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Invisible shareholder: a theoretical perspective on the relationship among natural capital, business, and society

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Abstract

The term "natural capital" originated in the field of economics but has gained increasing prominence in accounting in recent years. Natural capital is the stock of renewable or non-renewable natural resources that benefit both society and businesses, providing value through ecosystem services. This essay proposes the theoretical perspective of the invisible shareholder, highlighting the often unacknowledged contribution of society as a supplier of natural capital to businesses. This perspective is grounded in the following observations: a) natural capital arises from the natural resources that constitute our natural heritage, b) the combination of these resources contributes to the value creation of businesses, and c) accounting disclosures typically do not account for society's participation in the value generated by businesses The study examines the relationship between natural capital, business, and society based on aspects associated with ownership and control, the contribution of natural capital in the business value creation process, and the elements that involve disclosing this relationship in accounting.

Keywords: Natural capital. Business. Society. Accounting. Invisible Shareholder.

Shareholder invisível: uma perspectiva teórica da relação entre capital natural, negócios e sociedade

Resumo

O termo "capital natural" teve sua origem atrelada à Economia; nos últimos anos, no entanto, discussões a seu respeito têm crescido na área de Contabilidade. Definido como o estoque de recursos naturais renováveis ou não renováveis, que se combinam para produzir um fluxo de benefícios para a sociedade e para os negócios, o capital natural fornece valor por meio dos seus serviços ecossistêmicos. Nesse caso, considerando que: o capital natural é derivado de recursos naturais que compõem o patrimônio natural, a combinação desses recursos contribui para que os negócios criem valor, e a participação da sociedade no valor gerado pelos negócios não é evidenciada pela contabilidade, o presente ensaio tem por objetivo propor a perspectiva teórica do *shareholder* invisível, tendo em vista a contribuição ainda não reconhecida da sociedade como fornecedora do capital natural aos negócios. Para tal, o estudo apresenta a relação entre o capital natural, os negócios e a sociedade, com base: nos aspectos associados a propriedade e controle, na contribuição do capital natural no processo de criação de valor dos negócios e nos elementos que envolvem a evidenciação dessa relação na contabilidade.

Palavras-chave: Capital natural. Negócios. Sociedade. Contabilidade. *Shareholder* invisível.

Accionista Invisible: una perspectiva teórica sobre la relación entre capital natural, empresas y sociedad

Resumen

El término "capital natural" tuvo sus orígenes ligados a la Economía; En los últimos años, sin embargo, han crecido las discusiones al respecto en el área de Contabilidad. Definido como el stock de recursos naturales renovables o no renovables que se combinan para producir un flujo de beneficios para la sociedad y las empresas, el capital natural proporciona valor a través de sus servicios ecosistémicos. En este caso, considerando que: el capital natural se deriva de los recursos naturales que conforman el patrimonio natural, la combinación de estos recursos contribuye a que las empresas creen valor, y la participación de la sociedad en el valor generado por las empresas no se evidencia en la contabilidad, el presente ensayo pretende proponer la perspectiva teórica del accionista invisible, teniendo en cuenta la contribución aún no reconocida de la sociedad como proveedora de capital natural a las empresas. Para ello, el estudio presenta la relación entre capital natural, empresa y sociedad, a partir de: aspectos asociados a la propiedad y control, el aporte del capital natural en el proceso de creación de valor empresarial y los elementos que implican la revelación de esta relación en la contabilidad.

Palabras clave: Capital natural. Empresas. Sociedad. Contabilidad. Accionista invisible.

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INTRODUCTION

Businesses rely on society and a global supply chain that handles resources and has wide-ranging impacts, creating an "invisible" dependency on natural resources (Donaldson & Walsh, 2015; Polasky & Daily, 2021). In recent years, society has confronted various environmental challenges, including diminishing natural resources, environmental degradation, and climate change. These issues have heightened the demand for more sustainable corporate practices (Henderson, 2021; Huntjens, 2021; Khan, Rehman-Khan, & Ghouri, 2022; Österblom, Bebbington, Blasiak, Sobkowiak, & Folke, 2022).

The Anthropocene represents the intricate connection between human society and nature and encompasses the repercussions of human activities on terrestrial systems (Bebbington & Rubin, 2022; Cuckston, Russell, & Bebbington, 2022; Folke et al., 2021; Hernández-Blanco & Costanza, 2019; Steffen et al., 2009). This has garnered the attention of both the scientific and political communities on an international scale, as these impacts may jeopardize the fulfillment of society's present and future needs (Bebbington & Rubin, 2022; Folke et al., 2021).

The impact of the Anthropocene on companies and their responses also significantly influence accounting practices and research (Bebbington & Rubin, 2022). Tregidga and Laine (2022) emphasize that accounting practices carry substantial implications for society. Therefore, in the Anthropocene, the environment is not an external factor to society or the economy; it forms the very foundation of both (Folke et al., 2021). Accounting plays a crucial role in organizing socio-ecological systems due to the intricate relationship between business, society, and the environment (Cuckston, 2021).

While dependent on the environment, companies also influence it through their operations and supply chains (Österblom et al., 2022; Russell, Milne, & Dey, 2017). In this context, the environmental impacts of businesses can have significant social ramifications, and responses to these impacts by customers, regulators, shareholders, and other stakeholders can create risks and opportunities (The World Economic Forum [WEF], 2020). Freeman (1984) defines stakeholders as any group or individual who can affect or be affected by the organization's objectives. Armor (2020) perceives shareholders as those who invest resources in the business, whether as shareholders, partners, or owners. In return, shareholders are entitled to residual income based on the resources they contribute (O'Connell & Ward, 2020).

Nature contributes significantly to society and the economy. Elements like forests, rivers, land, minerals, and oceans generate value both directly and indirectly, collectively referred to as "natural capital" (Cuckston, 2018; Dasgupta, 2021; Hernández-Blanco & Costanza, 2019; Polasky & Daily, 2021). The concept of natural capital has been closely linked to economics since the early 20th century. Taussig was among the pioneering economists to adopt this term (Åkerman, 2005; Missemer, 2018). Gómez-Baggethun and Groot (2010) attribute the origin of the concept of natural capital to Schumacher in his book "Small is Beautiful: A Study of Economics as if People Mattered," published in 1973. However, it gained widespread recognition when Pearce (1988) defined natural capital as the collective environmental assets, aligning with modern literature on sustainable development (Hernández-Blanco & Costanza, 2019).

The evolution of the natural capital concept, along with research into economic and social issues and their environmental impacts, has underscored the necessity for adjustments in the production process and its relationship with nature to promote long-term sustainable economic development (Angotti & Ferreira, 2017; Sullivan, 2015). From an economic standpoint, discussions primarily revolve around the valuation of capital and ecosystem services, with a special emphasis on developing countries, where these values constitute a substantial portion of wealth. Additionally, there is a growing focus on incorporating natural capital into national accounts (Bagstad et al., 2021; Dasgupta, 2021; Polasky & Daily, 2021).

The study by Costanza et al. (1997) marks a significant milestone in the development of the natural capital concept, as it estimates the economic value of ecosystem services and natural capital at an impressive USD 33 trillion per year. The authors emphasize that a substantial portion of this value exists beyond traditional market transactions. Buonocore, Picone, Russo, and Franzese (2018) note that this study remains the most widely cited work in the field of natural capital. In 2014, employing the same method but with updated data, Costanza et al. (1997, 2014) calculated the global value of ecosystem services at an even more staggering USD125 trillion annually.

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While research on natural capital and its interaction with society is on the rise, there remains a gap in the literature regarding its full integration into the economy (Fisher, Wit, & Ricketts, 2021). Motivations driving stakeholders to create shared value and the process of sustainable value creation are poorly understood (Agwu, Oftedal, & Bertella, 2022). Additionally, financial reports often fail to adequately capture the relationship between business and the environment (Houdet, Ding, Quétier, Addison, & Deshmukh, 2020; Unerman, Bebbington, & O'dwyer, 2018). The lack of clarity on this topic makes it challenging to grasp the true purpose of integrating financial and non-financial information (Marçal, Neumann, & Sanches, 2022; Wagenhofer, 2023).

In 2016, the Natural Capital Protocol was introduced in the private sector to guide companies in assessing their natural capital (Cuckston et al., 2022). More recently, the IFRS (International Financial Reporting Standards) Foundation announced the establishment of the International Sustainability Standards Board (ISSB), which aims to develop a comprehensive global framework for sustainability disclosures. The first publication is expected in 2023 and may become mandatory in certain countries. Furthermore, various initiatives such as the Carbon Disclosure Project (CDP), the Task Force on Climate-Related Financial Disclosures (TCFD), the Taskforce on Nature-related Financial Disclosures (TNFD), and the World Economic Forum's Stakeholder Capitalism Metrics are actively working to report both the risks and opportunities related to nature-centric businesses (Modak, Mathur, & Vaidyanathan, 2019; Torres, Ripa, Jain, Herrero, & Leka, 2023; Wagenhofer, 2023).

Marcal et al. (2022) conducted an analysis of the term "value" and concluded that, from the semantic perspective of value creation, organizations engage in actions using values (capital) created directly or indirectly. Notably, companies only considered the positive effects of these actions on society and the environment, neglecting the negative impacts that can erode value for shareholders and other stakeholders. They emphasize that while financial value is crucial, it alone is insufficient for value creation. Success depends on various forms of capital, including natural, human, social, and relational capital. Houdet et al. (2020) support this assertion by highlighting that businesses rely on ecosystem services and have the potential to impact natural capital and its ability to provide these services. This dependence is linked to resource utilization and extraction during production processes, encompassing activities such as water extraction, energy consumption, climate regulation, pollination, and the ecological consequences of land use, waste generation, as well as water, air, and land pollution, among others (Capriolo, Boschetto, Mascolo, Balbi, & Villa, 2020; Houdet et al., 2020; Ingram et al., 2022; Capitals Coalition, 2016; Warnell et al., 2020).

Nonetheless, it remains a challenge that accounting fails to acknowledge or emphasize the connection between business operations and natural capital (Bebbington & Rubin, 2022; Houdet et al., 2020; Wagenhofer, 2023). In the current landscape, conventional accounting models do not adequately address a company's responsibility regarding natural capital. This gap hinders stakeholders' ability to assess the impact of business activities on the sustainable management or preservation of these resources (Agwu et al., 2022; Houdet et al., 2020). As a result, the relationship between business and society is contingent on a social contract or a social license to operate, which lacks formal structure and can be subject to change over time and across different geographical locations (Houdet et al., 2020; Huntjens, 2021; Österblom et al., 2022).

One theory that significantly contributes to understanding this relationship is the dual-investor theory. It closely aligns with this discussion by viewing society as a source of two essential forms of capital. First, society provides "opportunity capital"(Schlossberger, 1994), encompassing public infrastructure such as highways, water treatment and supply networks, energy systems, and other public goods and services. Second, it offers "natural capital," which is rooted in the natural resources considered as a shared heritage of society (United Nations Organization for Science and Culture [Unesco], 1972). These natural resources serve as the foundation on which businesses rely to create value (Houdet et al., 2020; Rambaud & Feger, 2019).

Considering that this relationship is not yet recognized in accounting, this study adopts the term "invisible shareholder" to designate the society as a business partner through providing natural capital.

Moreover, this concept aligns with the principles of stakeholder theory and the stakeholder capitalism model, emphasizing that society and the environment should occupy a central place in a business's decision-making process. They are not just beneficiaries but also significant contributors to the value generated by a company. This understanding highlights their integral role in the value distribution created through natural capital (Freeman, 2020; Freeman & David, 1984; Mazzucato, 2022; Schwab & Vanham, 2021).

Huntjens (2021) raises concerns about the effectiveness of social contracts in adequately addressing contemporary challenges. Valck et al. (2023) emphasize the imperative of bridging the gap between knowledge and action to create opportunities for mitigating the ongoing environmental crisis. Scientific insights into the impacts arising from the interaction between business

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and society can shape shifts in social values and, consequently, influence the evolution of social contracts (Mazzucato, 2022; Unerman et al., 2018).

Therefore, this essay aims to answer the following questions: Who is the “owner” or who “controls” natural capital? How does natural capital contribute to creating value for business? How could accounting highlight the relationship between natural capital, business, and society? The essay introduces the theoretical concept of the “invisible shareholder,” which seeks to address the currently overlooked role of society as a natural capital provider to businesses.

THEORETICAL LENS

Natural capital can be defined as a collection of resources that businesses and stakeholders mutually rely on to derive various benefits, thereby creating value (Capitals Coalition, 2020; Houdet et al., 2020; Polasky & Daily, 2021). From an accounting perspective, it is essential to theoretically comprehend the intricate relationship between natural capital, business, and society.

To grasp the application of theoretical perspectives, it is crucial to stress the difference between shareholders and stakeholders. Shareholders refer to a specific group of individuals, owners, or partners who invest resources in a business with the expectation of a financial return, often in the form of dividends. Shareholders are just one subset within a broader category of stakeholders, which includes employees, suppliers, customers, creditors, and society at large (Armour, 2020; O’Connell & Ward, 2020). When delving into the relationship between shareholders and stakeholders within a business context, Schlossberger (1994) highlights that shareholders contribute resources to companies, while stakeholders can both provide and receive resources in various forms.

Shareholder theory posits that the primary objective of management is to maximize the interests of the shareholders (Friedman, 1970), which takes precedence over the interests of stakeholders. According to this theory, shareholders are the ultimate owners of a company’s assets. Therefore, managers are tasked with safeguarding and enhancing these assets to benefit the shareholders (O’Connell & Ward, 2020). The goal is to achieve the highest possible returns for shareholders while complying with the basic societal norms (Friedman, 1970).

According to Friedman (1970), a company’s social responsibility is primarily to enhance its profits. Under this framework, engaging with stakeholders is considered favorable as long as it contributes to long-term gains in shareholder wealth. This perspective heightened the emphasis on maximizing shareholder value (Mazzucato, 2022). However, this approach often prioritized short-term gains, benefiting transient shareholders at the expense of longer-term stakeholders, such as employees and the broader community (Clarke & Friedman, 2016).

Stakeholder theory emerged as a response to shareholder theory. According to Freeman (1984), a stakeholder is defined as any group or individual who can influence or be influenced by an organization’s purposes. This theory was developed to address three key issues in the realm of business: how value is generated and negotiated, how to reconcile ethics with capitalism, and how managers can approach management to tackle the first two issues (Parmar et al., 2010). The theory proposes that these issues are better addressed when taking into consideration the relationships between a company and its stakeholders (Freeman, 1984).

It is important to highlight that stakeholder theory does not give precedence to any specific stakeholder group, recognizing the importance of maintaining a balanced relationship between the company and all of them (Goyal, 2022). The study conducted by Lakhal, Kuzey, Uyar, and Karaman (2023) uncovered a positive correlation between the payment of dividends and corporate social responsibility (CSR), indicating that companies take into account the perspectives of both shareholders and stakeholders. However, the negative relationship observed between dividend growth and CSR suggests that an excessive focus on safeguarding shareholder rights can potentially be detrimental to the interests of other stakeholders.

The dual-investor theory, as formulated by Schlossberger (1994), delves into the relationship between shareholders and stakeholders by introducing the differentiation between these two groups through the lens of two types of capital: “specific capital” and “opportunity capital.” Specific capital is earmarked for acquiring machinery, covering employee salaries, and constructing physical infrastructure. Recognizing that this capital alone is insufficient to sustain a business, opportunity capital is introduced. Opportunity capital encompasses the entire societal structure that businesses rely on, including labor that

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benefits from public education and infrastructure such as highways, water and energy supply networks, and various other public goods and services (Schlossberger, 1994).

The distinction between specific capital and opportunity capital, as proposed by the Dual-Investor Theory, finds common ground with stakeholder theory. Both emphasize the importance of management efforts to proactively address social issues and recognize that providing services to society should be integral to a business's objectives rather than merely a constraint on its operations. This perspective represents a notable departure from Friedman's model (1970), which emphasized maximizing shareholder profits. Schlossberger (1994) further elucidates that this perspective is not about demoting shareholders to the position of stakeholders but rather about combining elements of both socialism and capitalism to elevate society to a status equivalent to that of shareholders.

While these theories help us understand that value is collectively created and should be shared among all stakeholders, they fall short in addressing the recognition of this relationship in accounting. Consequently, they do not delve into the contribution of natural capital to business. The upcoming sections will discuss the relationship between natural capital, business, and society, framed within the theoretical perspective of the "invisible shareholder."

WHO IS THE "OWNER" OR WHO "CONTROLS" THE NATURAL CAPITAL?

The discourse surrounding ownership rights primarily revolves around legal and economic perspectives. From a capitalist economic standpoint, as highlighted by Mayer (2020, p. 238), "[...] ownership is not just a bundle of rights but a set of obligations and responsibilities." These responsibilities aim to ensure viable solutions to the challenges faced by people and the planet. Legal rights, viewed from a legal perspective, are defined and upheld by the government, whereas economic rights entail the capacity to directly utilize the services of an asset or indirectly access them through exchange (Barzel, 2015).

From a public perspective, the concept of natural capital assets defines "natural assets" within society. These assets are characterized by being uncreated by humans, incurring no production costs, not being subject to private ownership or acquisition, and being utilized by the government for its regular administrative functions (Barton, 1999). Marchak (1998) further underscores that anything generated using natural resources can have widespread effects, extending beyond formal owners, to encompass other species, and potentially yielding consequences for future generations.

Ownership rights are subject to change over time, often influenced by international agreements such as the Declaration of the United Nations (UN) Conference on the Human Environment of 1972. This declaration lays out two fundamental principles:

> 1: Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and wellbeing, and he bears a solemn responsibility to protect and improve the environment for present and future generations.
>
> 2: The natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate (Organization of United Nations [UN], 1972).

Furthermore, the Convention for the Protection of World Cultural and Natural Heritage considers natural heritage of humanity:

> [...] natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view;
>
> geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation;
>
> natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty (Unesco, 1972, p. 2).

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In 1992, Agenda 21 enshrined the highest principles of safeguarding humanity's most essential asset: the Earth itself. It strongly encouraged the active participation of communities and local populations in decision-making processes related to the management of these resources, underlining the significance of an environmentally conscious society (Agenda 21, 1993). In Brazil, in alignment with this perspective, Article No. 225 of the 1988 Constitution asserts: "All have the right to an ecologically balanced environment, which is an asset of common use and essential to a healthy quality of life, and both the Government and the community shall have the duty to defend and preserve it for present and future generations."

Lanis and Richardson (2013) assert that companies rely on public resources for their operations and bear the responsibility of reciprocity by paying for their use. Ownership rights are recognized as a mechanism to mitigate externalities. In line with this, Paniagua and Rayamajhee (2023) stress the significant challenge of defining ownership rights and provide illustrative examples of externalities, ranging from local-level impacts to global ramifications. They highlight the essential need for collective actions and collaborative endeavors involving both governments and the private sector.

Costanza et al. (2017) argue that, considering the inherently public nature of most ecosystem services, institutions should reexamine ownership rights regimes without necessarily privatizing them. In alignment with this perspective, Österblom et al. (2022) propose that government regulations can be put in place to compel companies to internalize their externalities or face penalties if they fail to do so. Consequently, the public sector plays a crucial role in mediating the demand for efficient and sustainable services (Mazzucato & Ryan-Collins, 2022).

In 2022, during the World Economic Forum in Davos, the Global Commission on the Water Economy was inaugurated to evaluate the impacts of climate and environmental changes on the global hydrological cycle. Its mission is to foster cooperation and promote the perception of water as a "global common good" (Rockström, Mazzucato, Andersen, Fahrländer, & Gerten, 2023). Concurrently, in the same year, the UN General Assembly officially acknowledged that everyone possesses the right to inhabit a world where the fundamental human right to live in a clean, healthy, and sustainable environment is upheld by both governments and businesses (Almond, Grooten, Juffe-Bignoli, & Petersen, 2022.

According to Mayer (2020), a liberal system is likely to exhibit a diversity of ownership structures. Mayer notes that, while this perspective may diverge from the traditional capitalist viewpoint, it closely resembles the form and function of ownership seen on a global scale. This perspective aligns with recent revisions to the conceptual framework for financial reporting, which have introduced a more inclusive interpretation of what constitutes "ownership" for accounting recognition purposes. Notably, the standard now emphasizes the principle of "essence over form" in transactions, replacing the term "ownership" with "control." Control, in this context, is defined as:

> Control links an economic resource to an entity. Assessing whether control exists helps to identify the economic resource for which the entity accounts. For example, an entity may control a proportionate share in a property without controlling the rights arising from ownership of the entire property. In such cases, the entity's asset is the share in the property, which it controls, not the rights arising from ownership of the entire property, which it does not control.
>
> An entity controls an economic resource if it has the present ability to direct the use of the economic resource and obtain the economic benefits that may flow from it. Control includes the present ability to prevent other parties from directing the use of the economic resource and from obtaining the economic benefits that may flow from it. It follows that, if one party controls an economic resource, no other party controls that resource (IFRS, 2018, p. A41-A42).

Cuckston et al. (2022) highlight that control over and the benefits of natural capital are typically not consolidated within a single organization. This emphasizes the need to expand the concept of control beyond traditional notions and consider the various elements and relationships entailed in natural capital management. It is important to note that while the term "control" is typically employed from a financial perspective, it is often replaced by responsibility in the context of sustainability reporting."

"Responsibilities" arise where "[...] the use of a resource has the potential to produce social or environmental benefits or disbenefits," as seen in Capitals Coalition (2022, p. 29). In the conceptual framework for sustainability reporting proposed by the Capitals Coalition (2022), it is argued that:

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Responsibility is the trigger for considering whether there are sustainability phenomena. An entity has the responsibility to:

> (a) Act as the agent of the party or parties who share access to and use those social or environmental resources;
>
> (b) Act as the agent of the party or parties who experience a positive change in wellbeing as a consequence of the use of those resources;
>
> (c) Act as the steward of those social or environmental resources where no party can be identified (Capitals Coalition, 2022, p. 29).

Terms associated with "rights" were also replaced by "wellbeing," which is understood as contributions to society resulting from the exchange of impact assets or impact liabilities but which do not result in an increase or decrease in social equity (Capitals Coalition, 2022, p. 25). Assets and liabilities are recognized through their dependencies and impacts associated with wellbeing. The economic resource is considered a social or environmental resource. It is a responsibility that "has the potential to produce social, environmental or economic benefits, which have potential to increase wellbeing" (Capitals Coalition, 2022, p. 24).

The discussion highlights the contentious nature of ownership rights, yet international conventions and agreements have established natural resources as the collective natural heritage of society (UN, 1972; UNESCO, 1972). This combined pool of resources constitutes what is commonly referred to as natural capital (Capitals Coalition, 2016; Houdet et al., 2020; Polasky & Daily, 2021). From an accounting standpoint, the conversation has shifted from "ownership" to "control" and even to "responsibility," encompassing social and environmental considerations. As businesses generate value through natural capital and bear responsibilities for societal well-being or the preservation of natural capital, they are increasingly being incorporated into the criteria proposed for accounting recognition through a sustainability perspective. The subsequent section delves into a discussion of how natural capital contributes to the value-creation process in businesses.

HOW DOES NATURAL CAPITAL CONTRIBUTE TO BUSINESSES CREATING VALUE?

Global economic production has grown exponentially, now standing at fifteen times its level in the 1950s. Paradoxically, the biosphere, which sustains this growth, is in decline, as highlighted by Dasgupta (2021). Activities encompassing agriculture, forestry, fishing, and sectors like food, beverages, construction, as well as services such as energy and water supply, represent organizations with high dependence on natural capital, contributing significantly to the gross value added either directly or through their supply chains (WEF, 2020). However, it is crucial to recognize that the entire spectrum of economic activities, as a collective whole, relies on natural capital (Cordella, Gonzalez-Redin, Lodeiro, & Garcia, 2022).

According to Polasky and Daily (2021), natural capital plays a pivotal role in value creation by providing ecosystem services. Furthermore, Wolde-Rufael and Mulat-Weldemeskel (2023) conducted a study that demonstrated the positive and significant relationships between natural capital, human capital, financial development, and globalization, all interconnected with produced capital. Their findings also unveiled significantly positive associations between these types of capital and financial development. As a result, decision-making related to natural resources remains a prominent concern, engaging multiple levels of government and the private sector, as emphasized by Boyd, White, Bell, & Burt (2018).

The private sector is widely acknowledged as a key driver of value creation, leading to a comprehensive examination of the value creation process by companies within various fields, including economics, business, and management studies. Recent research has delved into the value associated with resources, resource management, and novel approaches to generating and distributing value (Agwu et al., 2022; Finisdore et al., 2020; Ingram et al., 2022; Mazzucato & Ryan-Collins, 2022; Menghwar & Daood, 2021; Schormair & Gilbert, 2021). Storbacka (2019) reinforces this perspective by emphasizing that value emerges when social and economic actors integrate resources. Adopting a resource-based view, stakeholders are recognized as both resource suppliers and beneficiaries of value in this context.

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Among the various resources held by stakeholders, natural capital occupies a prominent position. As Dasgupta (2021) highlighted, natural capital plays a pivotal role in providing vital services that underpin the functionality of the economy and society. Sullivan (2009) aptly characterizes nature as the world's largest company, diligently working "for free" for the benefit of humanity. In essence, the value offered by nature holds substantial significance for the private sector's present and future financial performance, as attested by Agwu et al. (2022) and Houdet et al. (2020).

Ecosystems produce complex value flows that are "invisible" in national and corporate accounts (Bagstad et al., 2021). Among the values stand out the use of land and climate regulation (Warnell et al., 2020; Wentland et al., 2020), the use of water (Bagstad et al., 2020), the protection of lives and properties (Bagstad et al., 2021), the services of pollinators and agricultural pest control (Capriolo et al., 2020), and the recreational value associated with wildlife and landscapes (Boyd et al., 2018; Ingram et al., 2022).

Concerning dependence on the direct use of water, according to Rockström et al. (2023), food production is responsible for around 75% of global freshwater consumption. India has the highest consumption of this resource. Rockström et al. (2023) argue that the "social cost of water" should be evaluated similarly to the "social cost of carbon," justified by the costs to society of the damage caused by excessive water use. In agriculture, ecosystem services, such as soil fertility, biological control, and pollination, are considered production factors as important as anthropogenic production factors, given that they perform equivalent functions (Dardonville et al., 2022). This production component would not exist without ecosystem services, which therefore represent the creation of additional value resulting from the presence of pollinators (Capriolo et al., 2020).

Data derived from the agricultural sector's supply chain emphasize the sector's heavy reliance on ecosystem services, particularly those provided by pollinators, and underscore the potential for such impacts reverberating across the global market, as elucidated by Ingram et al. (2022). Consequently, the examples presented elucidate the substantial contribution of natural capital, predominantly through ecosystem services, to the direct value creation in sectors with high dependence on natural resources, as well as its indirect contribution in sectors with lesser reliance. Nonetheless, it is imperative to recognize that, to varying degrees, all sectors of the economy are contingent on natural capital, a point underscored by Cordella et al. (2022). The following section delves into the relationship between natural capital, business, and society from the theoretical perspective of the invisible shareholder.

NATURAL CAPITAL, BUSINESS, AND SOCIETY FROM THE PERSPECTIVE OF THE INVISIBLE SHAREHOLDER

Comprehending the interplay between natural capital, business, and society carries implications for reshaping the role of accounting within society, specifically by rendering natural assets "visible" in financial reports, a point emphasized by studies like Bagstad et al. (2021), Cuckston (2017), Houdet et al. (2020), and Rambaud & Feger (2019). Nevertheless, a significant challenge inherent to this recognition lies in questions related to the ownership or control of these resources, as discussed by Cuckston et al. (2022). A prime example is the recognition of ownership rights to essential resources like water, which is primarily managed and regulated as a "public good" intended for consumption and sanitation. However, the prevailing notion of public ownership often results in the undervaluation of water, while excessive, unsustainable, and inequitable usage patterns may deter private investment, as articulated by Rockström et al. (2023).

According to Dickie and Neupauer (2019), individuals or entities that own natural capital assets, have an impact on them, or rely on them can reap the benefits of developing natural capital accounts. Notably, in the United Kingdom, there is a municipal-level plan in Manchester to recognize natural capital. In their study, Economics for the Environment (Eftec), Environmental Finance, and Countryscape (2019) shed light on diverse categories of potential investors in natural capital who enjoy the advantages of resources and services without direct payment. These encompass public entities, philanthropic entities like funds and NGOs, social investors such as impact investors, organizations across various sectors like water companies and insurance companies, financial institutions including the financial sector and proponents of green bonds, as well as individual investors, including retail investors.

From a private perspective, several approaches have been devised to address aspects such as the value chain, spatial boundaries of assets and impacts, and the reliance on natural capital, as elucidated by Dickie and Neupauer (2019). Among these initiatives, Kering published the Environmental Profit and Loss account (EP&L) in 2016, which offers insights into environmental impacts

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across its value chain. However, this valuable information is not yet integrated into standard financial reports, as emphasized by Wagenhofer (2023).

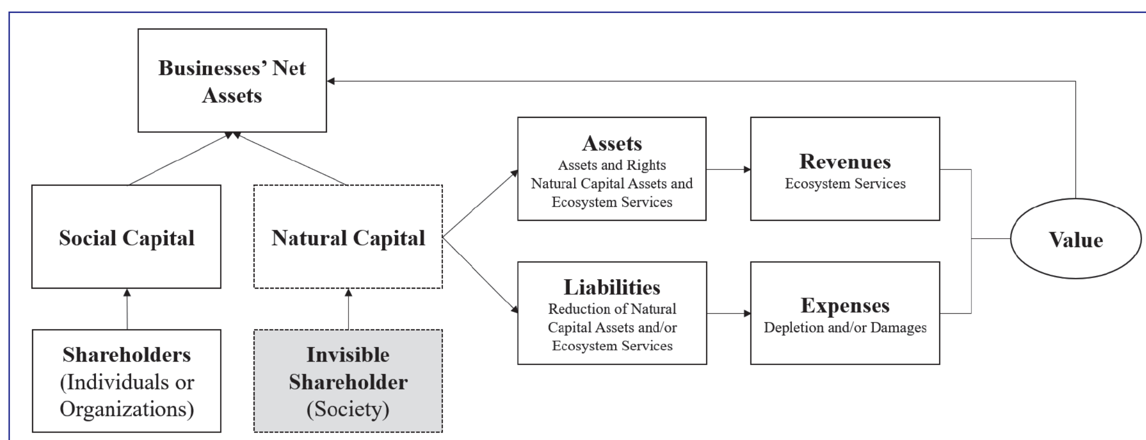
The need for legal updates is becoming increasingly apparent, as demonstrated by recent developments in Spain and New Zealand. In Spain, the Mar Menor, a vast saltwater lagoon, was granted the status of a "legal person" to safeguard its endangered ecosystem. This marked the first instance in which a European country acknowledged a natural resource as a "legal person" with rights to protection and preservation, overseen by the government and the local population. Similarly, New Zealand passed a law in 2017 that bestowed legal personhood upon the Whanganui River, underscoring the growing recognition of nature's rights (Stokstad, 2022).

Within the corporate landscape, Yvon Chouinard, the proprietor of Patagonia, a Ventura, California-based company with an annual sportswear turnover of over 1 billion dollars, has initiated a novel approach. He transferred full ownership to two new entities, namely Patagonia Purpose Trust and Holdfast Collective. Notably, any surplus dollar not reinvested in the company is allocated as dividends to safeguard the planet. The company's website reflects this philosophy with the statement, "Earth is now our only shareholder" (Patagonia Works, 2022).

The term shareholder was also adopted by a group of researchers who conceived the "Earth, Inc. Shareholder Report: Introduction." This report was designed to inform the global population, essentially the shareholders of Earth, regarding the present condition of human and planetary assets and liabilities (Earth, Inc., 2007). The primary aim of this initiative is to raise awareness within society so that individuals may engage with their leaders, urging them to implement the necessary measures to ensure our planet's ongoing and future wellbeing. The report underscores the possibility of making decisions that have a significant bearing on the long-term health of the Earth when adopting a business perspective toward the natural world, its human inhabitants, and the consideration of their assets, liabilities, goods and services, as well as profits and losses (Earth, Inc., 2007).

This perspective resonates with the dual-investor theory, as it explains the relationship between natural capital, business, and society by regarding society as both a shareholder in the business and a provider of natural capital. In this context, society represents opportunity capital, which is pivotal in enabling businesses to create value. It is important to note that conventional accounting practices do not currently recognize or disclose this multifaceted relationship. To address this gap, this study embraces the theoretical perspective of the "invisible shareholder," as illustrated in Figure 1.

Figure 1
Natural capital, businesses, and society according to the invisible shareholder perspective



Source: Elaborated by the authors.

In the context of accounting, the term "capital" or "net assets" refers to the value generated by the assets of owners and/or shareholders after deducting all liabilities (Rambaud, 2023). This "capital" account is essentially determined by the assets and their potential to generate value. According to the conceptual framework, the financial concept of capital (social capital) is precisely defined as "[...] money or invested purchasing power, capital is synonymous with the net assets or equity of the entity" (IFRS, 2018, p. A90).

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Natural capital from a business perspective can be understood as "[...] The stock of renewable and nonrenewable natural resources (e.g., plants, animals, air, water, soils, minerals) that combine to yield a flow of benefits to people" (Capitals Coalition, 2016, p.2), and, from an accounting perspective, as the essential, material and non-human capital that is used by the company and preserved over time (Rambaud, 2023). Rambaud and Feger (2019, p. 6) present a proposal for accounting recognition of natural capital under two approaches:

> 1) Capital is money to be repaid, not intrinsically productive. It is the realization of an operating process that creates an ex-post profit. Capital is independent from the activity of the firm.
>
> 2) Capital is a set of productive resources and/or productive money, generating, intrinsically, stream of future cash flows. Capital is dependent on the activity of the firm (the stream of cash flows depends of the activity).

The authors suggest recognizing natural capital on the balance sheet considering the first definition. They advocate for the creation of a category labeled "natural entities," which would be accounted for as "liabilities" rather than assets. Under this approach, the company would be considered to have a "debt" related to the maintenance of this natural capital. Consequently, natural "capital" is viewed as a natural entity that is utilized and depleted by the organization during its operations and simultaneously imposes a long-term obligation for its preservation (Rambaud & Feger, 2019).

This approach validates the discussion in this study by considering natural capital as a credit account. However, due to the perspective of society as an invisible shareholder, the "natural capital" account would be recognized as net assets, therefore aligning with the second concept of capital, in which it is understood as a means of creating value and increasing the business's "capital" (Rambaud & Feger, 2019), given the flows of benefits provided by ecosystem services (Capitals Coalition, 2022; Polasky & Daily, 2021). In this case, it does not lose the essence of preserving and maintaining natural capital, as defended by the authors' initial proposal (Rambaud & Feger, 2019).

The condition for this recognition corroborates Rambaud and Feger (2019), as they define a natural capital asset account to recognize the right of use and surplus income as revenue after all capital has been maintained. From a natural capital perspective, liabilities represent values with reductions in assets, while expenses may present the effects of environmental degradation, the depletion of natural resources, or the impacts of unsustainable uses (Warnell et al., 2020). Value is created through the benefits of ecosystem services (Polasky & Daily, 2021). It can be reduced or destroyed due to damage to natural capital.

Armor (2020) asserts that shareholders' rights are rooted in corporate and commercial legislation and contracts, ensuring them the following: 1) the receipt of cash flows; 2) the exercise of control; 3) access to information; and 4) adherence to executives' fiduciary duties (Armour, 2020). O'Connell and Ward (2020) corroborate this perspective by conducting a literature analysis and categorizing the primary arguments in favor of shareholder primacy: 1) the agency perspective, 2) the control perspective, 3) the perspective of residual credits, and 4) alignment with social wealth.

In line with Friedman's (1970) perspective, shareholders initiate their relationship with a business by investing financial capital, and their rights are determined and recognized through the social contract, which ensures their entitlement to receive cash flows, exercise control, access information, and hold executives accountable for their fiduciary duties (Armour, 2020; Hirota, 2015). The right to receive cash flows primarily pertains to dividends, which are obtained through the maximization of wealth created by the business (Armour, 2020; Friedman, 1970; Hirota, 2015). Conversely, shareholders also assume the financial risks associated with the business (Armour, 2020; O'Connell & Ward, 2020).

When considering the same elements but from the perspective of the invisible shareholder, it can be inferred, based on the stakeholder theory (Freeman, 1984) and the dual-investor theory (Schlossberger, 1994), that the social contract needs to be updated (Mazzucato, 2022) to incorporate social and environmental concerns. This view entails considering the concept of a natural social contract between businesses and society (Huntjens, 2021). Under the premise that natural capital is derived from natural resources regarded as society's natural heritage (UN, 1972; UNESCO, 1972) and that natural capital contributes to the value creation of businesses (Capitals Coalition, 2016; Houdet et al., 2020), society would assume the role of an invisible shareholder by providing natural capital to businesses.

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Regarding the rights associated with society as an invisible shareholder, Grunebaum (1987) contends that every community member should have a say in business decisions concerning the use of natural resources. Mazzucato (2022) supports this perspective, stating that elevating stakeholders to the status of shareholders grants them genuine financial and political involvement in the capitalist system. Moreover, challenges related to social issues are more likely to yield optimal solutions when approached through the lens of social values (Dmytriyev, Freeman, & Hörisch, 2021).

The right to information is advocated by Brauman et al. (2020) as a crucial element that can contribute to driving changes in attitudes and behaviors, alongside political reforms, making these elements essential for preserving biodiversity and ecosystems. Concerning the risks associated with the invisible shareholder, it is worth noting that although decisions are often focused on the short term, the social and environmental impacts can have long-term consequences for society (Unerman et al., 2018). The outcomes of business activities and their effects on society can reverberate for future generations (Agwu et al., 2022).

Donaldson and Preston (1995) emphasize that stakeholders are influenced by business activities and, in return, expect to receive benefits. Nevertheless, the rise in share prices does not benefit society evenly, as research indicates that the wealthiest 10% of the population owns 81% of shares, while the poorest 80% only hold 9% of company shares (Pargendler, 2016). O'Connell and Ward (2020) also note that, apart from shareholders, other stakeholders do not receive contractual income from companies.

The literature highlights various aspects of business contributions to society, as well as the interrelated nature of these contributions. Businesses contribute to society through tax revenues, social gains, employee salaries, remuneration of equity for shareholders, and remuneration of third-party capital (Hirota, 2015; O'Connell & Ward, 2020). However, these contributions are often interconnected. For example, employees invest in human capital, expecting future returns through their salaries (O'Connell & Ward, 2020). Additionally, issues related to tax avoidance and taxation systems can affect the actual contribution of businesses to society (Mazzucato, 2022).

Lakhal et al. (2023) argue that corporate boards should not only focus on policies for maximizing shareholder wealth but also develop effective environmental and social policies, such as reducing emissions, minimizing waste, and adopting renewable energy sources. In terms of financial reporting, Quattrone (2022) suggests adding a line in the value-added statement to reflect the value "given back" to nature. Costanza et al. (2017) propose the concept of common investment and common use, which can be based on Common Assets Trusts (CATs), institutions that assign ownership rights to common assets on behalf of society.

Maintaining a positive relationship with stakeholders and, specifically, with society is crucial for business continuity. Without the consent or support of society, many businesses may struggle or even cease to exist (Baudot, Johnson, Roberts, & Roberts, 2020). Moreover, while the relationship with society is often viewed in the long term, a shareholder's financial capital investment can be terminated at any time when they choose to end their relationship with the company (O'Connell & Ward, 2020).

FINAL CONSIDERATIONS

Natural capital comprises natural resources that combine to provide a flow of benefits to both society and businesses. These benefits create value and are called ecosystem services (Costanza et al., 1997; Polasky & Daily, 2021). Therefore, in the context of the relationship between natural capital, business, and society, this study aims to propose the theoretical perspective of the invisible shareholder, taking into consideration society's underrecognized role as a supplier of natural capital to businesses.

The discussion begins by adopting the initial theoretical lenses of stakeholder theory and the dual-investor theory, which view society as a stakeholder contributing to value creation and, therefore, advocate for this value to be shared among all stakeholders (Freeman, 1984). It also extends this by suggesting that businesses should elevate society to shareholder status, granting them opportunity capital (Schlossberger, 1994).

Stakeholder theory enriches the discussion by emphasizing that businesses should consider the interests of all stakeholders, not just shareholders. However, it has limitations regarding the inclusion of natural capital within this framework. On the other hand, the dual-investor theory offers an alternative perspective on the relationship between business and society,

recognizing society's contribution to public infrastructure and proposing elevating society to the position of a shareholder, termed "opportunity capital." Nevertheless, this theory also falls short of addressing society's connection with natural capital. Notably, these theories do not delve into the relationship between business and society from an accounting standpoint.

Moreover, acknowledging natural capital as part of a company's assets and framing it as a "debt" owed to society reshapes the relationship between business and society beyond the conventional social license to operate. Establishing a formal social contract between businesses and society not only grants society an active role in sharing the generated value but also involves them in decisions that impact natural capital. This approach also ensures the right to access information and requires businesses to act sustainably.

In summary, this discussion advances the understanding of the relationship between business, society, and natural capital and how the latter contributes to the development of both society and businesses by creating value. It aims to shed light on this relationship in accounting by proposing a new theoretical perspective that views society not merely as a stakeholder but as a shareholder through their natural capital contributions.

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