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State-Owned Enterprises and internationalization: impacts of ESG metrics

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STATE-OWNED ENTERPRISES: IMPACTS OF ESG METRICS

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INTRODUCTION

State-Owned Enterprises play a pivotal role in the global economy, accounting for a significant share of employment, revenues, and foreign direct investment. According to the World Bank (2023), SOEs contribute on average around 20% of GDP across 91 countries, with peaks above 30% in resource-rich economies. Their weight is even more visible in strategic sectors such as energy, transport, telecommunications, and finance, where governments consider them critical to both economic competitiveness and national sovereignty. Their hybrid nature, operating simultaneously as commercial actors and policy instruments, makes them fundamentally distinct from private multinational corporations. As Musacchio and Lazzarini (2014) famously noted, “*SOEs are hybrid organizations, balancing market discipline and political mandates.*” This dual mandate places SOEs at the intersection of financial performance, public accountability, and strategic national objectives, creating governance challenges and unique internationalization dynamics.

Over the last decade, a transformative trend has reshaped the environment in which SOEs operate: the rise of sustainability and Environmental, Social, and Governance (ESG) imperatives. What began as a reputational concern has progressively become a regulatory and financial requirement. The European Union, for instance, has introduced binding frameworks such as the EU Taxonomy Regulation (2020/852) and the Sustainable Finance Disclosure Regulation (SFDR, 2019/2088), which has direct implications for access to international finance and host-country legitimacy. High ESG ratings are now empirically associated with lower costs of capital, enhanced investor confidence, and preferential access to global markets, while weak performance may constrain cross-border expansion through stricter scrutiny and financing exclusion. These developments illustrate a broader institutional shift because companies are no longer evaluated solely on financial performance, but also on their environmental transition, social responsibility, and governance credibility. As Berrone et al. (2013) observed, “*sustainability has become the new language of global competitiveness.*”

Although a growing body of literature has examined SOE governance and internationalization, limited research has explicitly linked ESG metrics to their global strategies. This thesis addresses this gap by investigating how ESG performance influences the internationalization of SOEs, with a specific focus on greenfield investments, defined as a mode of entry that entails significant capital commitments, host-country approval, and long-term exposure to regulatory and societal pressures. Greenfield projects provide an ideal setting to test whether sustainability excellence facilitates SOEs' ability to expand abroad under demanding institutional conditions.

For SOEs, this change is particularly consequential because their hybrid nature exposes them to heightened institutional and stakeholder scrutiny. Citizens, parliaments, investors, NGOs, and international regulators simultaneously demand financial returns, policy alignment, and transparency. ESG performance thus functions as both a constraint and an enabler: weak performance can exclude SOEs from global capital markets and international tenders, while strong ESG credentials unlock access to green finance, reduce borrowing costs, and enhance legitimacy abroad. BloombergNEF (2024), for example, reports that SOEs with “AA” or above ESG ratings raised more than USD 200 billion in green and sustainability-linked bonds in 2023, benefiting from coupon rates 3–5% lower than peers with weaker ESG scores. Internationalization further amplifies these dynamics, through academic frameworks such as the Institutional Theory (DiMaggio & Powell, 1983; Scott, 2014) highlighting how coercive, normative, and mimetic pressures shape organizational behavior, or Stakeholder Theory (Freeman, 1984) showing how firms adapt to multiple constituencies. In this perspective, ESG metrics emerge as institutionalized proxies of legitimacy: they signal compliance with transnational norms, responsiveness to stakeholder demands, and capacity to align with sustainability regulations across jurisdictions. Despite the growing importance of ESG, the academic literature has so far devoted limited attention to its direct relationship with SOE internationalization. Many studies have explored greenfield investments, a mode of entry that requires establishing entirely new operations abroad. Unlike mergers and acquisitions (M&As), greenfield projects demand higher capital intensity, deeper engagement with host-country institutions, and greater exposure to scrutiny. They are therefore the most

revealing context to test how ESG performance conditions SOEs' ability to internationalize.

This thesis addresses this research gap by empirically investigating the link between ESG metrics and the internationalization strategies of SOEs, with a particular focus on greenfield investments. It sets the following Research Question (RQ): *How do ESG metrics influence the amount of greenfield investments of SOEs?*

To answer this question, two hypotheses are developed. The first (H1) posits that, in SOEs, higher overall ESG scores SOEs have a positive impact on greenfield investments. The second (H2) argues that among the three ESG pillars, the Environmental dimension exerts a stronger impact on the amount of greenfield investments of SOEs than Social or Governance performance. Together, these hypotheses operationalize the idea that sustainability is now central to SOEs' global competitiveness. Methodologically, the study combines theoretical insights with quantitative evidence. It builds a dataset of 1,441 listed SOEs from Bloomberg and Orbis covering the year 2022, integrates ESG ratings from leading providers, and employs econometric models to test the relationship between ESG performance and greenfield internationalization strategies.

The analysis is structured in five chapters. Chapter 1 presents a global perspective, defining SOEs and illustrating their economic weight, legal frameworks, and the implications of ESG accountability. Chapter 2 introduces the main theoretical lenses (Agency Theory, Institutional Theory, the Resource-Based View (RBV), and Stakeholder Theory) to frame how ESG metrics intersect with governance, resources, legitimacy, and stakeholder responsiveness in shaping SOE strategies. Chapter 3 examines the evolution of sustainable finance and the methodologies of leading ESG rating agencies, linking regulatory frameworks and rating divergence to the opportunities and constraints faced by SOEs. Chapter 4 outlines the research design, detailing the dataset, variables, and empirical methodology adopted to test the relationship between ESG metrics and greenfield internationalization. To conclude, Chapter 5 reports the quantitative findings, while also acknowledging the limitations and suggesting avenues for future research.

By bridging theoretical insights with original empirical evidence, this thesis contributes to the ongoing debate on state capitalism, sustainability, and global competitiveness. It demonstrates that ESG excellence has moved beyond a voluntary commitment to become a strategic prerequisite for SOEs' international expansion, reinforcing the idea that sustainable practices are not only compatible with but essential to long-term international success.

CHAPTER 1 – GLOBAL PERSPECTIVE AND REAL-WORLD EVIDENCES

1.1 The Importance of Defining SOEs

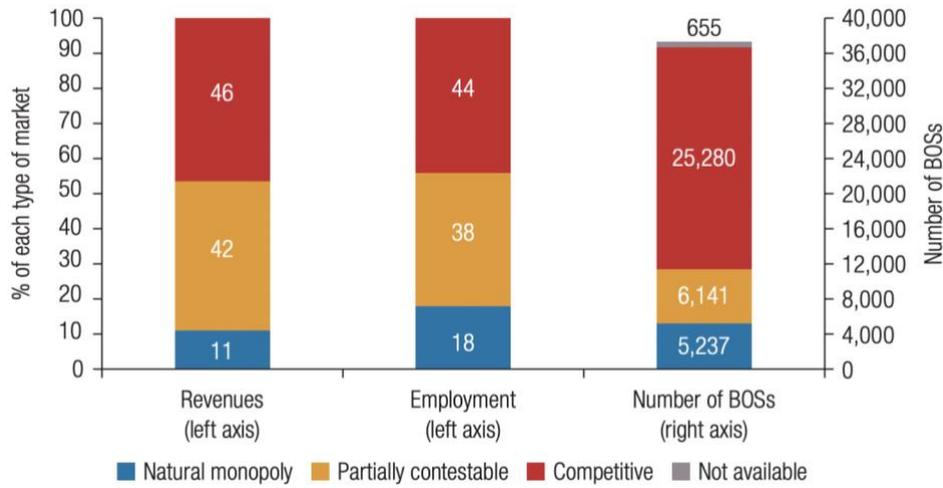
The absence of a universally accepted definition of SOEs continues to challenge scholars, policymakers, and international organizations. While SOEs are omnipresent in both developed and emerging economies, their legal form, ownership structures, governance models, and strategic objectives vary considerably across jurisdictions. Therefore, achieving definitional clarity is essential for policy coherence, comparative analysis, and bringing SOE conduct into line with sustainability and ESG standards.

A precise definition of SOEs enables more meaningful cross-country comparisons and benchmarking. Institutions such as the OECD (2024), IMF, and World Bank have all proposed definitional frameworks, primarily based on criteria like state ownership thresholds, legal incorporation, and market activity. However, in practice, these criteria are applied unevenly: entities with minority state participation but strong political influence may function as SOEs, despite not being formally categorized as such.

Recent statistics highlight the relevance of SOEs on a worldwide scale, highlighting the need for a clear definition. According to the *OECD Capital Market Series (2024)*, at the end of 2022, SOEs accounted for approximately 12% of global equity market capitalization. The number of SOEs in the *Fortune Global 500* increased from 34 in 2000 to 126 by 2023, further emphasizing their growing weight in the global economy (OECD, 2024).

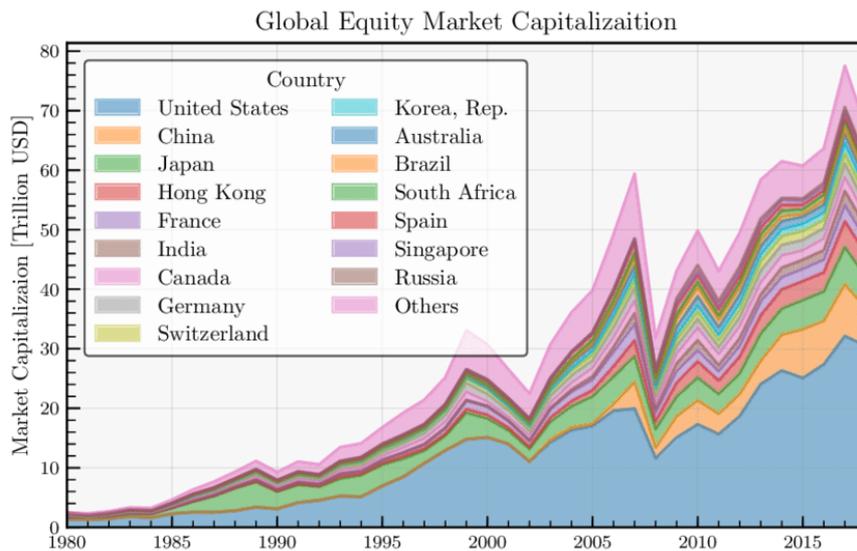
A World Bank (2023) review across 91 developing economies found that SOEs generated on average 17% of national GDP revenues, with several resource-rich and infrastructure-intensive countries. Building on this evidence, the figure below illustrates the breakdown of revenues, employment, and the total number of Businesses of the State (BOSs) across different market types, such as natural monopoly, partially contestable, competitive, and not available, as of 2019. The figure highlights that a significant portion of BOS revenues and employment originates from competitive markets, while also showing the absolute

number of BOSs within each market category, highlighting the different operational environments of state-owned entities and their varying degrees of market exposure.



Revenues, Employment, and Number of BOSs, by Type of Market, 2019. Source: World Bank, *Global Businesses of the State (BOS) database*, 2023.

As a result, achieving clarity and consistency in defining what constitutes an SOE is a foundational step for comparative analysis, effective governance, and international regulatory alignment. Global equity market capitalization for listed companies in major markets, highlighting the share of SOEs across regions (OECD, 2023).



Global Equity Market Capitalization by Country (1980-2017). Source: OECD, *Capital Market Series – SOE Dataset*, 2023.

Specifically, this area chart illustrates the evolution of global equity market capitalization from 1980 to 2017, disaggregated by country. Each colored band represents the market capitalization contribution of a specific country, with the overall height of the stack indicating the total global market capitalization. The figure highlights the growth trends and the relative contributions of various economies to the global equity market over nearly four decades.

From a governance perspective, definitional clarity is essential for implementing consistent disclosure standards, ensuring accountability, and enabling effective performance evaluation. The *OECD Guidelines on Corporate Governance* of SOEs (revised 2024) stress the importance of transparency, independent boards, and sustainability integration, especially as SOEs often operate in strategic sectors such as energy, transport, finance, and infrastructure. Without a common understanding of what qualifies as a SOE, it becomes difficult to implement governance framework across the public enterprise sector. This ambiguity undermines the ability of governments to monitor and evaluate SOEs' performance effectively, particularly when trying to align these firms with national development goals or sustainability targets. Whether a firm qualifies as an SOE has direct implications for its regulatory treatment, including public procurement rules, competition law, international investment agreements, and ESG reporting obligations. Ambiguous or inconsistent definitions can lead to regulatory gaps, distort competition, and hinder sustainability goals. Therefore, definitional clarity is critical to ensuring that SOEs are held to appropriate ESG standards reflecting their dual public and commercial roles.

Taken together, definitional inconsistency may affect how SOEs are expected to report on ESG metrics, given their hybrid nature as both market participants and public policy instruments. Governments, investors, and rating agencies increasingly demand transparent disclosure on sustainability, climate risks, and governance practices. Whether a company is officially classified as a SOE determines the type and depth of ESG reporting obligations it must comply with, influencing its legitimacy and access to international capital markets.

While previously has been established the critical importance of defining SOEs and understanding their global relevance, but it is also critical to recognize how corporate accountability is changing, particularly with regard to Environmental, Social, and Governance (ESG) metrics. SOEs, by their very nature, often operate with a dual mandate: pursuing commercial viability while simultaneously serving public policy objectives. This inherent duality places them at a unique intersection where traditional financial performance must be balanced with broader societal and environmental responsibilities. The increasing global emphasis on sustainable development, climate action, and social equity has propelled ESG considerations to the forefront of corporate strategy and investor scrutiny. For SOEs, this imperative is amplified, as their public ownership implies a direct accountability to citizens and governments for their impact on society and the environment.

The absence of a clear, universally accepted definition of SOEs directly impacts the consistency and comparability of their ESG reporting, making it difficult for global stakeholders, including governments, investors, and rating agencies, to accurately assess their sustainability performance across borders. Therefore, a precise understanding of what constitutes an SOE is not merely an academic exercise but a foundational step towards establishing robust ESG frameworks that reflect their hybrid nature, facilitate their international expansion, and ensure their long-term viability and positive societal impact in a globalized world.

1.1.1 Core Criteria for Identifying SOEs

Despite the absence of a universally agreed definition, most institutional and academic frameworks converge on a common set of core legal and operational criteria to classify an entity as a SOE. These criteria aim to distinguish SOEs both from government agencies (non-market bodies) and fully private firms. Drawing from international best practices, *OECD guidelines*, and national legislation, five elements are generally considered pivotal: separate legal personality, state ownership/control thresholds, commercial orientation, public policy mandate, and level of government involvement.

A basic requirement is that the SOE be legally distinct from the State, possessing its own *separate legal personality* as a legally distinct entity from the public administration. This condition enables the enterprise to act under commercial law, including the ability to enter contracts, own assets, incur liabilities, and be subject to litigation. This distinction separates SOEs from core administrative bodies. While ministries and regulatory agencies may deliver public services, they do so without legal or financial independence. In contrast, SOEs function with varying degrees of autonomy and managerial discretion. As noted by the OECD (2015), SOEs are defined as “*corporate entities recognized by national law as enterprises, and in which the state exercises ownership or control*”. For instance, Italy’s Ferrovie dello Stato Italiane (FSI) is wholly owned by the Ministry of Economy and Finance but operates as a joint-stock company under private law. The OECD (2020) emphasizes that legal incorporation is not just formal: it provides operational flexibility, enables access to capital markets, and enhances transparency. However, the distinction can become blurred when entities are granted excessive legal immunities or operate under hybrid mandates.

Public ownership and control constitute perhaps the most visible and frequently debated criterion for classifying SOEs. The OECD and other frameworks typically classify *an entity as an SOE when the State holds more than 50% of voting shares or exercises equivalent influence*. However, control can also arise through special rights, such as golden shares, board appointment powers, or veto privileges.

From a theoretical standpoint, the distinction between ownership and control is central to understanding state influence. While control is the capacity to direct managerial appointments and strategic choices, ownership is related to stock investments. This is particularly relevant in the case of partially privatized enterprises, where the State may retain a minority stake but exert significant control. For example, *ENI S.p.A.* in Italy is no longer majority-owned by the State, yet the Ministry of Economy and Finance and *Cassa Depositi e Prestiti (CDP)* together hold a substantial share and retain influence through governance rights. In China, even SOEs with minority state shareholding often remain under strong political control through the *State-owned Assets Supervision and Administration Commission (SASAC)*.

International legal documents reflect this nuance. The investment treaty CPTPP (*Comprehensive and Progressive Agreement for Trans-Pacific Partnership*) defines a SOE as an entity where the government holds at least 50% ownership or otherwise exercises "governmental authority or control." Similarly, the draft TTIP (*Transatlantic Trade and Investment Partnership*) text used broader language, referring to "decisive influence" over corporate policies. *Control thresholds* matter for international legal compliance, determining an entity's exposure to regulations on state aid, competition law, and international trade obligations. A poorly defined control criterion can lead to regulatory gaps, strategic ambiguity, and legal disputes.

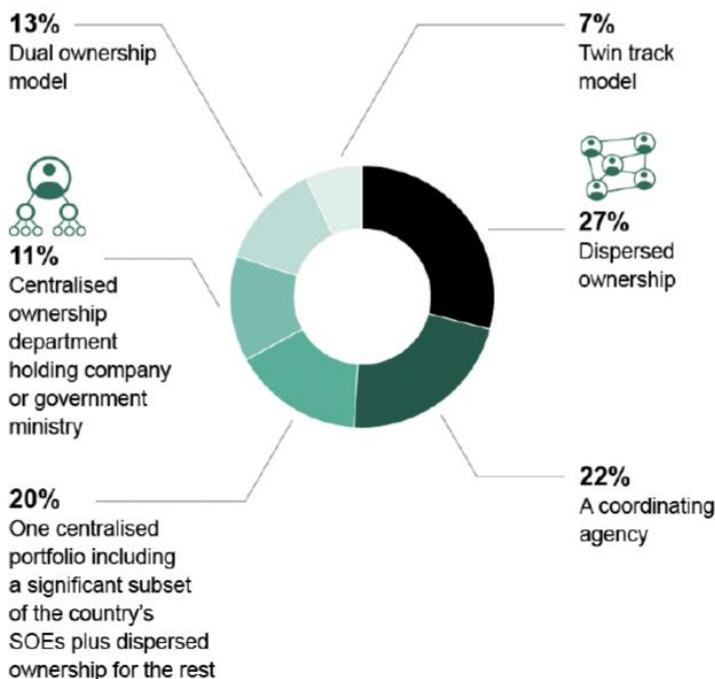
To qualify as a SOE, an entity must engage in *market-oriented commercial activities*, even if not fully profit-maximizing. This excludes public bodies that operate without exposure to market dynamics. According to the OECD (2024), commercial activity includes "*producing goods and services for sale on the market at economically significant prices*". This distinction is critical for evaluating the competitive neutrality of SOEs. Entities exclusively focused on regulatory or administrative functions, for example operating as monopolies without exposure to market discipline (e.g., internal services agencies) are therefore excluded under *OECD guidelines*. In contrast, entities that sell electricity, operate rail services, or run port infrastructure on a for-fee basis qualify as SOEs even if they serve public goals. Commerciality is assessed by indicators such as revenue models, competitive behavior, and pricing policies. Hybrid models are also common: a SOE may receive subsidies for core services while competing in side businesses such as logistics or real estate. To distinguish SOEs from non-commercial public bodies, most definitions require that the enterprise engages in commercial, market-oriented activities. This does not imply that profit maximization is the sole goal, but rather that the enterprise offers goods or services in exchange for payment, competes with private actors, and operates with some degree of financial autonomy. Singapore Airlines, though majority state-owned, operates in global competitive markets and is profit-oriented. Similarly, Saudi Aramco operates as a for-profit multinational in global oil markets, competes with private firms, and generates revenues based on market prices.

Commercial orientation is often assessed by revenue models, pricing policies, and market behavior. Some SOEs operate under a dual regime, where core services are subsidized (e.g., public transportation), but ancillary services are fully commercialized (e.g., logistics or real estate management). As such, the commerciality criterion must be interpreted dynamically, accounting for both mission and market behavior.

Many SOEs carry a *dual mandate*, pursuing both commercial viability and public interest objectives such as universal service provision, industrial policy, or strategic autonomy. This is especially evident in specific sectors (e.g. transport, energy, banking, defense), where SOEs are instruments of public policy. For instance, Petrobras has been leveraged by the Brazilian governments to pursue national energy goals, while Deutsche Bahn in Germany is required to operate unprofitable regional lines in the interest of public connectivity. Recognizing this role is key to understanding non-market motivations behind some SOE decisions. While not a definitional requirement in all contexts, the existence of a public policy mandate is often cited in national legislation and international policy frameworks as a distinctive feature of SOEs. Unlike private firms, which typically pursue profit maximization, SOEs often operate under constraints or objectives set by the government. These may be formalized in corporate statutes, shareholder agreements, or public service obligations and it also explains why SOEs may benefit from subsidies, tax exemptions, or monopoly rights, despite their commercial orientation.

The final criterion considers the *level of government* that exercises ownership or control. SOEs may be owned by: central governments, regional or state authorities, local municipalities. While global database (e.g., *OECD*, *World Bank*) focus on central SOEs, subnational entities are also significant, especially in decentralized systems. The *ICSID Review* (2019) and *World Bank* datasets explicitly account for subnational SOEs, especially in federated or decentralized systems. In Germany, for example, municipal companies (e.g. *Stadwerke*) manage electricity, waste, and transportation. In Italy, local governments hold stakes in firms operating in public transport, housing, and utilities. The *level of government* matters not only for classification purposes but also for regulatory oversight, transparency requirements, and international treaty coverage. Some treaties exclude subnational SOEs unless explicitly covered, leading to ambiguity. It also shapes the challenges faced, from politicization at the local level to geopolitical exposure at the

central level. Moreover, different governance challenges arise depending on the level of government. Municipal SOEs may suffer from weak administrative capacity or politicized appointments, while central SOEs may face international scrutiny or competition concerns.



Models of State Ownership and Governance of State-Owned Enterprises (SOEs). Source: OECD (2024), Ownership and Governance of State-Owned Enterprises.

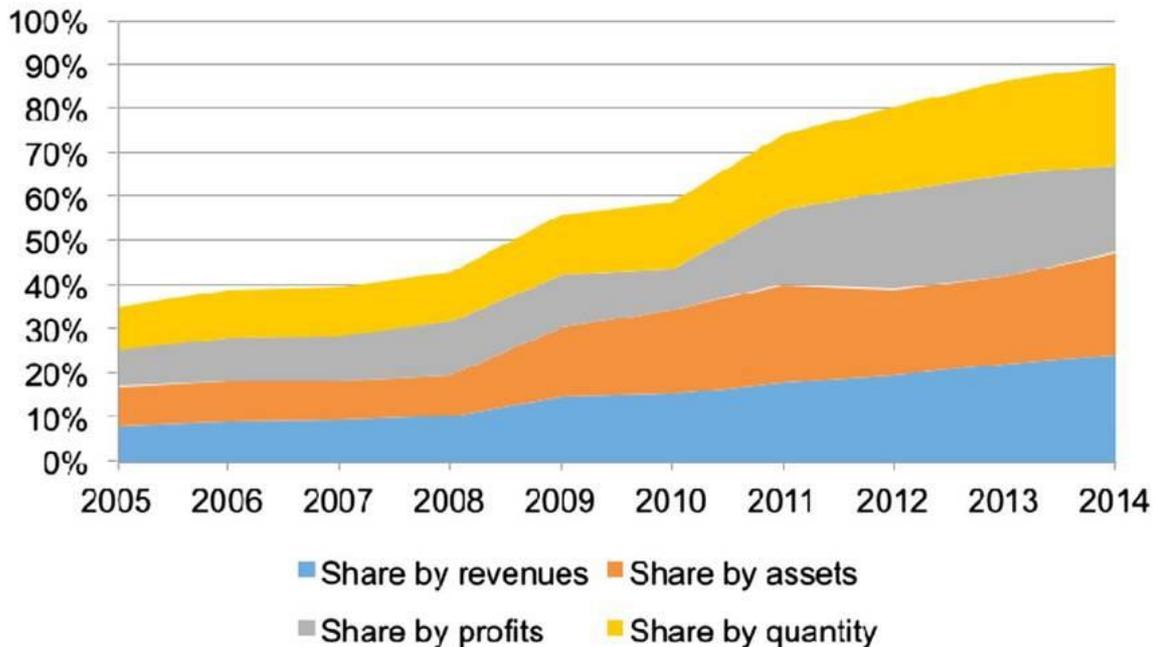
Here are clearly represented different models of state ownership and governance structures observed for SOEs, along with their respective percentages. These models into types such are categorized as *dispersed ownership*, *centralized ownership department*, *coordinating agency*, *dual ownership model*, and *twin track model*, illustrating the variety of approaches governments take in managing their SOE portfolios.

1.2 Global Relevance of SOEs

SOEs are not only prominent within national economies but also play a key role in shaping global economic and industrial landscapes. While traditionally dominant in strategic sectors such as energy, infrastructure, and transportation, SOEs have expanded their presence in manufacturing, telecommunications, banking, and high-tech industries,

increasingly competing with private multinational corporations (MNCs) in international markets. Recent empirical data confirm their global economic weight:

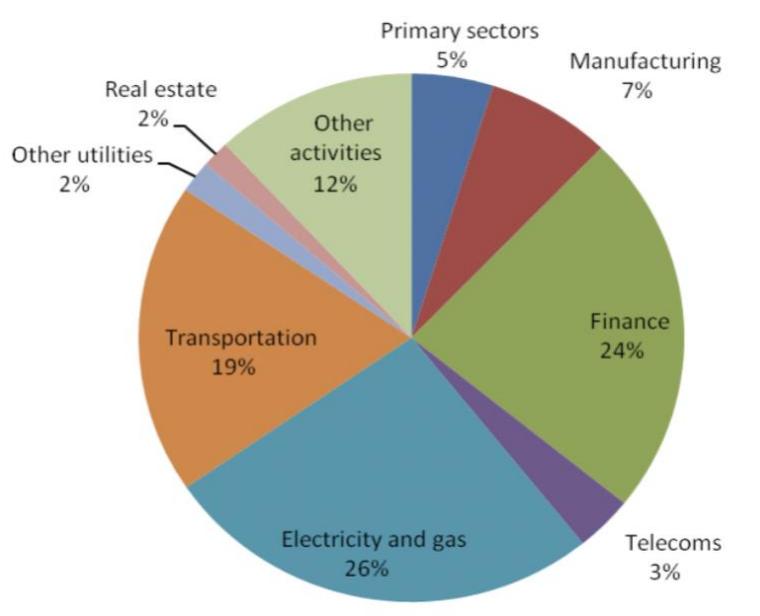
- According to *OECD* (2024), listed SOEs represented approximately USD 10.6 trillion in listed shares worldwide. This underscores the enduring role of state ownership in capital markets, despite waves of privatization in many jurisdictions.
- The *World Bank* (2023) estimates that SOEs generate on average 17% of GDP across 91 developing economies, with peaks exceeding 30–40% in resource-intensive countries such as Saudi Arabia, Kazakhstan, and Algeria.
- The *Fortune Global 500* (2023) included 126 SOEs, the majority are headquartered in China (over 90 firms), but significant state-controlled giants also operate from France, Italy, Brazil, and Middle Eastern countries. Collectively, these firms account for over 30% of the combined revenues of the top 500 companies worldwide.



Share of SOEs in Fortune Global 500 by Revenues, Assets, Profits, and Quantity (2005-2014). Source: Tolentino Nem Singh, J. (2016). *State-owned enterprises and state capitalism in the global economy*. Data based on Fortune Global 500 list, 2005–2014.

This particular figure highlights the growing dominance of state control in large international corporations by showing how the share of SOEs among Fortune Global 500 corporations increased between the mid-2000s and the mid-2010s, particularly when measured by revenue, assets, and profits (Nem Singh & Chen, 2018). This demonstrates the growing economic influence and presence of state-controlled entities among the world's largest corporations over this period.

From a sectoral perspective, SOEs dominate industries deemed critical for national security, public service provision, or natural resource management. Over 80% of SOE revenues worldwide originate from energy, utilities, transport, and financial services. In OECD economies, state participation remains particularly high in electricity generation and distribution, railway transport and banking in emerging markets. These industries reflect traditional public-interest rationales for state intervention, but in recent years, SOEs have also emerged in renewable energy, digital infrastructure, and strategic technology sectors aligned with national innovation policies.



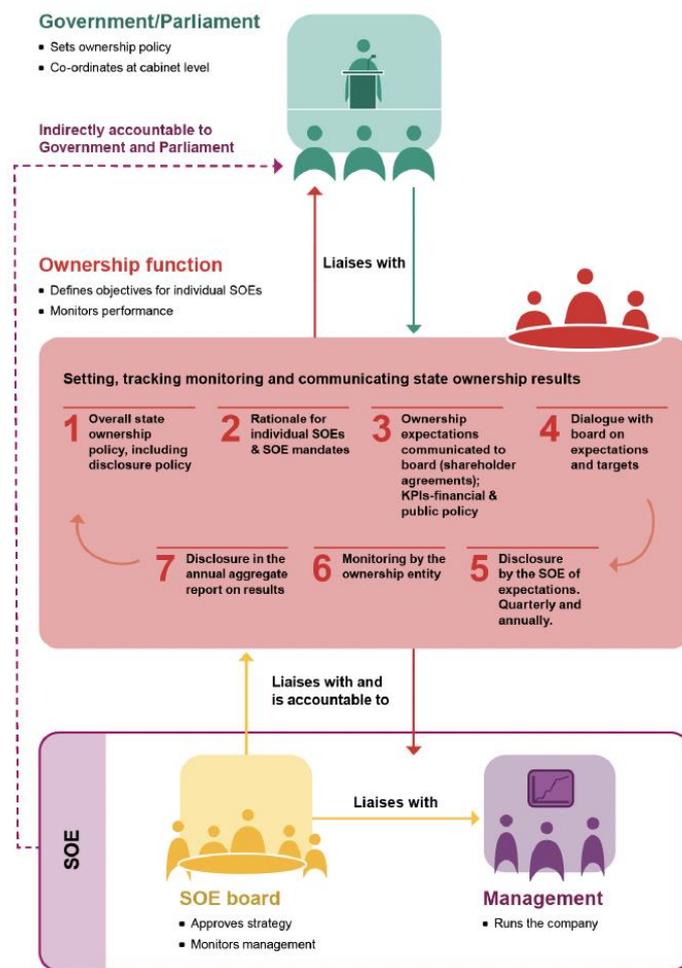
Christiansen, H. (2011). The size and composition of the SOE sector in OECD countries.

As illustrated above, it is highlighted that more than 70% of total SOE value is held in these three industries, such as finance, electricity and gas, and transportation, providing insight into the strategic industries where state ownership remains prevalent.

The global footprint of SOEs is not static, it evolves in response to geopolitical dynamics, international trade rules, and sustainability requirements. Many SOEs are key players in cross-border mergers and acquisitions, investment in infrastructure projects, and participation in sovereign wealth funds. Their influence is projected to grow in green energy and strategic minerals supply chains, where state-backed enterprises are expected to drive over 50% of new large-scale projects by 2030 (IEA, 2023).

1.2.1 Typologies of SOEs

SOEs manifest in a wide range of organizational configurations, reflecting diverse governmental objectives, sectoral priorities, and degrees of market exposure. While previous sections have clarified the definitional criteria of SOEs, it is equally important to acknowledge the functional and structural diversity these entities can assume in practice.



Framework for Setting, Tracking, Monitoring, and Communicating State Ownership Results for SOEs. Source: OECD (2024), Ownership and Governance of State-Owned Enterprises.

This comprehensive framework details the process by which governments and parliaments set ownership policy, define objectives for individual SOEs, and monitor their performance. It is composed by various stages, from establishing overall state ownership policy and SOE mandates to disclosure and aggregate reporting, emphasizing the accountability lines and different points between government, SOE boards, and management. Based on an extensive review of *OECD* (2023), *IMF* (2021), and *World Bank* (2022) documents, we can identify the following principal typologies:

- *Wholly-Owned State Enterprises*. These entities are 100% owned by public authorities, typically the central government. They are more common in strategic or natural monopoly sectors or industries with high national security sensitivity, such as defense, energy infrastructure, or public rail networks. While some may engage in commercial activity, others exist primarily to fulfill public mandates.
- *Mixed-Ownership Enterprises (MOEs)*. They combine public and private ownership, where the State retains significant influence, often through golden shares or board rights. Mixed-ownership allows for capital market access, improved corporate governance, and partial risk sharing. These firms often adopt private-sector management practices while maintaining public accountability and they aim to balance commercial goals with public interest.
- *Publicly Listed SOEs*. A subcategory of MOEs, these SOEs are traded on domestic or international stock exchanges, forcing them to face dual pressures: public policy expectations and investor accountability. Listing enhances transparency through regulatory disclosure requirements and allows governments to divest ownership gradually.
- *State Investment Vehicles / Holding Companies*. These are not operating firms, but entities created to manage public shareholdings across multiple companies. Their role is often strategic, aiming to optimize returns on state-owned assets and professionalize governance. For example, the *OECD* (2024) provides a

comparative overview of State-Owned holding companies, their respective shareholding ministries, and legal status across various jurisdictions.

Jurisdiction	State-Owned Holding Company	Shareholding Ministry	Legal Status
Austria	Österreichische Beteiligungs AG (ÖBAG)	Ministry of Finance	Joint Stock Company
Azerbaijan	Azerbaijan Investment Holding (AIH)	NA	Public Legal Entity
Bulgaria	Bulgarian Energy Holding EAD (BEH) Holding BDZ EAD (the Railway Holding Company) Terem - holding EAD State consolidation company EAD Bulgarian W&S holding EAD National company Industrial zones EAD	NA	Holding BDZ EAD (Under a special law, not formally considered a company)
Colombia	Grupo Bicentenario S.A.S.	Ministry of Finance	Public Stock Company
Finland	Solidium	Ownership steering department of the Prime Minister's office	Limited Liability Company
Greece	Hellenic Corporation of Assets and Participations SA	Ministry of Finance	Public Limited Company
Kazakhstan	Samruk Kazyna	Ministry of Finance	Joint Stock Company
Malaysia	Khazanah Nasional	Ministry of Finance	Public Limited Company
Peru	Fondo Nacional de Financiamiento de la actividad Empresarial del Estado (FONAFE)	Ministry of Finance	Statutory corporation
Portugal	PARPÚBLICA, Participações Públicas, SGPS, SA,	Ministry of Finance	Holding company
Singapore	Temasek Holdings	Ministry of Finance	Commercial investment company
Slovenia	Slovenian Sovereign Holding	Ministry of Finance	Public Limited Company
Spain	Sociedad Estatal de Participaciones Industriales (State Industrial Holding Company)	Ministry of Finance and Administration	Public Law Entity
Viet Nam	State Capital Investment Corporation	Ministry of Finance	Joint Stock Company

Examples of State-Owned Holding Companies, Shareholding Ministries, and Legal Status by Jurisdiction. Source: OECD (2024), Ownership and Governance of SOEs.

- *Municipal and Subnational SOEs*. Owned by subnational governments (states, provinces, municipalities), these entities typically operate in public services, such as urban transport, waste management, or water supply. Their effectiveness is directly related to the administrative competence of the local government.
- *Strategic Development SOEs* (Emerging Type). Especially in Asia and MENA regions, some SOEs are mandated to lead national development strategies. These hybrid entities blend commercial operations with industrial policy goals, often in high-tech, renewable energy, or global infrastructure.

To summarize, the table below categorizes and lists jurisdictions according to their centralized and coordinated ownership models for SOEs. It details different approaches, including single centralized holding companies, portfolios with dispersed ownership, coordinating agencies, dual ownership models, and twin track models, providing examples of countries adopting each specific governance structure.

Model		Jurisdictions	Total:55
Centralised or co-ordinated models.	One centralised ownership department holding company or government ministry, exclusively performing the role of ownership.	Israel, Italy, Korea, Peru, Slovenia, Sweden.	6
	One centralised portfolio including a significant subset of the jurisdiction's SOEs plus dispersed ownership for the rest.	Austria, Azerbaijan, Chile, Colombia, Finland, France, Iceland, Netherlands, Norway, Portugal, South Africa.	11
	A co-ordinating department with non-trivial powers over SOEs formally held by other ministries (and institutions).	Bulgaria, Costa Rica, Estonia, India, Latvia, Lithuania, Morocco, New Zealand, Philippines, Romania, United Kingdom, Viet Nam.	12
"Dual ownership": two ministries or other high-level public institutions jointly exercise the ownership.		Australia, Brazil, Czechia, Greece, Indonesia, Switzerland, Thailand.	7
Twin track model.		Belgium, China, Malaysia Türkiye.	4
"Dispersed ownership": a large number of government ministries or other high-level public institutions.		Argentina, Canada, Croatia, Denmark, Germany, Hungary, Ireland, Japan, Kazakhstan, Luxembourg, Mexico, Poland, Slovak Republic, Ukraine, United States.	15

Centralized and Coordinated Ownership Models for SOEs by Jurisdiction. Source: OECD (2024), *Ownership and Governance of State-Owned Enterprises*.

1.2.2 Global Illustrative Examples

The diversity of SOE models described above is clearly reflected in the variety of real-world examples from different national contexts. The following case studies highlight how different countries balance state control, market competition, and strategic goals.

Initially founded as a fully state-owned utility in 1962, *Enel* in Italy incurred into a significant transformation starting in the 1990s with liberalization and partial privatization processes and resulting in a *mixed-ownership public listed* entity, ESG-driven. It is currently among the biggest publicly traded utilities in the world, and the Ministry of Economy and Finance and *Cassa Depositi e Prestiti* continue to hold a sizable

amount of authority over it. *Enel*, highly oriented toward internationalization, has expanded its operations to over 30 countries, particularly in Latin America and Europe, positioning itself as a global energy player. It has adopted an ambitious sustainability strategy, aligning its core business with decarbonization targets and ESG performance: through its subsidiary *Enel Green Power*, the company has become a leading producer of renewable energy. *Enel's* integrated approach to financial performance, climate action, and social impact shows how reformed SOEs can leverage internationalization to scale ESG commitments while remaining under public strategic oversight.

In France, *Électricité de France* (EDF) offers another illustrative case. *Majority-owned* by the French government but also traded on the Euronext Paris, *EDF* combines commercial activity with strong public service obligations in nuclear energy and electricity distribution. *EDF's* structure illustrates the dual mandate typical of European SOEs, balancing profitability with energy sovereignty and affordability.

Meanwhile, *Temasek Holdings* in Singapore stands as a unique example of a *state-owned holding company* operating with full commercial autonomy. Founded in 1974, *Temasek* manages a wide-ranging portfolio of strategic investments across multiple sectors, such as telecommunications, transportation, banking, and beyond. Though owned by the Singaporean Ministry of Finance, it is governed according to private-sector standards and it consistently ranks among global leaders in governance and performance transparency. It shows how a state can exercise ownership while delegating full commercial and operational autonomy to a professional management structure.

Saudi Aramco, by contrast, demonstrates how a *resource-based SOE* can integrate into global capital markets while maintaining strong sovereign ties. *Aramco*, which had previously been a wholly state-owned company, became a publicly listed company in 2019 with the biggest IPO ever. Despite its listing, the Saudi government retains a controlling share and continues to use the company as a vehicle for implementing national economic policy and diversification efforts, it adheres to rigorous international financial and ESG disclosure standards, serving as a benchmark for listed SOEs in the extractive sector. However, the company has also drawn sustained criticism for its continued reliance on fossil fuel production and its high cumulative carbon emissions, which have

led many observers to question the credibility and depth of its ESG commitments. Aramco nonetheless plays a pivotal role in implementing Saudi Arabia’s economic diversification plans, illustrating the capacity of listed SOEs to function as tools of national development policy while navigating global environmental scrutiny.

1.3 Legal Definitions in International Agreements

As the role of SOEs expands globally, their regulation is increasingly subject to international investment and trade agreements, which provide not only economic disciplines but also legal clarity on what constitutes a SOE. Definitions are still dispersed, nonetheless, with differences in their application, standards, and extent. These legal definitions are not mere formalities: they shape the applicability of treaty disciplines on issues such as competitive neutrality, state subsidies, dispute settlement, and transparency, especially in the context of cross-border trade and investment. The legal significance of these definitions has been repeatedly tested in investor–State dispute settlement cases, where arbitral tribunals have had to determine whether an entity qualifies as an SOE or as a legitimate “investor” under a treaty. The relevant international agreements are as follows:

- CPTPP – Comprehensive and Progressive Agreement for Trans-Pacific Partnership
- TTIP – Transatlantic Trade Trade and Investment Partnership
- TiSA – Trade in Services Agreement
- BITs – Bilateral Investment Treaties

The CPTPP stands out as one of the most detailed international frameworks for SOEs. Under its Chapter 17, it defines a SOE as any enterprise in which a government, directly or indirectly, owns more than 50% of the share capital, or exercises governmental authority over the enterprise’s decisions (OECD, 2024). It requires SOEs engaged in commercial activities to act in accordance with “commercial considerations”, aiming to prevent distortions of competition due to state favoritism. Signatory governments must also ensure transparency through disclosure obligations, particularly when SOEs engage in cross-border investment or trade.

Although never finalized, the TTIP draft proposed a broader and more flexible definition. Moving beyond a quantitative ownership threshold, it emphasized the concept of "decisive influence", which could result from the rights to appoint board members or from regulatory powers. TTIP distinguished between enterprises that perform commercial activities and those with a public policy mission, suggesting the potential for a more nuanced treatment of hybrid entities. TTIP draft also recognized that effective control may exist below 50% ownership, thereby extending treaty disciplines to enterprises with indirect or partial state influence. The TTIP's approach reflects a sophisticated understanding of the complex ownership structures that characterize modern SOEs, particularly in sectors like energy, infrastructure, or banking.

WTO (*World Trade Organization*) countries are negotiating a plurilateral trade pact called the *Trade in Services Agreement* (TiSA), which emphasizes competitive neutrality and includes clauses that forbid unjust preference for SOEs. Unlike the CPTPP or TTIP, TiSA's scope excludes non-commercial public service SOEs and generally does not address subnational entities. It defines SOEs more narrowly, as entities that are engaged in commercial activities in the services sector and directly owned or controlled by the government.

Older-generation BITs often lacked explicit definitions of SOEs. However, recent BITs, particularly those signed by China, the EU, and Canada, now attempt to codify the treatment of SOEs through functional definitions. According to the ICSID (*International Centre for Settlement of Investment Disputes*) Review (2019), modern BITs increasingly describe SOEs as any enterprise through which the state performs economic or strategic functions, with criteria based on ownership, control, or mandate.

This fragmented landscape reflects a broader tension between state sovereignty and market-based competition rules, illustrates both the complexity and strategic importance of defining SOEs in international law. While CPTPP and TTIP offer functional yet robust frameworks, other treaties remain inconsistent, highlighting the need for harmonization. Inconsistencies in treaty definitions can lead to investor uncertainty. In the absence of a universal legal definition, the trend is towards functional, context-sensitive interpretations that consider not only formal ownership but also strategic influence, mandate, and

behavior. This evolving legal architecture is particularly relevant when assessing SOEs' ESG accountability, as many international agreements impose transparency and neutrality requirements on SOEs precisely when they operate across borders, thus setting the stage for the next section.

1.4 Implications for Governance and ESG Considerations

The legal classification of SOEs has far-reaching implications for governance practices, regulatory compliance, and corporate responsibility. The definition adopted in national laws, international treaties, and multilateral guidelines determines the scope of state influence, the degree of market discipline to which these entities are subject, and the expectations on transparency, disclosure, and sustainability performance. As public entities with commercial missions, SOEs are increasingly expected to serve as role models in sustainable development, responsible business conduct, and transparent governance. Therefore, definitional clarity surrounding SOEs is not only critical for legal and economic classification, but also for setting the standard for how these enterprises should behave in the public interest. A well-defined SOE is more likely to be well-governed, accountable, and aligned with ESG expectations, ultimately serving both national priorities and global governance goals.

From a governance perspective, definitional clarity influences: board composition and independence, regulatory compliance, and ESG integration. Regarding the first one, a clear criteria for SOE identification often trigger alignment with international corporate governance standards, including the OECD Guidelines on Corporate Governance of SOEs (OECD, 2024). Moving forward, SOEs classified under specific legal frameworks are subject to disclosure regimes, competitive neutrality requirements, and anti-corruption safeguards. Moreover, formal recognition as a SOE often comes with explicit or implicit obligations to align with state sustainability agendas and international ESG benchmarks. As public entities with commercial mandates, SOEs are increasingly positioned as flagships for responsible business conduct. They are expected not only to operate efficiently in competitive markets but also to deliver on broader public value objectives, including climate action, social inclusiveness, and ethical governance. This

dual role elevates the importance of ESG performance as a strategic lever for both legitimacy and competitiveness.

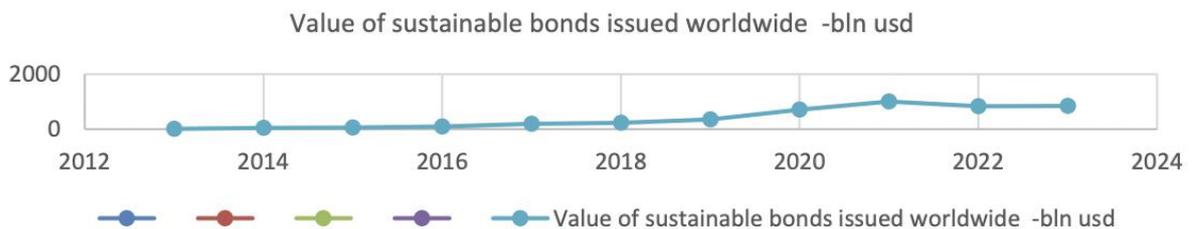
The recognition of an entity as a SOE, particularly in international agreements, imposes expectations regarding accountability and professional conduct. SOEs subject to treaty disciplines (e.g., under the CPTPP or BITs) are often required to adhere to principles such as competitive neutrality, transparency in state support, and market-based pricing. These principles align closely with the pillars of corporate governance: board independence, financial discipline, and operational transparency. SOEs inherently operate under a dual mandate because of financial returns, generating sustainable profits and preserving capital, and public value delivery, fulfilling policy objectives such as universal service provision, decarbonization, and industrial development. International trade agreements, such as the CPTPP, explicitly embed principles like competitive neutrality, market-based pricing, and transparency in state support. These principles overlap with the governance pillar (G) of ESG, reinforcing accountability, financial discipline, and operational transparency. For example, CPTPP's Chapter 17 mandates that SOEs act "*in accordance with commercial considerations*" and disclose any subsidies or preferential treatment received. This requirement implicitly promotes a level of disclosure consistent with international ESG benchmarks, especially on the governance (G) pillar. Unlike purely private firms, SOEs often pursue a dual mandate: generating financial returns while delivering public value. This hybrid role makes ESG integration both a strategic opportunity and an institutional necessity. The sectors where SOEs are most prevalent (e.g. energy, transport, infrastructure, and utilities) are also those most exposed to climate transition risks and opportunities. For example, Enel (Italy) and EDF (France) have embedded carbon neutrality into their corporate strategies, aligning with the Task Force on Climate-related Financial Disclosures (TCFD) and the Global Reporting Initiative (GRI).

The OECD (2024) highlights that well-governed SOEs can act as accelerators for national sustainability agendas, leveraging their scale, sectoral reach, and access to capital: sustainability performance is no longer optional.

1.4.1 ESG Reporting and Accountability Frameworks

Particularly in nations where SOEs have a systemic role in providing public services, governments and multilateral organizations are increasingly requiring ESG reporting as a tool to improve transparency, accountability, and public trust. This trend reflects not only a response to concerns of corruption, but also the need to monitor progress toward the Sustainable Development Goals (SDGs). In jurisdictions such as Norway, New Zealand, and Singapore, SOEs are required to publish annual sustainability reports aligned with international frameworks, sometimes subject to stricter disclosure obligations than those imposed on private listed companies. This asymmetry underscores the public accountability mandate of SOEs, which are expected to balance financial returns with broader societal outcomes. In several countries, national ESG disclosure frameworks specifically targeting SOEs have been introduced, often directly linked to SDGs or national climate strategies. The effectiveness of these frameworks depends on the strength of internal governance systems. Empirical evidence suggests that corporatized and partially privatized SOEs with independent boards, professionalized management, and clearly defined accountability mechanisms are more likely to integrate ESG KPIs into strategic planning and performance evaluation (OECD, 2024).

According to the *Climate Bonds Initiative Global State of the Market Report 2023*, global green, social and sustainability bond issuance surpassed USD 1 trillion in 2023. Moreover, over 80% of green bonds were issued by SOEs.



Global green bond growth between 2013-2023 (billion USD). Source: *Climate Bonds Initiatives, 2024*.
Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, 17(1), 99-120.

Beyond transparency, ESG ratings have tangible effects on SOEs’ financing conditions and international competitiveness. Empirical evidence from Moody’s (2023) and MSCI Research (2024) indicates that firms with higher ESG ratings face 10–20 basis points lower bond spreads, while poorly rated entities are penalized with higher credit costs or exclusion from ESG-focused funds (Moody’s, 2023; MSCI, 2024). Similarly, BloombergNEF (2024) reports that SOEs with “AA” or above ESG ratings raised more than USD 200 billion in green and sustainability-linked bonds in 2023, benefiting from 3–5% lower coupon rates compared to weaker ESG profiles. According to the Climate Bonds Initiative (2024), SOEs accounted for over 25% of global green, social, and sustainability-linked (GSS+) bond issuance in 2023, confirming their central role in scaling sustainable finance. For example, Enel (Italy) issued USD 6.9 billion in sustainability-linked bonds tied to renewable energy targets, while EDF (France) raised more than EUR 5 billion in green bonds to support its nuclear and renewable projects (Climate Bonds Initiative, 2024). These cases demonstrate how ESG disclosure and reporting frameworks are directly linked to access to international capital and cost of funding for SOEs.

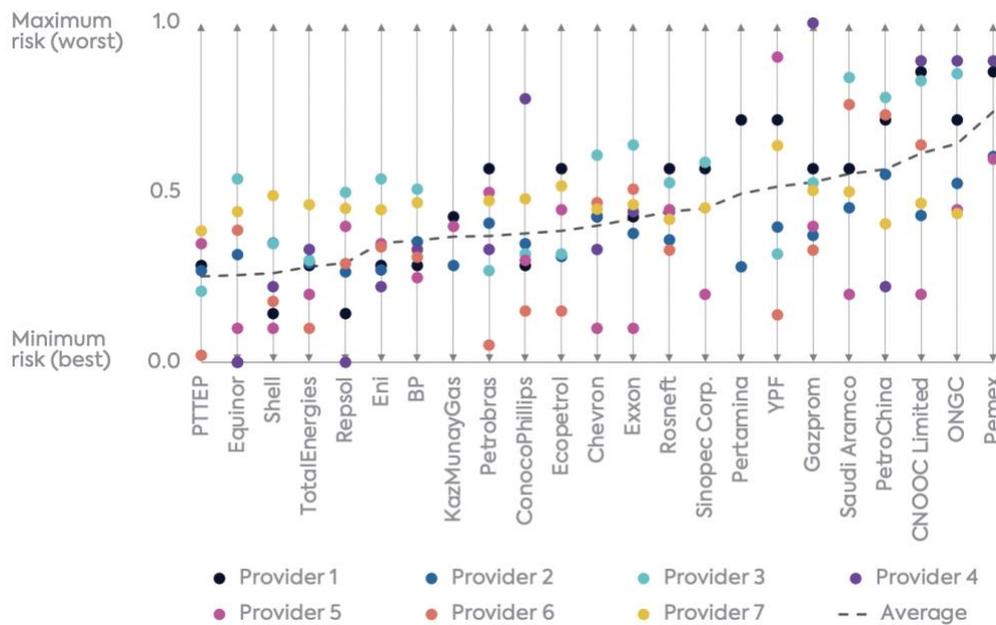
A key challenge, however, lies in the heterogeneity of ESG ratings methodologies. As shown in table below, correlations among leading ESG rating providers remain modest, highlighting significant divergence in criteria, weighting of E-S-G dimensions, and reliance on qualitative vs. quantitative data. This inconsistency raises questions for investors and policymakers alike and demonstrates how much the provider selected affects how ESG ratings affect SOE internationalization.

	Arabesque	ISS	Moody’s	MSCI	Robeco	S&P	Sustainalytics
Arabesque		0.36	0.55	0.24	-0.18	-0.23	0.01
ISS			0.40	0.71	0.08	0.30	0.51
Moody’s				0.50	-0.46	-0.32	0.22
MSCI					0.37	0.45	0.65
Robeco						0.99	0.67
S&P							0.68
Sustainalytics							

Source: Arabesque, ISS, Moody’s, MSCI, Robeco, S&P, Sustainalytics. Authors’ estimates from Bloomberg ESG Go (2022). Authors’ estimates from Bloomberg ESG Go (2022).

ESG could serve as a governance tool in reformed SOEs, particularly those that are publicly listed or partially privatized, increasingly integrate ESG frameworks into their corporate strategies. This dual orientation enables them to balance public service obligations with market competitiveness, reinforced by accountability to both state shareholders and private investors. Their exposure to international capital markets makes them especially sensitive to ESG ratings, as agencies such as MSCI and Sustainalytics directly influence their cost of capital.

The CGEP (2023) report on ESG ratings for National Oil Companies (NOCs) illustrates the extent of divergence among providers, with risk assessments varying substantially across firms such as Sinopec, Saudi Aramco, and Gazprom. The figure below demonstrates how different rating agencies produce wide dispersion in ESG risk scores, complicating benchmarking for policymakers and investors.



Source: Palacios, L., & Caricati, C. V. (2023). *Assessing ESG Risks in National Oil Companies*.

At the company level, evidence shows that European SOEs such as Enel and EDF consistently perform higher on ESG metrics compared to oil & gas SOEs like Sinopec and Saudi Aramco, reflecting differences in governance structures, sectoral exposure, and disclosure practices. Enel, for instance, achieves an AAA rating by MSCI and a Low Risk score by Sustainalytics, supported by its strong renewable capacity and Net

Zero 2040 commitment. By contrast, Aramco lags behind with BB/Medium-High risk ratings, due to limited Scope 3 disclosure and high carbon intensity. These differences confirm that sectoral context matters: SOEs in utilities and renewables appear better positioned to meet ESG benchmarks, while oil & gas SOEs face higher risks and lower ratings, despite some progress in hydrogen and diversification projects.

Finally, ESG integration functions not only as a financial signaling mechanism but also as a governance tool. OECD (2024) data show that SOEs with transparent ownership and oversight achieve higher ESG scores, as accountability mechanisms deter opportunistic behavior and align corporate actions with public interest. In this regard, ESG frameworks can support the enforcement of antitrust rules, public procurement standards, and sector-specific sustainability mandates, strengthening both domestic legitimacy and international competitiveness.

Ultimately, the strategic autonomy dimension is crucial because ESG excellence allows SOEs to differentiate themselves from private competitors by securing acceptance, trust and legitimacy on the part of society (e.g. local communities, governments, NGOs, investors) to operate and by reinforcing geopolitical influence in areas such as energy independence and digital infrastructure.

1.4.2 ESG as a Driver of Internationalization

The internationalization of SOEs amplifies the strategic relevance of ESG performance, as cross-border operations expose these enterprises to heterogeneous regulatory environments, evolving investor expectations, and heightened reputational scrutiny. When SOEs expand abroad, through foreign direct investment (FDI), joint ventures, or acquisitions, they often act as representatives of their home country's governance standards and sustainability commitments. According to OECD (2024) and UNCTAD (2023), SOEs account for over 20% of global outward FDI in strategic sectors such as energy, transport, and telecommunications. This expansion subjects them to: foreign investment screening processes (frequently assessing environmental and social impacts), host-country ESG regulations (potentially more stringent than domestic requirements), and enhanced due diligence from sovereign wealth funds, development banks, and private institutional investors.

In this context, robust ESG performance becomes a competitive asset in securing contracts, attracting financing, and maintaining a social licence to operate abroad. Conversely, poor ESG records can lead to contractual disputes under investment treaties or strain diplomatic relations. Regulatory developments also reinforce this convergence. Under the EU’s Sustainable Finance Disclosure Regulation (SFDR) and Taxonomy, funds invested in SOEs with poor ESG performance risk losing their “sustainable” label, discouraging international investor participation (European Commission, 2023). In the United States, the SEC’s 2023 climate disclosure rules force foreign issuers, including SOEs, to provide detailed emissions data and climate risk management strategies when listing securities (U.S. SEC, 2023). Non-compliance can delay or even prevent cross-border capital raising. Furthermore, ESG due diligence is now standard practice in international transactions: PwC (2024) finds that approximately 40% of EU merger and acquisition deals involving SOEs included ESG-related clauses, with buyers looking for assurances regarding governance procedures and environmental liabilities (PwC, 2024). This evolving regulatory and market environment underscores that ESG compliance is not merely reputational but a prerequisite for SOEs’ participation in international markets.

Illustrative cases demonstrate how SOEs are adapting to these pressures. For instance, *China National Offshore Oil Corporation* (CNOOC) has reinforced its internal ESG protocols to meet host-country environmental standards in offshore exploration. *SNCF Voyageurs* (France) integrates sustainability metrics in international rail projects, aligning with the EU Green Deal. Similarly, *Enel Green Power* uses its portfolio of renewable energy sources across Latin America to support regulatory approval procedures while also aligning with national and host-country climate goals. International legal disputes are also impacted by ESG factors: several ICSID arbitration cases have hinged on whether the respondent entity qualified as an SOE, with implications for state responsibility in environmental or human rights claims, linking legal classification to international accountability mechanisms.

Finally, global benchmarking initiatives, such as the *World Bank’s SOE Performance Assessment Framework* and the *OECD’s SOE Ownership and Governance Indicators*, increasingly embed ESG metrics alongside financial performance indicators. These

comparative tools create peer pressure among governments to elevate the ESG standards of their SOEs, especially when competing for infrastructure projects financed by multilateral development banks.

1.5 From Definition to Action: How SOE Identity Shapes Internationalization

Before delving into the empirical patterns of SOE international expansion, it is essential to establish a conceptual bridge between definitional clarity and the internationalization behavior of SOEs. Definitional precision is not only relevant for legal or academic purposes, but also fundamentally shapes how SOEs behave, are perceived, and are regulated in the international arena. A clear and operational definition directly influences the competitive environment, access to international markets, and the applicability of Environmental, Social and Governance (ESG) standards. In this sense, understanding the definitional foundations of SOEs is a prerequisite for assessing their global strategies, as well as the risks and opportunities they face when operating abroad. *So, how legal and functional definitions of SOEs influence their capacity, incentives, and governance frameworks when operating beyond national borders?*

The definitional status of an enterprise as an SOE directly impacts its eligibility to participate in international trade and investment regimes. Many multilateral and bilateral agreements (e.g. CPTPP, numerous BITs and the EU–Japan Economic Partnership Agreement) contain SOE-specific provisions regulating competition, subsidies, and market access. These frameworks often impose obligations related to competitive neutrality, transparency in state support, and market-based pricing, ensuring a level playing field between state-owned and private entities. An enterprise formally classified as an SOE is thus explicitly subject to these disciplines, which may also include disclosure of preferential treatment and adherence to commercial considerations in cross-border transactions. On the other side, entities that operate in practice as SOEs but are not officially recognized as such may escape regulatory scrutiny, creating asymmetries in competition and undermining the integrity of trade rules.

Moreover, definitional clarity enables consistent application of ESG standards across jurisdictions. As SOEs internationalize, they must often align with host country expectations concerning corporate conduct, sustainability, and governance: including environmental impact assessments, labour protections, and anti-corruption measures. Where legal definitions are vague or inconsistent, these expectations become harder to standardize or enforce, undermining both home and host country policy coherence and potentially leading to regulatory fragmentation, reduced policy coherence, and heightened reputational risk. The OECD (2024) underscores that a well-defined legal and functional classification strengthens accountability mechanisms, facilitates the adoption of international ESG benchmarks, and improves transparency in cross-border operations.

The duality, between state-driven and commercially-driven internationalization these two models is not always clear and it depends on how the enterprise is framed legally and politically. Hybrid approaches exist, where policy-oriented SOEs adopt competitive ESG strategies to reinforce legitimacy abroad, and commercially focused SOEs leverage state support to access politically sensitive markets. A narrow, ownership-only definition may fail to capture this nuance, while broader definitions (e.g., based on ownership, control, or policy function) offer a more accurate lens for evaluating critical insight into the rationale, risk profile, and governance frameworks that guide its cross-border engagements.

1.5.1 Bridging Definitions and Internationalization

The definitional characteristics of SOEs, such as legal autonomy, public ownership, commercial orientation, and policy mandates, are not merely semantic distinctions but they determines whether and how these entities engage with global markets.

SOEs that closely resemble commercially oriented, autonomous entities with separate legal personality, transparent governance frameworks, and partial public listings, tend to internationalize through mergers and acquisitions, joint ventures, and participation in competitive tenders. Examples such as *Enel*, *Temasek Holdings*, and *EDF* demonstrate how definitional clarity and corporatization facilitate integration into bilateral investment treaties (BITs), trade agreements like the CPTPP, and ESG-compliant financing structures. These attributes not only reduce political risk perceptions but also enable

partnerships with private-sector multinationals and multilateral development institutions. Conversely, SOEs with ambiguous mandates and governance, or strong political entanglements often face scrutiny in foreign markets. SOEs that meet definitional thresholds are more likely to engage in M&A, form strategic alliances, or attract foreign capital, while those with ambiguous or hybrid mandates may be perceived as instruments of state influence, subject to suspicion or exclusion in sensitive sectors.

Furthermore, effective control, often defined in terms of “decisive influence” rather than formal shareholding, is crucial when evaluating SOEs that expand internationally but remain strategically tethered to national interests. When the scope of state influence and commercial independence is transparent, host countries and investors can more accurately assess compliance capacity, risk exposure, and alignment with sustainability objectives. In this sense, the identity of the SOE, rooted in its legal status and governance model, directly translates into operational credibility, financing opportunities, and the ability to project both commercial competitiveness and soft power abroad. This definitional backdrop is essential for understanding the varying modes of internationalization adopted by these entities: commercialized SOEs and policy-oriented SOEs. The first ones leverage transparent governance and ESG compliance to access foreign capital and scale globally, on the other hand the policy-oriented SOEs may pursue international investments aligned with strategic national goals, such as infrastructure diplomacy or resource security.

The preceding analysis has demonstrated that definitional clarity is not a purely theoretical exercise but a functional determinant of how SOEs engage with the global economy. By dissecting the legal, governance, and operational attributes that shape their internationalization strategies, it becomes evident that the “identity” of an SOE, rooted in its formal classification, ownership structure, and strategic mandate. Consequently, establishing a robust and operationally relevant definition of SOEs is essential: *“A SOE is a legally incorporated entity in which the State exercises effective ownership or control (whether through equity, board representation, special rights, or regulatory authority) and which engages in commercial or market-oriented activities, while potentially also pursuing public policy objectives defined by the government.”* (own elaboration).

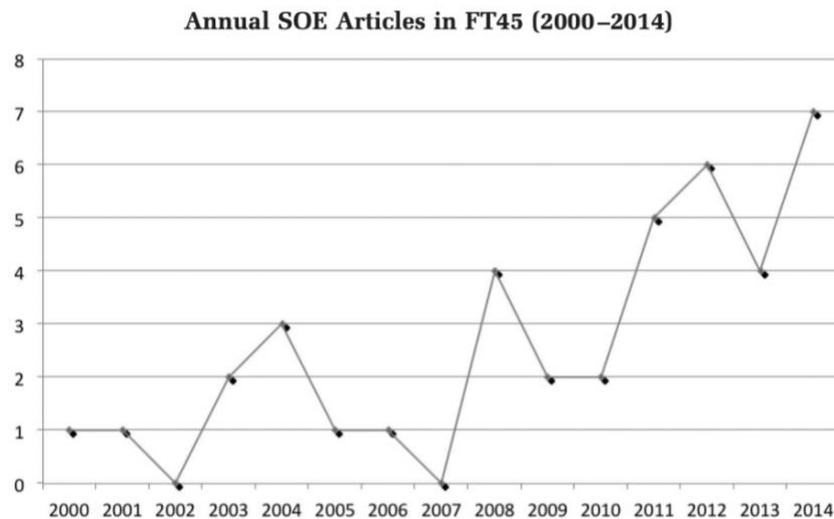
This formulation aligns with internationally recognized benchmarks, including the OECD *Guidelines on Corporate Governance of SOEs* (2024), the IMF's *Fiscal Transparency Code*, the World Bank's *SOE Corporate Governance Framework*, and definitional provisions embedded in selected Bilateral Investment Treaties and regional trade agreements.

Three core elements underpin this definition: legal incorporation and separate personality, effective ownership or control, and commercial orientation with potential policy mandate. Going deeper, the SOE must be formally established under corporate law, ensuring it possesses legal personality distinct from the State, capable of entering contracts, owning assets, and being held accountable in domestic and international environments. Control is interpreted broadly, encompassing majority or minority equity stakes, golden shares, appointment rights to boards or key executive positions, and regulatory instruments granting the State decisive influence (“decisive influence” criterion per EU competition law). Commercial orientation with potential policy mandate: while engaged in market-oriented activities, SOEs may simultaneously serve strategic national interests, such as energy security, infrastructure diplomacy, or industrial policy implementation. This hybrid nature differentiates them from purely private corporations and from administrative agencies. By integrating both ownership/control and commercial orientation, this definition accommodates the wide heterogeneity of SOEs, from wholly-owned utilities to partially listed multinational corporations and sovereign investment vehicles. The explicit recognition of policy mandates reflects the reality that in many jurisdictions (particularly in emerging economies) SOEs are expected to reconcile profitability with socio-economic development goals. Moreover, the inclusion of diverse control mechanisms captures the broader spectrum of state influence, ensuring the definition remains relevant across legal systems and sectors. This comprehensive definition provides an analytical tool for the comparative and empirical analyses that follow, enabling consistent assessment of SOEs’ governance, performance, and internationalization strategies.

CHAPTER 2 – ACADEMIC AND THEORETICAL FRAMEWORKS

The internationalization of SOEs cannot be understood solely through numbers. It is a hybrid phenomenon where commercial objectives and public mandates intersect, generating decision-making logics that differ significantly from those of private firms.

To complement the “real-world evidence” presented in previous chapter, it is crucial to highlight that SOEs has attracted growing academic attention. Unlike purely private multinational corporations (MNCs), SOEs face unique governance, legitimacy, and resource allocation challenges that cannot be fully captured by a single theoretical lens (Cuervo-Cazurra, Inkpen, Musacchio, & Ramaswamy, 2014). To address this complexity, academic research has applied and adapted multiple theoretical perspectives, each highlighting different drivers and constraints of SOE international expansion.



Source: Bruton, G. D., Peng, M. W., Ahlstrom, D., Stan, C., & Xu, K. (2015). State-owned enterprises around the world as hybrid organizations. *Academy of Management perspectives*, 29(1), 92-114.

The academic influential frameworks are the “Agency Theory”, the “Resource-Based View (RBV)”, the “Institutional Theory” and the “Stakeholder Theory”, which, taken together, underscore that SOE internationalization cannot be explained by a single theory. By focusing on the impact of ESG metrics on the internationalization of SOEs, it emerges as the linking variable across theories, conditioning agency outcomes, mediates the effectiveness of resource-based advantages, determines legitimacy under institutional pressures, and reflects responsiveness to stakeholder demands.

2.1 Agency Theory

A first and highly influential framework is the “Agency Theory”, which explains how conflicts between “principals” (e.g., state owners, private shareholders) and “agents” (managers) shape strategic behavior (Jensen & Meckling, 1976). It emphasizes the structural and political constraints that can inhibit rational decision-making and market efficiency. Originally developed to address the separation of ownership and control in private corporations (Jensen & Meckling, 1976), the theory posits that agents (managers) may act in their own interests rather than those of the principals (owners), particularly when incentives are misaligned or monitoring is weak.

Rather than dealing with a single principal, SOEs are often subject to multiple principals, including government ministries, parliaments, public agencies, citizens, and regulators, each with diverging objectives and time horizons (Musacchio & Lazzarini, 2013; Apriliyanti, Musteen & Ahsan, 2023). This “multiple-principal problem” generates overlapping and sometimes conflicting demands, which can weaken managerial accountability and strategic coherence.

Table 1. Principal-Agent and Principal-Principal Problems in State-Owned Enterprises

Typology of problems	Main issues	How does the problem manifest and how does it affect SOE performance?
Two principal-agent problems:	Information asymmetry and weak incentives	<ul style="list-style-type: none"> -Managers have more information than their monitors. They do not report transparent figures. -Managers do not have high-powered incentives or pay-for-performance contracts. -Soft-budget constraint -Managers do not seek profitability and pursue their own agendas
	Multiple-principals problem	<ul style="list-style-type: none"> -Multiple Ministries, Departments, and Agencies in charge of monitoring SOEs, but they all want to shift the cost of monitoring to each other leading to weak monitoring
Principal-principal problem	Governments deviate SOEs to pursue agendas that benefit politicians or their cronies	<ul style="list-style-type: none"> -Governments extract resources from SOEs in an ad hoc fashion (e.g., control prices), hurting shareholder value for minority shareholders -Governments obtain political rents from such extraction because they benefit industrialists (e.g., by selling inputs cheaply) or voters. -Governments extract resources from SOEs to finance deficit, leaving them without resources to finance capital and operational expenditures.

Source: Musacchio, A., & Lazzarini, S. G. (2017). State-owned enterprises as multinationals: Theory and research directions. *State-owned multinationals: Governments in global business*, 255-276.

2.1.1 Multiple-Principal Problem

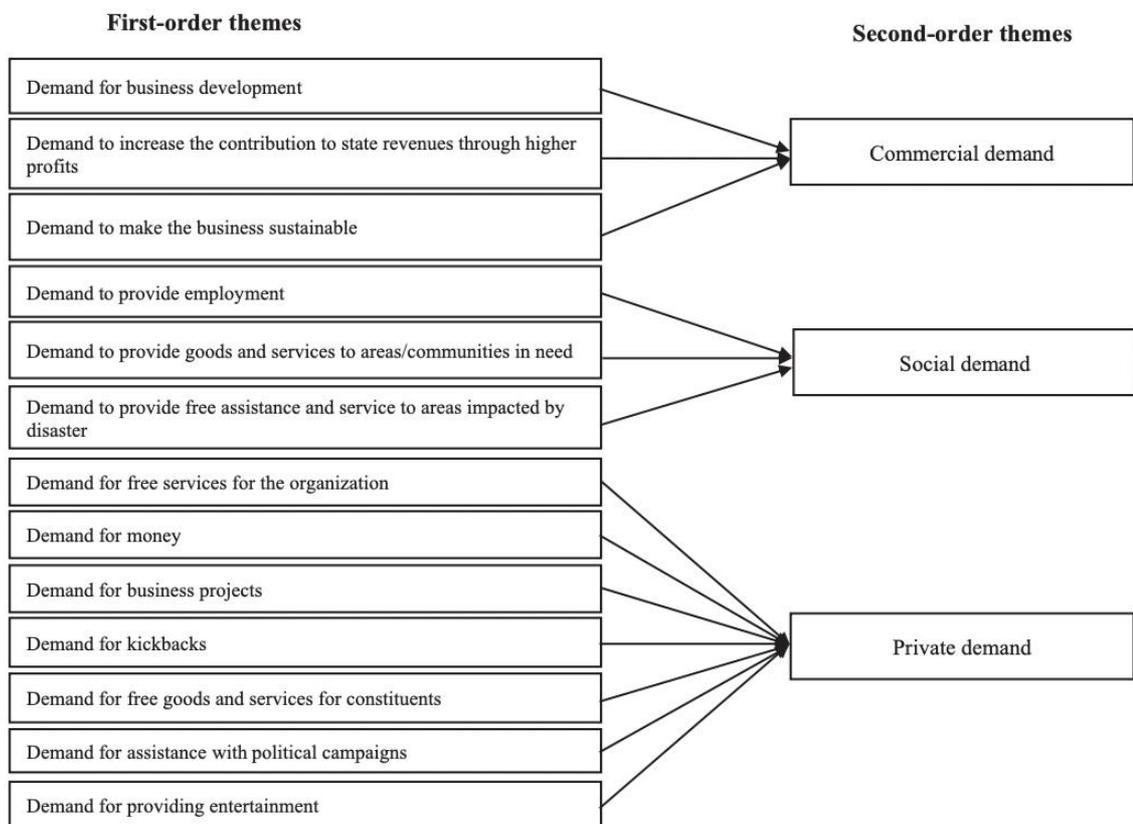
The existence of multiple principals not only complicates managerial accountability but also exposes SOEs to political interference. Governments often use SOEs as tools for electoral gain, geopolitical influence, or social redistribution, rather than purely economic goals. This logic leads to the appointment of board members based on loyalty rather than expertise, the imposition of unprofitable mandates, and the distortion of investment decisions to fit short-term political cycles (Bruton, Peng, Ahlstrom, Stan & Xu, 2015). Empirical evidence confirms the persistence of these governance risks. According to the OECD (2024), only 5% of SOEs in the 41 jurisdictions surveyed fully comply with recommended standards for board independence, while more than 60% of SOEs report having board members who simultaneously hold elected office. This prevalence of political appointees limits boards' capacity to provide neutral oversight or independent expertise, thereby perpetuating agency problems (OECD, 2024). Similarly, Rygh (2018) highlights that even partially privatized SOEs retain significant agency problems due to persistent government control and limited board independence.

The internationalization strategies of SOEs are therefore often politically motivated. Cuervo-Cazurra et al. (2014) show that many emerging-market SOEs, particularly from China, invest abroad to secure natural resources or gain geopolitical leverage, frequently prioritizing host countries with strong political alignment over those with favorable economic fundamentals. For example, Ramamurti (2009) argues that SOEs in strategic sectors such as oil, transport, and telecom often act as "arms of the state" abroad, pursuing national development or diplomatic goals rather than shareholder value. This political logic increases the risk of project failure, reputational damage, and inefficient capital allocation, creating a structural misalignment between formal governance frameworks (which assume commercial discipline) and actual strategic behavior (driven by political mandates).

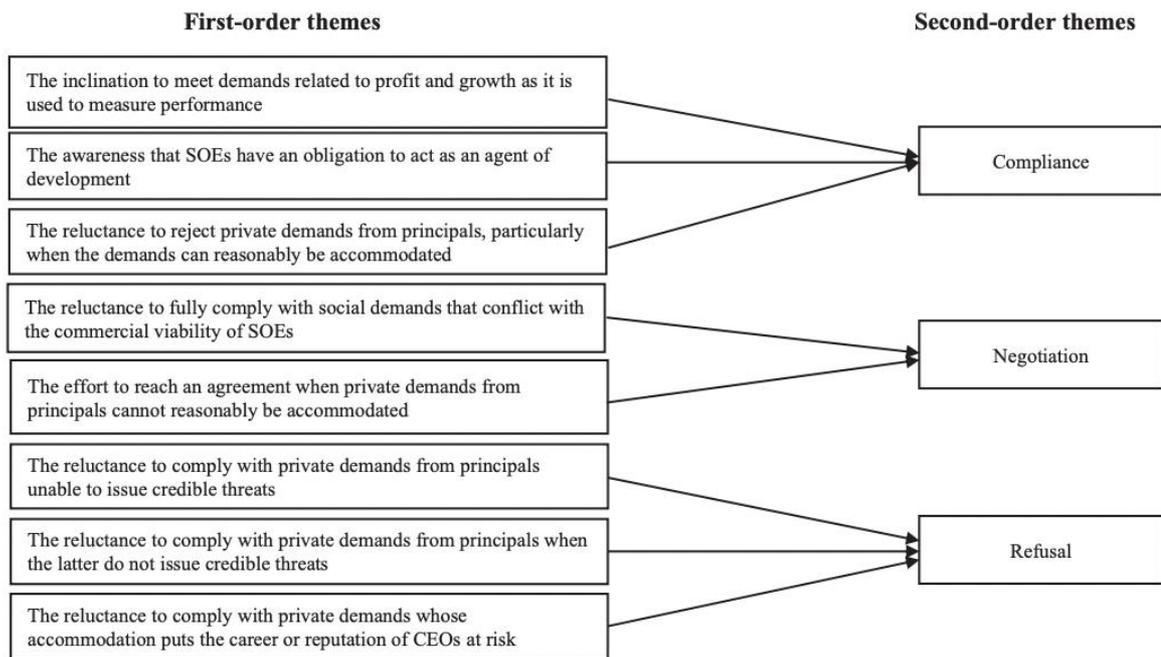
The literature on organizational slack provides one further refinement. Stan, Peng & Bruton (2013) note that slack resources, surplus or underutilized assets, can both enable strategic flexibility (e.g., long-term foreign projects) and encourage opportunistic behavior by politically motivated managers. In SOEs operating under soft budget

constraints (Kornai, 1986), slack tends to accumulate due to implicit state guarantees and lenient financial oversight. This excess slack may shield firms from market discipline and foster inefficient international expansion, undermining competitiveness abroad.

In sum, the multiple-principal problem in SOEs not only generates internal governance risks but also amplifies vulnerability to political interference, leading to internationalization patterns that may prioritize political rather than economic rationales.



Types of principals' demand. Source: Apriliyanti, I. D., Dieleman, M., & Randøy, T. (2024). Multiple-principal demands and CEO compliance in emerging market state-owned enterprises. *Journal of Management Studies*, 61(6), 2406-2436.



Types of agents' responses. Source: Apriliyanti, I. D., Dieleman, M., & Randøy, T. (2024). Multiple-principal demands and CEO compliance in emerging market state-owned enterprises. *Journal of Management Studies*, 61(6), 2406-2436.

2.1.2 Soft Budget Constraints in SOEs

A critical issue in the governance of SOEs is the phenomenon of soft budget constraints (Kornai, 1986). This concept describes a situation in which firms, particularly SOEs, expect to receive financial support from the state in times of difficulty, thus weakening incentives for cost-efficiency and risk-taking. In SOEs, the assumption of state rescue discourages fiscal discipline, allowing managers to make suboptimal investment decisions without fear of failure.

Academic research has shown that soft budget constraints are particularly prevalent in sectors where political priorities override commercial logic, such as infrastructure, energy, or transport. For example, Wang et al. (2012) document how Chinese SOEs systematically overinvest in politically favored regions despite low returns, anticipating bailouts from provincial or central governments.

Similarly, Megginson, Nash & Van Randenborgh (2012) find that the anticipation of state support lowers SOEs' responsiveness to market signals and fosters overstaffing or capital misallocation: this expectation of financial safety leads to distorts SOEs' international strategies as well. Without the fear of failure, SOEs may undertake high-risk foreign ventures that lack sound business justification, often motivated by political alignment or geopolitical considerations (Cuervo-Cazurra et al., 2014; Liang et al., 2015).

In addition, soft budget constraints undermine governance reforms aimed at improving board accountability or professionalizing management. Even in partially privatized or listed SOEs, the latent promise of government intervention weakens the disciplining role of market forces and investor scrutiny (Rygh, 2018).

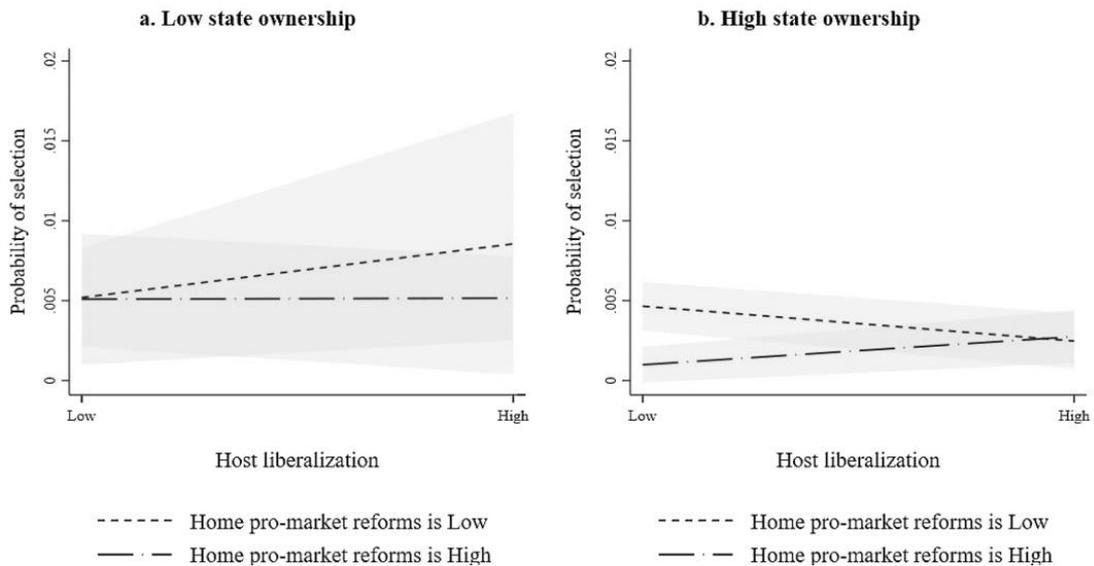
In conclusion, soft budget constraints, by reducing the disciplining role of financial markets, they distort incentives, encourage politically motivated internationalization, and weaken the effectiveness of reform initiatives.

2.2 Institutional Theory

“Institutional theory” further enriches the analysis by providing a relevant framework to understand how SOEs adapt to their external environment, not only to maximize efficiency but also to gain and maintain legitimacy in domestic and international markets (DiMaggio & Powell, 1983; Scott, 2013).

The quality of home-country institutions and the pressures encountered in host markets (coercive, normative, and mimetic) critically condition legitimacy, access to finance, and regulatory acceptance abroad (DiMaggio & Powell, 1983; Scott, 2013). SOEs often face a “liability of stateness”, whereby foreign stakeholders view them as politically connected and potentially anti-competitive (Cuervo-Cazurra et al., 2014).

Recent studies show that pro-market reforms in home countries, such as liberalization and privatization, can mitigate these legitimacy deficits and ease SOE entry into liberalized host markets (Santangelo & Symeou, 2024).



Source: Santangelo, G. D., & Symeou, P. C. (2024). The internationalization of state-owned enterprises in liberalized markets: The role of home-country pro-market reforms. *Journal of International Business Studies*, 55(5), 638-651.

As “hybrid institutions”, SOEs operate at the intersection of market logic and state logic, simultaneously pursuing profitability, efficiency, and broader socio-political objectives. This creates structural tensions: while commercial mandates demand cost-efficiency and competitiveness, political mandates may require employment preservation, redistribution of resources, or strategic foreign investments with limited economic rationale (Musacchio & Lazzarini, 2013; Bruton et al., 2015). Such hybridity often leads to blurred accountability lines and managerial opportunism, especially in environments with weak institutional checks and balances (Apriliyanti et al., 2023). When internationalizing, these hybrid features force SOEs to navigate multiple and conflicting institutional environments, balancing the expectations of their home-country governments with the demands of host-country regulators, international investors, and transnational organizations such as the OECD or WTO (Kostova & Zaheer, 1999; OECD, 2024).

Hybrid status also amplifies exposure to legitimacy pressures, facing scrutiny not only from markets but also from citizens, NGOs, and multilateral lenders, who expect higher standards of transparency and accountability due to the use of public resources (Berrone et al., 2013; Aguilera et al., 2019). As Scott (2013) notes, legitimacy is as crucial as efficiency in determining organizational survival: regarding SOEs, this means that credibility in ESG performance, governance standards, and CSR practices becomes integral to sustaining both domestic and international legitimacy. This hybrid phenomenon underscores the dual pressures that shape their internationalization, which are the economic discipline of markets and the institutional expectations of states and global stakeholders. This concept explains the reason why SOEs' global expansion cannot be analyzed solely through the lens of efficiency or resource advantage, but must also account for the institutional logics and legitimacy demands that condition their behavior across borders (North, 1990; DiMaggio & Powell, 1983).

One of the most important insights from “Institutional Theory” is that the governance and internationalization of SOEs are highly contingent upon the quality of home-country institutions. In OECD countries, SOEs tend to operate under robust institutional constraints, including independent judiciaries, transparent procurement systems, professionalized boards, and strong auditing mechanisms. These institutional features promote greater accountability, commercial orientation, and risk discipline. For example, European SOEs such as Enel (Italy) or EDF (France) have been able to internationalize while maintaining high ESG ratings and access to global sustainable finance markets, partly because of the governance standards embedded in their home-country institutional environments (OECD, 2024; MSCI, 2024). In contrast, SOEs in many emerging economies face institutional voids, characterized by weak rule of law, political patronage, and opaque regulatory enforcement (Bruton et al., 2015; Cuervo-Cazurra et al., 2014).

The institutional divide also shapes how SOEs implement governance reforms. In advanced economies, reforms such as board professionalization, anti-corruption safeguards, and ESG disclosure requirements are more credible and sustainable. In contrast, in weaker institutional environments reforms are often symbolic or cosmetic, producing limited impact due to entrenched.

2.2.1 International Legitimacy

A critical dimension of “Institutional Theory” is the pursuit of legitimacy in international markets, particularly for SOEs whose hybrid nature often raises skepticism among foreign regulators and stakeholders.

According to DiMaggio and Powell (1983), organizations adapt to their institutional environment through isomorphic pressures (coercive, normative, and mimetic) that shape their behavior and strategies.

- Coercive isomorphism occurs when SOEs face binding requirements from host-country regulators, supranational institutions, or trade agreements. Examples include compliance with the EU Sustainable Finance Disclosure Regulation (SFDR), the EU Taxonomy, and the US SEC climate disclosure rules (2023), which force foreign issuers, including SOEs, to provide detailed ESG data to access capital markets. Such regulations act as gatekeeping mechanisms, limiting market access for SOEs that cannot demonstrate robust governance and sustainability practices (OECD, 2024; SEC, 2023).
- Normative isomorphism reflects the influence of global professional and financial communities. International investors, development banks, and rating agencies (e.g., MSCI, Sustainalytics) set standards of responsible conduct and transparency, pressuring SOEs to meet best practices in governance and ESG disclosure. For instance, Enel and EDF have secured preferential access to green finance by aligning their reporting with international ESG frameworks (MSCI, 2024; Climate Bonds Initiative, 2024).
- Mimetic isomorphism appears when SOEs copy the methods of prosperous multinational corporations in an effort to be accepted elsewhere. In uncertain environments, where the legitimacy of SOEs is questioned, imitation of global private competitors becomes a strategy to signal modernity, credibility, and alignment with international norms (Suchman, 1995; Kostova & Zaheer, 1999).

A Typology of Legitimacy

	Actions	Essences	
Episodic Continual	Exchange Influence	<div style="border: 1px dashed black; padding: 5px; display: inline-block;"> Disposition Interest Character </div>	Pragmatic Legitimacy
Episodic Continual	Consequential Procedural	Personal Structural	Moral Legitimacy
Episodic Continual	<div style="border: 1px dashed black; padding: 5px; display: inline-block;"> Comprehensibility Predictability </div> <div style="border: 1px dashed black; padding: 5px; display: inline-block;"> Taken-for-Grantedness Inevitability </div>	<div style="border: 1px dashed black; padding: 5px; display: inline-block;"> Plausibility </div> <div style="border: 1px dashed black; padding: 5px; display: inline-block;"> Permanence </div>	Cognitive Legitimacy

Source: Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of management review*, 20(3), 571-610.

These isomorphic pressures demonstrate that international acceptance of SOEs depends not only on financial performance but also on their ability to conform to global institutional norms. Failing to achieve legitimacy may result in barriers to entry, exclusion from sustainable funds, or political backlash in host countries. Conversely, alignment with coercive, normative, and mimetic expectations enables SOEs to secure the “social license to operate”, reducing reputational risks and facilitating long-term internationalization (Berrone et al., 2013; Aguilera et al., 2019).

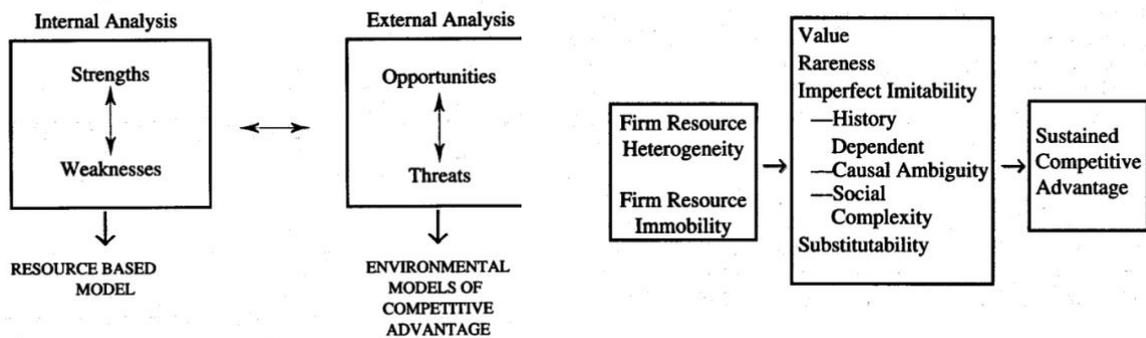
Legitimation Strategies

	Gain	Maintain	Repair
General	Conform to environment	Perceive change	Normalize
	Select environment	Protect accomplishments -Police operations -Communicate subtly -Stockpile legitimacy	Restructure
	Manipulate environment		Don't panic
Pragmatic	Conform to demands -Respond to needs -Co-opt constituents -Build reputation	Monitor tastes -Consult opinion leaders	Deny
	Select markets -Locate friendly audiences -Recruit friendly co-optees	Protect exchanges -Police reliability -Communicate honestly -Stockpile trust	Create monitors
	Advertise -Advertise product -Advertise image		
Moral	Conform to ideals -Produce proper outcomes -Embed in institutions -Offer symbolic displays	Monitor ethics -Consult professions	Excuse/Justify
	Select domain -Define goals	Protect propriety -Police responsibility -Communicate authoritatively -Stockpile esteem	Disassociate -Replace personnel -Revise practices -Reconfigure
	Persuade -Demonstrate success -Proselytize		
Cognitive	Conform to models -Mimic standards -Formalize operations -Professionalize operations	Monitor outlooks -Consult doubters	Explain
	Select labels -Seek certification	Protect assumptions -Police simplicity -Speak matter-of-factly -Stockpile interconnections	
	Institutionalize -Persist -Popularize new models -Standardize new models		

Source: Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of management review*, 20(3), 571-610.

2.3 Resource-Based View (RBV)

The “Resource-Based View” (RBV) focuses on the role of tangible and intangible resources in sustaining international competitiveness, emphasizing that firms achieve competitive advantage when they control resources that are valuable, rare, inimitable, and non-substitutable (VRIN) (Barney, 1991). For SOEs, resource endowments are shaped not only by market dynamics but also by their unique relationship with the state, which provides access to financial, natural, and political resources unavailable to most private firms (Musacchio, Pineda Ayerbe, & García, 2015). These resources could support long-term projects and global competitiveness and help expand internationally if properly managed (Barney, 1991), but they could also cause issues with market distortion and competitive neutrality (OECD, 2024).



Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, 17(1), 99-120.

A first distinctive resource is privileged access to capital. SOEs often benefit from state guarantees, lower borrowing costs, and preferential financing through state-owned banks or sovereign wealth funds (Musacchio et al., 2015). This financial backing allows them to sustain large-scale investments and long-term international projects, even in contexts where private competitors would face prohibitive risks.

A second resource is the control over strategic natural resources. SOEs dominate sectors such as energy, mining, and infrastructure, where they retain exclusive or preferential rights to exploit resources. This ownership of oil, gas, or rare minerals serves both as a

domestic policy tool and as a means of securing geopolitical influence through cross-border operations (Cuervo-Cazurra et al., 2014; Bruton et al., 2015).

A third, and less tangible, endowment is access to political and diplomatic networks. SOEs can leverage state-to-state relations, preferential trade agreements, and diplomatic channels to facilitate market entry and secure contracts abroad (Liang et al., 2015; Apriliyanti et al., 2023).

2.4 Stakeholder Theory

SOEs operate in an environment characterized by a plurality of stakeholders far more complex than in privately owned firms. While multinational corporations typically balance the interests of shareholders, customers, and employees, SOEs interact simultaneously with governments, parliaments, citizens, regulators, international organizations, investors, and civil society actors such as NGOs (Freeman, 1984; OECD, 2024).

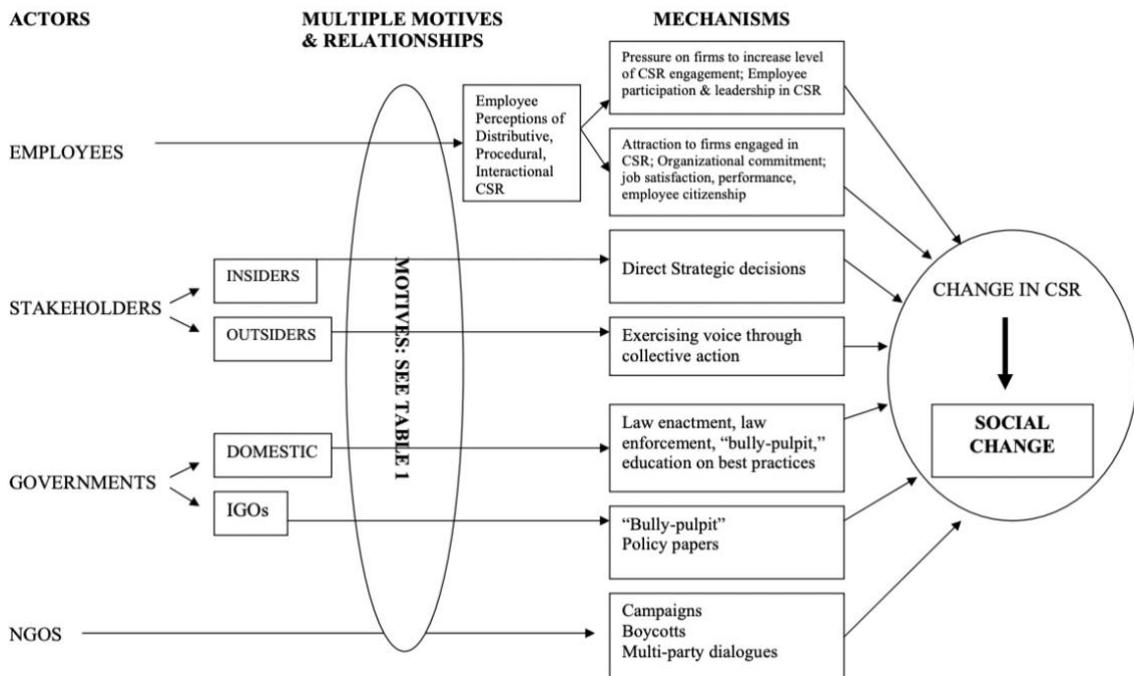
This multi-principal configuration reflects their dual mandate: to pursue commercial objectives while delivering public policy goals. Unlike private firms, SOEs must navigate not only market-based pressures from investors and competitors, but also political and social demands for the public interest (Musacchio & Lazzarini, 2013).

This multiplicity of stakeholder expectations often generates conflicting objectives: citizens may demand affordability of essential services, regulators require compliance with transparency standards, while foreign investors expect financial discipline and risk-adjusted returns. In this sense, stakeholder management for SOEs goes beyond traditional corporate governance, because it requires balancing different and sometimes contradictory demands to maintain legitimacy both domestically and internationally.

LEVELS:



Actors within the Multiple Levels Exerting Pressure on Firms to Engage in CSR. Aguilera, R. V., Rupp, D. E., Williams, C. A., & Ganapathi, J. (2007). Putting the S back in corporate social responsibility: A multilevel theory of social change in organizations. *Academy of management review*, 32(3), 836-863.



Actors' mechanisms to influence social change. Aguilera, R. V., Rupp, D. E., Williams, C. A., & Ganapathi, J. (2007). Putting the S back in corporate social responsibility: A multilevel theory of social change in organizations. *Academy of management review*, 32(3), 836-863.

2.4.1 CSR/ESG Integration

In the context of SOEs, ESG ratings have emerged as key instruments for evaluating how effectively firms respond to diverse stakeholder demands. Building on stakeholder theory (Freeman, 1984), ESG indicators translate abstract expectations (e.g. environmental stewardship, social responsibility, and sound governance) into measurable benchmarks that external actors can monitor and compare across firms and jurisdictions.

For SOEs, this measurement is particularly significant because they must simultaneously address the interests of multiple constituencies. In this sense, ESG ratings serve as a proxy for stakeholder responsiveness, signaling whether an SOE is capable of balancing these complex and sometimes conflicting objectives and directly influencing cost of capital, access to sustainable finance, and acceptance in foreign markets (Rygh, 2017; OECD, 2024). A high ESG rating communicates credibility to regulators, investors, and communities, thereby lowering both reputational risks and cost of capital and also enhancing legitimacy in international markets and benefiting of preferential access to sustainable finance instruments (Freeman, 1984; Porter & Kramer, 2011; Climate Bonds Initiative, 2024). Conversely, low ESG scores can expose SOEs to political scrutiny, investor divestment, and barriers to international expansion.

Recent OECD (2024) evidence shows that SOEs with transparent governance structures and independent boards consistently achieve higher ESG ratings. Similarly, global rating agencies, such as MSCI and Sustainalytics, increasingly integrate stakeholder-related metrics (e.g. labor practices, community relations, and anti-corruption measures) into their assessments, institutionalizing the link between stakeholder expectations and financial performance.

In this way, ESG ratings become strategic tools of governance: they not only influence access to global capital, but also provide external validation of how effectively SOEs manage the expectations of their multiple and heterogeneous stakeholders (Freeman, 1984; Porter & Kramer, 2011; OECD, 2024).

MSCI ESG Rating									
ENVIRONMENT PILLAR				SOCIAL PILLAR				GOVERNANCE PILLAR	
Climate Change	Natural Capital	Pollution & Waste	Env. Opportunities	Human Capital	Product Liability	Stakeholder Opposition	Social Opportunities	Corporate Governance	Corporate Behavior
Carbon Emissions	Water Stress	Toxic Emissions & Waste	Clean Tech	Labor Management	Product Safety & Quality	Controversial Sourcing	Access to Finance	Board	Business Ethics
Product Carbon Footprint	Biodiversity & Land Use	Packaging Material & Waste	Green Building	Health & Safety	Consumer Financial Protection	Community Relations	Access to Health Care	Pay	Tax Transparency
Financing Environmental Impact	Raw Material Sourcing	Electronic Waste	Renewable Energy	Human Capital Development	Privacy & Data Security		Opportunities in Nutrition & Health	Ownership	
Climate Change Vulnerability				Supply Chain Labor Standards	Responsible Investment			Accounting	
					Chemical Safety				

■ Universal key issues applicable to all industries

MSCI. (2024, July). *MSCI ESG ratings and cost of capital*. MSCI Research Insight. <https://www.msci.com/documents/10199/6c2115f3-5fef-b883-278d-853de6ffc019>

From an internationalization perspective, CSR strategies such as transparent ESG disclosure, community engagement, or alignment with the UN Sustainable Development Goals, can help SOEs reducing transaction costs when expanding abroad. Lower transaction costs emerge because host-country regulators, local communities, and international investors perceive CSR-oriented SOEs as more trustworthy and less prone to opportunistic behavior (North, 1990; Williamson, 1985). In this sense, CSR not only improves international reputation but also strengthens social license to operate, which is essential for gaining acceptance in host countries and ensuring project continuity.

The theoretical discussion on stakeholder responsiveness, CSR, and ESG performance finds concrete validation in the empirical evidence on sustainable finance. A clear example lies in the issuance of green and sustainability-linked bonds, where SOEs have become pivotal actors.

According to the Climate Bonds Initiative (2024), SOEs were responsible for more than 80% of global green bond issuance in 2023, with China’s provincial SOEs alone registering a 24% year-on-year increase. For example, Enel (Italy) issued USD 6.9 billion

in sustainability-linked bonds in 2023, tying coupon rates to renewable expansion, and benefiting from its AAA ESG rating by MSCI. Similarly, EDF (France) leveraged its AA rating to issue over EUR 5 billion in green bonds, financing its nuclear transition and renewable projects under favorable market conditions. These instruments demonstrate alignment with global sustainability goals and it also enhance international legitimacy, signaling to investors a long-term commitment to climate and governance standards.

CHAPTER 3 – SUSTAINABLE FINANCE AND ESG RATING WHITHIN SOEs FRAMEWORK

This chapter sets out the empirical strategy used to test the core proposition of this thesis: the extent to which Environmental, Social, and Governance (ESG) performance conditions the internationalization of SOEs.

SOEs are hybrid organizations that operate under a dual mandate (commercial discipline and public policy delivery), so their cross-border expansion cannot be explained solely by market incentives. Chapter 2 argued that agency frictions, resource endowments, institutional pressures, and stakeholder expectations jointly shape SOE behavior. Moreover, capital markets and regulators increasingly embed ESG requirements in financing and disclosure regimes, potentially altering SOEs' cost of capital, legitimacy abroad, and access to opportunities. Taken together, these forces suggest a testable empirical link: higher ESG performance should be associated with deeper and more sustainable modes of internationalization, but the strength of that link is likely to vary across institutional environments, sectors, and ESG pillars.

Regarding internationalization, these strategies typically include foreign direct investment (FDI), cross-border mergers and acquisitions, joint ventures, and participation in large infrastructure or energy projects abroad (Cuervo-Cazurra et al., 2013; Ramamurti, 2009). In this context, ESG acts as both a constraint and an enabler: firms with weak ESG profiles may encounter regulatory barriers, reputational risks, and exclusion from sustainable finance channels, whereas those with strong ESG credentials can leverage sustainability commitments to reduce transaction costs, secure host-country legitimacy, and access international capital at lower cost (OECD, 2024; MSCI, 2024). For SOEs, whose dual mandate already generates scrutiny from global stakeholders, ESG performance thus becomes a strategic filter that determines whether their internationalization paths are perceived as credible, sustainable, and aligned with global norms.

This perspective also aligns with the rapid institutionalization of sustainable finance. Regulatory frameworks such as the EU Taxonomy, the Sustainable Finance Disclosure Regulation (SFDR) and the Corporate Sustainability Reporting Directive (CSRD) increasingly bind financial actors to ESG-based classifications, influencing the flow of international capital (European Commission, 2023; SEC, 2023). In parallel, ESG rating agencies such as MSCI, Sustainalytics, Moody's, and Refinitiv provide standardized measures that shape investors' perceptions and access to sustainable funds.

3.1 Sustainable Finance

The EU Action Plan on Sustainable Finance (2018) and subsequent legislative initiatives, including the Sustainable Finance Disclosure Regulation (SFDR, 2019/2088) and the EU Taxonomy Regulation (2020/852), illustrate how institutional coercive pressures are reshaping corporate behavior (DiMaggio & Powell, 1983; Scott, 2014). For SOEs, which operate simultaneously as commercial actors and public policy instruments, these regulations are not only a disclosure exercise but also a precondition for credibility in international markets (OECD, 2024). Failure to align can result in reputational risks, higher costs of borrowing, and exclusion from sustainable investment flows, directly affecting their ability to expand abroad.

Since the launch of the EU Action Plan on Sustainable Finance (2018), the central idea has been to direct investment flows not only toward activities already considered “green” but also to support the transition of carbon-intensive sectors. This dual orientation reflects the hybrid nature of sustainability policy: on the one hand, it rewards companies already aligned with climate goals, while on the other, it recognizes that a large share of investments will need to flow into transition finance in order to meet the EU target of reducing greenhouse gas emissions by 55% by 2030 (European Commission, 2021). At the heart of the EU framework lies the attempt to redirect financial flows toward sustainable and transition activities, creating incentives for firms to adopt credible ESG strategies. This dynamic is particularly relevant for SOEs active in carbon-intensive industries such as energy, utilities, and transport. These firms often act as “national

champions” in their home countries but must demonstrate alignment with EU and global sustainability standards to maintain their social license to operate internationally.

The regulatory infrastructure is anchored in two key pillars. First, the EU Taxonomy Regulation (2020/852) establishes the only mandatory classification framework worldwide, defining economic activities that can be deemed environmentally sustainable according to six objectives, including climate-change mitigation, circular economy, and biodiversity restoration. Second, the Sustainable Finance Disclosure Regulation (SFDR, 2019/2088) requires financial market participants to disclose how their products integrate sustainability, distinguishing between “Article 8” products (which promote environmental or social characteristics) and “Article 9” products (which have a sustainability objective). Together with the Corporate Sustainability Reporting Directive (CSRD, 2022/2464) and the forthcoming Corporate Sustainability Due Diligence Directive (CSDDD, 2024/1760), these initiatives create a dense regulatory framework intended to increase transparency, comparability, and accountability.

However, empirical evidence suggests that the framework has not yet delivered the expected results, showing that taxonomy-aligned green bonds remain marginal: just 0.5–0.7% of total EU corporate bond issuance (Merler, 2025), but utilities and large SOEs have been among the first movers, signaling how public ownership can accelerate adaptation to new financial rules. Similarly, investment funds classified under SFDR Article 9 commit, on average, less than 5% of their assets to taxonomy-aligned activities, revealing both the difficulty of demonstrating compliance and the structural limits of the taxonomy’s binary logic.

Number of bonds	2021	2022	2023	2024
GBs issued by companies incorporated in the EU	618	547	515	682
of which, taxonomy-aligned	13 (2%)	56 (10%)	52 (10%)	42 (6%)
Amount issued (€ billions)	2021	2022	2023	2024
GBs issued by companies incorporated in the EU	852	402	339	399
of which, taxonomy-aligned	8 (1%)	40 (10%)	34 (10%)	29 (7%)

Source: Timeline of the EU sustainable finance framework. Merler, S. (2025). *How to improve the European Union's sustainable finance framework* (No. 05/2025). Bruegel Policy Brief.

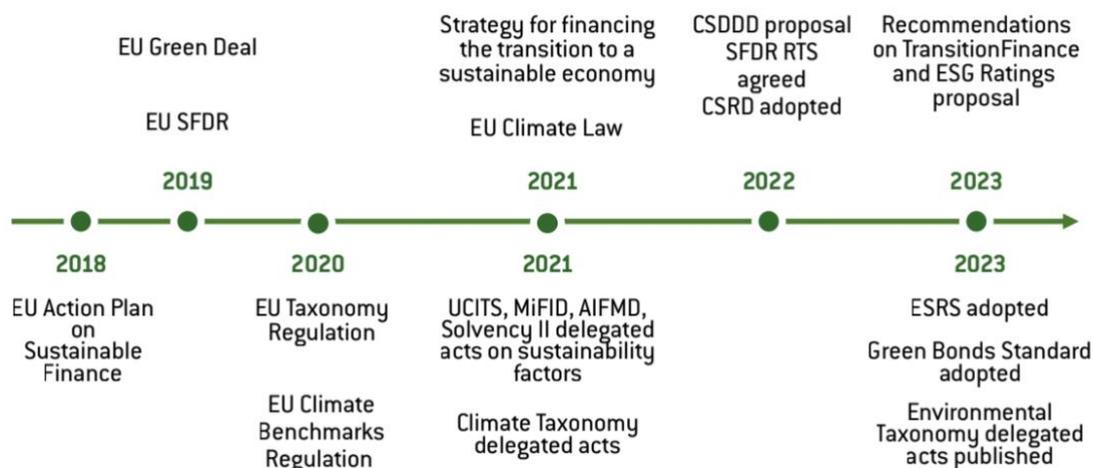
This directly links ESG performance with international competitiveness, reinforcing the argument of “institutional theory” that legitimacy now depends on compliance with global and supranational standards. Sustainable finance frameworks act as coercive pressures (binding EU Taxonomy or SEC climate disclosure rules), normative expectations (from investors, rating agencies, and international lenders), and mimetic practices (SOEs adopting private MNC standards in reporting and bond issuance).

The relevance of these strategies show that ESG performance is a central determinant of SOE internationalization strategies. “Greenfield investments and infrastructure projects” illustrate how these investments provide long-term access to resources and geopolitical influence, while they have also faced resistance due to environmental and social concerns.

Increasingly, host-country regulators require stricter environmental impact assessments and community engagement, making ESG alignment a prerequisite for the continuity of such projects (Liang, Ren, & Sun, 2015; OECD, 2024). “Cross-border mergers and acquisitions (M&A)” further demonstrate how ESG credibility increasingly distinguishes SOEs that are welcomed as legitimate investors from those perceived as politically intrusive or environmentally damaging (Cuervo-Cazurra et al., 2014; MSCI, 2024). “Joint ventures and strategic alliances” illustrate that SOEs with weaker ESG commitments often rely more heavily on bilateral political agreements, underscoring how ESG can create relational capital in foreign markets (Porter & Kramer, 2011; Climate Bonds Initiative, 2024). “Global capital market participation” underscores that the issue of instruments such as green and sustainability-linked bonds tied to renewable energy targets, can lead to lower cost of capital and reinforcing credibility among international investors.

3.1.1 EU Regulatory Framework

Over the past decade, the European Union has progressively built one of the most ambitious and comprehensive sustainable finance regulatory frameworks worldwide, aimed at aligning financial flows with the objectives of the European Green Deal and the Paris Agreement.



Source: Timeline of the EU sustainable finance framework. Merler, S. (2025). *How to improve the European Union's sustainable finance framework* (No. 05/2025). Bruegel Policy Brief.

The *EU Taxonomy Regulation (Regulation EU 2020/852)*, adopted in June 2020, provides the first common classification system for environmentally sustainable activities within the European Union. Its main objective is to establish technical screening criteria to determine whether an economic activity can be considered environmentally sustainable. The regulation sets out six key environmental objectives: climate change mitigation, climate change adaptation, sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control, and (vi) protection and restoration of biodiversity and ecosystems (European Commission, 2020). For companies, including SOEs, the Taxonomy serves as a reference framework to align corporate policies with EU sustainability objectives and to improve transparency towards stakeholders. Investors use it to integrate sustainability into investment strategies, while policymakers employ it as a tool to monitor progress toward the ecological transition (OECD, 2024). To qualify, an activity must substantially contribute to at least one objective, do no significant harm (DNSH) to any of the others, and comply with minimum social safeguards. Alignment with the Taxonomy enhances international legitimacy and improves access to sustainable finance instruments, c reputational penalties, reduced investor appetite, and exclusion from EU-labelled sustainable products.

The *Sustainable Finance Disclosure Regulation (SFDR, Regulation EU 2019/2088)*, adopted in 2019 and effective from March 2021, focuses on increasing transparency by evaluating how financial market participants and advisors integrate sustainability risks and opportunities into investment decisions (European Commission, 2019). The SFDR applies to a wide range of actors and requires disclosure at two levels:

- Entity level: transparency on sustainability risk policies, adverse impacts on sustainability factors, and remuneration policies;
- Product level: disclosure on whether financial products promote environmental or social characteristics (Article 8, “light green”) or have sustainable investment as their objective (Article 9, “dark green”).

The SFDR also emphasizes the principle of “comply or explain”, meaning firms must either meet transparency requirements or justify non-compliance. For SOEs, this increases the need to integrate robust ESG reporting frameworks, reducing risks of greenwashing and enhancing credibility abroad.

The *Corporate Sustainability Reporting Directive (CSRD, Directive EU 2022/2464)*, adopted in 2022 and effective from January 2023, expands the scope of the Non-Financial Reporting Directive (NFRD, 2014/95/EU) by extending reporting requirements to nearly 50,000 companies by 2026, including large listed SOEs and SMEs (European Commission, 2022). The directive mandates companies to report detailed environmental, social, and governance (ESG) information using the European Sustainability Reporting Standards (ESRS) developed by EFRAG (European Financial Reporting Advisory Group). It also requires external assurance of reported information and introduces a digital taxonomy to enhance data comparability (OECD, 2024). SOEs, as public entities, face heightened scrutiny from both domestic stakeholders and international markets: compliance with CSRD standards improves accountability and transparency, reinforcing their legitimacy when operating abroad.

The *Corporate Sustainability Due Diligence Directive (CSDDD, 2024/1760)*, formally adopted in 2024, moves beyond disclosure to establish binding due diligence obligations for companies operating within the EU market. Unlike the CSRD, which focuses on reporting, the CSDDD requires firms to identify, prevent, mitigate, and account for

adverse impacts on human rights and the environment throughout their global value chains (European Commission, 2024). The directive applies to EU companies above specific thresholds of employees and turnover, as well as to large non-EU companies with significant operations in the European market. Its obligations include:

- Due diligence policy and integration into corporate governance;
- Risk-based assessments to identify adverse human rights and environmental impacts;
- Preventive and corrective measures across subsidiaries and business partners;
- Stakeholder engagement and grievance mechanisms;
- Monitoring and evaluation of due diligence processes;
- Disclosure obligations to report on due diligence performance.

For SOEs, the CSDDD has strategic implications for internationalization because they often operate in jurisdictions with weak governance or high environmental and social risks. The CSDDD aligns with global initiatives, such as the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights, reinforcing Europe's ambition to set international standards for responsible business conduct. Compliance with the directive thus becomes a prerequisite for maintaining market access and legitimacy in the EU. Failure to meet due diligence obligations could result in civil liability, fines, reputational damage, and exclusion from EU-based supply chains (OECD, 2024).

Together, these four instruments not only increase transparency and accountability but also exert strong institutional pressures (DiMaggio & Powell, 1983) on firms, particularly SOEs, to integrate ESG considerations into their governance and internationalization strategies. For SOEs seeking to access global capital markets and expand abroad, compliance with these frameworks is a prerequisite for legitimacy, financing, and long-term competitiveness.

3.2 ESG Ratings

The ESG framework breaks down into three distinct but interrelated dimensions, Environmental (E), Social (S), and Governance (G), each capturing a specific set of risks, opportunities, and disclosure requirements that shape corporate behavior. For SOEs, these metrics influence access to international markets, legitimacy in host countries, and the ability to secure financing under global sustainable finance frameworks.

While each ESG pillar contributes distinct insights, their combined effect determines the overall sustainability and legitimacy profile of a SOE. High ESG scores serve as signals of reliability and transparency to international stakeholders, lowering borrowing costs, facilitating entry into high-standard jurisdictions, and enabling inclusion in sustainable investment funds. Conversely, poor performance in any of the three pillars can act as a binding constraint, leading to reputational damage, financing exclusion, or heightened scrutiny in cross-border projects. For SOEs, ESG metrics are thus not only reporting tools, but also strategic determinants of internationalization outcomes. They mediate the ability of hybrid enterprises to balance their dual mandate, public policy delivery and commercial competitiveness, while positioning themselves as credible global players.

3.2.1 Environmental (E) Pillar

The *environmental* pillar evaluates how firms manage natural resources, emissions, energy efficiency, and their contribution to the transition toward a low-carbon economy. It captures a firm's exposure to climate- and resource-related risks and opportunities: greenhouse-gas (GHG) emissions (Scope 1–2–3), energy mix and efficiency, air/water pollution, waste and circularity, biodiversity/land use, and climate-risk governance and targets.

For SOEs the environmental dimension conditions the feasibility and cost of cross-border projects and, therefore, the internationalization set available to SOEs, offering opportunities for cost savings and reputational gains, introducing risks tied to disclosure quality and sectoral materiality and requiring careful management to transform environmental performance into a durable strategic asset.

For example, SOEs like Enel (Italy) or EDF (France) have tied their international strategies to renewable energy expansion, issuing green bonds and sustainability-linked loans that reduce their cost of capital (Climate Bonds Initiative, 2024; MSCI, 2024). Conversely, fossil-fuel SOEs such as Sinopec or Saudi Aramco face increasing restrictions in OECD markets, where regulators and investors impose stricter environmental due diligence.

In the assessment of the Environmental (E) pillar, three recurring challenges such as methodological divergence: leading ESG providers adopt different materiality matrices, indicator sets that can range from a few dozen to several hundred, and proprietary weighting schemes. In some cases, analysts also integrate qualitative judgment or survey-based evidence. As a result, the same issuer may receive markedly different environmental (and overall ESG) scores depending on the provider, a divergence that has consequences when SOEs are screened by international lenders, rating agencies, or host-country regulators.

Another challenge relates to data coverage and Scope-3 reporting gaps. Even among large firms, disclosure of full Scope 1, 2, and 3 emissions is uneven, while for smaller issuers, particularly in emerging economies, comprehensive reporting is rare. Recent evidence from EU and UK datasets shows that full publication of Scope 1–3 data remains far from universal, even for large-cap companies. These gaps directly affect environmental scores, as rating agencies penalize firms and sectors with thinner disclosure, regardless of actual performance. Finally, materiality and sector bias further complicate environmental assessment: for example, in industries where environmental externalities are structurally high (e.g. power generation, mining, aviation, shipping), environmental indicators tend to dominate overall ESG profiles. By contrast, in sectors with lower direct footprints, governance and social aspects often carry greater weight. For diversified SOE groups, this makes it difficult to capture the real environmental impact of SOEs' cross-border operations and complicates host-country regulators' assessments of their legitimacy, because consolidated environmental scores may obscure significant heterogeneity across subsidiaries.

Moving forward, a crucial link between environmental performance and SOE's internationalization emerges through three interconnected channels. The first is the financing channel: SOEs with strong environmental profiles enjoy facilitated access to sustainable debt instruments (e.g. green bonds, sustainability-linked loans), resulting into lower spreads and improved borrowing conditions. By contrast, weak environmental data can exclude SOEs from sustainability-labelled financing pools, ultimately limiting their capacity to pursue international projects under favorable terms. The second is the regulatory and market-access channel, because host jurisdictions increasingly embed environmental due diligence, taxonomy-based classifications, and climate disclosure requirements into their conditions for listings, procurement, and infrastructure concessions. Ultimately, the third dimension is the project execution and stakeholder channel: for example, large-scale infrastructure and resource-based projects are particularly vulnerable to environmental risks such as biodiversity loss, water stress, or pollution. SOEs that demonstrate robust environmental risk management (through safeguards, monitoring systems, or pollution controls) significantly reduce the likelihood of community opposition, litigation, or even lender withdrawal. This is especially critical given that SOEs often operate in sectors where mandates intersect with public services and sensitive natural assets, such as utilities, energy, and transport.

3.2.2 Social (S) Pillar

The social pillar captures how firms manage relationships with employees, suppliers, customers, and communities, including labor standards, health and safety, human rights in supply chains, product responsibility, data privacy, and community impacts.

For SOEs, social metrics thus function as a license to operate in foreign jurisdictions because they are expected to act as role models in labor standards, inclusivity, and community development: it shapes licensing, procurement eligibility, access to development finance, and the social licence to operate abroad. In the context of internationalization, weak social performance can trigger reputational risks, regulatory backlash, or even community opposition in host countries, directly constraining international expansion, whereas credible practices lower transaction costs and smooth entry into host markets.

A particularly delicate area for SOEs concerns the measurement frictions that characterize the Social (S) dimension of ESG ratings. Unlike environmental indicators, which are increasingly standardized, social metrics often suffer from conceptual and methodological ambiguities that directly affect the evaluation of SOEs operating across multiple jurisdictions. A first challenge lies in the fact that social indicators still emphasize the existence of policies (e.g. human rights commitments or diversity statements) without sufficiently capturing verified outcomes, such as remediation of abuses or measurable improvements in workforce inclusion. This asymmetry rewards firms with advanced disclosure frameworks rather than those delivering tangible results, making cross-country comparisons particularly noisy. A second source of friction is supply-chain opacity: social risks are often embedded in the deeper tiers of global supply chains (tier-2 or tier-3 suppliers), where data is scarce and auditing practices vary widely across industries and countries. This raises a paradox for internationalizing SOEs, since their legitimacy in host countries can be undermined by weak supply-chain oversight, even when domestic operations meet high standards. A third complexity arises from controversy weighting, because ESG providers increasingly incorporate screening on these (e.g. labor disputes, community conflicts, or data/privacy breaches) using proprietary severity and decay algorithms. For SOEs, which are politically salient and often under intense media and stakeholder scrutiny, controversies can weigh more heavily and persist longer in public perception compared to private peers. For this reason, jurisdictional heterogeneity remains a structural barrier because labor rights and human-rights protections differ significantly across legal systems: a practice that exceeds baseline requirements in a developing host country may still be considered insufficient under EU or IFC standards creating divergence in how performance is scored.

Moreover, access to development finance is increasingly contingent on compliance with international social safeguards. Multilateral development banks (MDBs) and export-credit agencies (ECAs) typically align their lending criteria with frameworks such as the IFC Performance Standards or the Equator Principles. SOEs that can demonstrate strong social management systems (e.g. occupational health and safety protocols, effective grievance mechanisms, supplier due diligence) are better positioned to unlock concessional or long-tenor finance. Strong social governance also enhances operational resilience and cost efficiency, achieving lower insurance premiums, and achieve better

contractor performance. advantages that are particularly material in the capital-intensive sectors where SOEs are heavily represented.

Compared to private multinational corporations (MNCs), SOEs operate with not only shareholders and employees but also citizens, parliaments, ministries, unions, NGOs, and multilateral development banks (MDBs). This unique configuration amplifies the relevance of the social dimension of ESG for their legitimacy abroad. Unlike private firms, whose primary accountability lies in profitability and shareholder returns, SOEs are expected to reconcile public-service obligations with global competitiveness. The social pillar therefore signals whether a public enterprise can guarantee affordability, equity, quality, and respect for rights while expanding across borders.

3.2.3 Governance (G) Pillar

Governance acts as the foundation of international legitimacy, shaping whether SOEs are perceived as reliable global players or as politically compromised entities, because their hybrid ownership model exposes them to agency problems, political interference, and potential misalignment between public mandates and commercial imperatives. This pillar evaluates how firms are directed and controlled, focusing on metrics such as board independence and composition, ownership and shareholder rights, executive remuneration, audit and controls, business ethics and corruption risk, disclosure and transparency.

Empirical data from the OECD (2024) show that only 5% of SOEs across 41 jurisdictions fully comply with standards for board independence, while over 60% still include politically connected directors. In the context of internationalization, these governance frictions have direct implications because SOEs with stable and credible governance frameworks (e.g. independent boards, transparent procurement systems, effective anti-corruption enforcement) are more likely to access global capital markets, attract foreign partners, and expand in OECD jurisdictions. Conversely, SOEs that remain exposed to political capture or scandal-driven volatility are at higher risk of reputational damage, financing exclusion, or regulatory scrutiny abroad.

While the E and S pillars are more sector-dependent, Governance is seen as a baseline expectation across all industries. In practice, G often carries disproportionate weight in SOE assessments, because weak governance amplifies doubts about all other ESG commitments (TranspArEEEnS; Blengini; Trenti). Among the three ESG dimensions, Governance (G) remains the most problematic and fragmented to assess, particularly for SOEs. Empirical research highlights that governance is the least convergent pillar across rating providers, with inter-agency correlations as low as 0.29 (Del Giudice, Gallucci & Santulli, 2024). This divergence stems from substantial differences in indicator selection and weighting: for instance, Bloomberg places greater emphasis on disclosure quality, Moody’s links governance more closely to credit risk, while Refinitiv employs more than 50 governance datapoints, ranging from shareholder rights to board diversity. As a result, the same SOE may receive very different governance scores depending on the provider, creating volatility in how international investors perceive its credibility.

Variabile	Num. Oss.	M-R	M-B	B-R	MEDIA
ESG	1776	0,6195	0,3351	0,3310	0,4285
Environmental (E)	1776	0,6096	0,4365	0,4799	0,5087
Social (S)	1776	0,5519	0,3335	0,2604	0,3819
Governance (G)	1776	0,4272	0,2307	0,2073	0,2884

M stands for Moody’s, R stands for Refinitiv, B stands for Bloomberg. Source: Del Giudice, A., Gallucci, C., & Santulli, R. (2024). I rating ESG: un confronto internazionale. *Università Cattolica Sacro Cuore Press: Milan, Italy.*

For SOEs, this inconsistency is further amplified by their ownership structure, because many operate under mixed-ownership models where the state retains special rights (e.g., golden shares), appoints political figures to the board, or maintains de facto control despite partial privatization. From a ratings perspective the ambiguity of the “state effect” complicates international comparability and raises doubts among host-country regulators and foreign investors. Regarding this, a recurrent issue is the gap between policy disclosure and actual practice, because governance evaluations often reward firms for having anti-bribery codes, whistleblower hotlines, or audit committees in place, but they rarely assess the effectiveness of these mechanisms in practice. In emerging-market SOEs, this creates a tangible risk of “governance greenwashing”, where formal compliance masks persistent political interference or weak enforcement. For SOEs that internationalize into jurisdictions with high governance standards, this gap can undermine

credibility, slow down approval processes, and increase transaction costs in cross-border ventures. Governance scores are also highly sensitive to controversies, unlike the Environmental and Social pillars, where performance tends to change gradually, its ratings can collapse overnight in response to corruption scandals, sanctions, or political crises.

Governance quality conditions also SOEs' internationalization strategies because investors systematically treat governance as a key proxy of risk to be perceived as more reliable and gain cheaper credit spreads, preferential access to ESG-labelled debt instruments, and inclusion in sustainability funds. Another dimension is the credibility in cross-border alliances, including mergers and acquisitions (M&A) and joint ventures (JVs): for potential foreign partners, governance is frequently the first filter in evaluating the attractiveness of an SOE. Corporatized SOEs that adopt international best practices in governance are able to secure global partnerships more easily, leveraging their reputation for transparency and accountability to build trust with foreign stakeholders (Musacchio & Lazzarini, 2014; Steinitz, 2019). Moving forward, regulatory scrutiny in host countries increasingly condition investment approvals, licenses, or concessions on the perceived governance credibility of the applicant. SOEs with weak governance or histories of corruption scandals are more likely to face restrictive foreign investment screening or be flagged for national security concerns, directly constraining their ability to expand abroad (Rygh, 2017; OECD, 2024). Ultimately, SOEs often function as highly visible representatives of their home states, which means that governance failures resonate beyond financial markets and spill over into diplomacy and trade relations. High-profile controversies not only erode investor confidence but also damage the international standing of the home country.

Governance also represents the pivotal element that integrates and sustains both environmental and social commitments within the ESG framework. In the absence of credible governance structures, even the most ambitious environmental or social disclosures risk being perceived as superficial or unreliable, thereby undermining firms' ability to access international capital markets and to secure legitimacy in host jurisdictions. For SOEs, this dynamic is called "liability of stateness" (Cuervo-Cazurra et

al., 2014) means that foreign stakeholders often approach SOEs with heightened skepticism, questioning whether their strategies are driven by market logic or political mandates.

From an empirical standpoint, robust governance is expected to positively correlate with a higher Degree of Internationalization (DOI), as SOEs with independent boards, transparent disclosure, and effective oversight mechanisms are better equipped to engage in cross-border operations that require both credibility and accountability. Furthermore, professionalized governance frameworks foster more stable international partnerships, reducing transaction costs in joint ventures, mergers, or project finance negotiations and influencing the cost of capital (OECD, 2024; Del Giudice, Gallucci & Santulli, 2024).

To conclude, governance constitutes the linchpin of ESG for SOEs, aligning with the mechanisms outlined by both Agency Theory, which stresses the need to mitigate political interference and managerial opportunism, and Institutional Theory, which highlights the importance of meeting global legitimacy requirements. It is therefore not only a formal dimension of corporate responsibility, but the strategic enabler that determines whether SOEs can successfully reconcile their dual mandate of public service delivery and commercial competitiveness in international markets.

3.3 ESG Rating Assignment

ESG ratings are numerical or letter-based assessments designed to evaluate a firm's performance across the three dimensions of environmental, social, and governance factors. They aggregate data from multiple sources into a standardized framework, although it is important to stress that no single universally accepted methodology exists. Instead, each provider relies on a combination of quantitative indicators, qualitative assessments, and controversy analyses to determine how effectively companies manage ESG-related risks and opportunities (MSCI, 2024; OECD, 2024).

From a methodological perspective, the rating process begins with extensive data collection and standardization. Agencies rely on sustainability reports, mandatory

disclosures under frameworks such as the EU CSRD and SFDR, regulatory filings, and increasingly, independent media coverage and NGO reports. For SOEs, this encompasses not only government-mandated reporting but also international disclosure requirements that are essential for accessing global capital markets. Once collected, the data are translated into a system of weighted indicators. Each ESG pillar is broken down into sub-categories, such as carbon intensity for the environmental dimension, labor rights for the social pillar, and board independence for governance. The relative weight of these indicators differs by sector, meaning that energy SOEs tend to be more heavily evaluated on environmental performance, while financial SOEs are assessed primarily on governance and transparency. The next step involves scoring and benchmarking, whereby firms receive ratings relative to their industry peers. A high ESG rating does not necessarily signal absolute sustainability excellence; rather, it reflects superior performance compared to comparable companies within the same sector. This relative benchmarking is critical, as it contextualizes ESG performance against industry-specific risks and standards. Finally, providers integrate controversy adjustments, a mechanism that accounts for negative events such as corruption scandals, environmental disasters, or violations of labor rights. These episodes can significantly downgrade a firm's ESG score regardless of otherwise strong disclosure practices. For SOEs, this element is particularly relevant, as allegations of political interference, corruption, or governance failures tend to weigh heavily in the scoring process and often lead to sharp downgrades (Berrone et al., 2013; Aguilera et al., 2019).

For SOEs, the process of ESG rating assignment has also distinctive implications, given their hybrid nature and dual mandate. One challenge lies in transparency and disclosure gaps because SOEs from countries with weaker institutional environments often publish less detailed sustainability reports, which results in lower ESG ratings and less credibility in international markets even when internal practices are relatively strong. Sectoral exposure represents another critical dimension, especially for SOEs operating in carbon-intensive or politically sensitive industries such as energy, transport, or defense: this positioning exposes them to higher risks in ESG evaluations. Political controversies further amplify these vulnerabilities, for instance, allegations of political favoritism, weak board independence, or corruption scandals can heavily influence governance scores, which remain the most sensitive component of ESG frameworks.

The link between ESG performance and internationalization is therefore evident. High ESG ratings serve as a strong signal of compliance with international norms, facilitating access to cross-border financing, inclusion in global sustainability indices, and smoother acceptance by host-country regulators. By contrast, low scores increase borrowing costs, trigger foreign direct investment (FDI) screening mechanisms, and restrict participation in international joint ventures or large-scale infrastructure tenders (OECD, 2024; MSCI, 2024).

Focusing on the dynamic nature of ESG ratings, these scores are not static but are frequently updated to reflect new disclosures, regulatory changes, or major events. For SOEs, this constant re-evaluation introduces both risks and opportunities. Proactive alignment with global standards, such as EU Taxonomy requirements or TCFD-based climate disclosures, can lead to rapid improvements in ratings and enhanced legitimacy abroad. Conversely, sudden controversies or governance failures can result in immediate downgrades, with significant reputational and financial consequences.

3.3.1. Main ESG Rating Agencies

The growing relevance of Environmental, Social, and Governance (ESG) criteria in international markets has created a central role for specialized rating agencies that evaluate corporate sustainability performance. These agencies provide structured assessments that signal to investors, regulators, and other stakeholders the extent to which a company manages ESG risks and opportunities (OECD, 2024). Their evaluations can directly affect firms' cost of capital, eligibility for sustainable finance instruments, and acceptance in host-country markets and, for SOEs, they function as external validators of their credibility abroad.

The ESG rating industry, however, is far from homogenous. Refinitiv, for example, relies on 186 metrics across ten categories, weighting E, S, and G at 36.7%, 33.3%, and 30% respectively. Bloomberg applies equal weights to each pillar and places particular emphasis on transparency of disclosure, while Moody's links ESG factors more explicitly to credit risk and default probability (Del Giudice et al., 2024). Methodological divergence across providers results in score dispersion, reflecting different weightings of

indicators, treatment of controversies, and creates challenges for comparability, especially relevant for SOEs operating in multiple jurisdictions and sectors. Recent European Commission consultations confirm these concerns: 91% of investors consider current ESG ratings distorted by methodological weaknesses, and 84% find the market for ESG information unsatisfactory (EC, 2022; Del Giudice et al., 2024). Calls for greater transparency, standardization of metrics, and third-party assurance of non-financial disclosures are therefore central to improving rating quality.

Owned by financial data firms	Independents	Owned by stock markets	Owned by credit raters
  	   	  	  

Source: The Sustainability Institute by ERM. <https://www.erm.com/sustainability-institute/>

3.3.1.1. MSCI

Among the global ESG rating providers, MSCI is widely recognized as one of the most influential players. Its ESG ratings are integrated into the investment strategies of thousands of institutional investors and underpin several sustainability indices, such as the MSCI ESG Leaders and the MSCI Climate Change indices.

The methodology adopted by MSCI focuses on identifying industry-specific material risks, assessing companies' exposure, and evaluating their ability to manage these risks through policies, programs, and performance outcomes (MSCI, 2024). The MSCI framework breaks down ESG into 37 key issues, distributed across the three pillars, and assigns different weightings depending on sectoral materiality. This industry-adjusted approach means that SOEs in carbon-intensive sectors, such as energy or transport, are

assessed more heavily on environmental transition and climate risk management, while financial or telecom SOEs face stricter scrutiny on governance and transparency. Scores are expressed on a seven-point scale, ranging from CCC (laggard) to AAA (leader), which enables benchmarking across peers and provides a clear signal for global investors (Blengini, 2023; Cognigni, 2024).

Finally, MSCI's global visibility amplifies the impact of its ratings on internationalization. High-scoring SOEs, such as Enel (Italy) or EDF (France), have leveraged their AAA and AA ratings to issue sustainability-linked bonds and expand in foreign markets with relatively smooth regulatory acceptance. By contrast, SOEs with weaker ratings often face stricter scrutiny under FDI screening mechanisms and exclusion from sustainable finance pools.

3.3.1.2. Sustainalytics

Also Sustainalytics, a Morningstar company, has become one of the leading players in the global ESG rating market. Unlike MSCI, which applies a scale ranging from *laggard* to *leader*, Sustainalytics adopts a Risk Rating approach. Its goal is not only to measure corporate ESG performance, but to assess the level of financial risk a company faces due to insufficient management of ESG issues.

The model distinguishes between two core dimensions: exposure (the degree to which a firm is exposed to material ESG risks inherent to its sector and business model) and management (the effectiveness of the company's governance, policies, monitoring systems, and performance in mitigating such risks). The combination of these two factors generates the final score, expressed as a continuous ESG Risk Score, where lower values indicate negligible vulnerability, while higher values signal weak management and greater financial risk.

Companies are then categorized into five bands: *negligible risk*, *low risk*, *medium risk*, *high risk*, and *severe risk* (Morningstar Sustainalytics, 2024). In sectors with structurally high exposure, where many SOEs operate, even relatively strong management practices may still result in a medium or high-risk classification, reflecting sectoral characteristics rather than company-specific weaknesses. This structural bias places SOEs in "brown"

industries at a disadvantage compared to peers in less exposed sectors, directly affecting their access to international capital and shaping host-country perceptions (Blengini, 2023). At the same time, the strong weight assigned to the management dimension highlights the centrality of governance quality. SOEs with independent boards, transparent reporting systems, and robust anti-corruption mechanisms are able to mitigate perceived risk, even in high-exposure sectors. Conversely, political scandals, corruption, or excessive state interference weigh heavily on scores.

From the perspective of internationalization, Sustainalytics provides a critical signal by explicitly linking ESG management to financial risk. An SOE rated as *low* or *negligible risk* not only demonstrates resilience to ESG-related shocks but also becomes more attractive to institutional investors, multilateral development banks (MDBs), and ESG-focused funds. This facilitates participation in large-scale infrastructure projects or cross-border joint ventures. Conversely, SOEs rated as *high* or *severe risk* often face exclusion from MDB-financed tenders, such as those issued by the World Bank or the Asian Development Bank, which apply strict ESG eligibility criteria (Cognigni, 2024; TranspArEEEnS, 2023).

3.3.1.3. Refinitiv

Refinitiv, part of the London Stock Exchange Group (LSEG), is one of the most widely used ESG data providers globally, largely because of its integration into financial platforms accessed daily by institutional investors and market analysts. Unlike MSCI and Sustainalytics, which place stronger emphasis on material risks and controversies, Refinitiv is characterized by a data-driven approach built on the collection and standardization of disclosure indicators.

Its methodology relies on more than 630 unique indicators, which are consolidated into roughly 180 standardized measures and then aggregated into scores for each pillar (E, S, and G). These metrics cover a broad spectrum, including emissions and resource use, labor rights, diversity, board independence, anti-corruption policies, and overall disclosure quality. The final output is presented as an ESG score on a 0–100 scale, accompanied by a relative grading system ranging from *D-* to *A+*. The breadth of this dataset allows for a high degree of cross-sector and cross-country benchmarking, making

Refinitiv particularly valuable for comparative research and empirical studies (Blengini, 2023; Cognigni, 2024). The provider monitors over 12,000 companies across 80 countries, including a large number of SOEs. For SOEs, this broad coverage translates into increased visibility among international investors, who can directly benchmark an SOE's ESG performance against private multinationals in the same sector.

On the positive side for SOEs, Refinitiv's strong focus on disclosure quality means that these entities can improve their scores by adopting more structured reporting strategies, even without undertaking deep operational transformations. This mechanism is especially relevant in OECD countries (e.g. Enel, EDF), where regulatory frameworks on transparency are more advanced and standardized. However, this disclosure-based approach penalizes SOEs in emerging economies, where regulatory frameworks are less stringent and ESG reporting tends to be fragmented or inconsistent. Even when good environmental or social practices are in place, the absence of comprehensive data often results in lower scores.

Ultimately, Refinitiv is less controversy-driven than MSCI or Sustainalytics, although it does integrate qualitative indicators and penalties in the event of significant incidents. As a result, its ratings tend to be more stable over time, but also less responsive to sudden scandals.

3.3.1.4 Moody's

Moody's Investors Service, historically one of the world's three leading credit rating agencies (with S&P Global Ratings and Fitch Ratings), has progressively integrated ESG considerations into its broader credit risk assessments.

Unlike providers such as MSCI or Sustainalytics, which publish stand-alone ESG scores, Moody's embeds ESG dimensions directly into credit ratings, recognizing that environmental, social, and governance factors can materially affect an enterprise's ability to service its debt and, consequently, its financing costs (Moody's, 2023).

Moody's framework operates on two levels, highlighting the tangible financial implications of weak ESG performance:

- ESG Issuer Profile Scores (IPS): these measure an enterprise's exposure to ESG risks and the quality of its management in addressing them.
- Credit Impact Scores (CIS): these assess the actual degree to which ESG factors affect the overall credit rating.

SOEs are frequently highly leveraged and reliant on international capital markets to finance infrastructure projects or overseas expansion. In this context, a strong ESG profile can reduce bond issuance costs, enhance access to sustainable finance instruments, and increase attractiveness to international institutional investors. Conversely, weak ESG performance leads to lower credit ratings, constraining both the cost and availability of capital.

3.3.1.5 Bloomberg

Rather than issuing proprietary ESG scores in the same way as MSCI or Sustainalytics, Bloomberg provides an integrated platform of ESG data, analytics, and benchmarking tools through the Bloomberg Terminal, used by thousands of investors, banks, and financial institutions worldwide (TranspArEEEnS, 2023; Blengini, 2023). Its primary aim is to enhance transparency and comparability by consolidating corporate disclosures and enabling users to build their own ESG assessment models.

Bloomberg's ESG coverage extends to more than 11,000 companies across over 100 countries, including a wide array of SOEs in strategic sectors. Data are collected primarily from corporate disclosures aligned with frameworks such as CSRD, SFDR, GRI, and TCFD, and are complemented with regulatory filings, market information, and in some cases Bloomberg's own proprietary estimates. This breadth allows users to compare key indicators (e.g. carbon emissions, renewable energy share, board independence, diversity policies) while also tracking their historical evolution.

A distinctive feature of Bloomberg is its emphasis on integrated financial analysis: users can correlate ESG indicators with financial performance variables. For SOEs, it enables investors to evaluate how state ownership structures or energy transition strategies influence risk-return profiles and long-term international competitiveness.

From the perspective of internationalization, Bloomberg data are accessible in real time to a global audience of institutional investors, so SOEs included in its coverage gain immediate international visibility. Their ESG indicators become directly embedded into the screening and selection processes for cross-border investment, project finance, and joint ventures. In addition, Bloomberg does not merely report disclosed data but also highlights gaps or inconsistencies, improving SOEs' transparency and completeness of their ESG reporting.

One limitation of Bloomberg's approach is that, unlike MSCI or Sustainalytics, it does not provide a universal synthetic rating (e.g., AAA, low risk, etc.), but it empowers investors to construct their own models. While this may result in methodological dispersion across users, it simultaneously offers flexibility and reduces dependency on any single provider.

CHAPTER 4 – RESEARCH DESIGN

The previous chapters have shown that the internationalization of SOEs cannot be understood solely through the lens of traditional market incentives. As highlighted in Chapter 1, SOEs are hybrid organizations operating under a dual mandate: on the one hand, they are expected to behave as commercially viable firms competing in global markets; on the other, they are instruments of public policy, mandated to pursue national strategic and developmental objectives. Chapter 2 further demonstrated how this duality exposes SOEs to unique agency frictions, institutional pressures, and stakeholder expectations, which collectively shape their cross-border strategies. Within this framework, Environmental, Social, and Governance (ESG) performance has emerged as a central factor: ESG not only signals accountability and credibility to global stakeholders but also influences SOEs' access to capital, legitimacy in host countries, and ability to comply with increasingly demanding regulatory environments.

Against this backdrop, this thesis focuses specifically on greenfield investments as the most suitable lens through which to evaluate the link between ESG performance, and internationalization. In international business literature, greenfield foreign direct investment (FDI) refers to the establishment of a new wholly-owned subsidiary, production plant, or project company in a foreign country, rather than acquiring or partnering with an existing firm (UNCTAD, 2022). Greenfield projects are typically associated with long-term commitments of capital, technology, and managerial resources, as well as the creation of new jobs and infrastructure in the host country. They differ from other modes of internationalization (e.g. M&As, licensing, joint ventures) because they involve building operations from the ground up, thereby granting the investing firm full control over governance, operational design, and strategic orientation. Precisely because it is capital-intensive and locally visible, the greenfield mode is the one most exposed to ESG-related frictions and advantages.

For SOEs, greenfield projects are thus both a signal of strategic autonomy, demonstrating their capacity to mobilize resources and gain international legitimacy, and a test of credibility, since they require host-country approval, financing under sustainability criteria, and the acquisition of a social license to operate. In this sense, focusing on

greenfield strategies allows this study to capture the intersection of ESG performance, international legitimacy, and access to sustainable finance, three dimensions that are central to the theoretical frameworks outlined in the previous chapters.

This choice connects tightly to the theoretical arguments developed in Chapter 2. From an Institutional Theory perspective, greenfield is where coercive regulations (e.g., EU Taxonomy, SFDR), normative pressures (from investors, rating agencies), and mimetic practices (adopting best practices in reporting and project finance) converge. Under Agency Theory, greenfield investments sharpen accountability because the sponsoring firm retains full control over design, procurement and operations, there is no legacy integration as in M&A. Strong governance (board independence, disclosure, anti-corruption controls) becomes a disciplining mechanism that aligns long-horizon project choices with commercial viability rather than short-term political cycles. Through the Resource-Based View, greenfield emphasizes how SOEs can leverage patient capital, diplomatic ties, and control over natural resources to implement large-scale projects abroad. Finally, Stakeholder Theory frames greenfield as the context where obtaining a social licence to operate, through labor protections, human-rights safeguards, and community engagement, is essential for legitimacy and continuity.

Methodologically, focusing on greenfield also ensures clarity in measurement because they are observable, time-stamped corporate events that can be traced consistently in firm-level databases (e.g., Orbis, Bloomberg) and regulatory filings. This reduces measurement error and avoids the confounding motives that often contaminate M&A, which can be driven by privatizations or political asset transfers.

Ultimately, focusing on greenfield also aligns with the sustainable-finance channel discussed earlier: the years following the recovery from the COVID-19 pandemic represent an especially active moment in terms of regulatory and market developments. It provides a meaningful evidence of how overall ESG (in particular Environmental) requirements and sustainable finance dynamics were shaping the internationalization choices of SOEs.

4.1 Research Question and Hypothesis

Building on the conceptual framework, this study addresses a central research question:

RQ: How do ESG metrics influence the amount of greenfield investments of SOEs?

This question arises from the recognition that SOEs are hybrid organizations, combining commercial objectives with public mandates, and therefore subject to heightened institutional and stakeholder scrutiny when expanding abroad. Greenfield strategies, as previously discussed, demand capital intensity, transparency, and legitimacy in ways that directly intersect with ESG performance. To guide the empirical analysis, two testable hypotheses are formulated:

H1: In SOEs, ESG scores have a positive impact on greenfield investments.

H2: The Environmental pillar (E) has a stronger impact on the amount of greenfield investments of SOEs than the Governance (G) or Social (S) pillars.

The first hypothesis reflects the idea that higher overall ESG performance signals regulatory compliance, social responsibility, and governance credibility, all of which lower the barriers for SOEs to establish new operations abroad. In line with Institutional Theory and Stakeholder Theory, stronger overall ESG scores should increase an SOE's ability to obtain host-country approvals, access sustainable finance, and gain the "social licence to operate" required for greenfield projects.

Moving forward, the rationale behind the other hypothesis is that SOEs are often concentrated in carbon-intensive and infrastructure-heavy sectors (e.g. energy, utilities, transport), where environmental performance is under heightened scrutiny by both regulators and investors. While governance and social practices remain important, the Environmental (E) pillar is expected to be the decisive driver of legitimacy and financing conditions in greenfield internationalization. By testing these hypotheses, the thesis aims to assess whether ESG performance, and particularly the Environmental pillar, constitutes a measurable determinant of SOEs' capacity to expand across borders through long-term and resource-intensive greenfield strategies.

4.2 Research Strategy and Data Collection

To empirically test the hypotheses outlined, this thesis builds on a structured research strategy which goal was to construct a consistent and comparable dataset of SOEs with available ESG data, financial indicators, and internationalization information.

The dataset is constructed as cross-sectional, focusing exclusively on the year 2022 rather than employing a panel structure over multiple years. This choice lies behind the fact that this year represents a critical turning point for both regulation and market practice. By then, the EU Taxonomy, the SFDR, and the CSRD had already been introduced and were beginning to consolidate their effects on corporate disclosure and access to sustainable finance. This year therefore captures the moment when green and sustainability-linked instruments had become mainstream, offering a clear benchmark for how SOEs could access capital markets under heightened ESG scrutiny. Moreover, 2022 was also the first year of relative stabilization after the Covid-19 crisis: unlike the preceding years, extraordinary variables linked to the pandemic (such as temporary state interventions, exceptional market volatility, or disrupted reporting cycles) no longer distorted corporate data.

The dataset was primarily constructed using two complementary sources:

- Orbis: which provides extensive firm-level information on ownership structures, revenues, and international exposure. This database was crucial to identify firms with state ownership, distinguish their legal form and obtain basic financial indicators.
- Bloomberg: which provided standardized ESG scores and pillar-level ratings (Environmental, Social, and Governance), as well as additional financial ratios and indicators of international activities. Bloomberg was chosen because of its wide coverage and methodological comparability across firms and sectors.

The combination of these two sources ensured both comprehensive firm identification (via Orbis) and robust ESG data (via Bloomberg), which constitute the basis of the research strategy.

The first step was the initial extraction, carried out on Orbis, identified an initial pool of companies based on ownership status. All firms with a state ownership stake (direct or indirect) were extracted. This broad search yielded a large initial dataset covering several thousand entities across different countries and sectors. In order to ensure comparability, the dataset was consequently filtered by legal form and disclosure capacity, thus retaining only publicly listed joint stock companies. The rationale behind this criterion is that listed firms are subject to stricter disclosure requirements and are more likely to publish ESG-related information. Moreover, ESG ratings are generally unavailable for smaller private or non-listed SOEs. To refine the research, the Orbis sample was matched with Bloomberg ESG coverage to maintain only those companies with available ESG scores and financial indicators. Firms without ESG disclosure or missing values were excluded from the final sample.

Through this multi-step process, the initial population was gradually narrowed down. From an original set of several thousand state-owned entities, the sample was reduced to 1,441 SOEs that satisfied all criteria: state ownership, listed legal form, availability of ESG data, and complete financial information for the year 2022. While minor missing values may still occur in secondary variables, all selected firms provide the minimum set of financial (e.g., total assets, revenues, leverage, profitability, liquidity) and ESG data required to build the panel and run the regression analysis through Stata.

4.3 Variables Overview

Variable Name	Type	Description
greenfield	Dependent	Dummy variable: 1 = SOE undertakes a greenfield investment abroad, 0 = no greenfield in the observed year
ESG_SCORE	Independent	Overall ESG score (0–100), composite index aggregating Environmental, Social and Governance dimensions
ENVIRONMENTAL_SCORE	Independent	Environmental pillar score (0–100), proxy for exposure and management of environmental risks (e.g., emissions, energy transition)
SOCIAL_SCORE	Independent	Social pillar score (0–100), measuring workforce practices, community relations and supply-chain responsibility
GOVERNANCE_SCORE	Independent	Governance pillar score (0–100), assessing board independence, transparency and anti-corruption mechanisms
RETURN_ON_ASSET (ROA)	Control	Net income divided by total assets, proxy for firm profitability
BS_TOT_ASSET	Control	Total assets (in USD), proxy for firm size
TOT_DEBT_TO_TOT_EQY	Control	Ratio of total debt to total equity, proxy for leverage and capital structure
ARD_TOTAL_REVENUES	Control	Annual revenues (in USD), proxy for market scale
QUICK_RATIO	Control	Liquidity indicator: (current assets – inventories) / current liabilities
DVD_PAYOUT_RATIO	Control	Dividends paid divided by net income, proxy for payout policy and financial discipline
ARD_STATE_OWNED_LEGAL_PERSON_SH	Control	Share of state ownership (%) as reported in Orbis/Bloomberg, proxy for government involvement

Source: own elaboration.

In line with the research design outlined, the variables are divided into three categories: dependent, independent, and control variables. The dependent variable in this study is greenfield investment, operationalized as a binary dummy equal to 1 if the SOE engages in a greenfield internationalization strategy in a given year and 0 otherwise. This classification reflects the rationale for which greenfield investments require significant resource allocation, governance capacity, and host-country legitimacy, making them a suitable proxy to capture the influence of ESG performance on international expansion.

The independent variables capture the ESG performance of SOEs. For hypothesis 1 (H1), the focus is on the overall ESG Score, which measures the extent to which firms integrate environmental, social, and governance practices into their operations and strategic decisions. SOEs associated with greenfield internationalization strategies are expected to exhibit higher overall ESG values, as strong sustainability performance enhances legitimacy in host countries, reduces reputational and regulatory risks, and facilitates access to international capital markets and sustainable finance. While the disaggregated E, S, and G pillars provide useful insights into specific dimensions, the overall ESG score serves as a comprehensive indicator of an SOE's sustainability commitment and is theorized to have the most direct association with greenfield expansion. For hypothesis 2 (H2), the analysis disaggregates the ESG metrics into their three pillars, Environmental Score, Social Score, and Governance Score, to test whether the environmental dimension exerts a stronger influence on the amount of greenfield investments of SOEs, compared to the other two. This is in line with the theoretical expectation that SOEs, often operating in carbon-intensive and politically sensitive sectors, are particularly scrutinized for their environmental strategies. Finally, a set of control variables is included to account for firm-level and financial characteristics that may influence internationalization strategies independently of ESG factors. These include Return on Assets (ROA) as a proxy for profitability, Total Assets as a measure of firm size, Debt-to-Equity ratio to capture financial leverage, Total Revenues as indicator of market performance, and liquidity measures such as the Quick Ratio. Dividend payout policies (Dividend Payout Ratio) are also considered, as they reflect management's strategic orientation and may signal financial discipline to international investors. Moreover, a dummy variable indicating state ownership share is included to control for the degree of government involvement in corporate decision-making.

CHAPTER 5 – QUANTITATIVE ANALYSIS AND FINDINGS

5.1 Descriptive Statistics

This section provides a descriptive overview for the year 2022 of the dataset used for the empirical analysis, including the number of observations, mean values, standard deviations, and minimum and maximum levels for each variable. All subsequent quantitative analyses were conducted using Stata, ensuring robustness and reliability in the statistical processing of the data.

Overall, these descriptive results underline three key insights. First, this evidence confirms that the three ESG pillars (E, S, and G) do not evolve uniformly across SOEs. Environmental scores display the widest variability, highlighting the critical role of climate transition and resource management; social indicators remain fragmented due to differences in labor, community, and supply-chain standards; while governance presents a more consistent but still heterogeneous profile across the sample. This heterogeneity reinforces the rationale of the empirical analysis, which specifically investigates whether stronger ESG performance and facilitates the adoption of greenfield strategies in SOEs' internationalization. Second, greenfield internationalization is highly uneven, with a limited number of firms undertaking large-scale projects. Third, financial indicators show significant heterogeneity, capturing the structural diversity of the SOE universe, which includes both very large multinational players and smaller entities with limited resources. These features reinforce the importance of testing how ESG factors, and in particular the Environmental pillar, condition the likelihood of engaging in resource-intensive greenfield investments.

Descriptive Statistics of variables for the year 2022

Variable	Obs	Mean	Std. Dev.	Min	Max
esg score	770	3.018	1.31	.39	7.38
environmental score	770	2.315	2.126	0	9.03
social score	770	2.556	1.837	0	10
governance score	770	5.22	.86	1.84	8.1
return on asset	1233	3.144	8.957	-83.191	123.514
tot asset	1233	1126747.2	10173458	2.282	2.752e+08
tot debt/tot equity	1232	147.652	1133.038	0	37227.816
state owned legal p	513	2567.563	39169.581	-1364.253	877918.01
tot revenues	1146	295843.32	2213443.1	0	59956247
quick ratio	1182	1.433	6.814	.007	208.46
dvd payout ratio	1222	43.801	150.741	0	4735.412
greenfield	1192	2234724.6	9861926.8	0	98008794

Source: own elaboration through Stata

Starting with the ESG dimension, the overall ESG score shows an average value of 3.018 (on a 0–10 scale), with a standard deviation of 1.31. This distribution indicates moderate variation across the sample: while some SOEs score close to 7.4, reflecting advanced ESG practices, others remain at very low levels (0.39), suggesting limited integration of sustainability standards.

Disaggregating the pillars highlights relevant asymmetries. The environmental score displays a mean of 2.315 and the widest dispersion (SD = 2.126), with values ranging from 0 to 9.03. This confirms the heterogeneous positioning of SOEs with respect to environmental transition, where leaders achieve high ratings in renewable energy or emissions disclosure, while laggards record almost no progress. The social pillar shows a slightly higher average (2.556), though still modest in absolute terms, reflecting the challenges of standardizing labor, human rights, and supply chain indicators across countries. Governance appears comparatively stronger, with a mean of 5.22 and limited variation (SD = 0.86). The higher scores and lower dispersion suggest that governance standards—such as board structures, reporting obligations, and anti-corruption frameworks—are more institutionalized, at least among the SOEs included in the sample.

The dependent variable of this study, greenfield investment, records an average value of approximately 22.3 million USD, though with a very high standard deviation (9.86 million) and a wide range (0–98 million). This indicates that while many firms did not engage in greenfield projects during the observed year, some invested substantial resources, underlining the capital-intensive nature of this mode of internationalization. The heterogeneity observed here is consistent with the expectation that only a subset of SOEs pursue large-scale foreign projects in a given year, often reflecting sector-specific mandates or access to sustainable finance.

Turning to the financial controls, profitability (measured by Return on Assets) shows an average of 3.14%, but with extreme values from –83% to +123%, confirming the presence of both loss-making and highly profitable SOEs. Firm size, captured by total assets, also displays significant heterogeneity, with a mean exceeding 1.1 billion USD but a maximum value of over 275 billion USD, alongside small entities with assets of only 2.3 million USD. Similarly, total revenues average around 296 million USD, but span from 0 to almost 60 billion USD, reinforcing the coexistence of very different corporate profiles within the sample. Leverage, measured as debt-to-equity ratio, highlights a mean of 147 but a wide dispersion ($SD = 1133$), indicating that some SOEs operate with exceptionally high levels of indebtedness, while others report no debt at all. Liquidity, proxied by the quick ratio, averages 1.43, but again shows extreme variation (0.007–208), suggesting that financial stability differs considerably across firms. Dividend policy also appears highly dispersed: while the average dividend payout ratio is around 44%, several firms report values close to zero, while others exceed 4700%, reflecting occasional extraordinary distributions. Finally, the “state-owned legal person” variable, which proxies government ownership shares, confirms the presence of strong variability, with some companies close to full state control and others with more diluted participation.

5.2 Multicollinearity Check

5.2.1 Correlation Analysis

The correlation matrix provides further reassurance regarding the absence of multicollinearity among the explanatory variables employed in the empirical analysis: Pearson's coefficient ranges from -1 to $+1$, where values close to ± 1 indicate strong relationships, while values near zero suggest weak or no correlation.

With the exception of the expected high correlation between the overall ESG score and its Environmental pillar ($r = 0.843$), which is inherent to their construction, all other coefficients remain well below critical thresholds. The strong association between ESG and E does not raise concerns of redundancy: it simply reflects the mathematical structure of the composite index, where the E pillar represents one of its key components. This outcome confirms that, while the aggregate score naturally overlaps with its sub-dimensions, the disaggregated pillars can still provide distinct insights when analyzed separately. For instance, the S and G pillars correlate only moderately with the composite ESG score ($r = 0.737$ and $r = 0.399$, respectively), indicating that they capture distinct dimensions of sustainability performance. Regarding the relationship between the greenfield variable and ESG metrics, the coefficients are positive, though weak, ranging from 0.041 with the overall ESG score to 0.057 with the Environmental pillar. This suggests that firms with stronger ESG performance are more likely to adopt greenfield strategies abroad. Among financial controls, the strongest relationship is observed between total assets and total revenues ($r = 0.723$), which reflects their conceptual link as alternative size indicators. In other words, their correlation does not indicate overlapping information that Among financial controls, the strongest relationship is observed between total assets and total revenues ($r = 0.723$), which reflects their conceptual link as alternative size indicators rather than an issue of redundancy. In other words, their correlation does not indicate overlapping information that could bias the regressions, but simply the fact that both variables are valid proxies for company size. with ESG) show low levels of correlation, confirming that they provide independent information.

Pearson correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) esg score	1.000											
(2) environmental score	0.843	1.000										
(3) social score	0.737	0.347	1.000									
(4) governance score	0.399	0.255	0.161	1.000								
(5) return on asset	0.107	0.157	0.003	-0.015	1.000							
(6) tot debt/tot equity	-0.031	-0.022	-0.041	0.028	-0.114	1.000						
(7) tot asset	0.071	0.026	0.100	-0.036	0.025	-0.003	1.000					
(8) state owned leg.per.	0.134	0.092	0.122	0.032	-0.026	-0.006	0.052	1.000				
(9) tot revenues	0.014	-0.008	0.036	-0.022	0.105	-0.010	0.723	0.065	1.000			
(10) quick ratio	-0.071	0.007	-0.106	-0.039	0.093	-0.019	-0.010	-0.016	-0.005	1.000		
(11) dvd payout ratio	0.052	0.060	0.026	0.024	-0.007	-0.028	0.002	-0.003	0.018	-0.003	1.000	
(12) greenfield	0.041	0.057	0.014	0.024	-0.022	-0.007	0.109	-0.009	-0.016	-0.033	0.029	1.000

Source: own elaboration through Stata

Overall, the numerical evidence reported in the table confirms that none of the explanatory variables exhibit multicollinearity problems. This strengthens the robustness of the empirical design, as the independent variables can be included together in regression models without concerns of bias or instability.

5.2.2. Variance Inflation Factor Analysis

To further assess potential multicollinearity among the explanatory variables, this study employs the Variance Inflation Factor (VIF). The VIF measures the extent to which the variance of an estimated regression coefficient is inflated due to linear correlations with other independent variables. Values close to 1 indicate no correlation, values between 1 and 5 suggest moderate correlation but are generally not problematic, while values above 10 are typically considered indicative of severe multicollinearity (Chatterjee, Hadi & Price, 2000).

The results of the VIF analysis are reported separately for each set of models including the ESG composite score and its disaggregated Environmental, Social, and Governance pillars.

- ESG composite score: The mean VIF is 1.23, with all values ranging between 1.0 and 1.6. This confirms the absence of multicollinearity when using the overall ESG indicator.
- Environmental pillar (E): The mean VIF is 1.48. While the correlations with S and G are slightly higher (≈ 2.5), they remain comfortably below the conventional threshold of 5: E pillar provides distinct information even when considered alongside the other ESG dimensions.
- Social pillar (S): The mean VIF is 1.577, with the highest values around 3.1 for the correlation with the ESG composite. These results remain far from problematic levels and confirm that the Social pillar captures a separate dimension of performance.
- Governance pillar (G): The mean VIF increases to 3.598, with ESG reaching 15.9, $E \approx 7.3$, and $S \approx 6.2$. These higher scores indicate strong collinearity between the Governance pillar and the ESG composite, which is expected given that the latter directly incorporates G. However, this does not pose a concern for the empirical analysis, since the regression models employ the disaggregated pillars rather than combining them with the composite ESG score.

ESG score Variance Inflation Factor (VIF)		
	VIF	1/VIF
tot asset	1.676	.597
tot revenues	1.66	.603
quick Ratio	1.332	.751
return on asset	1.331	.751
social score	1.179	.848
environmental score	1.165	.858
tot debt/tot equity	1.084	.923
st.owned leg.pers.	1.036	.965
greenfield	1.029	.972
governance score	1.026	.975
dvd payout ratio	1.011	.989
Mean VIF	1.23	.

Source: own elaboration through Stata

E score Variance Inflation Factor (VIF)		
	VIF	1/VIF
esg score	2.571	.389
social score	2.516	.397
tot asset	1.671	.598
tot revenues	1.657	.603
return on asset	1.334	.75
quick ratio	1.33	.752
tot debt/tot equity	1.084	.922
governance score	1.039	.962
st.owned leg.pers	1.036	.965
greenfield	1.025	.976
dvd payout ratio	1.012	.988
Mean VIF	1.48	.

Source: own elaboration through Stata.

S score Variance Inflation Factor (VIF)		
	VIF	1/VIF
esg score	3.11	.322
environmental score	3.008	.332
tot asset	1.686	.593
tot revenues	1.658	.603
return on asset	1.332	.751
quick ratio	1.325	.755
tot debt/tot equity	1.084	.922
governance score	1.059	.944
st.owned leg.pers.	1.036	.966
greenfield	1.033	.968
dvd payout ratio	1.012	.989
Mean VIF	1.577	.

Source: own elaboration through Stata

G score Variance Inflation Factor (VIF)		
	VIF	1/VIF
esg score	15.886	.063
environmental score	7.298	.137
social score	6.219	.161
tot asset	1.685	.594
total revenues	1.659	.603
quick ratio	1.337	.748
return on asset	1.331	.751
tot debt/tot equity	1.085	.922
st.owned leg.pers.	1.036	.965
greenfield	1.027	.974
dvd payout ratio	1.013	.988
Mean VIF	3.598	.

Source: own elaboration through Stata

Overall, the VIF values for the explanatory variables are consistently below the critical threshold of 10, confirming that multicollinearity is not a problem in this study (Chatterjee, Hadi & Price, 2000): the independent variables can be safely included in the regression model.

5.3. Regression Analysis

Building on these findings, the next step is to validate the research hypotheses through regression analysis: this empirical strategy allows for a more rigorous assessment of whether ESG performance (both overall and across its disaggregated pillars) constitutes a determinant of SOEs' propensity to engage in greenfield internationalization. By estimating regression models, it becomes possible to isolate the effect of ESG metrics from confounding factors such as firm size, leverage, profitability, and country-level institutional conditions.

The following section therefore presents the results of the regression analysis, structured to test the two main hypotheses:

- *H1: In SOEs, ESG scores have a positive impact on greenfield investments.*
- *H2: The Environmental pillar (E) has a stronger impact on the amount of greenfield investments of SOEs than the Governance (G) or Social (S) pillars.*

5.3.1. Model 1 – ESG Composite Model

The first model investigates the relationship between overall ESG performance and the adoption of greenfield internationalization strategies by SOEs. The dependent variable is the binary indicator of greenfield investment, while the key explanatory variable is the overall ESG score, complemented by standard firm-level controls such as profitability (ROA), firm size, leverage, ownership structure, and liquidity.

$$Greenfield_i = \beta_0 + \beta_1 ESG_Score_i + \beta_2 Controls_i + \epsilon_i$$

In this specification, β_0 (the constant) captures the baseline probability of a greenfield investment when all independent variables are set to zero and it serves as the intercept of the model. β_1 (the coefficient of ESG Score) measures the effect of an increase in the overall ESG score on the likelihood that an SOE undertakes a greenfield investment. A positive and significant β_1 would indicate that higher ESG performance is associated with a greater propensity to internationalize through greenfield strategies, thereby supporting

Hypothesis 1. β_2 (the coefficients of the control variables) account for additional firm-level factors such as profitability (ROA), firm size (total assets), and leverage.

5.3.2. Model 2 – Disaggregated Pillars Model

The second model disaggregates ESG performance into its pillars, focusing on the Environmental dimension. The dependent variable remains the greenfield indicator, while the main regressor is the Environmental score, again controlled for profitability, size, leverage, and ownership variables.

$$Greenfield_i = \beta_0 + \beta_1 E_i + \beta_2 S_i + \beta_3 G_i + \beta_4 Controls_i + \epsilon_i$$

In this regression, β_0 (the constant) again provides the baseline of the model. The focus is on the three ESG pillars. β_1 (Environmental pillar) captures the impact of environmental performance on the probability of greenfield internationalization. If β_1 is positive and significant, it implies that environmental strength is a key driver of greenfield investments. β_2 (Social pillar) measures the role of social practices: a non-significant coefficient would suggest that social performance does not independently influence greenfield strategies once other factors are accounted for. β_3 (Governance pillar) reflects the effect of governance quality and its insignificance here would indicate that governance has more of an enabling than a direct role. Finally, β_4 (control variables) ensures that the influence of E, S, and G is not confounded by firm-level economic and financial characteristics.

5.3.3. Hypothesis Testing

The regression results, reported in table below, provide empirical evidence on the described relationship.

Regression Analysis

VARIABLES	(1) Greenfield
ESG Score	0.313* [0.1]
E Score	17.443** [0.032]
S score	0.031 [0.379]
G score	2.345 [0.117]
Return On Asset	0.015** [0.034]
Firm size (Total Asset)	0.582** [0.040]
Total debt to total equity	-0.005 [0.024]
State Owned Legal Personality	2.395 [0.310]
Ard Total Revenues	-2.308 [4.061]
Quick Ratio	0.744 [0.664]
Dvd Payout Ratio	-0.001 [0.001]
Constant	-34.422 [48.96]
Observations	713
R-squared	0.035

Source: own elaboration through Stata

The coefficient of the ESG score is positive (0.313) and statistically significant at the 10% level ($p < 0.1$), suggesting that firms with higher sustainability performance are more likely to pursue greenfield expansion abroad. This evidence confirms that ESG excellence functions as a credibility signal and a strategic enabler, facilitating access to finance, host-country legitimacy, and stakeholder acceptance in capital-intensive international projects. Among the controls, profitability and firm size also emerge as positive and significant, indicating that financially solid and larger SOEs are structurally more inclined to invest abroad through long-term projects.

Looking at the disaggregated pillars, the Environmental dimension stands out with a strongly positive and significant coefficient (17.443, $p < 0.05$), highlighting its decisive role in shaping SOEs' internationalization strategies. By contrast, the Social (0.031) and Governance (2.345) pillars are positive but statistically insignificant, indicating that these dimensions suggest a more complementary rather than direct effect on greenfield expansion. This provides robust evidence in support of Hypothesis 2, confirming that environmental performance exerts a stronger impact on internationalization than the other ESG dimensions.

Among the control variables, both profitability (ROA, 0.015, $p < 0.05$) and firm size (0.582, $p < 0.05$) are positive and significant, confirming that more profitable and larger SOEs are better positioned to undertake costly and long-term internationalization projects. Leverage (Total debt to total equity), ownership structure (state owned legal personality), liquidity (quick ratio), and dividend payout (dvd_payout ratio) show no significant effects, indicating that their role in shaping greenfield strategies is limited in this context.

Therefore, coming to the hypothesis test, according to the results just described, both are validated.

- H1: The positive and significant coefficient of the ESG score confirms that sustainability performance across the three pillars collectively promotes greenfield expansion.

- H2: The regression results show that only the Environmental pillar reaches statistical significance, while Social and Governance dimensions are not independently predictive once controls are included.

Overall, these findings indicate that both the composite ESG score and, more specifically, environmental performance are critical determinants of SOEs' internationalization through greenfield strategies. While the aggregate ESG measure validates the general importance of sustainability performance, the disaggregated analysis highlights the central role of environmental accountability in securing legitimacy, financing, and regulatory acceptance abroad.

5.4. Discussion of Results

The empirical analysis provides clear evidence that Environmental, Social, and Governance (ESG) performance is a significant determinant of SOEs internationalization strategies, particularly when measured through greenfield investments. The findings confirm the expectation, outlined in Chapter 2, that the hybrid nature of SOEs makes them especially sensitive to institutional pressures, stakeholder expectations, and sustainability requirements when expanding abroad.

First, the results support Hypothesis 1, showing that SOEs associated with greenfield strategies are positively correlated with higher overall ESG scores. This finding suggests that sustainability performance, taken as a composite measure across the three pillars, is not only a reputational asset but also a practical enabler of international expansion. Firms that display stronger ESG credentials are more likely to secure host-country approvals, attract international investors, and gain legitimacy for their long-term projects. In this sense, the overall ESG score operates as a broad signal of accountability and competitiveness, consistent with both Institutional Theory (which stresses the role of coercive and normative pressures from regulators and investors) and Stakeholder Theory, which frames ESG as a strategic response to societal demands.

Second, the results provide strong support for Hypothesis 2, confirming that the Environmental pillar exerts a stronger influence on SOE internationalization than either

Social or Governance performance. While governance remains crucial for transparency and accountability, and the social dimension contributes to stakeholder legitimacy, these factors emerge as complementary rather than decisive drivers. This hierarchy is consistent with the Resource-Based View (RBV): environmental performance represents a strategic capability that allows SOEs to differentiate themselves in highly scrutinized industries and to leverage privileged access to sustainable finance.

Moreover, the results also resonate with Agency Theory: weak governance or political interference, while relevant, do not directly condition greenfield expansion in the same way as environmental performance. Instead, governance appears to act indirectly, enabling or constraining the credibility of environmental strategies. Thus, the evidence highlights a hierarchy among ESG dimensions, with the Environmental pillar functioning as the key determinant of internationalization, while Social and Governance serve as supporting enablers.

Overall, these findings reinforce the view that ESG performance has moved beyond a reputational concern to become a strategic prerequisite for SOEs' international competitiveness. In the context of greenfield internationalization, where transparency, legitimacy, and capital intensity are necessary, the overall ESG score emerges as a significant predictor, while the Environmental pillar stands out as the decisive driver shaping SOEs' ability to expand across borders.

5.5. Limitations and Future Research Suggestions

While the results provide meaningful insights into the relationship between ESG performance and the internationalization of SOEs, several limitations need to be acknowledged and used to highlight areas where future research can build upon and refine the present analysis.

First, the scope of the dataset is restricted to listed SOEs with available ESG ratings to ensure data comparability and access to standardized ESG disclosure, but it inevitably excludes unlisted SOEs, which may differ substantially in governance quality, disclosure practices, and internationalization strategies. As a result, the findings may not be fully

generalizable to the entire population of state-owned firms, while expanding the scope of the dataset to include unlisted SOEs would improve the representativeness of the analysis and allow for a more comprehensive understanding of how overall ESG performance interacts with greenfield internationalization in different institutional contexts. Many state-owned firms with significant global presence, particularly in emerging economies, remain outside ESG disclosure frameworks.

Second, the measurement of ESG variables relies on data provided by rating agencies such as MSCI, Sustainalytics, and Refinitiv. As previously highlighted, ESG ratings are subject to methodological divergence, differences in indicator weighting, and incomplete disclosure. This variability introduces a degree of measurement error and makes the results dependent on the specific methodologies of the chosen providers. Useful for future studies could be employing additional methodological approaches to address potential endogeneity.

Going ahead, the year 2022 under exam is relatively short. while this period captures an important phase marked by the COVID-19 crisis and the consolidation of EU sustainable finance regulation (e.g., SFDR, Taxonomy), it does not allow for the assessment of long-term dynamics in ESG adoption and internationalization strategies. A broader temporal coverage would allow scholars to assess whether the positive association between greenfield strategies and higher ESG scores persists or evolves as regulatory requirements and market expectations mature.

CONCLUSION

This thesis has examined the relationship between Environmental, Social, and Governance (ESG) performance and the internationalization of SOEs, with a specific focus on greenfield investments. Building on the recognition that SOEs are hybrid organizations operating under a dual mandate, the study has demonstrated that ESG considerations have become an integral determinant of their global competitiveness.

The analysis began with an overview of SOEs' global relevance, highlighting their dominant role in strategic sectors such as energy, utilities, transport, and finance. This introductory framework underscored how SOEs are increasingly evaluated not only by financial outcomes but also by their ability to align with sustainability norms and regulatory requirements in host countries. Moving forward, we explore the theoretical foundations of the study framed ESG performance as a multidimensional variable: Agency Theory shed light on the governance frictions inherent in SOEs' hybrid ownership; the Resource-Based View (RBV) explained how access to state-backed resources can be both an advantage and a source of distortion; Institutional Theory emphasized the role of coercive, normative, and mimetic pressures; and Stakeholder Theory framed ESG as a proxy for responsiveness to multiple constituencies. Together, these perspectives converged on the idea that ESG performance is a mechanism through which SOEs secure legitimacy, credibility, and financial viability abroad. Consequently the research translated into the evolution of sustainable finance and the methodologies of major ESG rating agencies (MSCI, Sustainalytics, Refinitiv, Moody's, Bloomberg), emphasizing how ESG ratings influence SOEs' financing costs, access to capital markets, and legitimacy abroad. Divergence in rating methodologies and disclosure practices was shown to be particularly relevant for SOEs, which often operate in high-exposure sectors and under varying institutional conditions.

These concepts laid the foundations for the Research Question (RQ) of this thesis: "*RQ: How do ESG metrics influence the amount of greenfield investments of SOEs?*". A dataset of 1,441 listed SOEs from Bloomberg and Orbis was compiled for the year 2022, and the focus was set on greenfield investments, justified by their capital intensity, long-term exposure to host-country institutions, and heightened visibility which make them the most

appropriate proxy to capture the ESG–internationalization nexus. Variables were operationalized into dependent, independent, and control categories, and econometric models were specified to isolate the effects of ESG performance.

By integrating firm-level ESG ratings with financial and structural controls, the study tested two hypotheses:

- *H1: In SOEs, ESG scores have a positive impact on greenfield investments.*
- *H2: The Environmental pillar (E) has a stronger impact on the amount of greenfield investments of SOEs than the Governance (G) or Social (S) pillars.*

Chapter 4 reported the quantitative findings. First, Hypothesis 1 was supported: SOEs associated with greenfield internationalization strategies are positively correlated with higher overall ESG scores. The regression results confirmed that overall ESG performance is positively associated with greenfield strategies, indicating that sustainability excellence lowers entry barriers, enhances credibility, and facilitates access to sustainable finance. Moreover, the Environmental pillar emerged as the most decisive driver, significantly influencing the likelihood of SOEs undertaking greenfield projects abroad. This outcome reflects the heightened scrutiny on environmental practices in carbon-intensive and infrastructure-heavy sectors, where compliance with climate regulations and credibility in transition strategies are prerequisites for international legitimacy. By contrast, the Social and Governance dimensions, while relevant to long-term accountability and stakeholder engagement, showed weaker and indirect effects. These results carry several implications. Theoretically, they validate the integration of ESG into the study of SOE internationalization, demonstrating that sustainability metrics act as binding constraints and enablers rather than peripheral considerations. Empirically, they highlight that ESG performance has become a measurable determinant of internationalization outcomes, reinforcing the idea that SOEs' global competitiveness depends on their ability to credibly combine state ownership with sustainability leadership. From a policy perspective, the study underscores the importance of harmonizing ESG reporting standards and promoting competitive neutrality, so that SOEs can be evaluated fairly and transparently in global markets. What is gathered from this study is the evident need to embed ESG (especially environmental performance) at the

core of international strategy, as a competitive advantage. For policymakers and regulators, the results demonstrate that sustainable finance rules and disclosure frameworks are not neutral; they directly shape the international opportunities of SOEs. This underscores the importance of harmonizing ESG standards globally to ensure level playing fields and competitive neutrality.

At the same time, several limitations must be acknowledged because the analysis was restricted to listed SOEs with available ESG ratings, potentially excluding significant unlisted players. The year analyzed is relatively short and context-specific, marked by the COVID-19 crisis and the early implementation of EU sustainable finance regulation. Methodological challenges such as endogeneity and ESG rating divergence also persist. These constraints limit the generalizability of the findings but also point to promising avenues for future research, such as expanding the dataset to unlisted SOEs, extending the time horizon, employing causal methods, and combining quantitative analysis with in-depth case studies.

In conclusion, this thesis has shown that ESG performance, particularly environmental excellence, is no longer optional but a strategic prerequisite for SOEs' international competitiveness. By bridging theoretical insights with robust empirical evidence, it demonstrates that SOEs' ability to expand abroad through greenfield investments depends not only on financial and political resources, but critically on their capacity to align with global sustainability standards. In a world where legitimacy, transparency, and environmental stewardship define access to capital and markets, ESG is not merely a metric: it is the new currency of internationalization.

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