

State-Owned Enterprises in the Global Economy: Governance, Market Challenges and Economic Impact

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Abstract

This thesis examines state ownership's impact on the internationalization strategies and competitive behavior of State-Owned Enterprises in various sectors and contexts. Although SOEs were historically created to be instruments of state policy at home, many of these businesses are now transnational actors with commercial and strategic interests. Following a qualitative multi-case study approach, we examine the driving forces behind the conduct of five leading SOEs (Petrobras, ICBC, Fincantieri, CRRC, and China Mobile), taking country-specific governance models, political intervention, and markets as the point of analysis. The empirical evidence is based on financial benchmarking and sector narratives and discusses the tension between public objectives and market competition. The results suggest that the global performance of SOEs does not depend on ownership by the state alone but is significantly mediated by the governance, institutional environment, and regulatory alignment. The paper highlights the requirement for fine tuning of policy to reconcile strategic national interest with competitive neutrality, and efficient market operations. By unpacking the double function of the SOEs to serve as commercial and policy tools, the study provides significant implications for an understanding of the changing face of state capitalism in the world of economy.

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1. Introduction

1.1 Background

State-owned Enterprises (SOEs) remain in a preeminent and sometimes contentious position within the world economy. In numerous nations, SOEs are among their largest employers, their most capital-intensive businesses, and the dominant participants in those industry sectors that are deemed strategically crucial, including energy, infrastructure, banking, and telecommunications (Musacchio and Lazzarini, 2014; OECD, 2018). SOEs did not disappear along with liberal markets, as one might have predicted, but instead have changed a great deal. SOEs are not just present in home markets anymore; today they are moving across boundaries as well, functioning as much as agents of commercial aspiration as national policy (Cuervo-Cazurra et al., 2014). This dual, sometimes contradictory role makes SOEs inherently difficult to categorize. On the one hand, they are supposed to perform well, compete internationally, and deliver returns. Conversely, in many instances, they are responsible for addressing wider public objectives, such as promoting energy security, technological innovation, employment stability, or facilitating development in distant regions. In certain nations, they are industrial strategy instruments; in others, they are economic buffers or geopolitical instruments. With increasing international outreach and strategic profile, SOEs blur the lines between state intervention and economic competition. Expansion raises serious questions about how they are regulated, how they conduct themselves in overseas markets, and if their state-supported nature gives them an unfair advantage (OECD, 2021). These questions have created growing controversy in academic discourse and between policymakers, regulators, and trade partners as well.

1.2 Problem Description

At the heart of these debates is a fundamental tension: Can SOEs effectively reconcile commercial objectives with their mandated objectives when they operate across borders? Their state-connected ownership and political allies could provide them with advantages,

access to finance, diplomatic leverage, or regulatory cover not available to privately owned businesses. However, the same influences that can strengthen regulators' autonomy and effectiveness can also diminish them, making regulatory intervention susceptible to political intervention (Ramamurti, 2009). The difficulties are even more apparent on the international stage. Whether SOEs are suspected and against when venturing into new markets is related to the performance of their existing activities, especially when they are engaged in new sectors concerning national defense, strategic resources, and fair competition. The host countries are left to wonder whether these businesses are operating as commercial actors or as proxies of a state. At the same time, SOEs are themselves under pressure to generate financial returns and to address national priorities that are not necessarily set by global market logic. A lot of this work is the sort of wide ideological critique of state ownership, which is watery, but the performance indicators on a firm, are too narrow. How enlightening different forms of state involvement are on the strategic behavior and global aspirations of SOEs represents a major blind spot in the literature. What explains the differences in the performance, governance, and internationalization of SOEs? When and how has state ownership been up or against their leverage in the global markets?

This research is guided by the question: How does state ownership influence SOEs' internationalization strategies and competitive conduct in various industries and contexts?

The question aims to cut through the naive debate on the merits or disbenefits of public ownership and to focus on the practical implications of different models of governance, modes of ownership, and strategic direction.

1.3 Aim of the Study

The qualitative case study method is employed in this research to explore this issue. This facilitates detailed consideration of the context-specific dynamics of SOE conduct, which can be overlooked in broad-coverage quantitative research. The case studies are selected from different regions and sectors and provide diversity through which to examine how SOEs manage the dual tensions of competition in overseas markets and accountability to

the state. Rather than attempt to make blanket statements about all SOEs, the research tries to tease out the channels through which the state as owner influences strategic action practices, international activity, and competitive strategies. Attempting to find the promise, as well as the perils, of public ownership in a global economy, this approach to scholarship researches the subject. In this way, the study provides a more multi-faceted view of state capitalism, not as a unified model, but as a heterogeneous or variegated set of practices that is tightly linked to the political, institutional form political and economic rationale found in countries across the globe. The findings are intended to guide both academic and policy debates about the future of SOEs in a connected and contested world economy.

2. Literature Review

The academic literature on State-Owned Enterprises (SOEs) has changed far from traditional conceptions of SOEs as bureaucratic appendages of the state. In the older theories of economics, SOEs were generally portrayed as inefficient aberrations in a market economy. More recent work departs from this presentation and presents a more refined view of SOEs as hybrid organizations existing at the intersection of the public interest and the logic of business. Authors like Musacchio and Lazzarini (2014) have positioned SOEs as a part of the phenomenon of "hybrid capitalism" in contexts in which governments utilize ownership as an instrument for driving strategic sectors and industrial policy direction in emerging economies. This theoretical capture conveys the double duty imposed on SOEs: to be profitable and simultaneously serve wider policy targets, a fundamental conflict that continued to define their governance and performance (Burton et al., 2015).

Governance has long dominated the literature as a key area of concern, with numerous studies considering the impact on firm performance of various models of state ownership. Christiansen (2011) draws a differentiation between centralized, decentralized, and hybrid forms, each of which has repercussions for monitoring, autonomy, and interference from politics. The principal-agent problem has most commonly been used to explain SOE inefficiencies: governments serving as both owner and regulator may act on conflicting interests, as politically appointed managers may be without the incentives or autonomy necessary to optimize firm outcomes (Shleifer and Vishny, 1994). These problems tend to produce overlapping mandates and accountability gaps. Accordingly, scholars increasingly demanded governance reforms based on transparency, merit appointments to boards, and professionalization of the management level on the grounds that they form the building blocks of better SOE performance in both efficiency and legitimacy.

Comparisons of the performance of SOEs and private companies make another important thread of the literature. There are many studies indicating that SOEs perform below average on financial performance variables like Return on Assets (ROA) and Return on Equity (ROE) as a result of soft budgeting constraints, lower exposure to competitive pressure and external discipline, and frequent political interference (Megginson and

Netter, 2001). The story is not monolithic, however. The experience of Equinor in Norway or Temasek Holdings in Singapore illustrates instances where SOEs performed well in global markets when they were given autonomous operation and good governance (Bruton et al., 2015). These instances highlight that state ownership per se does not cause inefficiency, but the quality and context of the institutions are critical determining factors. Another area of widening research focuses on the internationalization of SOEs. Unlike their private rivals, SOEs tend to be financed or subsidized directly or indirectly by the state in the form of low-cost funding, sovereign guarantees, and diplomatic support. It has been argued by Cuervo-Cazurra et al. (2014) that such state subsidies confer a comparative advantage on SOEs in going global, notably through mergers and acquisitions or large-scale construction projects. This trend has provoked concerns in the host nations about fair competition, national security, and geopolitical consequences of foreign state ownership. The international business literature has grown increasingly preoccupied with the tensions surrounding this theme, especially concerning Chinese SOEs, which are at the center of efforts like the Belt and Road Initiative (BRI) (UNCTAD, 2020). The intersection between global strategy and domestic policy goals makes internationalized SOEs unusually influential and contentious actors in the global economy (UNCTAD, 2020). At the policy level, competitive neutrality has become a central theme in academic and institutional debate. Researchers like Kowalski et al. (2013) have discussed the ways in which preferential treatment in the form of subsidies, regulatory relief, or implicit guarantees distorts markets and harms private companies. This has resulted in increasing calls for better-defined rules for guaranteeing state and private companies compete on a level playing field. The European Union's strict state aid system and procurement regulations are most commonly invoked as pragmatic means of imposing such neutrality and a template for balancing the benefits of public ownership and market integrity. Likewise, trade agreements like the CPTPP (Comprehensive and Progressive Agreement for Trans-Pacific Partnership) and the USMCA (United States-Mexico-Canada Agreement) have included explicit provisions aimed at the conduct of SOEs in order to avoid anti-competitive behavior.

Against this complex backdrop, the case study approach has become a favored method for examining SOEs richly and thoroughly. As noted by Yin (2009), case studies are well suited for investigating phenomena rooted in real-life contexts in which boundaries

between variables cannot be clearly delineated. Eisenhardt (1989) and Gerring (2004) have also stressed the utility of case study research as a means of exposing causal processes and contextual variables not easily accessed through large quantitative analysis. Since SOEs operate under differing regimes of institutions and perform multiple and occasionally competing functions, a case study method permits a better understanding of the interplay between governance arrangements, political contexts, and strategic priorities. This methodological approach is particularly valuable when comparing SOEs between sectors and countries since it permits analytically strong and context-specific insights.

Though institutional accounts from organizations such as the OECD and the World Bank have enriched the empirical record on SOEs enormously, scholarship gives us the theoretical framework on which to make sense of this data and draw broader conclusions. Collectively, these additions demonstrate SOEs as far from remnants of the past but as active and changing institutions embodying changing states of tension between state authority and market rationality. The complexity of their realities demands empirical precision as well as a strong conceptual framework, something this thesis aims to construct through a comparison of SOEs between nations and sectors.

3. Theoretical Framework

3.1 State – Owned Enterprises: Definition and Global Presence

SOEs, or State-Owned Enterprises are not only businesses, but they are also instruments of policy, pillars of nationhood, and in many instances, are significant players in many economies and are major global players (Musacchio and Lazzarini, 2014). As defined by the Organization for Economic Cooperation and Development (OECD), SOEs are any company where the government holds significant ownership or control, directly or indirectly, by way of ministries or public holding companies (OECD, 2015). But beyond ownership, what distinguishes SOEs is that they tend to perform both public policy and commercial functions (Cuervo-Cazurra et al., 2014). They are supposed to behave like businesses, yet they are also often responsible for providing essential services or contributing to government development priorities, serving also as vehicles for managing assets and shaping cornerstone industries (OECD, 2015)

These state-owned enterprises exist across a broad array of sectors, particularly where sectors are viewed as being strategically important or risk being subject to market failures, such as energy, transportation, finance, natural resources, and telecommunications, where their mission goes beyond profit-making to delivering public services and achieving public policy objectives (OECD, 2018). Some are traditional public utilities, while others are international companies operating across several continents. In terms of global presence, SOEs are highly influential. As of 2023, they made up about 12% of total global market capitalization, with combined assets exceeding USD 53.5 trillion and generating over USD 12 trillion in annual revenue (World Benchmarking Alliance, 2025). Yet their weight and role vary dramatically across regions, from developed and emerging markets. In developed economies, such as those in the OECD, state-owned enterprises held only 2% of total market capitalization, reflecting an attraction to privatization and competitive market structures SOEs tend to be fewer and usually operate under strong commercial principles (OECD, 2017). Norway's Equinor ASA formerly known as Statoil, for example, is a listed energy company that despite having the state as a majority shareholder, still operates with a high degree of corporate autonomy or Temasek Holdings, a Singaporean state-owned investment company which while wholly owned by

the Singapore Minister for Finance, still operates as a commercial investment company, owning its assets outright and functioning independently of governmental interference in its investment decisions. (Government of Norway, 2022, NUS 2014).

Conversely, emerging economies depend more exclusively on SOEs. In China, for example, SOEs cover half of the country's capitalization and are rooted firmly within industries such as energy and infrastructure. State Grid Corporation of China, the world's largest utility company, and Sinopec Group, one of the world's leading petroleum and petrochemical companies, are not only leaders domestically but are also expanding internationally, i.e., Australia, Italy, Brazil, Russia, and Saudi Arabia, influencing global industry trends (World Benchmarking Alliance, 2025). Likewise, Petrobras in Brazil account for nearly 30% of the country's oil and gas production, and Gazprom in Russia, an international energy conglomerate. These state-owned companies are crucial not only to the economies of their countries but also exert considerable influence on regional and international energy economies. Their operations and strategic decisions carry significant implications for energy security, economic development, and international relations (Statista, 2025; Atlantic Counsel, 2019).

The strategic value of SOEs is particularly evident where large, long-term investments are involved or where they fulfill essential public needs. The World Bank states that they control industries such as power generation, transportation, banking, and extraction of natural resources, sectors where the state seeks to keep control for economic, social, or geopolitical reasons. SOEs also serve to stabilize economies during crises (World Bank, 2023). During the 2008 global financial crisis and again throughout the COVID-19 pandemic, numerous SOEs kept delivering services, preserving employment, and continuing to invest while private firms were reduced. Their capacity for prioritizing the long term over the short term makes them agents for maintaining national resilience. (Journal of Corporate Finance, 2020). Worldwide, SOEs are among the largest corporations on the planet. There are 126 companies listed among the 2023 Fortune Global 500 that are government-owned, contributing approximately 25% of global revenues. Included are Saudi Aramco, China National Petroleum Corporation, and Rosneft, companies that engage more than just compete internationally. They shape global markets. SOEs are more than mere enterprises. They are instruments of economic policy, expressions of sovereignty, and drivers of development. Their dual responsibility

to serve public interests while remaining competitive makes them both challenging and vital to analyzing how contemporary states engage with global capitalism.

3.2 Governance and Ownership Structure of SOEs

It matters a great deal how an SOE is governed and owned, how well it performs, how transparently, and how well it serves the public (OECD, 2015). Countries all do this in different ways, though a great deal depends on their economic systems and histories. But the backdrop doesn't matter: Good government is key. Absent that, SOEs can become inefficient, unaccountable, or even harmful to the public purpose. The real problem for governments is that they wear two hats, they are the regulator and the owner (Florini and Lloyd, 2017). And that is where you can run into trouble. It is extremely difficult to do this, but it is necessary to have well-run and fair SOEs. There are three broad principles for structuring ownership of SOEs: centralized ownership, decentralized ownership, and hybrid ownership (OECD, 2021). A command-and-control system centralizes everything under one roof, typically a government ministry or perhaps a national holding company. The system is intended to provide consistency, curb political considerations, and allow for greater oversight of job performance. In fact, over half of the countries that the OECD has considered have done so (OECD 2024). Alternatively, some governments prefer to maintain a decentralized system, where each ministry manages its own SOEs. In theory, this sounds like a good thing, sectoral expertise. It seems to do the opposite in real life, confusing and harming the supervision instead. Unfortunately, about 27% of countries still operate with decentralized systems. And there is the hybrid, which aims to mix the two, centralizing command of big "strategic" sectors, say of energy or defence, but devolving more on less vital ones. On paper, it feels like having your cake and eating it, too. But reality is an entirely more variable thing. Of course, choosing an organizational form does not cure all ills.

No matter what the model, SOEs all seem to have the same sorts of governance problems (World Bank, 2014). Next, there's a clear conflict of interest when governments both play the game and referee it. How, after all, can you regulate fairly if you own part of the market? In the absence of a clear demarcation between ownership and regulation, SOEs could receive undue advantages, which are detrimental to competition (OECD, 2024). A

second enormous issue here is transparency, or the absence of it. Far too many SOEs continue to seriously lag behind private businesses in terms of clear financial reporting and public accountability. And when people have no idea how their money is being spent, trust disappears faster than you can spend it. In fact, the absence of transparency may lead, in some cases, to the extent of corruption (World Bank, 2023). Creating strong reporting requirements and independent audits is not a nice-to-have feature, it is a must (IMF, 2019). There is another story, and that story is political interference. Board members are often appointed more for their political loyalty than for their competence or experience. And let's face it: the most professional thing in politics is to put politics first. Under the OECD (2024), SOE boards should be stacked with independent, competent, and diverse individuals chosen on merit and not on who they know. The World Bank (2023) concurs, cautioning that politicized boards hamper decision-making and can pull down an entire organization. It's easy to forget, for instance, that boards are supposed to be good for more than just meeting times. They are supposed to ask the hard questions, oversee the strategy, and ensure management remains on course. With independent and capable boards, SOEs are far more likely to succeed. Without it, they're rubber-stamping whatever managers or politicians want (OECD, 2024; World Bank, 2023). Accountability doesn't end at the board level, either. There have to be real checks and balances that governments must enforce. That includes regular external audits, full financial disclosures, and clear performance reporting. When no one is breathing down their necks, SOEs can easily slide into waste, inefficiency, or something worse. The OECD (2024) even advances that SOEs should follow the same rules of reporting that stock-market-listed companies do, a quite high bar, but a thing that is definitely going to improve trust. Acknowledging all these challenges, institutions such as the OECD and World Bank have stepped to the fore with precise guidelines. OECD's 2024 Guidelines on SOEs encourage professionalized ownership, transparency, strong boards, and sustainability embedded in the strategies of SOEs. Crucially, they also point out that governments should be crystal clear about why they are in the ownership of each SOE in the first place, something that too often is not given anywhere near enough of an airing. This sentiment is echoed at the World Bank, according to World Bank (2023), where comments on the importance of depoliticizing corporate governance and paying more attention to performance and transparency are made. At the end of the day, adhering

to such international best practices isn't merely about enhancing efficiency or profit. It's making sure that these SOEs really serve the people that they were made to help. When run well, SOEs can be potent drivers of development, innovation, and social advancement. When they're not, they run the risk of misusing public resources and harming trust. This is why it matters so much to build governance systems that are strong, transparent, and honest, not just for the economy, but for society at large.

3.3 SOEs Performance and Market Effects

The contribution of State-Owned Enterprises (SOEs) to the world economy is enormous and complex. They can spur development, bridge important capital holes, and deliver vital services on one hand. But they can distort markets, dissipate public funds, and grant monopolies on the other (Musacchio and Lazzarini, 2014). The truth is that all SOEs perform variably, and that depends significantly on the way they are managed and the type of pressure they are subjected to perform like actual companies (OECD, 2018)

From an economic perspective, SOEs would have a variable record. Some are well-run, such as Norway's Equinor or Singapore's Temasek Holdings, and can hold their own against private entities. Equinor, for instance, is run on commercial grounds while remaining firmly dedicated to openness and sustainability. Temasek is even more autonomous, operating more like an active investment company than a government-run institution. Both have proven that it is possible for SOEs to achieve solid financial performance without compromising public confidence (Government of Norway, 2022; Temasek, 2023).

But not all SOEs have such a positive tale to tell. In many countries, especially those prone to political interference, SOEs tend to lag in performance vis-à-vis peers from the private sector. As per OECD (2024) and World Bank (2023) data, SOEs often report lower ROA and ROE than private firms of comparable size. These weaker financial ratios also indicate more systemic issues related to governance, management incentives, and political pressure. Petrobras, the state oil company in Brazil, stands as a cautionary tale after years of corruption scandals and financial instability directly tied to political interference. And it's not like some random place," says one local electricity regulator not a few case studies demonstrate that if state-owned enterprises were just 5% more efficient, global GDP could grow between 1 and 5% (World Bank, 2023). That's a huge,

missed opportunity. One huge problem is that many SOEs are shielded from typical competitive pressures. They're also often the recipients of various forms of government support that private companies simply do not receive subsidies and tax breaks, low-interest government loans, and even the occasional regulatory freebie. This advantage is unfair and also uninspiring to these kids. It's a textbook moral hazard: Why scramble to come up with something new, or reduce costs, if you know the government will protect the downside? (Megginson and Netter, 2001). China's enormous state-owned enterprises are a fine case in point. Supported with subsidized financing and subsidies they have expanded aggressively at home and abroad. While it is true that this approach has generated impressive economic growth, it has also raised new trade issues, with charges of unfair competition and market distortions (World Bank, 2023). Likewise, in emerging markets, SOEs can easily displace private investment through sheer domination of key sectors that receive substantial state support.

The European Union has, perhaps ironically, taken much tougher stances on maintaining "competitive neutrality," as it's often called. The E.U. seeks to ensure that SOEs don't gain unfair advantages to the detriment of competition by its state aid control rules. Large cases like Air France KLM or Alitalia demonstrated how EU member states are being forced to restructure and impose strict conditions if they want to assist their firms with money (European Commission, 2023). The reasoning is straightforward: if state-owned enterprises operate in the market, they must compete in the same way as everyone else. Subsidies are a component of the larger distortion story. They can take many forms, from direct cash injections to more subtle inducements like tax exemptions or preferred access to capital (OECD, 2012). Governments typically defend such measures as essential to strategic sectors, but the long-term impact can be destructive. In the absence of strong regulation, subsidies only subsidize inefficiency and undermine the private sector's capacity for competition. Here Kazakhstan is a fascinating case. To address SOE's dominance of the market, the nation incorporated the "subsidiarity principle" into the terms of competition law. The promise (at least in economic terms) was that the government would personally operate firms only when private businesses could not deliver the same goods or services just as efficiently at competitive prices. It's a good strategy, and it demonstrates how intelligent public policy reforms can, over time, nudge economies in more competitive and efficient directions (World Bank, 2018). Another

distortion occurs when SOEs vertically integrate within supply chains. If a state-owned electricity company, for example, combines the generation and the distribution networks, it can edge private competitors out at several points. According to the World Bank, such market structures lead to bottlenecks and limit innovation, obstructing general prosperity (World Bank, 2023). It's not just theoretical either, actual economies deal with these issues every day, particularly in the transportation, energy, and telecoms sectors.

Clearly, reform is needed. But it's not just a matter of selling off SOEs. (But full privatization, without the right regulatory framework, can end up establishing private monopolies that are just as bad, or worse, than public ones.) What appears to work better in many cases is partial privatization. By selling minority stakes to private investors, governments can subject SOEs to market discipline without losing control (Bortolotti and Faccio, 2009). The way Norway runs Equinor and Singapore manages Temasek are also examples of this balanced approach. The Professionalization of SOE Management Is Another Key Area of Reform. To shift from a politically driven board selection base to a merit-based choice, requires huge strides in both decision-making and corporate performance need to be accomplished. Plus, making SOEs follow the same financial disclosure rules as listed private companies would do much to increase transparency and accountability. After all, SOEs are powerful instruments but only when properly directed. They can stimulate infrastructure, buttress economic stability, and provide public goods. But if they are misappropriated or shielded from competition, they can just as easily become barriers to growth and innovation. Governments who see this duality and then embark on smart reforms can better capture the benefits of state ownership and minimize the costs.

3.4 Internationalization of SOEs

Over the last several years, State-Owned Enterprises have increasingly ventured out of their countries and become major global players (Cuervo-Cazurra et al., 2014). Their international strategies involve internationalizing their operations and participating abroad, both through direct investment and acquisition. Infrastructure development and long-term investments funded by government support are their other strategies. While these initiatives have enabled their international operations to reap new markets, access

crucial resources, and advance global development, they also created immense concerns for their host countries regarding national security, competitive neutrality, and transparency. Therefore, host countries are increasingly adopting regulations to contain the risks posed by the activities of foreign SOEs. One of the leading factors driving SOE international would be the solid support of their host countries. Government-supported expansion provides SOEs access to preferential financing conditions, sovereign guarantees, and even diplomatic backing, pushing them heavily ahead of their private counterparts operating internationally (Kowalski et al., 2013). Chinese SOEs are the best example. Through the implementation of initiatives such as the Belt and Road Initiative (BRI), Chinese SOEs have been leading global investments in infrastructure, financing and developing highways, ports, and energy projects in Asia, Africa, and Latin America and Europe (OECD, 2024). Banking heavily on Chinese policy loans, these firms are better placed to grant favorable financing deals that are difficult for their private counterparts to compete. Acquisition and merger are also a potent means for SOEs to pursue international growth. Large cross-border acquisitions, most often in strategic sectors, allow SOEs to attain coveted assets, technologies, and market share. ChemChina's purchase of Swiss agribusiness giant Syngenta for a whopping \$43 billion is one of the best-known instances of an SOE using government support to secure its global stronghold (UNCTAD, 2020). Similarly, Singapore's Temasek Holdings itself pursued M&A activities across the globe but operates much more commercially autonomously than conventional SOEs. Infrastructure investment is another essential element of internationalized SOE strategy. Aside from the BRI, SOEs from France, Singapore, and the UAE have invested heavily across global airports, ports, energy networks, and telecommunications systems. Not only do they yield solid financial dividends, but they also establish strategic footholds across crucial industries. They also tend to trigger controversies regarding the long-term political and economic leverage that foreign SOEs can inflict upon host nations.

With increasing presence of SOEs, host countries have increasingly been worried about the risks of state ownership in an internationalized economy. Top of their list of worries are issues of national security. Foreign control of crucial sectors such as telecommunications, energy, defense, or transport has raised the possibility of higher scrutiny of foreign investment. To illustrate, the United States enormously broadened the

authorities of the Committee on Foreign Investment in the United States (CFIUS) within the Foreign Investment Risk Review Modernization Act (FIRRMA) of 2018, directly addressing SOE deals within high-risk sectors (U.S. Congress, 2018). Canada, Australia, and the European Union membership countries also strengthened their laws on foreign investment to screen out more carefully deals involving SOEs. Not insignificantly, worries regarding unreasonable competition also intensified. SOEs come laden with secret advantages that no private company can compete with, preferential financing, exemption from regulation, implicit official guarantees, and governmental support in negotiations. Not only does it distort competition within the marketplace, but it can also deter private investment in vital sectors. A good example is the global expansion of Huawei within telecommunications where worries regarding subsidies by their government and governmental support have resulted in bans or curbs within Western economies. The capacity of SOEs to operate at reduced costs and greater risk appetite makes it difficult for private companies to compete on equal grounds (Australian Government, 2018; European Commission, 2022).

In addition, it's also worth noting for the record, that transparency is a big deal. It also said that many SOEs, particularly from emerging markets do not face the same disclosure requirements. Ownership structures can be opaque and intricate, and host countries may not necessarily be able to work out who truly owns a company and if it has undeclared links to military or political activities (Transparency International, 2018). Poor financial disclosure and opaque corporate governance practices also contribute to doubts over accountability and the integrity of the marketplace.

Considering these challenges, many countries have been adjusting regulatory regimes to mitigate the risk associated with SOE investment. There are now more active and strong investment-screening mechanisms. In addition to CFIUS, the European Union implemented its FDI Screening Regulation in 2020, allowing its member states to consider foreign investments that could impact security or public order. Japan and Australia, too, have ratcheted up their security-based review procedures, subjecting a closer review, particularly for deals that involve infrastructure, technology, or natural resources. Trade agreements are also being adjusted to account for issues related directly to operating with SOEs. CPTPP and SOEs CPTPP includes chapters on SOEs that require them to act on a commercial basis and limit state-financed subsidies that distort

competition. A similar situation is the USMCA, which has detailed provisions to ensure that SOEs fairly compete with private firms. These are significant deals in terms of the introduction of CN principles in the area of international trade. Beyond that, Great Reveal 2.0 sets higher disclosure requirements to achieve more level-playing-field transparency on foreign SOEs. States are beginning to demand full details about who owns, manages, and underwrites foreign SOEs seeking to invest. In some cases, though, including the European Union's new foreign subsidy rules, authorities also have the ability to scrutinize and prohibit deals if it is shown that a hidden subsidy has created an unfair competitive position. What's more, these policy interventions are not really just defensive. Some administrations are already aware that there are potential benefits available from having foreign SOE investments if done under the proper terms. Strategic infrastructure projects, energy cooperation, and investment in technology are significant economic boons if they are tightly regulated. The difficult task is to distinguish between the investment in question for purely commercial reasons and that which may serve even broader civilian or military goals. It's also worth noting that, around the world, not all SOEs are created equal. Companies like Norway's Equinor or Singapore's Temasek show that public ownership of companies does not have to mean market distortion, so long as those entities act independently and competitively. Equinor, although controlled by the Norwegian government, competes as a private energy company and follows high standards of financial disclosure. Also, Temasek reports full financial accounts and adheres to internationally applied corporate governance. However, as far as most issuing Chinese or Russian SOEs are concerned, the line between politics and business is rather blurred. This lack of clarity drives misunderstandings in host countries and underpins the multiple levels of regulation and scrutiny that are now in place to influence all SOE investments.

Finally, internationalizing SOEs offers opportunities and risks. On the one hand, they have the potential to add to infrastructure development, transfer technology, and create jobs, especially for emerging economies. On the other hand, their spread may skew competition, compromise national security, and undermine conventional perceptions of fairness. Governments across the world are continuing to discover how to best navigate these trade-offs. Getting the right mix between openness to investment and safeguarding essential national interests will continue to be an overarching challenge for governments

throughout the next several years. As more and more SOEs become major players at the global level, spotlighting transparency, competitive neutrality, and equitable competition can be expected to heighten, influencing not only investment policy but also larger trade and economic relations as well.

4. Empirical Analysis of SOEs in different sectors

4.1 Overview of SOEs by sector

State-Owned Enterprises (SOEs) inhabit a curious, but undeniable, place in contemporary global economic life. They are found across finance, energy, infrastructure, and technology, as tools of government policy, stewards of national interest, and occasional, recalcitrant reminders of a bygone economic age (OECD 2023). Their existence isn't merely a relic of history; it remains a living force, as influenced by economic aspiration, political expedience, and changing global forces (Musacchio and Lazzarini, 2014).

In the financial sector, SOEs, specifically state-owned banks (SOBs), majority-owned and controlled by government entities, have an oversized position, especially in the case of emerging markets. It is not by chance that in nations such as China, India, and Brazil, such public sector banks are prominent, controlling a considerable proportion of aggregate banking assets. Their significance rings true during crises of finance, too. For instance, during 2008, when a majority of private banks cut back on loans, China's state-owned banks increased lending by almost 30%, more than offsetting the blow to the economy. But there is a cost to such stability. State-owned banks tend to have higher levels of non-performing loans (NPLs) as well as lower returns relative to private sector ones (La Porta et al., 2002). One might attribute this partly to political pressure, supplemented by a laxer discipline from the markets (World Bank, 2023).

Degradation by SOEs is, if anything, more pronounced in energy and infrastructure. The Saudis must be stunned, along with Putin and the rest of Aramco, Gazprom, Fincantieri, and the other state-owned giants, that not only dictate domestic energy and industrial profiles but world supply and price regimes. As the International Energy Agency noted in 2022, nearly 70% of global oil and natural gas production is generated by SOEs (placing aside electricity production, which is less an SOE-dominated market, but even there SOEs control the bulk of the electricity grid, according to the IEA, 2022). Governments justify this monopoly on grounds of strategic necessity and public interest, but the evidence suggests otherwise. Contraction notably in parts of South Asia, state-owned utilities have technical and commercial losses approaching 25%, a number

significantly higher than the 8% loss rate seen for privately operated systems. Indeed, they waste billions of dollars of national resources and, paradoxically, often undermine the public good they were supposed to advance. What is perhaps more astonishing, though, is the expanding reach of SOEs into technology industries and innovation. Historically, this was virtually a domain reserved for lean private companies, subject to competitive pressure to innovate from every quarter. However, governments, China in particular, have aggressively planted state-owned giants in frontier industries. China's "Made in China 2025" program, for example, showered enormous favour on companies such as China Mobile, a leading telecommunications giant, and CRRC Corporation, a leading transport technology giant, placing them at a firm leadership position in telecommunications and transport technology. But this model has fuelled increasing international controversy (State Council of China, 2015). One example, of course, is widespread hostility to the expansion of Huawei into 5G networks worldwide. The United States, Australia, and various European nations have placed controls on, or banned, Huawei equipment, citing fears of state influence, cybersecurity threats, and predatory competitive practices. Such controversy reflects increasingly blurred distinctions between economic competition, technological leadership, and geopolitical strategy as companies linked to SOEs move ever bigger around the globe.

Regional differences introduce additional complexity. In developing economies, SOEs are commonly used as instruments of achieving goals of industrial policy, filling gaps left by reluctant private investors (Rodrik, 2004). But success in this model is extremely uneven. In Latin America, for example, Brazil's Petrobras is a cautionary tale. While Petrobras made Brazil a key energy player, it also found itself at the center of one of the largest corruption scandals in recent history, Operation Car Wash. Political intervention, mismanagement, and a lack of transparency undermined public confidence, as well as resulting in severe economic losses (Transparency International, 2021). On the other side of the Atlantic, South Africa's Eskom provides another cautionary example. Once a model utility, Eskom currently suffers from chronic operational failures, rolling blackouts, and financial instability, largely as a result of years of bad governance and political interference. These examples show that although SOEs are commonly touted as drivers of development, when governing structures lose their way, these same SOEs can

become prominently economic and political liabilities as well (Government of South Africa, 2022).

That being said, not all instances are negative. Equinor of Norway, Temasek Holdings of Singapore, and a few other instances reveal that high levels of governance, openness, and incentives to perform can turn state ownership into a catalyst of innovation and competitiveness, not stagnation. Nevertheless, benefits accruing to SOEs also raise fears of market distortions. As OECD (2023) points out, access to subsidized finance, regulatory shielding, and preferential treatment when tendering can pose serious obstacles to level playing in the marketplace. Private companies, having to conduct business in the absence of such protection, are routinely disadvantaged structurally. Ironically, protectionist policies, designed to guard national interest, end up resulting in lack of progress, rent-seeking activities, and lower aggregate competitiveness at times (Megginson and Netter, 2001). In short, SOEs are key players in many industries, mediating public interest and market forces. The continued relevance of these measures serves as evidence of the potential strategic value of such measures, as well as the formidable obstacles they place in the path of policymakers determined to advance competitive, innovation-based economies. An appreciation of the multi-faceted nature of SOEs in different industries is important for those wishing to assess the real contribution of SOEs to economic growth globally.

4.2 Research and Case Selection Rationale

This research employs a qualitative case study approach to answer the key research question: "How does state ownership shape the internationalization strategies and competitive behavior of publicly owned enterprises in various sectors and countries?". A case study has been described as an empirical investigation examining a contemporary phenomenon in the context in which it exists in real life, especially when boundaries between phenomenon and context remain not clearly apparent (Yin, 2009). The case study design has particular relevance when dealing with complex multi-dimensional issues wherein contextual variables, such as strategic priorities at the political level, governance conditions, and strategic goals at the national level, play a pivotal role in determining the behavior of firms. Since State-Owned Enterprises (SOEs) intersect the realm of public policy and market competition, case study design permits a close

examination of the internal and external dynamics affecting their internationalization processes.

The case study approach is also supported by the diversity of SOEs worldwide. SOEs vary greatly in governance models, strategic goals, performance results, and levels of autonomy from the state (OECD, 2021). A cross-national and cross-sectoral case study approach offers analytical traction in order to identify patterns, differences, and causal processes a purely quantitative approach may not capture. To capture this diversity, five SOEs were chosen on the grounds of sectoral diversity (energy, finance, defense, and technology), geographic diversity (Latin America, Europe, and Asia), and alternative models of state engagement and performance. The cases comprise Petrobras (energy, Brazil), ICBC – Industrial and Commercial Bank of China (finance, China), Fincantieri (shipbuilding and defense, Italy), CRRC Corporation (advanced manufacturing/rail, China), and China Mobile (telecommunications, China). The integration of CRRC and China Mobile is especially pertinent as they both hold a key role in the state-driven initiative of China's "Made in China 2025" goal of making China a global leader in high-tech sectors. These companies demonstrate the capacity of SOEs as a tool for national industrial policy by combining state support and global market aspiration. Their engagement in advanced sectors also indicates the increased intersection between geopolitical policy and corporate globalization. The chosen SOEs not only differ in sectors but also in their alignment with state priorities, the level of market exposure they experience, and the international route they have embarked upon. Petrobras is an SOE influenced largely by local politics and resource nationalism, while ICBC represents a situation wherein the state's financial strength gives impetus to international expansion driven by geopolitical aspirations. Fincantieri depicts a European model wherein industrial policy, defense policy, and commercial competitiveness coincide. CRRC and China Mobile exemplify high-tech expansion driven by centralized planning by the state. By examining these cases, the research aims at revealing the complex ways in which state ownership affects firm-level strategy and the conditions in the international market and offers both explanatory insight and cross-case comparability.

4.3 Methodology and Data collection

The performance and overall impact of State-Owned Enterprises (SOEs) must be understood through a research strategy that is as diversified as are the firms themselves. Since SOEs tend to straddle public service mission and competitive marketplace objectives, a strictly qualitative or a strictly quantitative methodology would be unable to accurately reflect the entire range of their conduct. Thus, the analysis herein employs a mixed strategy, blending statistical benchmarking with intensive case study investigation. Underlying the analysis is a comparative quantitative comparison designed to measure SOE performance against comparable private-sector firms. The main categories of financial metrics, such as Return on Assets (ROA), Return on Equity (ROE), debt/equity ratios, investment size, and market share, were chosen based on a consensus recognized within corporate finance studies for their provision of objective measures of profitability, efficiency, and marketplace. The metrics are well known in corporate finance literature and provide a basis for determining if SOEs are performing on a comparable basis with, or behind, comparable private firms.

The primary data used are extensive datasets available from international institutions such as the OECD, World Bank, International Energy Agency (IEA), and International Monetary Fund (IMF). Furthermore, industry-specific databases, together with documents published by country-level regulating authorities, were also accessed, with a view to complementing missing global data, especially for developing areas, where solid SOE data is usually less available. Financial data were adjusted for currency differences and inflation, if required, for comparison purposes.

Although ROA and ROE are important measures, they represent only half of the picture. For example, high ROE might be indicative of government-supported benefits, such as cheap financing, and not true operational efficiency. In such cases, therefore, additional indicators, including labour productivity, technical loss rates (for infrastructure sectors), and R&D intensity within technology-driven SOEs, were incorporated into analysis to paint a more comprehensive picture (World Bank, 2020). As an acknowledgment that pure financial measures cannot provide a satisfactory explanation for SOE performance variation, a qualitative aspect is important. To this end, there are three case studies exploring Petrobras (energy, Brazil), Fincantieri (shipbuilding/defence, Italy), and the Industrial and Commercial Bank of China (ICBC, finance, China) in depth. Furthermore, a sector-level analysis of frontier SOEs at the vanguard of technology and innovation,

such as the CRRC Corporation (China) and China Mobile, is included with a view to assessing state influence over technological competitiveness, R&D capability, and national innovation policies.

Each case study incorporated a multi-source methodology, using a combination of corporate annual reports, academic research, government publications, and investigative reporting. In so far as possible, expert interviews and policy briefs were also used in order to extract insights into less visible influences, including internal governance overhauls, political meddling, and international expansion plans. For instance, the case of Petrobras centers on not so much financial performance but on how political clientelism and systemic corruption essentially undermined corporate accountability. In a comparable manner, the ICBC case looks at not just the global expansion of the world's biggest bank by assets, but also the domestic political forces that continue to shape its strategic choices. The Fincantieri case examines how strategic industrial policy, defence deals, and European regulation influence the performance and global ambitions of a dominant shipbuilding company. The use of a case study methodology enabled the research to look beyond superficial fiscal comparisons and into the "why" behind performance achievements, something that a strictly statistical perspective could never do.

An additional layer of analysis looks at regulations and policies that influence SOE conduct within various regimes. Particular emphasis was placed upon government ownership policies, competition laws, and measures taken to ensure what is known as by the OECD as "competitive neutrality", that is, state-owned and private enterprises competing on an even playing field without an advantage bestowed by the state. Within the European Union, strict state aid and public procurement rules impose an organised environment upon SOEs that incentivizes them to conduct activities within a form of a disciplined marketplace. In contrast, within emerging economies, lax enforcement of competition laws allows SOEs to use political affiliations for market dominance, driving out private investment and, in a few cases, creating substantial distortions in the development of certain sectors. This regulation is important because it represents a constraint or facilitator of SOE conduct. Unless an awareness of the overall institutional context is recognised, it would be impossible to fairly interpret a financial or operational measure without context.

The main period of analysis is 2015-2024, a period chosen to cover a range of recent change, including the aftermath of the global financial crisis, state capitalism's ascendancy in emerging markets, and economic shocks precipitated by the COVID-19 pandemic. The period also encompasses increased geopolitical tensions which directly affected world-wide activities of a number of SOEs, especially in sectors such as technology and energy. However, collection of data proved challenging. Variations in accounting regulation, differences of disclosure transparency, and political sensitivity of certain SOE activities made full comparability impossible on occasions. In a number of instances, proxy measures or secondary data were used when direct financial figures were missing or unreliable. Of note is that SOE behaviour is extremely context sensitive. Political regimes, legal regimes, societal norms, and historical inheritances all shape state-owned firms' activities and performance. Accordingly, although every effort has been made for objectivity and for ensuring comparability, analysis must be read with an explicit recognition of these contextual caveats.

Throughout the conduct of research, high standards of academic integrity were upheld. All data were cross-checked thoroughly, and in cases of conflicting points, primary documents or the best available institutional publications were preferred. Interpretative findings, especially those of political influence or quality of governance, were at all times based upon evidenced documentation, not comment. In cases of sensitive case studies, especially those concerning corruption accusations or issues of national security, findings were offered in a balanced form, with allowance for uncertainty, without unjustified generalizations. All in all, the research design attempted to combine quantitative benchmarking's empirical strength with qualitative research's contextual depth, supported by a steady sense of awareness of research's ethical and methodological intricacies when analyzing actors as politically and economically sensitive as SOEs.

4.4 Case Studies of SOEs in different industries

Whereas broad cross-sector analysis is useful for illuminating SOEs' macroeconomic function, it is at firm level that the real vectors of state ownership's complexity and contradiction are made particularly apparent. In order to discuss these dynamics somewhat more concretely, this section looks at sample case studies from those three big sectors with which SOEs are particularly closely associated: finance, defence, and energy.

Through a consideration of an individual firm's structure, behaviour, and performance, it is then feasible to form more solid conclusions about opportunities and risks entailed by state ownership.

The banking industry presents a particularly striking example of the balancing act that state-operating enterprises (SOEs) must accomplish between governmental policy objectives and economic viability (La Porta et al., 2002). State-owned banks (SOBs) are commonly given twin mandates: support economic development and inclusion, while keeping finance stable and performing well in competitive markets. Industrial and Commercial Bank of China (ICBC) presents a particularly emblematic case. The world's biggest bank by total assets, ICBC, has been a prime driver of advancing overall Chinese economic agendas. In the 2008 global financial crisis, while global private banks reduced lending to insulate their balance sheets, ICBC increased lending aggressively, cushioning domestic demand and lessening external shocks on Chinese economic fundamentals. In addition to domestic stabilization, ICBC has been a primary financier of the Chinese Belt and Road Initiative (BRI), further harmonizing activities with state geopolitical agendas. Quantitatively, ICBC's performance supports its supremacy: at FY2023, its ROE of about 11.1% compares favourably against a global average of ~9% among major private banks, and ROA equivalent to ~1.0% trails slightly respectable Western benchmarks such as JPMorgan Chase (~1.3%), although it remains solid (ICBC Annual Report, 2024; S&P Global, 2024). Its 5.5x debt-to-equity multiple, while daunting by industry criteria, is moderated by implicit state guarantee support, which lowers its financing costs (Moody's, 2024). These figures demonstrate both operational performance and privileged status, making it difficult to know whether performance is due to true efficiency or favourable factors. With implicit state guarantees and buffered by preferential regulation, ICBC has ready access to cheap capital not available to rival private-sector banks. Political priorities often direct lending, while non-performing loan quality and clarity of reporting are questioned by external observers. Whereas official statistics provide impressively low non-performing loan percentages, external observers tend to suspect lower underlying asset qualities, particularly in politically sensitive industries. ICBC is representative of the wider trend of state-owned banks being able to successfully stabilize economies and fulfill national development imperatives, yet at the cost of compromising competitive marketplace forces and corroding longer-run financial efficiency.

Turning towards the infrastructure and energy sectors, state stakes become even greater. These sectors tend to be seen as strategic to economic sovereignty and national security, deserving of ongoing government participation. Brazil's Petrobras experience illustrates that even when state ownership seems strategically appropriate, success hinges vitally upon governmental quality and strategic definition. Petrobras, Brazil's state flagship oil company, has served for decades as a symbol of national aspirations and pride. Its pioneering work exploring and developing Brazil's pre-salt and deep-water reserves made Brazil a global energy player. Petrobras's deep-water drilling technological leaps were recognized internationally, and its expansion generated considerable benefits, including job creation and industry development. Yet, Petrobras became mired in Operation Car Wash, a gigantic corruption scheme that revealed systemic political meddling and systemic corruption. Inflated contract awards, bribery, and political kickbacks destroyed Petrobras's balance sheet, only to propel economic and political instability throughout Brazil. Investor confidence evaporated, debt ballooned, and Petrobras, which once served as a source of national pride, became a powerful emblem of what is risked by insufferable governance and political control over SOEs (Monaldi, 2017). Financially, Petrobras reported a remarkable ROE of ~18% for 2023, surpassing that of global oil and gas averages at ~12% (Petrobras Annual Report, 2024; Deloitte, 2024). Its debt-to-equity of ~1.7x, however, reveals legacy fiscal strain stemming from political meddling and corruption scandals, specifically the aftermath of Operation Car Wash (World Bank, 2023). Whereas Petrobras's upstream production dominates domestic Brazilian markets (commanding ~70% of domestic output), its adjusted ROA (~6.5%) trails that of private giants such as ExxonMobil (~8%) or TotalEnergies (~7.8%), tending to suggest that its profitability is strongly driven by extraneous influences such as commodity prices rather than greater internal efficiency. These statistics present a picture of how Petrobras's fiscal success must be interpreted within the overlay of longstanding issues with governance that so often beset its ability for longer-term sustainability.

An alternative industrial case is Italy's Fincantieri, a global shipbuilding leader with a high degree of state control. Fincantieri is majority-owned by Cassa Depositi e Prestiti (CDP), Italy's state investment bank, which exercises control over the state holding. With a history spanning over two centuries, Fincantieri is a global industry leader for naval defence, cruise shipbuilding, and offshore engineering. Fincantieri's strategic path has

entailed organic development alongside international acquisitions, including its 2018 purchase of a majority holding in STX France (now Chantiers de l'Atlantique), solidifying its preeminent European shipbuilding leadership.

Fincantieri is an example of state ownership facilitating strategic industrial capacities and global competitiveness. Financially, Fincantieri registered an average ROE of ~7.5% for 2022–2023, which lagged reference industry performance at ~10% (Fincantieri Annual Report, 2024; European Commission, 2024). Its ROA, at ~3.2%, is comparable with industry counterparts such as Meyer Werft (~3.5%) and STX Europe (~3.0%), consistent with the capital-intensive nature of industry operations. The company's debt-to-equity multiple of ~1.4x is within a moderate gearing band, balancing financing for expansion with maintaining stability. Notably, Fincantieri commands over 35% of the EU's military shipbuilding, outcompeting major peers Navantia and BAE Systems, based on its dual defence/commercial focus and privileged access to state contract awards (European Defence Agency, 2024). These quantitative metrics support the qualitative consideration, which presents Fincantieri as a firm having benefited from state support without compromising competitiveness. Italy considers Fincantieri essential from an economic perspective, not merely, and for national defence purposes, given the firm's pivotal status in naval defence works and construction of naval vessels for Italy and NATO allies. Concurrently, Fincantieri's commercial activities, particularly within the field of cruise ships, have helped it compete successfully on a global realm with private-sector competitors, harmonizing public policy goals with market-oriented performance.

The company, however, has itself been far from immune to issues of governance. Allegations of political interference with board decisions, periodic conflicts with European authorities over state aid, and tensions created by balancing defence contracts with corporate expansion reflect some of the intricacies that state-owned enterprises such as Fincantieri must manage. Yet, it has been able to maintain profitability and innovation, making significant investments in green technologies and digital shipyard development. The company is a prime illustration of what, with effective governance and strategic leadership, a state-owned firm is able and capable of being, an agile and effective competitor within global markets and a purveyor of public policy and national security goals.

Last, the role of SOEs in innovation and technology is a newer and more significant area of state control. Traditional wisdom has seen technological innovation so far as a preserve of the private sector, driven by competition, entrepreneurial risk-taking, and diffuse decision-making. However, in the intervening years, several governments began looking to SOEs as a vehicle for achieving technological dominance and economic sovereignty in strategic spaces like telecommunications, artificial intelligence, and advanced manufacturing. China's experience perhaps provides the clearest and most sweeping expression of this phenomenon. Under state-led initiatives like "Made in China 2025," officials allocated serious resources toward building national champions like CRRC Corporation for the high-speed train and China Mobile for telecommunications (State Council of China, 2015). CRRC emerged as the largest provider of rolling stock worldwide, having established world-class capacity based on heavy investment in research and development.

CRRC's financials strengthen the firm's status as a preeminent state-sponsored innovator. In 2023, the firm generated a Return on Equity (ROE) of 7.41% and a Return on Assets (ROA) of 2.56%. It had a debt-to-equity ratio of 43.16%, showing modest leverage underpinned by government guarantees. Significantly, CRRC spent around RMB 7.95 billion on capital expenditure, a significant portion of it on R&D and next-generation train technology development (CRRC, 2024). These figures not only highlight the firm's fiscal strength but also the continued investment in innovation as a strategic national asset.

On a related front, China Mobile advocated for aggressive expansion into 5G networking utilizing technical capacity and favorable positions assisted by the state (OECD, 2023). The telecommunication giant achieved an ROE of 11.8% in 2024 and a significantly low debt-to-equity ratio of only 0.07, a reflection of its good internal capital standing and minimal external financing dependency. At a level of RMB 164 billion (which represents well over 18% of revenues on an annualized basis), China Mobile confirmed its pivotal role in the deployment of state-of-the-art communication facilities. Its average revenue per user (ARPU) of RMB 52.3 reflected not only commercial profitability but also technology leadership (China Mobile, 2024). This state-led framework for tech development has also proven controversial. The experience of Huawei, far from being a state-owned entity in a formal legal sense, encapsulates fear about state-sponsored companies dominating sensitive tech sectors. Several countries, including the U.S.,

Australia, and sections of Europe, have blocked Huawei's entry into 5G markets due to fear of cybersecurity and political influence wielded through trade (European Commission, 2022; Australian Government, 2018; U.S. Department of Commerce, 2019). These actions mirror the confluence of rising economic competition, technological primacy, and defence interests in a time when technological sovereignty has become the key driver of global influence for nations. Concurrently, however, a debate exists regarding whether or not SOEs can compete on a level of innovation dynamism comparable to non-governmental firms. Critics assert that although SOEs may achieve the size of a technical nature, bureaucratic orthodoxy, risk averseness, and slower decision-making ultimately form liabilities (Bruton et al., 2015). Evidence from instances like CRRC and prior government-supported Korean industries suggests otherwise, however: given clarity of purpose, autonomous operations, and strong controls, SOEs can indeed be forces for innovation in their own right. The added instance of China Mobile proves the proposition as well: its blending of market leadership, financial strength, and next-generation investments showcases the manner in which SOEs, when provided clear operations discipline and long-term remit, can advance nations' innovation agendas in scale (OECD, 2023; World Bank, 2023).

Across finance, energy, shipbuilding, and technology sectors, the theme is clear: the effects of state ownership are not predetermined by state ownership itself and not always negative. Rather, they're decisively determined by the quality of regulations and institutions and the quality of balancing the goals of state policy and economic efficiency. Where in those instances those aspects are well-aligned, SOEs can be sources of enormous public and strategic value. Where in those instances those aspects exist in short supply, even strategically necessary SOEs can be anchors on their economies and canthers of systemic risk.

4.5 The effect of Government Ownership on Market Competition

The presence of State-Owned Enterprises (SOEs) within contemporary economies has been a source of dispute for a long time about whether and how far their influence extends on overall marketplace competition. On the one hand, SOEs stabilize strategically significant industries, support development goals, and deliver public goods. On the other hand, SOEs induce significant distortions in markets, which, if left uncontrolled, tend to

undermine competition, suppress innovation, and introduce institutional inefficiencies. Defining SOEs as stabilizers and, by extension, potential disruptors, is important for assessing participation by SOEs within modern economic frameworks. Perhaps the longest standing among all issues attendant with SOEs is the favouritism afforded them. Using OECD estimates (2024), such a tilt lowers an SOE's effective costs of operation by up to 20% against private enterprises. These advantages take a wide range of forms, from government-provided financing subsidies to exemptions from regulation to implicit state guarantees that lower the costs of borrowing. A particular salient point made by the OECD is that, internationally, state-owned enterprises often compete against private rivals not because they are more productive or innovative, but because of distortions based on state support. (OECD, 2024). This distortion of the competitive landscape does not only harm private firms but also has a risk of entrenching inefficiencies throughout an entire sector.

The economic effects of this distortion are nontrivial. It is estimated that SOE's average Returns on Assets (ROA) is 1.5 percentage points lower relative to equivalent private sector firms (World Bank, 2023). While this performance difference may seem like a small margin, at the scale of economies, it makes a huge difference. According to the World Bank, to cut just half of some of SOEs-related inefficiencies would result in a whopping increase of 1-3% in global GDP. Of course, the opportunity costs are also high: resources stuck in underperforming SOEs could be reallocated into more dynamic, innovative, competitive industries. In addition to these direct inefficiencies, SOEs have a number of indirect effects that can undermine private sector development. In many emerging economies, oligopolistic SOEs maintain such strong positions in finance, energy, or telecom that private entry is completely discouraged. In its 2023 report, the World Bank also says that several significant markets, along with preferential credit and supervisory support, also allowed SOEs to "crowd out" private investment, leading to less entrepreneurship, less innovation, and sluggish productivity growth. This is particularly prejudicial in sectors where technological change and flexibility are key drivers of competitiveness. But interestingly, these are not emerging market problems alone. Even in high-income countries/economies, the role of SOEs makes enforcement of competition policy problematic. The OECD (2024) also notes that a level playing field is difficult to maintain in practice, as politically connected firms benefit from more opaque forms of

implicit support such as looser regulation or privileged access to tenders. As a result, maintaining fair competition under the coexistence of SOEs and private enterprises requires constant attention and nuanced handling by policy (Kowalski et al., 2013).

Responding to these issues, policymakers globally are implementing concrete measures designed to limit harmful market impact of SOEs. Central among them is the principle of competitive neutrality: that state and private enterprises must compete on an even playing field, with no unfair advantage accruing from state ownership. Competitive neutrality has been adopted, in principle, by the OECD and is a fundamental conception at the heart of state aid regulation within the European Union (European Commission, 2023). Applying competitive neutrality usually encompasses different measures. First, governments need to ensure that SOEs are subject to the same fiscal disciplines as private companies, including exposure to bankruptcy risk and financing costs based on markets. The Norwegian model provides an attractive model of how this is made feasible. Norway's State Ownership Report (2022) states that state-owned enterprises are expected to have distinct commercial mandates, professionalized boards, and transparent reporting rules that, altogether, significantly lower distortions among state and non-state actors (Government of Norway, 2022). Second, transparency of finances is essential. The OECD advises that mandatory disclosure of high-standard rules for SOEs, just like for listed non-SOEs, serves to lower information asymmetries and reveal inefficiencies. Public release of financial statements does more than enforce accountability (OECD, 2015). However, they allow regulators, investors, and the general public to determine if SOEs are actually doing what they are said to be doing without favouring them abnormally in markets (OECD, 2024). Third, subsidiarity has become a more widely embraced principle for guiding public ownership choices. According to subsidiarity, government ownership is only justified if there is a lack of viability for provision by a private party or when there are important objectives of a strong public interest. For example, Norway differentiates among SOEs by strategic importance, separating companies with exclusively commercial purposes from companies with important roles for critical public policymaking. By doing so, it makes state intervention targeted and proportionate, avoiding an undue distortion of competitive markets (Government of Norway, 2022).

Nonetheless, even with optimally designed frameworks, all the tensions inherent within state ownership cannot be avoided. Certain sectors, such as utilities, public transport, and

strategic defence, are inherently suited for a level of government control due to concerns for public goods or natural monopolies. In such areas, the objective is not to exclude SOEs, but to see that they are transparent, run efficiently, and held accountable by outside mechanisms (Rodrik, 2004). Also, it is important to note that SOEs are able to provide certain benefits within certain environments. In industries needing large, patient capital investment, such as infrastructure, energy transformation, or frontier research, SOEs can serve a catalytic function by absorbing risks that investors may eschew. Furthermore, during times of economic downturn or market failure, state-owned enterprises can offer stabilising forces that shield more extensive economic and social interests (IMF, 2020). As with the 2008 economic crisis and the COVID-19 pandemic, state intervention in pivotal sectors is, at times, necessary so that national strength is preserved (World Bank, 2023; OECD, 2024). However, the benefits of SOEs need to be carefully compared with the threats that SOEs pose. In any case, without robust governance institutions, unambiguous performance mandates, and protection mechanisms for maintaining competition, SOEs are quick to become hotbeds for rent-seeking, cronyism, and sclerosis. They do not necessarily manifest distortions immediately, yet over a period, distortions plead economic dynamism, deter direct investment, and lower potential for long-term growth. In conclusion, the impact of government ownership on market competition is strongly conditioned by a wider institutional policy context. Well-run SOEs, with competitive neutrality and unambiguously commercial mandates, can coexist with dynamic private sectors and support wider national objectives. Ill-run SOEs, on the other hand, are at risk of distorting markets, stifling innovation, and putting a drain on taxpayers. Policymakers' challenge is consequently not so much whether to own or not, but about how to shape ownership arrangements and regulation so that the advantages of public ownership are unleashed while confining its substantial risks (Bruton et al., 2015; OECD, 2024).

5. Strategic Internationalization of SOEs - Case Comparisons

5.1 Petrobras - Strategic Leadership and Governance Risks in Energy

Established in 1953 when economic nationalism reigned supreme, Petrobras (Petróleo Brasileiro S.A.) emerged as Brazil's most celebrated state-owned enterprise (SOE), the epitome of national pride and visions for industrial and energy independence. Petrobras' founding marked Brazil's strategic move towards breaking the dependence on imported oil and gaining economic independence over the long term. Organizational-wise, Petrobras is still majority-owned and controlled by the Brazilian government through its direct and indirect holding of about 50.3% voting shares, thus exerting key controlling powers over strategic choices (Petrobras Annual Report, 2023). Historically, Petrobras served as a key player in the direction Brazil's industrial sector took, first refining imported petroleum but then moving into domestic production and exploration to further national economic development goals. A turning point in its history occurred in the early 2000s when the discovery of the extensive pre-salt reserves took place beneath thick beds of salt several kilometers beneath the ocean floor. This discovery revolutionized Brazil's international standing and placed Petrobras firmly at the forefront of the world in terms of deep-water exploration and drilling technological prowess (IEA, 2021). By developing ultra-deep-water extraction techniques, Petrobras positioned itself as a significant international producer as well as a technological pioneer with the ability to drive world industry standards (World Bank, 2023).

This international expansion at the beginning of the 21st century, was driven primarily by the desire to diversify its business and reduce risk in a single market, but also to use their advanced capability in offshore exploration and expand in the international market, by securing a source of supply overseas in the form of oil reserves in another country outside of Brazil. Petrobras strategically targeted countries with geological conditions similar to those of Brazil's offshore, with large investments in Africa, including Angola and Nigeria, and in the offshore of the Mexican Gulf, and in countries of Latin America, such as Argentina, Colombia, and Venezuela (Petrobras Annual Report, 2023). In these foreign markets, Petrobras operated in several competitive modes, which range from direct investments to joint ventures, and strategic alliances. Petrobras, in collaboration with international oil majors such as TotalEnergies, ExxonMobil, and Shell, employed a mix of technological and market capabilities to reduce entry barriers and operational

uncertainties in the internationalization process (Deloitte, 2022). Moreover, Petrobras' international experiences were greatly assisted by Brazilian diplomacy. The Brazilian state was to a large extent utilizing its resources in foreign policy and its own networks of diplomacy mostly in order to actively contribute to the internationalization of Petrobras as part of Brazil's broader geopolitical project, particularly in Africa and the Americas (Burgess, 2013). It was easier for such an integration among new markets accompanied by political support which helped in lowering resource world entry barriers and enhanced operational reputation and credibility overseas (OECD, 2022). However, while enjoying such benefits, Petrobras's corporate governance and international strategy were severely undermined through systemic governmental meddling and corruption. The extent of the governance woes emerged starkly with Operation Car Wash (Operação Lava Jato) in 2014, where far-reaching bribery and other forms of corruption involving Petrobras executives, politicians, and private sector contractors were unraveled. This vast scandal entangled bribery, collusive procurement contracts, inflated prices, and systemic government kickbacks, considerably eroding Petrobras's corporate integrity and badly blemishing its international image (Transparency International, 2021). At the core of the governance shortcomings was the long-established tradition of politically appointed board and high-level management posts in Petrobras. Political appointees tended to place party or personal interests over corporate governance norms at the expense of accountability safeguards, managerial independence, and disclosure. The implications for Petrobras were disastrous and included widespread investor distrust, drastic losses in share value, reduced credit ratings, and elevated external financing costs. Debt exploded and exerted immense pressure on financial sustainability and constrained strategic maneuverability (World Bank, 2023). Therefore, Petrobras's international partners began to look at alliances with more trepidation, wary of potential governance and compliance risks from such systemic political intervention. By comparison, Petrobras's performance when compared to private multinational energy behemoths such as ExxonMobil, Shell, and TotalEnergies shows mixed performance. Financial metrics such as Return on Equity (ROE), Return on Assets (ROA), and debt-to-equity ratios show Petrobras's strengths and weaknesses in a pointed manner. Petrobras achieved a strong ROE of about 18% in 2023, beating the global oil and gas industry average of about 12% (Petrobras Annual Report, 2024). Still, this financial resilience primarily stemmed from advantageous world oil prices instead of better operating efficiency. In fact, Petrobras's adjusted ROA of about 6.5% lagged private sector comparables like ExxonMobil at 8% and TotalEnergies at

7.8% and exhibited evidence of persisting operational cost issues, efficiency lags, and governance inefficiencies (Deloitte, 2024).

Moreover, Petrobras's high debt-to-equity ratio of about 1.7x far surpasses industry standards and reflects ongoing financing pressures stemming from past governance concerns and the high costs of financing emanating from perceived political risk (World Bank, 2023). Such finance risks have limited Petrobras's strategic flexibility and international market competitiveness against its better-financed international peers. However, state ownership has also given Petrobras distinct strategic benefits, particularly apparent in its ambitious long-term investments in technologically risky ventures like the pre-salt oil fields. Implicit guarantees from the state and direct political support allowed Petrobras to invest in risk-prone exploration projects that privately owned companies may forego over pressure from shareholders in the short term. However, such benefits have constantly been undermined by governance deficits, reflecting the entangled interaction between state ownership, corporate governance, and market competitiveness (OECD, 2024). Aiming to address these core governance risks and imperatives, Petrobras initiated comprehensive corporate governance reforms to de-politicize management institutions, achieve greater transparency, and limit political intervention. Current governance reforms have placed a greater emphasis on merit-driven executive appointments, enhanced controls and check and balance mechanisms, and better disclosure practices and standards in a bid to reestablish investor confidence and optimize operational performance. These initiatives, while still in their initial stages, represent a deliberate move towards a more international best-practice compatible model of governance and are expected to make Petrobras more competitive globally (OECD, 2024).

Ultimately, the Petrobras experience teaches key lessons about the strategic nuances confronting state-owned companies in the international energy sector. Whereas state ownership can certainly confer competitive benefits through strategic support and risk-sharing, such advantages rely greatly on strong governance institutions and political independence. Petrobras's course starkly illustrates how governance failure and political intervention can greatly erode international strategy, reduce competitiveness, and threaten long-term corporate resilience. Conversely, the continued governance reforms suggest a potential path to greater strategic performance, if it is cemented by continuing political will towards transparency, accountability, and professional corporate governance. The Petrobras experience as a case study thus teaches important lessons in offsetting the

advantages of state ownership against the governance risks, vital to strengthening SOE performance across global markets.

5.2 ICBC - Geopolitical Expansion via Financial Power

Founded in 1984, the Industrial and Commercial Bank of China (ICBC) soon transformed itself into the world's largest bank in terms of assets, reflecting its strategic significance to the domestic financial system in China and the wider national economic needs. ICBC is largely controlled by the Chinese government directly through Central Huijin Investment Ltd., the subsidiary of the sovereign wealth fund China Investment Corporation (CIC), and the Ministry of Finance. Central Huijin alone holds about 34.7% shares in ICBC together with the Ministry of Finance which directly owns about 34.6%, reflecting the decisive role of the Chinese state in ICBC's corporate governance and strategic direction (ICBC Annual Report, 2023). As a state-owned institution, ICBC's business mandate readily incorporates the functions of a commercial bank with important policy-driven functions allocated to the Chinese government. This dual mandate places ICBC in a distinct position within the Chinese financial system, requiring it to reconcile commercial profitability with the facilitation of state-defined economic stability and development objectives. The bank is the key player in the execution of Chinese domestic financial policy and frequently serves as the financial instrument of the government during times when the economy is clouded in uncertainty (Kurlantzick, 2016). A stark illustration is the period in the 2008 global financial meltdown when ICBC, in line with instructions from Chinese authorities, sharply ramped up the availability of credit to key sectors including infrastructure development, housing, and manufacturing. This large stimulus intervention spearheaded by ICBC and other large state-owned banks proved pivotal in insulating the Chinese economy against external economic shocks and stabilizing domestic economic environments (World Bank, 2023). Furthermore, ICBC's banking operations are deeply embedded within China's national macro-economic policy agendas such as national development programs intended to promote innovation, infrastructure development, and economic rejuvenation at the regional level (Gallagher, 2016). By directing financial funds towards high-priority areas as targeted by Chinese policymakers, ICBC serves as both a commercial bank and a key enabling factor in the delivery of targeted economic performance against national strategic priorities (OECD, 2022).

ICBC's expansion strategy outside its domestic market tracks very closely with China's grand geopolitical agenda labeled the Belt and Road Initiative (BRI), launched in 2013. BRI's aim is to promote greater global connectivity and economic interdependence between Asia, Europe, Africa, and Latin America through comprehensive infrastructure investment. ICBC serves the role of a lead financial conduit to this strategic framework, vastly expanding international economic leverage through the financing of massive infrastructure projects like ports, railways, energy plants, and highways in target countries (World Bank, 2023). ICBC has significantly increased its international reach in target regions targeted by the BRI in Southeast Asia, Central Asia, Africa, Europe, and Latin America. ICBC does this through a diversity of investment and co-partnership models, largely through the use of project financing, syndicated lending, direct equity investment, and strategic joint venture partnerships with domestic financial institutions. By 2023, ICBC opened branches and subsidiary institutions in over 40 countries and greatly increased its international reach in emerging markets targeted as geopolitically strategic through Chinese policy planning initiatives (ICBC Annual Report, 2023). These international operations serve evident geopolitical and economic purposes rather than solely commercial expansion. By financing towards strategic investments and infrastructure development, ICBC directly facilitates the ultimate Chinese goals of gaining access to key natural resources, expanding new markets for Chinese companies, increasing diplomatic clout, and internationalizing the Renminbi (RMB) currency. ICBC's international strategy thereby directly demonstrates wider Chinese economic and geopolitical ambitions and therefore is a leading entity in the pursuit of Chinese economic clout and diplomatic weight (OECD, 2022).

As a state-owned enterprise, ICBC benefits substantially from a range of institutional advantages derived from its close association with the Chinese government. These advantages notably include preferential access to low-cost, state-backed funding, implicit sovereign guarantees that significantly reduce its borrowing costs, and strong regulatory support, providing the bank with a distinct competitive edge over purely commercial international banks (World Bank, 2023). ICBC's regulatory ecosystem is particularly advantageous. While private commercial banks lack the risk tolerance implicit in the support of the state government, ICBC can make significant investments in politically risky or economically volatile areas where private banks may hesitate to invest out of concern over risk. This greater risk tolerance facilitated by implicit government backing unlocks financing and infrastructure projects over the long term vital to the geopolitical

ambitions of the BRI where immediate profitability may be questionable (OECD, 2022). ICBC also uses its government affiliation as a form of negotiation currency in international diplomacy. Recipient countries are aware of ICBC's closeness to Beijing and will sometimes grant the bank preferential terms or other benefits in terms of treatment and presentation, considering ICBC both a financial and diplomatic gateway to the Chinese government. This combination of cheap financing costs, regulatory accommodations, and diplomatic backing considerably enhances ICBC's competitive potential in international financial spaces (World Bank, 2023).

In comparison to high-profile international private banks like JPMorgan Chase or HSBC, ICBC's financial performance shows distinct attributes influenced considerably by its government ownership. Financial ratios like Return on Equity (ROE) and Return on Assets (ROA) capture the effects of ICBC's dual mandate and operating style. ICBC's ROE in 2023 stood at about 11.1%, slightly more than the 9% World Bank average. Its ROA at about 1.0%, however, lags behind top private international banks like JPMorgan Chase at about 1.3%, reflecting the effects of ICBC's sizeable asset base driven through its wide-ranging governmental mandate and a high degree of exposure to policy-driven lower-return investments (ICBC Annual Report, 2024; S&P Global, 2024). ICBC's risk profile is characteristically impacted by its government support. Its high ratio of debt to equity far over private bank norms at about 5.5x means ICBC comfortably lives in a universe where the implicit government guarantee softens worries over risks related to being over-levered and enables it to carry much higher levels of credit extension and investment activity than its private counterparts might reasonably afford (Moody's, 2024). Operationally speaking, ICBC has lower levels of management independence compared to private international banks owing to strong government influence over strategic management decisions. In contrast to private international banks where corporate strategy is largely driven by market forces, ICBC's strategic direction is oftentimes aligned with wider national policy interests and diplomacy goals established by the Chinese government. While this reduces the bank's operating flexibility and responsiveness to sheer market incentives, it also maximizes its ability to operate strategically across the medium and very long terms, especially in geopolitically sensitive economies (OECD, 2022). Ultimately, the significance of ICBC's state ownership transcends financial performance and reflects geopolitical motivations more broadly. ICBC is used as a vehicle for the exercise of Chinese state power externally, and its international reach, lending practices, and market penetration all are deeply influenced by

Chinese foreign policy goals. This places ICBC in the category of a unique model of state-supported financial power projection different in ambition and scope from other pure commercial international banks driven almost exclusively by profitability in the framework of normal market relations. This renders ICBC both a dominant financial institution and a key player in the broader geopolitical and economic strategy pursued by China in the international arena.

5.3 Fincantieri - Balancing Industrial Policy and Global Competitiveness

Fincantieri, founded in 1959 but with a two-century legacy behind it, is Italy's leading shipbuilding company and a key player in the national industrial policy strategy of the country. Fincantieri is controlled by a majority stake via Cassa Depositi e Prestiti (CDP), Italy's state investment bank holding about 71.3% of its shares and thereby exercising proper government control and strategic direction (Fincantieri Annual Report, 2023). This ownership model places Fincantieri not just as a business organization but as a strategic pillar in Italy's defense and economic infrastructure. As a leading shipbuilding company in the naval sector, Fincantieri is a strategic pillar in Italy's defense capabilities through the provision of vital infrastructure and ship production to the Italian Navy and allied NATO navies. Its role extends beyond defense, however, deeply complementing Italian industrial policy efforts towards fortifying industrial capability, enhancing technological sovereignty, and stimulating national employment within the economy. Fincantieri therefore illustrates the use of state ownership in Italian strategic sectors fundamental to national security and industrial competitiveness in the international market (European Commission, 2023).

Fincantieri has engaged in aggressive expansion over the last decades through targeted acquisitions and strategic alliances aimed at expanding its capability in military and civil shipbuilding activities. One of the key successes in this expansionist exercise was its 2018 acquisition of a majority holding in STX France since rebranded as Chantiers de l'Atlantique, firmly establishing it as Europe's shipbuilding market leader and vastly expanding its industrial presence and technological capabilities in the construction of commercial cruise ships (Fincantieri Annual Report, 2023). One key aspect to Fincantieri's strategy is its dual-use capacity combining naval defense and merchant shipbuilding markets. A dual-use strategy enables the organization to tap technological advancements, economies of scale, and inter-sectoral capability to ensure competitive

benefits across different market spaces. Examples include developments created primarily for military purposes, e.g., navigation systems, propulsion technologies, and cybersecurity measures, being successfully transferred and implemented in merchant ships strengthening innovation capacities and competitiveness in the marketplace (European Defence Agency, 2022). Fincantieri has also sought out strategic alliances in Europe with other defense and marine companies as part of its efforts to innovate and broaden its technological offerings. Through partnerships with such companies, the firm has spearheaded key technological innovations in green shipping solutions, digital shipbuilding, automation, and green maritime solutions, establishing it as a maritime innovation pioneer (European Commission, 2023).

The governance framework of Fincantieri mirrors its dual role as both a strategic state asset and a business-driven company. Though owned predominantly by the Italian government through CDP, Fincantieri exercises significant operational independence, especially when contrasted with numerous other state-owned firms in the world. The board of directors includes a mix of both independent and state-appointed directors evenly distributed, conforming closely to international corporate governance best practices. This ensures the firm remains insulated from high-level political intervention so the management can prioritize strategic, operational, and innovation-based goals with great independence (OECD, 2021; OECD, 2023). Despite this relative autonomy, Fincantieri's strategic direction remains firmly in line with Italian government policies, specifically defense procurement and industrial policy directives. Policies initiated and controlled by the government are key determinants when the company makes investment choices, decides upon its research and development priorities, and identifies its strategic directions, especially in areas deemed key to national defense and technological innovation. A key focus of Fincantieri's business strategy is innovation, and the company has pursued digitalization and sustainability enthusiastically and proactively since they are viewed as being key to being competitive in the world maritime market (Fincantieri Innovation Report, 2023). There have been considerable investments in activities such as automated digital shipyards, adoption of the use of Industry 4.0 technologies, research and development of new-generation green powering technologies (beyond LNG and hydrogen-powered ships), and cybersecurity measures to safeguard strategic naval and merchant infrastructures (Fincantieri Annual Report, 2023). Fincantieri is thereby placed at the technological cutting-edge through innovation activities further supplemented

through supportive Italian and European Union industrial policy environments providing incentives to sustainable innovation.

Placed alongside its privately-owned international competitors like BAE Systems and Meyer Werft, Fincantieri offers unique strengths and limitations deriving directly from its model of state ownership. Financially, Fincantieri evidenced a Return on Equity (ROE) and Return on Assets (ROA) of about 7.5% and 3.2%, respectively in 2023, indicative of strong but slightly lower returns than the general industry standards of about 10% ROE and corresponding ROA rates across key private competitors (European Commission, 2024). Its relatively low 1.4x debt-to-equity ratio shows a secure financial position to support ongoing strategic investment and expansion programs. State ownership affords Fincantieri unique competitive strengths through its ability to secure large and lengthy defense contracts from the Italian government and other defense procurement entities in Europe. This implicit government support provides the company ample operating stability and the ability to make large strategic investments with longer payback horizons than private-sector counterparts might usually accept (OECD, 2023). Nevertheless, this government interlinkage is not problem-free. The balancing requirement between commercial efficiency and government aims can sometimes introduce complicated decision-making dynamics. Cases involving conflicts between operating independence and government intervention have from time to time emerged, especially in disputes over mergers, acquisitions, or strategic alliances with politically and national-security sensitive implications.

In international defense manufacturing markets, Fincantieri competes favorably based on technological excellence and robust government assistance, albeit in the face of strong private-sector competition from the likes of BAE Systems, who are able to operate more freely and economically without the burdens of state-mandated responsibilities. While Fincantieri is able to successfully adopt its dual-use technological strengths and take advantage of government-backed financing, maintaining the balancing act between political and commercial success is a continuing problem affecting its international competitiveness (European Defence Agency, 2022). Generally speaking, the firm strategic path demonstrates the multifaceted interaction between government ownership, commercial success, technological prowess, and geopolitics. Its experience also demonstrates valuable insights into the management of government-owned firms in high-tech strategically sensitive industries, and the key competitive benefits provided through

government assistance while the continuing problem in reconciling commercial activities with national strategic goals is exposed.

5.4 CRRC & China Mobile - Leadership through State-Driven Expansion

CRRC Corporation Limited, the world's largest producer of rolling stock, and China Mobile, a top international telecom operator, are both key participants in China's strategic industrial policy, prominently outlined through the ambitious "Made in China 2025" initiative launched in 2015 (State Council of China, 2015). This policy directly aims at making China a world leader in high-tech industries through innovation, self-dependence and competitive supremacy in strategic areas such as advanced transport equipment and telecom infrastructure (OECD, 2022). State policy places both CRRC and China Mobile not just as business entities but also as vital means of acquiring technological independence and world market dominance. CRRC itself has been charged with expanding China's international competitive edge in high-speed rail innovation, electric drive technology, electric propulsion systems, and advanced transport infrastructure. China Mobile, however, is strategically pivotal to the nation's expansion in the field of telecom with the rollout of 5G and next-generation wireless networks and digital infrastructure as well as internet-of-things applications pivotal in facilitating wider industrial modernization (World Bank, 2023). Both companies illustrate the strategic application and use of state-owned firms within overall industrial and economic state policy configurations in China. They illustrate the strategic use and application of state ownership to secure technological supremacy and the way national strategic goals are aligned closely with corporate aims and significant governmental support and financial investment are used to further national technological supremacy (OECD, 2022).

CRRC and China Mobile have significantly invested in innovation efforts, research and development activities (R&D), and infrastructure development with active support through policy-driven investment and government-led financial incentives. CRRC alone expended about RMB 7.95 billion in R&D activities alone in 2023 and devoted significant funds towards the production of next generation rolling stocks, high-speed train innovations, electric traction, and intelligent transport systems (CRRC Annual Report, 2023). These activities are actively encouraged by the government through direct financial subsidies, tax relief, and policy incentives specifically targeted at enhancing

technological innovation and attaining world leadership in transport technologies (World Bank, 2023). China Mobile equally devoted significant funds, expending more than RMB 164 billion in infrastructure expansion and innovation activities in 2023 alone and specifically committing significant funds to the rollout of nationwide 5G networks, enhanced IoT solutions, cloud computing infrastructure, and artificial intelligence as service-based offerings. This heavy investment demonstrates China Mobile's leading position in the state's overall digital transformation strategy, underscored by strong financial backing through state subsidization, preferential finance, and regulatory easing (China Mobile Annual Report, 2023). Both operators derive significant benefits from the state incentives and policy-driven financing assistance measures such as access to subsidized financing conditions from state-backed financial institutions, comprehensive R&D subsidization, preferential regulatory treatments, and direct financing for projects. This government-supported investment significantly enhances their ability to pursue long-term, investment-intensive, and technologically complex projects and thereby their international technological competitiveness considerably (OECD, 2022). Both CRRC and China Mobile have aggressively pushed out into international markets as part of their wider role in enhancing their international technological reach. CRRC's international expansion strategy has targeted vast markets across Asia, Europe, Africa, and Latin America and won contracts to supply railway systems, metro rail, and the manufacturing of rolling stocks in many countries such as Malaysia, South Africa, Germany, Argentina, and Brazil. Its strategy is typically in the form of strategic joint ventures and partnerships and is usually complemented with wide-ranging state-sponsored financing packages that position its business more favorably against private competitors (World Bank, 2023). China Mobile has also pushed out globally through its early investments in next-generation digital infrastructure. It greatly increased its footholds in emerging Asian and African markets through the use of its advanced telecommunication technologies and government-supported financing arrangements to achieve competitive market share. Nevertheless, both firms have faced geopolitically significant reactions and regulatory issues across the world. CRRC has come up against mounting pressure and limitations in the United States and Europe, primarily based on fears over the government providing unfair competitive advantages and perceived security threats from Chinese government intervention. In the same way, China Mobile ran head-on with regulatory setbacks in the form of being directly banned from the U.S. telecom market over national security reasons. These events reflect the larger geopolitical tensions and regulatory barriers

increasingly being faced across Western markets by Chinese government-owned technological companies (OECD, 2022).

In comparison with Western private-sector tech companies, CRRC and China Mobile reflect different models of innovation, financial forms, and market strategy. Western companies in the technology sector like Siemens in transport and Verizon or AT&T in communication usually focus intensely on market-driven innovation and access finance primarily through private market avenues. CRRC and China Mobile, however, function in a much more government-driven model of innovation with access to ample government finance, direct subsidization, and strategic safeguards allowing more risky and more long-term technological investment and sometimes more than private-sector companies can wisely pursue (World Bank, 2023). Financially, CRRC and China Mobile gain heavily through implicit government guarantees and preferential financing terms sharply lowering the cost of capital to make way for consistent high-level investment in innovation and infrastructure. Western private companies, however, face tight market discipline where profitability and pressure from shareholders constrict their ability to make extended periods of capital-heavy R&D without immediate financial payoffs. Regarding organizational independence in operation, CRRC and China Mobile have lower levels of strategic independence when compared to Western technological counterparts. Strategic choices are often driven more broadly through government policy imperatives rather than market returns, prioritizing national technological and economic progress over immediate profit. Western private companies have more freedom to shift strategy quickly as the market evolves, resulting in a greater degree of agility and more rapid adaptation to market changes (OECD, 2022).

Despite the differences between them, CRRC and China Mobile are world-class competitors through their ability to direct large quantities of resources towards technological progress and strategic market positioning. Their capability to invest in lengthy, government-backed innovation programs confers a strong competitive edge in strategically important world industries, demonstrating the ability of civil government ownership and directed industrial policy to empower technological supremacy in the face of the stresses of geopolitical tensions and the regulatory complexities faced in world markets.

5.5 Patterns and Cross-Case Insights

Across the state-owned companies evaluated, Petrobras (Brazil), ICBC, CRRC, China Mobile (China), and Fincantieri (Italy), unique yet convergent themes emerge in their internationalization models. Each SOE embarks upon international expansion primarily driven by national policy goals using unique strategic advantages provided through their governments' support. Petrobras used its technological supremacy in deep-water exploration to venture into geologically similar markets such as Brazil, usually in collaboration with multinational companies already established in those countries. ICBC and CRRC have also used government-supported financing in tandem with diplomatic assistance to make large-scale investments in infrastructure across the world, mostly through the Belt and Road Initiative. China Mobile also follows this path with the international deployment of next-generation telecommunication infrastructure driven by overtly stated policy goals. Fincantieri, while more economically oriented in its expansion in Europe, has also profited from government-backed mergers and acquisitions and strategic partnerships, specifically in the defense and dual-use industries. A thread common to each is the use of joint ventures, partnerships, or acquisitions as favored means of entry, enabling risk management and operational synergy and often buttressed by considerable political and diplomatic support. Taken as a whole, the cases document a strategic model where SOEs leverage state-supported competitive strengths, technological dominance, subsidized financing, and diplomacy to gain strongholds abroad.

Governance institutions across the SOEs differ widely in their degree of political monitoring, managerial independence, and overall governance efficacy. Petrobras is the classic case of extreme governance shortcomings arising from high levels of political intervention, epitomized by Operation Car Wash, which seriously undermined its managerial independence and operational efficiency. On the other hand, ICBC, CRRC, and China Mobile are considerably more organized in their governance institutions, with evidently specified domains based upon national policy agendas like "Made in China 2025" and the Belt and Road Initiative. Nevertheless, these companies are still faced with significant political intervention in strategic decision-making processes driven more by overall governmental agendas than market-driven purposes. Fincantieri illustrates a relatively greater degree of governance independence and expert management with operational self-determination in terms of a well-defined framework of industrial policy directives. Its governance system is well aligned with international best practices in its

focus on evenly proportioned board composition and relative insulation from direct political interference while maintaining strong strategic alignment with national defense priorities. Governance organization across the SOEs examined shows that effectiveness largely depends upon the extent of insulation from interference and greater governance clarity and defined autonomy being directly correlated with enhanced operational efficiency and international competitiveness.

Turning to the state support mechanisms, they are universally present in all the cases examined, albeit in different forms and magnitudes. Petrobras benefits mostly through implicit guarantees and diplomatic support, empowering ambitious and high-risk explorations. ICBC, CRRC, and China Mobile are aided significantly through direct financial subsidies, good regulatory climates, state-supported low-cost financing, and diplomacy-driven strategic facilitation, greatly enhancing their international market shares and competitiveness. Fincantieri's state assistance, although relatively less direct and filtered through more intermediate forms, largely takes the form of guaranteed defense contracts and financing-related policy incentives and facilitated strategic European mergers and acquisitions. All the state supports significantly influence market dynamics and competitive fairness. In the cases of ICBC, CRRC, and China Mobile, widespread subsidized and preferential financing terms have generated significant international concerns over unfair competition and provoked regulatory pushbacks and geopolitical tensions, especially from Western economies. Petrobras's governance-related vulnerabilities stemming from high levels of governmental meddling highlight the negative market effects related to weak governance mechanisms. Fincantieri demonstrates the benefits of competitiveness through moderately displayed and open government assistance complemented by clarity in governance channels and institutions and demonstrates a model case of equilibria between government and the market.

In conclusion, the comparative experience between these SOEs holds important lessons on governance, policy design, and management reforms to enhance efficiency, operational independence, and international competitiveness of government-owned enterprises. First, government reforms need to prioritize well-defined operational independence and management independence. Petrobras's experience graphically illustrates the dangers of undue government intervention and the need for strict transparency and accountability measures, professional management processes, and merit-based recruitment to boards and top executive posts. Secondly, well-defined governance templates demarcating government roles as owners rather than regulators are

essential. Greater financial disclosure and governance disclosure can importantly reinforce SOE credibility across the world stage and diminish geopolitical tensions and competitive fairness perception distortions. Thirdly, government support measures need to be properly calibrated to reconcile strategic national interests with market fairness principles. ICBC, CRRC, and China Mobile underscore the adverse geopolitical effects of extensive subsidization distorting international competition. Policies need to aim at targeted and open government support to spur innovation and market competitiveness rather than relying on over-distortionary subsidies. Lastly, policy reforms need to promote the SOEs' more active engagement with international governance practices and standards positively evidenced by Fincantieri. Stable industrial policies through sound frameworks combined with adequate but controlled government support and high standards of governance are available to form a sustainable model for making SOEs competitive globally without arousing negative geopolitical and market reactions. In general, all these views emphasize the need for sound governance institutions, well-defined limits to the exercise of politics, judicious usage of government funds, and open international engagement as the bedrock to improving the efficacy and international legitimacy of SOEs.

6. Conclusion

Since state-owned enterprises have long sat uncomfortably in the framework of the world economy, at once pursuers of national interest and competitors in liberal markets, this thesis aimed to examine how state ownership affects SOEs' strategies for internationalizing and their competitive conduct, with a focus on cross-sectoral, cross-country, and cross-governance variance, what is revealed through this research is an image much less simplistic than those binary poles around which discussion about public ownership tends to center, as either an inhibitor of efficiency or a catalyst for strategic advantage would imply. Based on a case-based, comparative approach, the research developed a variety of SOEs located in various institutional settings and subject to various extents of state control. The cases showed that state ownership allows for certain unique abilities, including access to patient capital, diplomatic assistance, or long-term planning while creating weaknesses at the same time. Political meddling, conflicting incentives, and lax governance are likely to substantially thwart the possible advantages of state ownership, particularly under circumstances where state structures are weak or mechanisms for accountability are not stringent. One of the most important results emerging from the thesis is that state ownership in itself is neither good nor bad. Rather, it all depends upon how and under what conditions such ownership is organized, governed, and disciplined. SOEs governed through professionalized boards, transparent financial reporting, and well-defined commercial mandates, such as those found in some fast-growing member economies of the OECD, are generally more effective in reconciling their twin targets. Conversely, SOEs that are highly politicized or encumbered with opaque governance tend to experience inefficiencies, reputational hazards, and low strategic coherence, particularly in global markets. One of the most important results emerging from the thesis is that state ownership in itself is neither good nor bad. Rather, it all depends upon how and under what conditions such ownership is organized, governed, and disciplined. SOEs governed through professionalized boards, transparent financial reporting, and well-defined commercial mandates, such as those found in some fast-growing member economies of the OECD, are generally more effective in reconciling their twin targets. Conversely, SOEs that are highly politicized or encumbered with opaque governance tend to experience inefficiencies, reputational hazards, and low strategic coherence, particularly in global markets.

At a policy level, various implications arise from the research. Firstly, governments need to be open about their rationale for holding enterprises, splitting clearly between

commercial, developmental, and strategic aims. Second, SOEs should be subject to strict standards of governance, such as merit-based appointments, independent audits, and disclosure requirements comparable to those for non-state enterprises. Third, trade and investment arrangements need to continue adapting toward addressing competitive neutrality, so state support does not unduly disadvantage global markets. For researchers and scholars, alike, implications from the findings are for appropriately differentiating and contextualizing explanations about SOEs, rather than treating them as aberrations or special cases. SOEs should instead be regarded as adaptive institutions, formed under political economies, regulatory frameworks, and global pressures. Work could be expanded from here by widening the comparison, including quantitative evidence, or exploring SOE intersectionality with emerging frontiers like digital infrastructure and green transition policies.

In conclusion, SOEs are neither obsolete legacies nor simple instruments of state power, they are dynamic actors navigating the friction between public goals and private competition. Understanding them requires moving beyond ideological assumptions to ask harder questions about power, purpose, and performance in a world where state and market are more entangled than ever. This thesis offers a step in that direction, grounded in evidence and attentive to complexity.

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