly support. For example, Italy's national airline is under bankruptcy protection and has received large loans or transfers from the government

¹⁹Governments have also provided significant support to private financial institutions and nonfinancial companies, most noticeably during the global financial crisis.

Figure 3.18. SOE Debt Vulnerability



Sources: IMF’s Public Sector Balance Sheet (PSBS) database; Eurostat; S&P Capital IQ; and IMF staff calculations.
 Note: Debt drawn from S&P Capital IQ is only for the largest SOEs in the country. S&P Capital IQ and Eurostat data are for 2017 or 2018. Debt data drawn from the PSBS database covers a range of years from 2012–2016 and, for some countries, represent total liabilities less equity. Data labels in the figure use International Organization for Standardization (ISO) country codes. SOE = state-owned enterprise.

Sources: World Bank 2020; WEO 2019; and IMF staff calculations.
 Note: The figure includes both financial and nonfinancial SOEs. Data labels in the figure use International Organization for Standardization (ISO) country codes. SOE = state-owned enterprise.

in the past few years.²⁰ Similarly, South Africa’s government-owned power company, Eskom, is receiving a rolling government bailout of 2½ percent of GDP over three years, although the cost may turn out larger (IMF 2019b). In Belarus, over the past years, the government on average provided 1½ percent of GDP in subsidies and about 2 percent of GDP in additional off-budget support (Richmond and others 2019).

More broadly, SOE debt levels can pose a risk to public sector finances, even in the absence of explicit government guarantees. In some countries, debt of the SOEs exceeds 20 percent of GDP and in several cases constitutes half or more of the public sector debt stock (Figure 3.18). In other countries, SOE external debt exceeds 25 percent of the countries’ exports of goods and services (see also IMF 2020). Even if the debt was incurred to develop a natural resource, as in oil-exporting countries, the debt may increase the vulnerability of the government to shocks (for example, a fall in oil prices). In addition to debt, SOEs may have significant obligations to private parties through joint ventures, public-private partnerships, and power purchase agreements.

The realization of SOE risks may also have multiplier effects on the whole economy. When these risks materialize in public banks, credit growth may be curtailed,

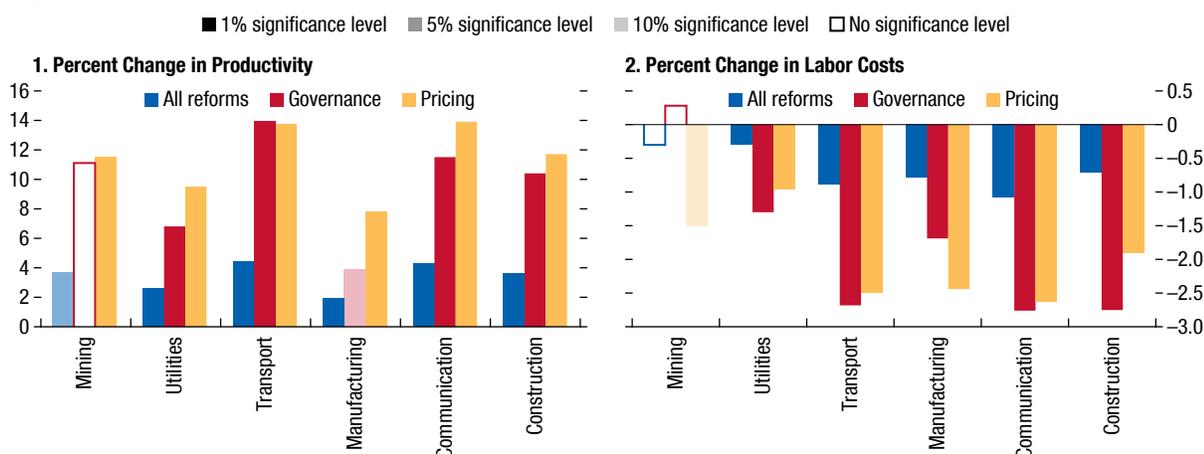
undermining economic activity. As for nonfinancial SOEs, the larger they are the more significant the impact of their financial imbalances can be for employment and investment. If financially impaired SOEs dominate a key economic sector such as power, they can also affect the financial system and competitiveness (for example, Ghana, see Online Annex 3.5). The public sector balance sheet approach can be used to show how a macroeconomic shock can have cascading effects through interrelationships between financially vulnerable SOEs (for example, in The Gambia) to the national budget (October 2018 *Fiscal Monitor*).

Reforms Can Help

The discussion so far suggests that there is scope for SOE reforms targeting governance and financial incentives to improve SOE performance. Some empirical cross-country evidence, although limited, indicates that SOE reforms can improve their efficiency (Megginson and Netter 2001). Taking advantage of a novel database for a sample consisting primarily of emerging market and developing economies, as well as a few advanced economies (members that had IMF-supported programs in 2002–17), we study the effect of SOE reforms in a cross-country setting.²¹

²⁰Alitalia was privatized in 2009, but in 2014 the government took a minority stake. In 2017, the airline was put under special administration. In 2020, the company was formally reincorporated as a public holding.

²¹The information comes from data on structural conditionality in the context of IMF-supported programs. See Online Annex 3.6 for details.

Figure 3.19. Impact of SOE Reforms, 2002–17

Source: IMF staff estimates.

Note: “All reforms” includes the impact of financial target setting and arrears clearance in addition to governance and pricing reforms. “Pricing” includes, among others, implementation of automatic fuel prices and electricity tariffs adjustments. The coefficients measure the impact of SOE reforms on average productivity and average cost changes. The coefficients can be interpreted as the average improvement of productivity or costs following reforms. SOE = state-owned enterprise.

The reforms target (1) SOE governance (for example, SOE management, oversight, and transparency)—not governance in general; (2) public enterprise pricing (such as tariffs and automatic fuel price mechanisms); (3) arrears clearance; and (4) the achievement of specific financial targets.

The results show that some reforms positively affect financial performance.²² Reforms of SOE governance and pricing improve financial variables for all sectors except for mining SOEs (Figure 3.19). For example, an implemented governance reform is associated with an increase in productivity of \$10,000 per worker and a reduction of costs of 5 percent in the electricity sector. Reforms such as arrears clearance and financial targets have weaker or no impact, perhaps reflecting that if other structural reforms are not part of the package the underlying factors driving performance may not change.

These reforms require building and sustaining broad popular support over several years. It is also important that improvements in the financial health of SOEs

²²SOE reforms are implemented SOE reforms during IMF-supported programs. Governance reforms span a wide array of reforms related to monitoring, auditing, and management; structural reforms to a sector as a whole (if they are governance related); and others. Public enterprise pricing reforms primarily concern tariff structures and typically target SOEs in electricity, gas, oil, heating, and water sectors.

be achieved while protecting the more vulnerable segments of the population from possible adverse effects. Jordan’s and Ukraine’s experiences provide two examples.

- Subsidies to Jordan’s electricity company, NEPCO, were close to 6 percent of GDP in 2014 (for context, the share of total health spending was 7.5 percent of GDP in the same year). NEPCO undertook a series of reforms, including gradual tariff adjustments since 2012 and the installation of a liquefied natural gas plant to ensure cheaper inputs. At the same time, vulnerable households were supported by increased cash transfers. As a result, public transfers to NEPCO were eliminated as of 2015, and NEPCO has posted small positive or negative net operational balances since 2016.
- Ukraine’s national oil and gas company, Naftogaz, turned from a loss-making firm receiving significant budget aid to a profitable company within a few years. Significant gas and heating price increases, along with restructuring and governance reforms as of 2014 were accompanied by the extension of utility subsidy programs for vulnerable households.

In both countries, ongoing efforts will be needed to sustain the reforms, including targeted support to the most vulnerable and continued efficiency gains.

How to Get the Most Out of SOEs

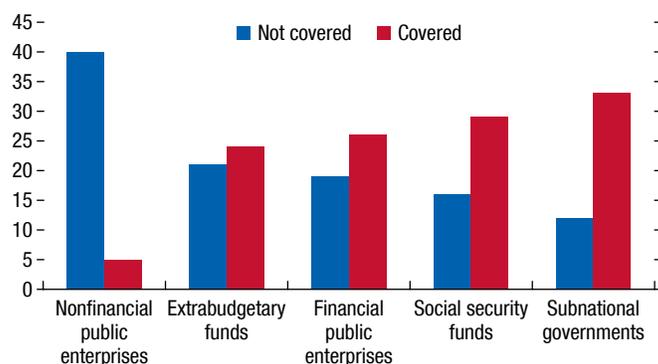
As the previous sections illustrate, SOEs can be difficult to manage and costly to the budget and the economy. This is particularly true when they are subject to excessive political interference and are used as vehicles to disguise off-budget spending and borrowing, patronage, or corruption. This section explores what countries can do to overcome these and other challenges and get the most out of SOEs. Although SOEs exist for many reasons, including historical and political circumstances, it is important to regularly review whether the rationale for each SOE remains valid and whether it delivers value for taxpayers' money. Given the potentially large costs, countries should use SOEs selectively and only where government intervention through SOEs can be most effective. The case is weaker for SOEs that operate in competitive sectors because private firms provide goods and services more efficiently. In contrast, experience suggests a stronger case for public intervention in sectors in which the government strives to achieve universal delivery of goods and services at affordable prices (for example, public utilities and ground transportation)—this is an area where SOEs are heavily present around the world.

For their SOEs to be successful, many countries will need to strengthen the link between SOEs and public sector goals, improve firm-level incentives, and enhance governance institutions. Some countries, for example, the Nordics (Online Annex 3.7), have built strong SOE frameworks that encompass these elements with the aim of ensuring they deliver value for taxpayers' money.

Aligning SOE Activities with Public Sector Goals

Consistency between SOE activities and general government policies is important to prevent the two parts of the public sector from working at cross purposes. For example, if SOEs accumulate significant debt when the rest of the public sector is aiming at fiscal adjustment, the government's efforts to reduce its borrowing costs may be undermined. Coverage of SOEs in the public accounts and provision of the right incentives for SOEs allow for better alignment of SOE actions and performance with overall government objectives.

Figure 3.20. Fiscal Coverage beyond the Central Government in Sub-Saharan Africa
(Number of countries)



Source: IMF staff survey of 45 countries in sub-Saharan Africa.

Consistency with the Broader Public Sector Goals

SOE financial operations and assets and liabilities should be fully integrated into the financial statements of the public sector. Applying such a public sector balance sheet approach would enhance transparency of SOE financial performance and relations with other parts of the public sector (October 2018 *Fiscal Monitor*). Some countries or regions already implement a public sector balance sheet approach (Australia, New Zealand, United Kingdom) or partially reflect SOEs' main financial indicators in the public accounts (for example, Latin America). But many others do not, as is the case in sub-Saharan Africa (Figure 3.20) and most of Europe.²³ Fully integrating SOEs into a public sector accounting framework will likely require an incremental approach in some countries. In the meantime, countries that currently report information only on central or general government fiscal results (revenue, expenditures, budget balance, and debt) should complement this reporting with memorandums that summarize government guarantees to SOEs (in addition to the recommended SOE financial disclosure practices outlined in the transparency section below).

Given that SOEs use public resources and pursue policy goals, it is important to ensure that they collectively operate consistently with the country's broader macro-fiscal objectives. Those objectives are often embedded in fiscal targets, such as the overall budget

²³Based on IMF's Fiscal Transparency Evaluations since 2014, around 90 percent of the countries evaluated did not publish comprehensive information on the public sector.

balance or gross debt, that are set at levels to support macroeconomic goals—economic growth, inflation, and stability. Including nonfinancial SOEs in the fiscal targets would create greater incentives for fiscal discipline and transparency because (1) governments will likely exercise greater oversight over SOEs' overall borrowing and (2) governments' options to circumvent fiscal targets would be more limited. Inclusion would ensure that the broader fiscal policy goals are consistent across the public sector, for example, in keeping total public debt at safe levels.

The preference is to include nonfinancial SOEs in fiscal targets. Many governments in Latin America already include most nonfinancial SOEs in the fiscal targets and rules. At a minimum, governments should ensure comprehensive coverage in fiscal targets of at least nonfinancial SOEs that pose significant fiscal risks and for which the government is a majority shareholder (IMF 2007).^{24,25} If this is not feasible, an SOE's debt should be included in public sector debt when the SOE poses a fiscal risk.

When considering the need for macroeconomic stabilization, it is appropriate to limit the use of SOEs and use more direct, transparent measures instead. Using SOEs to support employment during economic downturns is less efficient than monetary or fiscal policy tools. Likewise, forcing public banks to boost credit as the economy weakens could ultimately deteriorate the quality of their loan portfolio and increase risks. A case could be made for using public banks in situations of severe economic deterioration as part of a broader, and exceptional, policy action (as during a major global financial crisis). This approach requires fully transparent objectives and costs.

²⁴SOEs have public mandates that imply that their finances and operations will likely deviate from commercial interests making the commercial orientation of an SOE ill-suited as a selection criterion. Past analysis by IMF staff finds that SOEs did not behave commercially because there was always some government-imposed mandate or constraint (for example, on setting prices or employment policies) (IMF 2005).

²⁵Public banks are better kept outside fiscal targets given the nature of their financial operations. It is also important to keep close track of the performance of SOEs that routinely turn profits—as might be the case, for example, for a highly profitable national oil company—to ensure that such SOEs remain efficient and to recognize that such profits will ultimately accrue to the state. The case for inclusion of such SOEs in the fiscal targets needs to be counterbalanced against the possibility that they could obscure the underlying financial performance of the rest of the public sector.

Getting Incentives Right at the Firm Level

Governments must give SOEs the right incentives to deliver value for taxpayers' money. This is more challenging, but also more necessary, when SOEs operate in sectors with limited competition or when there are significant externalities (for example, when provision of a good is important for economic growth) or social mandates. To promote efficiency and a sustainable business model,

- *Getting the pricing policy right is key.* Pricing rules should be transparent and depoliticized (for example, published rules specifying how domestic fuel prices will adjust automatically to changes in the cost of supplying fuel). Preferably, prices should be set to ensure cost recovery (including to cover investment expenditure). The pricing policy in sectors with negative externalities (for example, fossil fuels that lead to pollution and health problems) should also be adjusted, protecting more vulnerable households.²⁶ If this is not possible—for example, because a large share of the population is poor and there is no social safety net—governments should appropriately compensate the SOE in a timely and transparent manner. Conversely, it is important to prevent excessively high prices if the SOE has monopoly power because high prices may lead to inefficiencies.
- *Independent regulatory agencies* need to balance different interests, ensuring that government and firms operate according to transparent and well-defined rules, especially when private investors are involved. For example, regulators can ensure tariffs in public utilities are set to balance affordability with the need to cover costs. In low-income countries, pooling resources in a single regulator overseeing several sectors can help build capacity.
- *Professional managers and the independence of managerial decisions* are required to ensure the firm operates efficiently. Firms need to have corporate governance structures that promote sound hiring, wage, and procurement policies. The next section discusses in greater detail some of the important features, including a professional board and a high degree of transparency.

²⁶In some cases, a better approach would be to have a broader strategy, under which firms can charge prices that reflect costs with the government directly providing subsidies to the poorest households.

Other strategies that have been adopted to improve the SOE incentives include corporatization and allowing for participation of private minority shareholders. In OECD countries, most SOEs are incorporated according to company law and are generally subject to the same laws and regulations as private companies.²⁷ About half of those companies by value are listed on a national stock exchange (OECD 2017). Mixed ownership has been adopted by many countries to some degree over the past decades (for example, Brazil and China as well as European countries).

Strengthen Institutions

The starting point is a clear and comprehensive ownership policy aiming to get value for taxpayers' money out of SOEs (Allen and Alves 2016). Ownership policies should clearly state (1) the mandates, objectives, and a dividend policy for SOEs; (2) the approach to achieving professional boards of directors; (3) the functions carried out by the government as owner of the SOE and its coordination with fiscal risk oversight functions; and (4) the way the government exercises its ownership rights. To assess SOEs' effectiveness in achieving value for money, it is also important to distinguish and disclose commercial and noncommercial activities (policy mandates). Moreover, governments must develop the capacity to properly oversee the operations of the company while avoiding excessive intervention of public officials; enforce transparency requirements; and establish a sound SOE corporate governance framework. Implementation of anticorruption strategies to prevent the use of SOEs for private gain is also critical.

Effective Financial Oversight and Ownership

A strong oversight and control agency can yield better performance from SOEs (Musacchio and Pineda Ayerbe 2019). A centralized model provides the best potential for ensuring consistency between the ownership (for example, representation on company boards, strategic direction of firm) and financial oversight functions. A centralized model could take the form of an autonomous agency or holding company (as in Finland, France, Kenya, Malaysia, Peru, and Singapore).

²⁷At the same time, company laws do not specifically address the relationship between the state and SOEs. The legal framework for SOEs must therefore consist of an additional layer, that could be an SOE law, that governs such a relationship.

Holding companies exhibit advantages when managers have professional expertise and they protect SOEs from undue political interference.

It is critical to have one government unit responsible for the financial oversight of SOEs even when a holding company is in place. One unit makes oversight activities more coherent, while pooling experts from different areas. A central element of the oversight function is to identify, disclose, and mitigate fiscal risks. Fiscal risk assessments can be made for individual companies and for the SOE portfolio. The latter allows for evaluation of the combined risks for the government.²⁸ Oversight units can be located within ministries of finance (France) or public companies (such as UK Government Investments). The former model has the advantage of better integrating SOE risk oversight in the budget process and facilitating a broader assessment of fiscal risks. Moreover, SOE oversight units should be accountable to an institution representing the interests of the public (for example, parliament).

SOEs' investment plans, because of their direct fiscal costs and impact on growth, deserve special scrutiny. Government assessment of large investment (infrastructure) plans of SOEs should be informed by technical and economic appraisals based on standardized criteria. Furthermore, when projects involve direct budgetary costs—for instance through capital injections or on-lending to SOEs—they should be subject to a selection process to ensure the consistency of aggregate investment plans with medium-term fiscal objectives and the degree of fiscal risk. The effectiveness of the process requires close cooperation among the ministry of finance, SOEs, and line ministries, who are often tasked with the design of sectoral investment strategies. However, line ministries should not be given excessive control over ownership arrangements or strategic decisions because this might undermine SOE efficiency.

Several approaches exist to contain potential risks from the SOE sector. One possibility is to explicitly commit to a no-bailout clause. This approach has been used mostly in transition countries, such as Poland and Ukraine. A recommended approach is to subject SOEs to effective insolvency procedures such as those for private firms. For example, bankruptcy legislation in Italy, Korea, the Netherlands, Sweden, and the United Kingdom has the same insolvency procedures for SOEs as

²⁸IMF staff have supported the development of SOE risk analysis templates in several countries during the past decade, most recently in Armenia (2015), Namibia (2018), and Serbia (2019).

for private companies.²⁹ Providing SOE management with incentives to manage risks (such as performance contracts and benchmarking) can help too. However, the latter approach is often difficult to implement.

Countries should also regularly review their SOE portfolios to assess whether the policy case for an SOE remains valid. For example, technological changes may mean the reason for the government intervention no longer exists (for example, it is possible that competitive mobile phone networks have undermined the need for state ownership in telecommunications). Several European countries conduct these reviews, either periodically or on an ad hoc basis (such as when a need arises to analyze an SOE). For example, Germany conducts a biennial review of its SOE portfolio during which each SOE's continued existence must be justified (OECD 2018a). In general, if the SOE is no longer relevant, options for freeing government resources for better uses include (1) selling the assets and closing the firm—with appropriate protection to workers and communities—if the business plan is not viable, and (2) privatizing the firm if the appropriate institutional preconditions are in place and the business plan is viable (Box 3.1).

Transparency

The financial and operational performance of the SOE along with its financial relations with the government must be disclosed. This can reduce the likelihood that SOEs will be used as vehicles for off-budget spending and borrowing, political patronage, or corruption. Unfortunately, financial information on SOEs in many countries is sparse. This is especially the case for NOCs, which manage large assets, particularly in the Middle East and sub-Saharan Africa (NRGI 2019).

Disclosure of SOE financial statements is the prevailing practice in advanced economies, whereas in emerging market economies disclosure is often restricted to listed SOEs. SOE financial statements should be audited by the national audit office or private audit firms approved by the national audit office. Finland, France, Ireland, New Zealand, and Sweden also publish performance assessments of at least their largest SOEs.

An annual report with detailed information and analysis of the performance of the SOE sector at the aggregate, sectoral, and company levels can be an

²⁹However, in some cases, countries still shield the firms from bankruptcy invoking national interest.

effective communication tool. Countries such as India, Paraguay, the Philippines, and Sweden publish reports on the aggregate performance of the SOE sector. Brazil, Ghana, India, Korea, and Sweden also provide information at the individual SOE level. As highlighted earlier, ultimately, SOE financial data should also be integrated into a public sector balance sheet to provide a comprehensive view of the public finances.

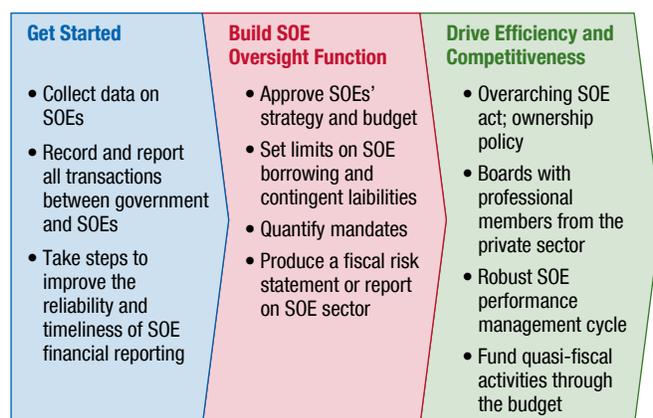
Transparency is also needed on the financial interactions between the general government and SOEs. Government mandates to SOEs should be clearly defined, transparently disclosed in the budget, and compensated if needed.³⁰ Fiscal risks associated with SOEs, both at the public sector level and at the firm level, when relevant, should be regularly reported (including contingent liabilities). The assessment of SOE risks and the mitigation measures should be disclosed. Fiscal risk statements are a good vehicle for doing this, as in Austria, Georgia, and the Philippines. In South Africa, the budget review discloses the financial position and prospects of the largest loss-making nonfinancial SOEs (in addition to other SOEs) and describes ongoing risk mitigation measures.

SOE Corporate Governance

Governments should establish and enforce SOE corporate governance standards in line with good international practice.³¹ The composition of SOE boards plays a significant role in the quality of corporate governance. At a minimum, governments should promote professional boards that can help ensure proper accountability. In some countries, some or all of the members of the boards of directors are required to be independent of the government (for example, Canada, Germany, the Netherlands, and Switzerland). Appropriate regulation of SOEs is another important element of corporate governance. In Chile, the Netherlands, Norway, and Sweden, at least the largest SOEs are subject to the same regulatory framework as listed private companies. A third attribute of good corporate governance is regularly assessing SOE management performance. This can be difficult but is possible. For example, New Zealand has a sound and effective performance contracting framework within which SOEs' goals are informed by risk oversight

³⁰The IMF's *Fiscal Transparency Handbook* recommends the disclosure of quasi-fiscal activities, including the rationale for undertaking them through SOEs rather than through the budget and the mechanisms used to compensate SOEs for any resulting deterioration in their financial positions.

³¹The OECD Guidelines on Corporate Governance of SOEs (OECD 2015) are an example of good standards.

Figure 3.21. Gearing SOE Oversight to Capacity

Source: IMF staff.
Note: SOE = state-owned enterprise.

and fiscal objectives. Implementing high corporate governance standards remains challenging in many low-income developing countries.

Transition to Better Oversight and Management of SOEs

Implementing a system for overseeing SOEs that meets all the requirements discussed previously takes time and resources. Some of these reforms may not be possible in the short term in low-capacity countries. In such cases, this argues for a risk-based and sequenced approach to building an oversight regime for SOEs with a focus on monitoring mainly SOEs that involve higher risks.

Figure 3.21 illustrates the three main pillars of reform. First, governments need to know their SOEs, as many countries do not have a firm grasp of the number or size of the SOEs they own. This will also allow regular reviews to determine which SOEs are still relevant. The second pillar focuses on building oversight with a strong emphasis on controlling fiscal risks. Third, policies and procedures need to incentivize government officials and SOE boards and management to strive for SOE efficiency. In some cases, it may be possible to pursue elements of different pillars simultaneously. The feasibility and speed of reforms will depend on country circumstances, including political economy considerations.

Being a Good "Global Citizen"

As SOEs have grown in scope and size, their drawbacks have spilled over to other countries, leading

to calls for protectionist measures. As discussed previously, concerns that government support can provide SOEs with competitive advantages are growing.³² As such, SOEs' activities may distort international markets (for example, aluminum, semiconductors, airlines, and steel), including when they are shielded from foreign competitors in their domestic markets. Another concern is that SOE expansion abroad is not always based on commercial objectives but may reflect other home country goals, such as control of natural resources, acquisition of technology, or political or diplomatic objectives. Moreover, SOEs are a major conduit for foreign bribes, with available data suggesting SOE officials received 80 percent of total bribes in foreign bribery cases (OECD 2014). SOEs in the power sector (generation of electricity) account for a substantial quantity of greenhouse gases (OECD 2018c), more than their private peers, and NOCs can have a significant impact on the environment in countries where they operate (for example, by polluting water or abandoning oil fields without cleaning them). Addressing these drawbacks can deliver domestic and global benefits.

The main benefits are domestic. Well-governed, transparent, and efficient SOEs that compete on a level playing field support productivity growth, better use public resources, and reduce local pollution. These benefits could also generate positive spillovers to other countries. Indeed, SOEs can play their part in the pursuit of global public goods, such as protecting the environment (for example, by moving toward cleaner sources of energy in the power sector, or by minimizing environmental damage when conducting oil and gas exploration). Likewise, SOEs can play a positive role in the global fight against corruption if governments improve general governance at home and impose effective anticorruption strategies, including when SOEs operate abroad.³³ Multilateral efforts would complement these domestic reforms.

Some advanced economies have taken steps toward fostering a level playing field

³²The legal framework for state aid in the European Union provides an example of how some of the concerns could be addressed. It also contains a working definition: government support is a concern if it confers an advantage to certain firms and the advantage is selective, distorts competition, and affects trade between member states.

³³Similarly, source countries need to enforce legislation against foreign bribery (as envisaged, for example, under the OECD anticorruption convention—see April 2019 *Fiscal Monitor*) to prevent their private firms from paying bribes to foreign SOE officials.

(i.e., competitive neutrality).³⁴ The EU and Australia have some of the most comprehensive approaches. For example, Australia requires SOEs to make compensatory payments to the national treasury for regulatory or debt-financing advantages (OECD 2016b). Other advanced economies have made a commitment to competitive neutrality, and most have laws and regulations that address potential uneven treatment of SOEs and private firms (OECD 2018a). Several countries have sought to address some elements of competitive neutrality across borders.³⁵ Multilateral institutions have also established disciplines (World Trade Organization) or guidelines (OECD 2015) that touch on the issue of competitive neutrality to varying degrees.

A more cooperative solution would be a multilateral agreement on general principles to ensure a level playing field between SOEs and private firms. These principles would guide SOE international behavior and recipient-country responses, which would build mutual trust. An approach akin to the Santiago Principles for sovereign wealth funds (International Working Group of Sovereign Wealth Funds 2008) may be worth considering, with appropriate adaptation to SOEs. The principles could cover areas such as transparency on mandates and the type and size of government support. They could also promote nondiscriminatory treatment. Adoption of the principles could be voluntary, at least initially.

Establishing effective principles would require significant technical work and political desire across countries. Detection and satisfactory resolution of SOE competitive advantages requires information that is frequently lacking on explicit and implicit government support for SOEs, the cost to the SOE of its

³⁴Competitive neutrality is usually defined as a situation in which no entity operating in an economic market is subject to undue competitive advantages or disadvantages (OECD 2012; UNCTAD 2019). Competitive neutrality concerns are not limited to SOEs; they may also apply to nonprofit entities that are active in the marketplace or to private entities receiving government support.

³⁵For example, the Australia–United States Free Trade Agreement contains specific obligations on anticompetitive practices by SOEs. At the sectoral level, recent agreements between the United States and several Gulf countries and a revised EU directive on airline competition (EU 2019) have sought to address concerns about unfair SOE competition in the global airline industry. At the regional level, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership, the agreement between the EU and Japan for an economic partnership (EU–Japan EPA), and the agreement between the United States, Mexico, and Canada each contain a chapter on SOEs that establishes rules to promote fair competition and prevent market distortion by governments.

Figure 3.22. Competitive Neutrality: Some Basics

Concept	Some Challenges and Complexities
Cost allocation transparency	<ul style="list-style-type: none"> • What type of policy mandates should be compensated? • What methodologies should be used to appropriately allocate costs between commercial and noncommercial activities? • Assuring debt neutrality, what is the value of an implicit government guarantee? • What is an appropriate benchmark for assessing return adequacy? • What is the value of a legally created captive home market? • Valuing compensation: What about in-kind benefits such as free land?
Compensation of policy obligations	
Market = consistent rate of return	
Debt neutrality	
Similar tax, regulatory, and procurement rules	

Sources: OECD 2018a; and IMF staff.

noncommercial mandate (if any), SOE and comparator company finances, and the broader regulatory and legal environment in which the firms operate. Figure 3.22 highlights some of the issues that would need to be addressed to foster competitive neutrality. For example, the costs of an SOE's commercial and noncommercial mandates would need to be identified, separated, and disclosed, using a methodology to be agreed upon. Another important aspect would be to ensure that an SOE's cost of capital (interest on debt and return on equity) is similar to its private sector competitors, which would require benchmarking competitors' costs of capital and requiring the SOE to make compensatory payments to the budget if the SOE's cost of capital is lower than the benchmark. Challenges to establish common methodologies can be overcome, and an agreement on common principles would yield benefits domestically and globally by supporting trade and foreign direct investment.

Conclusion

SOEs have major economic and fiscal effects in many countries. SOEs are among the largest companies in the world and are now global players. At the same time, many SOEs are struggling. SOEs generally have low productivity, distort competition, and can be plagued by corruption. SOEs have fallen short, particularly in developing countries, in providing basic services, such as access to safe water, sanitation, and reliable electricity, to the entire population. Many have been a significant drain on the government budget and in some cases have contributed to economic and fiscal crises. Concern about the activities

of multinational SOEs is growing, which could fuel protectionist measures.

The model for using and managing SOEs should be strengthened in many countries. The stakes are high because SOEs provide core economic services and could be an important vehicle for achieving the Sustainable Development Goals. International experience provides lessons on how to move forward. Governments should not waste public resources in areas where intervention is not needed. The case for SOEs is weak when markets are competitive and private firms provide goods and services efficiently. Where SOEs play a dominant role, such as public utilities, improving their performance and achieving a sustainable business model are priorities. Governments will also need to find ways to attract private investment to complement the activities of SOEs, which are unlikely to be able to satisfy all development goals.

Governments need to set appropriate incentives and build sound institutions to ensure SOEs operate efficiently and fiscal costs are contained. A strong framework would include a clear and comprehensive ownership policy supported by appropriate government oversight and good corporate governance. Transparency of SOE activities and their relations with the government is critical to bolster accountability.

In view of the growing presence of SOEs in global trade and investment, ensuring a level competitive playing field is important to foster economic efficiency at home and to address international spillovers. Several countries have adopted rules with this aim. Some of these issues are also flagged in international trade and investment treaties. However, there is room for a more coordinated international approach that could benefit from setting global principles for multinational SOEs.

Box 3.1. Experience with Privatization

Privatization, done right, can mean improved firm performance, healthier public finances, and positive macroeconomic effects (Estrin and Pelletier 2018; Estrin and others 2009; Megginson and Netter 2001). The literature suggests that privatized firms outperform SOEs but underperform firms that have always been in private hands (Harrison and others 2019; Shirley and Walsh 2000). So, how can privatization be “done right” and what happens if necessary, conditions are not met?

Privatization has disappointed when complementary institutional and market reforms, as well as equity goals, are not pursued with equal vigor. The existence of a competitive market, the protection of property rights, and the privatization method are important to the outcome of the privatization (Hanousek, Kocenda, and Svejnar 2008; Havrylyshyn and McGettigan 1999). In Russia and Ukraine, for example, rapid mass privatization within a framework of weak governance and regulation often led to bid rigging and limited, if any, efficiency improvements (Rose-Ackerman and Palifka 2016). Estache and Trujillo (2008) find significant productivity gains after pre-2000 privatization in Latin American countries but point to employment loss and unequal distribution of privatization rents, especially for noncompetitive activities. Privatization reversals are also common where regulation is not effective. Power sector privatizations were reversed in the Dominican Republic, the Indian state of Odisha, and some African countries when tariffs remained too low or the utility was not yet functioning at a basic level (Foster and Rana 2020).

Sector dynamics are also relevant for privatization success. Take, for example, water supply, a natural monopoly. There could be a tension between ensuring affordable provision of water and adequate profits by the private firm. In Guinea, private participation in the sector increased access to water by 10 percent from 1986 to 1997 but made the price of water 40 times more expensive (Nellis 2008). Privatization was reversed in 2003.¹ Similarly, in California in the 1990s electricity generation was privatized in a push for higher efficiency and lower prices. Lobbying for deregulation, subsequent fraudulent behavior, and the search for higher company

¹See also Kirkpatrick and others (2006) and Tan (2012) for mixed results of private participation in the water sector.

stock values resulted in several problems and a hike in electricity prices (Rose-Ackerman and Palifka 2016; Tillman 2009). Similar arguments against privatization have been raised for other sectors, including electricity transmission and other infrastructure (such as roads and railways).

Popular concerns about the impact of privatization have not always been warranted. Employees and labor unions oppose privatization because of the threat of layoffs (Andrews and Dowling 1998; Boix 1997; Chong, Guillenand, and López-de-Silanes 2011), as in Nicaragua and Argentina in the 1990s. However, privatization can lead to employment gains even if employment and wages in the former state firm fall (Davis and others 2000; Earle and Shpak 2019; Estache and Trujillo 2008). After Zambia Airways was liquidated, two new private airlines emerged, leading to higher employment in the sector (Kikeri 1998). McKenzie and Mookherjee (2003) find that utility prices, on average, fell by 50 percent in some Latin American countries after privatization, and in countries where prices rose, access to previously unavailable goods and services did too.

Realizing the benefits of privatization requires certain preconditions to achieve success: a solid regulatory framework, including a well-functioning legal system, an effective and independent regulator and strong property rights; and relatively low levels of corruption to permit a transparent sale process and prevent embezzlement of SOE assets in the run-up to privatization.² Moreover, privatized firms will be more likely to be efficient and to serve the public if there is sufficient competition in the underlying market or an independent regulator at the onset of privatization. Frequent renegotiation of contracts in the public services sector after privatization in Latin America indicates the failure of efforts to achieve competition in markets with too few bidders for the auctioned firms (Estache and Trujillo 2008). Low barriers to new domestic firm entry and openness to foreign direct investment can remedy this problem.

²See, for example, Balza, Jimenez, and Mercado (2013); Estrin and Pelletier (2018); Gasmí and others (2013); Jomo (2008); Kikeri and Kolo (2005); Kikeri and Nellis (2004); Rose-Ackerman and Palifka (2016); and Zhang, Parker, and Kirkpatrick (2008) for discussions on the different preconditions and consequences of their absence.

Box 3.2. State-Owned Banks

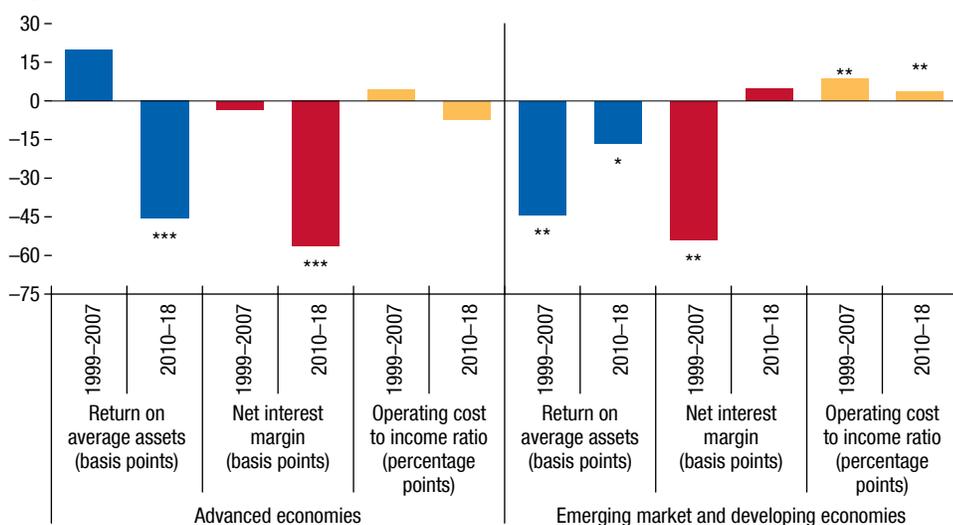
Public banks comprise two broad categories: commercial banks, which provide competitive banking services, and development banks, which provide credit for development-related projects, usually at subsidized rates, with funding coming from the budget or with government guarantees. In practice, the two types are hard to differentiate given that both have public mandates. One common stated objective is to finance socially valuable but financially unattractive or highly risky projects, such as lending to young, small, and innovative firms (for example, the Business Development Bank of Canada). Another is to finance capital-intensive infrastructure projects (for example, the Development Bank of Southern Africa).

Public banks have struggled to achieve their socioeconomic mandates. Studies have shown that greater state ownership of banks is associated with lower levels of financial development, weaker economic growth, and higher financial instability (Barth, Caprio, and Levine 2004; Beck and others 2008; La Porta, Lopez-de-Silanes, and Shleifer 2002). There is a concern that the state presence politicizes credit allocation (including lending to connected entities or other SOEs). For example, in Ukraine’s state-owned banks, politically motivated lending led to massive losses in recent years and repeated recapitalizations by the state (Repko 2019). But public banks can also play a positive role. For example, Mexico’s NAFIN is credited

for fostering financial development, innovation, and inclusion (de La Torre, Gozzi, and Schmukler 2017).

The empirical evidence on financial performance is mixed. Public commercial banks operating in developing economies tend to have lower profitability and interest margins, higher overhead costs, and higher nonperforming loans than private banks, whereas no significant performance differences are found in advanced economies (for instance, Berger, Hasan, and Zhou 2009; Iannotta, Nocera, and Sironi 2007; Micco, Panizza, and Yanez 2007). A sample of more than 4,000 banks in 125 countries over the past two decades shows that public commercial banks are less profitable and cost-efficient than their private counterparts (see Online Annex 3.3), not even accounting for the substantial guarantees, subsidies, and preferential treatment that public banks enjoy. Comparing the decades before and after the global financial crisis, however, the findings suggest that the performance differences have narrowed between public and private commercial banks in emerging market and developing economies but widened in advanced economies (Figure 3.2.1). For emerging market and developing economies, one hypothesis is that greater government support for public commercial banks after the global financial crisis boosted their profitability. In advanced economies, the ultra-loose monetary policy after the crisis tended to have a disproportionate effect on public commercial banks because they lend more locally than their private peers.

Figure 3.2.1. Financial Performance of Public Relative to Private Commercial Banks



Source: Fitch Connect; and IMF staff estimates.

Note: Regressions control for several factors, including other bank characteristics. ***, **, and * indicate statistical difference from zero at 1, 5, and 10 percent significance level, respectively.

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