

Value creation and appropriation in economic, social, and environmental domains: Recognizing and resolving the institutionalized asymmetries

Ritala Paavo, Albareda Laura, Bocken Nancy

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**Value creation and appropriation in economic, social, and environmental domains:
Recognizing and resolving the institutionalized asymmetries**

Abstract:

Value creation and appropriation are much-studied processes in business and management fields. However, both academia and business practice have traditionally focused on how value is created and appropriated in the economic context and by economic actors. This overemphasis on economic logic has created institutionalized asymmetries in managing the relationship between business, society and ecological environment. In this paper, we broaden the value creation and appropriation analysis along two dimensions: (1) the type of economic goods used to create value (private and club goods, public goods and common goods) and (2) value creation and appropriation domains (economic, social, and environmental). Building on this framework, we argue that there are several institutionalized asymmetries in the relationship between the goods used to create value and the domains in which the value is eventually appropriated. We point out the system-level tendency of value over-appropriation in the economic domain over the two other domains as well as value over-appropriation in the social domain over the environmental domain. We also discuss how existing organizational practices, such as corporate social responsibility, shared value creation, and sustainable business models, have attempted to overcome them, and reflect on the main critiques to these approaches. Finally, we identify potential business-based solutions to the institutionalized asymmetries and provide implications to research and practice.

Keywords: Value creation; value appropriation; economic goods; institutionalized asymmetries; sustainable business models

1. Introduction

“Today’s economy is highly destructive of natural and social capital, and is characterized by large and growing gaps between rich and poor” (Elkington, 2013, pp. 10).

Our societies are confronted with complex grand challenges related to ecologic and social problems, and resolving those would require decisive, collective, broad-based, and robust action (e.g. Ferraro et al, 2015). Relatedly, Turnpenny et al. (2009) refer to sustainable development as an “über-wicked problem” characterised by the following: uncertainty; inconsistency of needs, preferences, and values; an unclear sense of consequences or of the impact of collective action; and fluid, heterogeneous, pluralist participation in problem definition and solving. Indeed, among the growing calls for sustainability, there are increasing calls to understand the role of different actors – or in other words their agency – that is required to tackle the grand challenges we are facing (Garud & Gehman, 2012; Koistinen et al., 2020; Sinha et al., 2020). In this study we critically assess the roles of various actors in both upholding as well as potentially resolving the grand sustainability challenges we are facing, with a particular focus on the role of business actors. We are particularly interested in how value created and appropriated including multiple stakeholders and across multiple domains: what are the main asymmetries involved, and what are the most promising solutions to those asymmetries from the viewpoint of business-driven agency?

Several authors have recently highlighted how value is created and appropriated by firms, their suppliers, the employees, the government, and other stakeholders (Lepak, Smith, & Tylor, 2007; McWilliams & Siegel, 2011; Bridoux & Stoelhorst, 2014, 2020; Garcia-Gastro & Aguilera, 2015; Tantalo & Priem, 2016; Volschenk, Ungerer, & Smit, 2016). Both processes—*value creation* and *appropriation*—involve multiple stakeholders, and analyses of these processes need to take these stakeholders into account in order to be rigorous and pragmatic (Garcia-Gastro & Aguilera, 2015). In classic economics theorizing, value creation and appropriation have focused on the economic interaction between the firm and its immediate value chain partners (Brandenburger & Stuart, 1996). The recent extensions incorporate a multi-stakeholder view (Stubbs & Cocklin, 2008; Bocken et al., 2013; Bridoux & Stoelhorst, 2014, 2016, 2020; Garcia-Gastro & Aguilera, 2015), showing the diversity of stakeholders embedded in these processes. Such theorizing has been especially explicit in including relevant “social” actors to the firm, such as employees, managers, and the government. However, voices within and beyond stakeholder theory increasingly suggest incorporating an even broader set

of actors as well as “non-actors” to the analysis of value. These include suggestions to incorporate non-human stakeholders, such as the environment at large (Starik, 1995; Phillips & Reichart, 2000; Bocken et al., 2013; Stubbs & Cocklin, 2008), as well as other non-actors, such as societal principles, communities without a voice, and future actors (Meyer & Jepperson, 2000; Bocken et al., 2013; Stubbs & Cocklin, 2008).

Previous research has also made serious attempts to understand the different stakeholders involved in value creation and appropriation. For instance, studies in stakeholder synergy (e.g., Tantalo & Priem, 2016) and stakeholder-oriented business models (Freudenreich et al., 2019) argue that value creation can have positive-sum implications across stakeholder groups. However, recent empirical analysis (Garcia-Castro & Francoeur, 2016) shows that, when the analysis is conducted from an economic perspective only, it is rather difficult to find support for investments to non-economic stakeholders (see also Fleming & Jones, 2013; Crane et al., 2014). This is supported by a wealth of analyses and critiques that suggest that economic actors are over-appropriating value in contrast to other stakeholders and, by doing that, are causing negative externalities to both society and the environment (Banerjee, 2008, 2010; Shevchenko et al., 2016). Therefore, economic logic to value creation and appropriation is still perceived as the dominant model in the global production and policy.

Building from these insights, we argue that value creation and appropriation analyses need to be broadened even further beyond the current multiple-stakeholder approach (Jensen, 2002; Freeman, 2010; Harrison & Wicks, 2013; Garcia-Castro & Aguilera, 2015; Bridoux & Stoelhorst, 2016; Tantalo & Priem, 2016) and multi-level view (Lepak et al., 2006), while searching for the tensions between value creation and appropriation (Albareda, Ritala & Bocken, 2015; Oskam, Bossink, & De Man, 2020). There are efforts in this direction by scholars operating at the intersection of the fields of business and society. In the last decades, we have seen how different poles of discussion of triple bottom line value creation (Elkington, 1997), “blended” or “shared value” (Emerson, 2003; Porter & Kramer, 2011; Crane, Matten, & Spence, 2014), and “strategic corporate social responsibility” (Baron, 2001; Daudigeos & Valiorgue, 2011; McWilliams & Siegel, 2011), for instance, have suggested solutions for resolving the asymmetric linkages between business, society, and the environment. We also have greater understanding as to why (and why not) firms might act responsible or sustainably (Putrevu et al., 2012; Shevchenko et al., 2016). However, while theoretical frameworks existing that point out the need for creating and appropriating value across economic, social, and environmental domains (e.g. Volschenk et al., 2016), and across multiple stakeholders (e.g. Lepak et al., 2006; Garcia-Castro & Aguilera, 2015), we are still

missing an integrative framework which would point out the major institutional asymmetries in value creation and appropriation across the three domains, and which would examine the business-driven solutions to resolve these asymmetries. In the current study, we attempt to fill this gap via proposing an integrative theoretical framework.

Using a narrative literature review method that is suitable for exploratory conceptualization and theory-building (see e.g. Sovacool et al., 2018) and involves inclusion of relevant literature based on researchers' discretion rather than via a systematic protocol (Cronin & George, 2020), we first review briefly the existing literature on value creation and appropriation and expand this framework to incorporate the three domains of sustainable development (economic, social, and environmental) and the analysis of multiple stakeholders (Garcia-Castro & Aguilera, 2015). Our framework further adopts the classic discussion over "economic goods" (Samuelson, 1954) to demonstrate the differential role of private and club goods, public goods, and common goods (i.e., commons) in the economic, public and environmental domain respectively. In particular, the theory of goods helps us to understand the types of assets, resources, products, and services that are used to create value by various actors across which is further appropriated by the same or different actors (Albareda & Sison, 2020). Overall, we argue that "value creators" are often different from "value appropriators," a distinction that has major consequences for understanding the dynamics between these processes. We further attest that value creation and appropriation involve asymmetric processes that relate to the bargaining power and agency of actors appropriating value in different domains. We argue that profit-seeking firms create and appropriate not only economic value but also social and environmental value through their actions, both directly and indirectly, involving and affecting different stakeholders from the three domains. Given these linkages, we assert that there is an *inherent asymmetry* towards over-appropriation of value by economic actors. We develop a series of theory-driven propositions to summarize our arguments.

Overall, these above-mentioned asymmetries can be viewed as institutionalized norms and practices in the society (Scott, 2008) that follow economic logic of value creation & appropriation. Thus, we argue that *institutionalized asymmetries* are upheld over time and reinforced by institutions, actors, and activities that have both explicit and implicit interests in the status quo. This argument follows the recent research on business, society and CSR that have suggested the existence of constraints that the dominant neoliberal capitalist system pose on long-term sustainable transformation (Banerjee & Sabadoz, 2014; Levy & Kaplan, 2007; Scherer & Palazzo, 2011). We join these discussions by reinforcing their main arguments, but also by suggesting that the institutionalized asymmetries can be at least partially

accommodated by deliberate change agency of business actors toward sustainability. In this regard, our paper ends with a critical reflection on the commonly suggested approaches to business-originated solutions – corporate social responsibility, shared value, and sustainable business models – and their potential to overcome institutionalized asymmetries. Finally, we reflect the most potential business-based solutions to the institutionalized asymmetries using our theoretical framework which integrates the theory of economic goods in the context of economic, social and environmental domains.

2. Theoretical background: Transcending the Boundaries of Value Creation and Appropriation

2.1 Value Creation and Appropriation: The Economic Model

Value creation and appropriation are fundamental theoretical constructs in economics and management research (Bowman & Ambrosini, 2000; Brandenburger & Stuart, 1996; Lepak, Smith, & Taylor, 2007; Pitelis, 2009). Value in economics is formally defined as the level of willingness to pay of the customers (Brandenburger & Stuart, 1996; Garcia-Gastro & Aguilera, 2015). Further, economic value can be divided into two dimensions: value in use (the utility of a particular good and the satisfaction we obtain from the use of a commodity) and the exchange value (the monetary amount realized at a single point of time by the exchange of the good) (Bowman & Ambrosini, 2000; Lepak et al., 2007). Together, these perspectives describe the fundamental economic notion of “value.”

Value creation includes all the activities leading to an increase of value, which, in the end, is determined by the customers’ perception of the value (Bowman & Ambrosini, 2000). Further, Lepak, Smith, and Taylor (2007, p. 182) suggest that “value creation depends on the relative amount of (economic) value that is subjectively realized by a target user (or buyer) who is the focus of value creation—whether individual, organization, or society—and that this subjective value realization must at least translate into the user’s willingness to exchange a monetary amount for the value received.” New value is created by a new focal task, product, or service based on the economic exchange and the economic conditions of different actors who create value (the organizations, the individuals, and even society).

Value appropriation, on the other hand, refers to actors’ capturing of a portion of the value. In classic economic theory, the analysis of value appropriation has originally been described only based on small groups of value chain actors: the firm, the suppliers, and the customers (Brandenburger & Stuart, 1996). In recent research, Garcia-Castro and Aguilera

(2015) discuss the need to broaden the analysis of the number of stakeholders who are able to retain and capture the value, including employees, capital providers (shareholders) and management, and governments through taxes.

In the business-based value creation discussion, two main approaches have sought to cover these questions in the past years. One approach was adopted by Lepak, Smith, and Taylor (2007) when they proposed how value creation and value capture could be studied across different levels of analysis by the individual, the organization, and society. Their arguments were based on the analysis of how individuals or organizations create value when they develop new tasks, products, services, processes, or technologies. At the societal level, value is created when new programs and incentives for entrepreneurship and innovation are developed to promote economic value creation. Some new conceptualizations of value creation indeed go beyond economic, monetizable value, including higher moral and social value creation (Volschenk et al., 2016). A second approach has been followed by the analysis of how value is created and appropriated by multiple stakeholders (Carcia-Castro & Aguilera, 2015; Bridoux & Stoelhorst, 2016; Tantalo & Priem, 2016; Volschenk et al., 2016).

However, none of these approaches have thoroughly studied the analysis of value creation in the economic, societal, and environmental domains. We suggest that there is a major need for such a theory, which would combine the established economic rationale (e.g., Brandenburger & Stuart, 1996; Bowman & Ambrosini, 2000; Lepak, Smith, & Taylor, 2007) with stakeholder theorizing (Bridoux & Stoelhorst, 2014; Bosse, Philips, & Harrison, 2009; Freeman, 1984; Garcia-Castro & Aguilera, 2015; Tantalo & Priem, 2016) and, more broadly, with social and environmental domains.

2.2 Introducing Goods-Based Logic

To better understand how value is created and appropriated across different domains, we adopt the classic concept of *economic goods* (Samuelson, 1954), which can be seen as an overarching framework for economic value creation. Four main types of goods are analyzed in this framework: *private goods*, *club goods*, *public goods*, and *common goods*. This classification is based on two main dimensions of the nature of these goods as well as their effects on business and society: excludability of use and rivalry of consumption (see also Daudigeos & Valiorgue, 2011).

Private and club goods are those that are excludable from others and, thus, are subject to rivalry by private consumption (for analytical simplicity, we analyze them together here).

“Private goods” is a very large category of excludable goods subject to rivalry (Samuelson, 1954). They are paid for and therefore owned by consumers who exercise private property rights, preventing those who have not paid for the goods from using them or consuming their benefits. For instance, as a typical private good, an automobile requires the economic resources coming from its suppliers, but it also uses many environmental resources in the form of raw materials and so on. Club goods include private but shared systems, such as cinemas, sport clubs, and satellite television. They are also excludable but cause less rivalry as they are used by a group of consumers or appropriators (Buchanan, 1965). It is commonly acknowledged that, in order to produce private and club goods, businesses use resources and activities coming from social and environmental domains in addition to the economic domain. Thus, the nature of private and club goods is similar in terms of their excludability, and we group them together in our analysis for brevity.

Public goods are those that cannot be excluded by others; they cause no rivalry as their individual use does not typically reduce their availability to others (Samuelson, 1954). Examples of public goods include national defense, public education, and public infrastructure. Public goods are mostly provided by public actors, mainly governments or public agencies, and distributed to society at large (Olson, 1965). Public goods are available to everyone in a society, and when they extend beyond national borders, they may be known as global public goods. However, public goods might be subject to excessive use, resulting in negative externalities affecting all users: for example, the degradation of public health systems or public education.

Common goods are defined as non-excludable because, while it is impossible to exclude a person from their consumption, they involve rivalry as their use precludes their future use by others. Common goods are typically those that are available for everyone (and are thus non-excludable) but might be competed for (e.g., clean water, forests) (Hardin, 1968). It is not possible to prevent people from using them, but some actors (e.g., governments) can prevent others from using them. Common goods are mostly different from public goods because, at the local level, common-pool resources (e.g., a forest, a lake) are shared (via property rights) by local users and citizens (Ostrom, 1990). In contrast, at a global level, they are shared by multiple users without a clear property rights regime, but appropriation is limited as they can be overexploited and depleted. Many commons become *global commons* as their use extends beyond national boundaries; examples include the atmosphere, Antarctica, and outer space. These resources have historically been guided by the principle of the common heritage of humankind. Hence, they are based on the open access doctrine. Most common goods are

connected to natural ecosystems (e.g., water ecosystems, the atmosphere) and based on the environmental domain, although there are also common goods in the social domain, such as knowledge commons (e.g. on human DNA) (Albareda & Sison, 2020).

The value creation process involves sourcing different private, public, and common goods by which the firm and its stakeholders produce new products and services. In doing so, companies not only source from the economic domain (e.g., private goods from suppliers) but also from the environmental domain (i.e., natural resources and raw materials) and the social domain (i.e., individual creativity and knowledge, entrepreneurial ventures, industry structures and public services, law, and regulation) (Lepak et al., 2006; Volschenk et al., 2016). This creates asymmetric dynamics in relation to the social and environmental domains, as we will discuss next.

2.3 The Economic, Social, and Environmental Domains of Value Creation and Appropriation

Our approach to value creation and appropriation includes the three domains proposed by the United Nations (UN) based on discussions of sustainable development (Elkington, 1997; Johannesburg Declaration on Sustainable Development, 2002; Lehtonen, 2004; Pearce & Atkinson, 1993; UN, 2010, 2012). These are three interdependent and mutually reinforcing dimensions: economic development, social development, and environmental protection (Johannesburg Declaration on Sustainable Development, 2002). This threefold division has been gaining ground in many academic and practitioner discussions, including accounting (the “triple bottom line”; Norman & MacDonald, 2004), social value (“blended value”; Emerson, 2003), strategy (“shared value”; Porter & Kramer, 2011), multiple stakeholder value (Bocken et al., 2013; Stubbs & Cocklin, 2008), collective value (Donaldson & Walsh, 2015), and joint value creation (Bridoux & Stoelhorst, 2016).

The *economic domain* includes the analysis of market-based activities, including production, distribution, or trade, and consumption of goods and services by different economic actors. Economic transactions occur when two parties agree to the value or price of the transacted good or service, commonly expressed in a certain currency; however, monetary transactions are only a small part of the economic domain. The productive system has changed over time due to the introduction of innovation and technology changes in industrial relations. The actors in the economic domain include all those actors or shareholders that have the goal of generating economic or private goods in the markets; hence, they are organized by an

economic logic (i.e., firms, shareholders, and market stakeholders) (Samuelson,1954). Economic actors include individuals, businesses, organizations, and governments. Though, the economic domain is mainly based on private goods.

The *social domain* encompasses human activities related to social and public sustainability, including elements such as social equity, social justice, health, education, culture, community development, social capital, human rights, labor rights, peacekeeping, social responsibility, and community resilience. Value creation in social domain is often analyzed through the notion of social capital (Bourdieu, 1986; Coleman, 1988; Putnam et al., 1994; Putnam, 2000), defined as the networks of social relations characterized by norms of trust and reciprocity that can improve the efficiency of society by facilitating coordinated actions (Lehtonen, 2004). Putnam et al. (1994) viewed it as a set of horizontal associations between people—social networks and associated norms that have an effect on the productivity of the community. Coleman, (1988, p. 598) describes social capital as “a variety of different entities, with two elements in common: they all consist of some aspect of social structure, and they facilitate certain actions of actors—whether personal or corporate actors—within the structure.” The social actors or actors in the social domain involve all those actors that are working to create value for society (i.e., public administration, governments, citizens). Though, the social domain is mainly based on the growing of public goods. The *environmental domain* involves the natural environment and its long-term sustainability. It includes natural resources and natural ecosystems (e.g., air, water, food, biodiversity) which are mainly common goods. The environmental “actors” are fundamentally non-human and non-agentic (Starik, 1995). They include the natural environment and natural ecosystems (e.g., plants, animals, and natural resources). Traditionally, economists see these as raw materials or inputs. However, sustainable business model literature regards “the environment” (sometimes represented by environmental NGOs or governments) as a stakeholder (Stubbs & Cocklin, 2008; Bocken et al., 2013). Therefore, given its lack of “agency,” the environmental domain requires that human beings, citizens, and society design sustainable activities to meet long-term human needs while preserving the life-support system of the planet (World Commission on Sustainable Development, 1987; Sinha et al., 2020). Sustainability requires that human activity use nature’s resources at a rate at which they can be replenished naturally. In contrast, an unsustainable situation occurs when natural resources (i.e., the natural capital) are used at a faster rate than they can be replenished (UN, 2012). Human-induced climate change already influences living conditions, and this will increase if no adequate action is taken (Solomon et al., 2007).

3. Institutionalized Asymmetries in Value Creation and Appropriation

As value is created and appropriated in different domains and by different actors, inherent *asymmetries* are bound to emerge given the differences in bargaining powers and motivations of actors. Asymmetries take place when the actors whose resources are used to create value (in the form of goods) do not appropriate an equitable portion of the same value or, otherwise, get overexploited in the process. Overall, we conceptualize these as *institutionalized asymmetries that follow economic logic of value creation & appropriation, and thus uphold the imbalances between business and society*. Figure 1 illustrates the key points of our argument and acts as a starting point for the propositions that will be developed in the forthcoming sections. As illustrated in the figure, institutionalized asymmetries tend to highlight the potential over-appropriation in the economic domain at the expense of social and environmental domains, or the over-appropriation in the social domain at the expense of the environmental domain. In the following, we will discuss separately the institutionalized asymmetries in each of the three domains (economic, social, environmental), as well as link this to the different types of goods (private/club, public, common).

Insert Figure 1

3.1 Asymmetries in the Economic Domain and Role of Private/Club Goods

In the *economic domain*, value creation is understood as the generation of new private goods, including new tasks, goods, products, or services, which can be exchanged and used, with an amount paid by the user to the seller for the use of value in the markets (Lepak et al., 2007). Value appropriation dynamics, then, are based on competition (Lepak et al., 2007), including the use value and the monetary exchange of the product, service, or task. Value appropriation in the economic domain refers to making profit and to how it is divided between economic actors, including the firm and multiple stakeholders, such as customers, employees (i.e., receiving their salaries), shareholders or capital providers—owners—(i.e., receiving their interest and income), and even the government (i.e., social actors in the form of taxes) as documented by Garcia-Gastro & Aguilera (2015) or Bridoux & Stoelhort (2016). This competition includes the bargaining power of different value creators seeking to benefit from it. In this case, those actors who do not have bargaining power or an active voice (such as the natural environment) do not benefit from value creation unless joint responsibility is taken to give it a voice (e.g., COP 21 Paris climate conference).

Therefore, in the economic domain, there are inherent asymmetries where value (e.g. new private goods and services) is jointly created by using all types of goods (i.e., private, public, and commons) and across all domains and multiple stakeholders (Bridoux & Stoelhort, 2016) while the value is mostly appropriated by the economic actors (Volschenk et al., 2016). This is the case of the natural environment as a key input for producing private goods and services while the environmental domain and the natural environment do not benefit from value appropriation. There is also a similar asymmetric dynamic with public goods: in order to produce private goods and services, firms used public goods (e.g., public education to educate the workers or public infrastructure), although the social domain only benefits from it indirectly through tax systems.

***Proposition 1:** In the economic domain, institutional asymmetries relate to value creation in all three domains—the economic (firms, managers, shareholders, suppliers, employees), the social (public education, public infrastructure) and the environmental (natural resources and the natural environment)—while the appropriators of value are largely situated in the economic domain and sometimes indirectly at the social domain (government through taxes that might pay public services).*

In the following, we go deeper into the explanations of these asymmetries aiming to indicate how the institutionalized asymmetries that originate from the economic domain to other domains take place via production of private and club goods.

Overproduction, superfluous products, and overconsumption. In the economic domain, part of the persistent asymmetries emerge when businesses produce goods that individuals do not desire or need, leading to overproduction or superfluous production, facilitating some asymmetric business models that lead to overconsumption (e.g., high prices, social dumping, or environmental waste and pollution). In economics, overproduction (or oversupply) represents an excess of supply over the customer demand for products being offered to the market (Keynes, 1936). As a consequence of overconsumption, there might be a low-price problem increasing the stocks of unsold goods along with the possibility of generating unemployment and potentially economic crises and finally causing environmental degradation or externalities (Shrivastava, 1995). Furthermore, firms might adopt opportunistic and counter-productive behaviors. An example of this is “planned obsolescence,” where “shorter product lifespan benefits manufacturers directly and is therefore purposely built into the product’s design” (Bakker et al., 2014, p. 11). This happens purposely for financial gain and is different

from technical or legislative obsolescence. As a consequence, product lifetimes across product categories have been decreasing gradually over time (Bakker et al., 2014). France is the first country in the world to challenge planned obsolescence through legislation, and the EU has started to regulate durability (Maitre-Ekern & Dalhammar, 2016).

Bargaining power. A second important systemic constraint based in the economic domain emerges as bargaining power and information asymmetry. Companies use their bargaining power towards other actors in their network, including suppliers, consumers, or governments. This has been studied in economics when firms use their power on the markets to appropriate more economic value than suppliers and stakeholders (Bowman & Ambrosini, 2000; Bradenburger & Stuart, 1996). Examples include cases in which a business underpays groups of suppliers or employees.

Negative social externalities. In the social domain, the institutionalized asymmetries appear in the form of negative social externalities (Jones et al., 2016). This is the case when private goods create value that negatively affects society's wellbeing. Examples include businesses excluding groups within society by prohibitive pricing, violating human rights, generating negative health effects, and perpetrating tax evasion. In some cases, institutionalized asymmetries are related to specific industries and sectors that might affect public health or individual wellbeing, such as the tobacco, alcohol, and gambling sectors. These externalities generate external costs that are handled by the society (e.g., the cost paid by public health to solve lung cancer). Beyond that, other externalities appear due to the lack of capacity of society to capture increments of value created in private goods or when private actors do not pay taxes or evade capital. Hence, Garcia-Castro and Aguilera (2015) discuss the integration of government on the process of value capturing through their capacity to set up taxes.

Negative environmental externalities. At the environmental domain, institutionalized asymmetries emerge through negative environmental externalities—when creation of private goods contributes negatively to the natural environment (Shrivastava, 1995). Most of the time, the production of private and club goods might result in the exploitation and degradation of the natural environment. For instance, the Aral Sea has been drying up because of cotton production (Allwood et al., 2006) and irrigation (NASA, 2013). Furthermore, pesticides used for growing crops lead to collapses in bee populations (Henry et al., 2012), and waste plastics build up in the ocean, harming biodiversity (Deudero & Alomar, 2015). In 2017, United Airlines cancelled flights to Delhi because of severe air pollution, which would have harmed customers (Meza, 2017), showing the interconnectedness between business, environmental, and social issues. In sum, natural resources contribute to generate value in the economic

domain (via private and club goods). However, they are not included in the process of value appropriation as such and are often overexploited.

***Proposition 2:** In creating and appropriating value from private and club goods, institutionalized asymmetries emerge in all of the three domains: economics of overproduction and uneven bargaining power (economic domain), negative social externalities (social domain), and environmental externalities (environmental domain).*

3.2 Asymmetries in the Social Domain and Role of Public Goods

In the *social domain*, value creation relates to new value for society, including new social or organizational innovation that helps to improve human and societal wellbeing or higher standards of living for citizens. For instance, the UN's Sustainable Development Goals (SDGs) highlight "social needs including education, health, social protection, and job opportunities" (UN, 2017). Thus, we see how social value is created by actors such as governments, public administration, or civil servants. Society itself serves as the core source of social value creation by providing related values, norms, and institutions (Lepak et al., 2007).

However, in many cases, in order to create new social value, private actors also participate, and private goods are needed (i.e., when public education is created, it might use natural resources as raw materials and private goods to build the schools) (Kroeger, & Weber, 2014). Social businesses might provide services such as health care, nutrition, education, and sanitation and build up social value (Bocken et al., 2016a; Di Domenico, Tracey, & Haugh, 2010). Although actors would situate in the public domain, such as public administration's organizing of public services, private companies are typically contracted to provide inputs to the social value creation. There are also public-private projects and partnerships (Caldwell et al., 2017) by which private firms and suppliers might be involved in building public infrastructure. Beyond that, the natural environment might also be a source of social value, public goods, or services. Natural resources might be used to generate public services and goods (e.g., natural resources are used to produce public goods such as defense weapons, public libraries, or public hospitals) (Kroeger & Weber, 2014).

Social value is mostly appropriated in a societal domain when citizens, communities, and other societal stakeholders benefit from the emergence of new public goods or services, such as public education, public, or public universities. For example, when a new public good, such as a hospital, is created, the value is created by public and private actors including firms.

They use different goods, such as natural resources and social knowledge; however, this value is mostly captured by society and also by private firms that have taken part into such projects.

Sometimes, economic actors also appropriate value from public goods and services (e.g., as Volschenk et al. [2016] demonstrate, companies appropriate from value created in partnerships with technological and societal suppliers, even society and governments). In terms of value appropriation, any public infrastructure often enables economic actors to appropriate value through privatization. However, the natural environment typically is over-exploited by both economic and social actors.

Proposition 3: *In the social domain, institutional asymmetries relate to value creation in all three domains, mostly the social (society, government, public administration), the economic (companies, suppliers, managers, shareholders, employees), and the environmental (natural resources and the natural environment), but the appropriators of value are situated mainly in the social domain (society and citizens) and sometimes in the economic domain (e.g., contracted suppliers).*

These asymmetric dynamics originating from the social domain are linked to different institutionalized asymmetries: the production and appropriation of public goods by private actors, which we will discuss below.

Abuse and over-exploitation of a public good for private self-interest. In the social domain, institutionalized asymmetries appear when private actors use and over-exploit public goods (e.g., education, public services) in the for-profit market (economic domain) for private self-interest (Olson, 1965). Volschenk et al. (2016) and Lepak et al. (2007) explained these processes by which business firms use public goods to create value in the economic domain: for example, how public education is crucial for companies to attract talent and generate innovation. Economic value is created in cooperation between business firms and by multiple partners; therefore, multiple stakeholders may participate in the process of value appropriation (e.g., governments through taxes) (Garcia-Castro & Aguilera, 2015). However, in many cases, the public goods used privately are not distributed to society. This is due to the non-rivalry and non-excludability of the use of public goods or services (Olson, 1965). In that sense, group size effects and monitoring or control of members' behavior explain why, in large groups, firms and private actors use and over-exploit public goods.

The teamwork and free-riding problems. Business might also appropriate and use public goods without paying for them. As an example, private actors appropriate public goods, such

as education, traffic infrastructures, and health services, using them to receive the monetary outcome of public goods without giving back to society (Buchanan, 1965). Hence, governments invest in society, generating public education, health systems, and culture. These public goods results in more knowledgeable and educated workers that generate value for their companies. This value is not always captured by society in order to benefit from the workers' participation in economic value creation. This problem can be termed the team production problem or the free-riding problem. The team production problem has been recently analyzed by Bridoux and Stoelhorst (2016) in relation to firm stakeholder value, reframing Olson's (1965) problem of collective action and Alchian and Demsetz's (1972) dilemma of the team production problem. We see how, in situations of market societal interdependence, firms face a public-good dilemma. They can contribute to joint collective value creation, or alternatively, they can act based on economic self-interest and fail to contribute to the public good (Bridoux & Stoelhorst, 2020).

The free-riding problem explains why private actors over-use public goods, which results in over-exploitation and under-provision of public services (Olson, 1965; Stroebe & Frey, 1982). Many publicly provided goods (e.g., highways, schools, public safety) have the qualities of non-excludability and, therefore, face the problem of free riding, which undercuts the supply of goods. Free riding is an economic problem, described by the Pareto inefficiency (Pareto, 1906), which leads to the non-production or under-production of a public good. According to Pareto (1906), providing public goods is difficult because governments do not have the required information and people tend to underestimate the value of public goods. The definition of the free-rider problem is based on the question of how to limit free riding and its negative effects in these situations of collectively provided goods.

Corruption. In the social domain, institutionalized asymmetries appear under the negative relationship between companies and the use of public goods. This might appear if private actors in the public domain or public agents in the public domain adopt a form of corruption and private influence over public servants. Corruption affects the agency of politicians and public services; however, the cause might be based in the private sector (Putrevu, McGuire, Siegel, & Smith, 2012). Offering bribes and other forms of corruption with the goal of gaining influence over public servants or politicians is a major challenge in many countries, which has pursued to overcome via corporate social responsibility (CSR) initiatives (Crane & Matten, 2016).

Privatization of public goods. A second asymmetry or problem related to public goods emerges through the privatization of public services and goods. In this case, privatization

means that services (i.e., health or education) previously distributed to society by public companies or public servants are now distributed among private groups. Once private actors adopt this role, it is very important to have regulation and contracts that ensure equitable distribution among citizens.

Public goods and negative environmental externalities. There are also such institutionalized asymmetries with public goods; these emerge as negative environmental externalities. Natural resources become part of the process of generating public goods (e.g., water for irrigation in the Aral Sea; NASA, 2013), but they typically do not receive any value back—on the contrary, value is detracted. There are important examples of how the process of public goods creation generates degradation of the natural environment. For instance, in the case in traffic infrastructures, the overuse of natural resources is not returned to them.

Proposition 4: *In creating and appropriating value from public goods, institutionalized asymmetries appear in all three domains: in the economic domain, as abuse and over-exploitation of a public good for private self-interest, teamwork, or the free-riding problem; in the social domain, corruption or privatization of public services; and in the environmental domain, through negative externalities caused by the creation of public goods.*

3.3 Asymmetries in the Environmental Domain and Role of Common Goods In the *environmental domain*, value creation involves the generation of new value for the natural environment (e.g., regenerative agriculture initiatives; <http://regenerationinternational.org>). Beyond that, value might be created indirectly by improving the conditions of the natural environment as a result of the launch of a new public regulation (e.g., on climate change), private good (e.g., on waste-to-value products), a new public good or service (e.g., climate change regulation), or even through global common regimes (e.g., the Antarctic Treaty [World Commission on Environment and Development, 1987]). Furthermore, the environmental domain benefits from new renewable energy sources; value is not “destroyed,” in contrast to non-renewable sources. The value generated by the natural environment and natural ecosystems is mainly appropriated by economic actors (e.g., companies use natural resources) and societal actors (e.g., when citizens enjoy the use of natural resources individually or through public services). The main challenge is when the use of common goods finally becomes the overuse and overexploitation of natural resources.

Proposition 5: *In the environmental domain, institutional asymmetries relate to value creation directly from the natural environment (natural resources and natural ecosystems) and only indirectly from the social domain (in the form of regulation) and the economic domain (e.g., in the form of recyclable goods or CO2 emissions reduction). Value is appropriated mainly by actors in the economic domain (firms and shareholders) and the social domain (society, governments, and citizens).*

A further examination of common goods provides the root causes for institutionalized asymmetries witnessed in the environmental domain.

The tragedy of the commons. The exploitation of natural resources is still a widely accepted business practice. In the economic domain, some companies build their whole business around exploiting natural resources (e.g., the oil industry, the forestry industry, the mining industry). Most of these natural resources might be part of local or global commons. Indeed, commons are often negatively affected by economic and social actors as they can be polluted or depleted (Olson, 1965). Fish stocks in oceans are a clear example. These resources are often appropriated for private use. Private actors or economic users may withdraw these resources to secure short-term gains without regard for the long-term consequences. The problem has been described as the Tragedy of the Commons (Hardin, 1968), referring to parties taking advantage of the free availability of common resources without considering external costs, which can lead to overconsumption and exhaustion by society. More firm-related problems appear when businesses contribute to the tragedy of the commons by privatizing common resources or promoting the (over)degradation of common goods in for-profit markets. Hence, the open access of common-pool resources (e.g., water sources, fishing grounds) and global commons leads to over-exploitation of natural resources through the free-riding problem. Private actors can exploit common goods, benefiting from them without payment. There is a clear imbalance when companies use natural resources in a way that affects collective economic outcomes negatively (Ostrom, 1990).

Collective action failure, policy, and regulatory limitations. In the case of the social domain, institutionalized asymmetries appear for common goods when society, governments, and citizens and private actors are not able to generate collective action in order to co-manage local and global commons with the goal of avoiding their degradation (Ostrom, 2010; Albareda & Sison, 2020). In that sense, we have seen how governments have tried to govern and manage global commons challenges, such as climate change, for many years; however, progress and success have not been sufficient (Stavins, 1997). Domestic policy instruments, regulations, and

international agreements have not become efficient enough to control and sufficiently reduce CO2 emissions. In that sense, Ostrom (2012) argues that the management of global commons goes beyond market failure and regulatory instruments, requiring the development of polycentric governance systems.

Over-protection of natural resources at the expense of social and economic domain. In the case of the environmental domain, institutionalized asymmetries appear when value is over-appropriated at the environmental domains by common resources, at the expense of the economic and social domain. In that sense, these has been many discussions about how climate change management can negatively affect societal needs and economic markets. However, this is a very rare case in the current dynamic of institutionalized asymmetries, and typically it is not a problem that environmental domain is “overprotected” – as illustrated in the discussions thus far.

***Proposition 6:** In creating and appropriating value from common goods, institutionalized asymmetries appear mostly in the economic and social domains. This is explained as the tragedy of the commons problem, in which the environmental domain is overexploited by private actors, and the social domain suffers from collective action failure and policy and regulation limitation.*

Insert Table 1

4. Discussion: Resolving the Institutional Asymmetries

In this study, we have integrated the discussion of value creation and appropriation in mainstream management and economics literatures with business and society field, aiming to understand the institutionalized asymmetries that influence business firms. We have proposed a comprehensive framework of analysis of value creation constraints, including the debate of different sustainable development domains and economic goods. In that sense, we have explained the main asymmetries emerging between the economic, social, and environmental domains involving private, public, and common goods.

Policy initiatives that attempt to reduce the asymmetries of economic overexploitation of social and natural resources are well documented but are only slowly starting to deal with more difficult challenges, such as planned obsolescence and sustainable consumption (Mont &

Dalhammer, 2008; Maitre-Ekern & Dalhammar, 2016). However, we argue that, in addition to this it is beneficial to examine the root cause of the asymmetry problem: economic actors causing asymmetries through their activities. Economic actors have a lot of resources as well as abilities to innovate solutions to resolve the problems they have been partially causing (e.g. Porter & Kramer, 2011; Malen & Marcus, 2017). For these purposes, the role of businesses and business practices needs to be at the center of this discussion.

4.1 Existing Approaches in Resolving the Asymmetry Problem

In the literature, business-related solutions to the asymmetry problem have been discussed under the umbrella of CSR (e.g., Lankoski, 2009; McWilliams & Siegel, 2010; Putrevu et al., 2012) as well as more recent discussions of shared value (Porter & Kramer, 2011), conscious capitalism (Mackey & Sisodia, 2014), and finally, sustainable business models (e.g., Boons & Lüdeke-Freund, 2013; Bocken et al., 2014, 2015; Ritala et al., 2018). In any of these business-originated solutions, the fundamental aim is to improve on the inherent asymmetric linkages between value creation and appropriation across the social, economic, and environmental domains. Earlier studies have found that there are different paths to reduce the asymmetries. For instance, Lankoski (2009) found that there are different outcomes for firms that apply CSR to reduce negative externalities, than to increase positive externalities (the former was more beneficial economically). Further, some authors suggest that there are differences in how businesses can treat responsibility either as reducing harms that the business creates, or actively seeking to find synergy between economic and social value (Porter & Kramer, 2011). Accordingly, we can analytically separate two distinct, yet interrelated mechanisms that businesses can use to improve the alignment of value creation and appropriation: 1) Business strategies that help to demonstrate how firms and economic stakeholders (shareholders, managers, supplier, customers) become enablers of *asymmetry-reducing* processes across the economic, social, and environmental domains; 2) Business strategies that seek to generate synergy-enabling processes across the economic, social, and environmental domains and multiple economic, social, and environmental stakeholders searching for *symmetry-increasing* value creation and appropriation linkages.

First, traditional CSR relates to voluntary initiatives by businesses to improve social and environmental issues. Fundamentally, this relates to reducing or compensating the asymmetries of over-appropriation by businesses vs. society and the natural environment. By engaging in human rights, labor standards, reporting, community work, and environmental

protection schemes, firms “give back” to stakeholders and domains that otherwise suffer from negative externalities. There is some evidence that CSR is linked to financial performance (e.g., Lankoski, 2009; Wang et al., 2016), but this linkage remains highly contested (Fleming & Jones, 2013; Crane et al., 2014). Therefore, traditional CSR initiatives can be viewed as mostly business-driven mechanisms used to *reduce asymmetries* between value creation and appropriation in the economic, social, and environmental domains. In this sense, CSR studies have also elaborated on the new political role of business in society (Scherer & Palazzo, 2007; 2011) framing broader societal and political developments linked to the concept of corporate citizenship (Crane & Matten, 2005). This debate also includes the critical approach to CSR (Banerjee, 2015) showing the limits of CSR to develop more democratic forms of global governance. Therefore, main solutions might emerge on new forms of cross-sector partnerships, multi-actor and multi-level CSR-oriented governance initiatives fostering new discussion on networked CSR governance (Albareda & Waddock, 2018).

Second, new framings of the role of business in society include concepts such as shared value (Porter & Kramer, 2011) and conscious capitalism (Mackey & Sisodia, 2014). Common to these approaches is their contrast to traditional CSR (see e.g., Porter & Kramer, 2011, for discussion). These approaches advocate an active approach to seek synergies across triple bottom line issues—i.e., the economic, social, and environmental domains. The key idea is to find business cases where the creation of economic value also increases social and environmental value. Thus, by creating more economic value, more social and ecological problems can be solved, in effect creating a virtuous cycle. As opposed to seeking asymmetry-reducing solutions, these approaches suggest *symmetry increases* between economic, social, and environmental issues. While there is a lot of case-based and other evidence regarding such solutions, there are also critiques of these approaches as naïve or overly simplistic regarding their assumptions of the role of businesses (see e.g., O’Toole & Vogel, 2011). The question remains whether businesses can actually scale social and economic value creation together or whether institutionalized asymmetries in resources or externalities to unaccounted stakeholders nevertheless emerge. Given the strength of the institutionalized asymmetries between economy, society and environment (e.g. Shevchenko et al., 2016; Malen & Marcus, 2017) the ideal of shared value –type of system-level synergy remains difficult to grasp.

Third, sustainable business models combine both *symmetry-increasing* and *asymmetry-reducing* mechanisms. First, certain sustainable business models could be seen to increase symmetries. Think about the company Patagonia’s focus on regenerative organic agriculture—through its food business, it was to create new standards for agriculture that could leave the

earth in a better state than before (Patagonia Provisions, 2017). Similarly, the idea of a “net positive business” is that it could create a new standard for businesses to ensure a resilient and regenerative world (Hollender, 2015). On the other hand, business models could reduce asymmetries by pursuing, for instance, renewables or fair prices in value chains (e.g., fair trade). To build more evenly distributed value creation and appropriation through sustainable business models, companies could structure themselves for long-term competitiveness and sustainability by defining their purpose and opportunities for value creation and appropriation across the three domains of society, environment, and economic value and including a long-term reciprocal process of value capture (Stubbs & Cocklin, 2008). New forms of organizing are emerging, such as benefit corporations (<http://www.bcorporation.net>), with the intent of ingrained sustainability as part of their core definition of business vision and architecture. However, businesses are also pursuing sustainability without a change of the fundamental corporate structure, though their business models (e.g., Bocken et al., 2014). Hence, value creation and appropriation can be studied and linked to the emergence of sustainable business model innovation, which requires a fundamental shift in the purpose of business and in almost every aspect of how it is conducted (Bocken et al., 2013; Stubbs & Cocklin, 2008; Schaefer, 2004). It involves a re-conceptualization of the purpose of the firm and the value creation and appropriation logics (Bocken et al., 2013) and the relationship and dynamics with economic, social, and environmental stakeholders (Stubbs & Cocklin, 2008). However, sustainable business models—depending on the model—are subject to broader institutionalized asymmetries. Very seldom can economic production fully accommodate externalities, and even if the new sustainable business models are an improvement upon existing ones, they might still have unintended macro-level effects across the social and environmental domains. In that sense, sustainable business models can be connected to different domains, economic, social and environmental, sometimes with more focus on one area than another (Boons and Lüdeke-Freund, 2013; Bocken et al., 2014). For instance, the increasingly prevalent circular economy business models focus on environmental sustainability and excess waste reduction (Manninen et al., 2019; Hofmann, 2019; D’Amato et al., 2020; Ferasso et al., 2020). Moreover, each sustainable business model is subject to institutionalized asymmetries. For example, business models focused on electric vehicles might solve some environmental issues (move away from petrol) but at the systemic level, these might still sustain a fossil fuel economy if electricity is generated through coal. Car sharing may reduce the number of cars on the road, but can would also sustain other infrastructures such as telecommunications infrastructures through reliance on apps (Lelah et al., 2011; Boons and Bocken, 2018). Table 2 summarizes our arguments as

it comes the existing approaches as pointed out in the literature contribute to resolving institutional asymmetries.

Insert table 2

Based on the various solutions available, we now turn the discussion to known examples of how businesses can create value from different types of goods that are, in ideal cases, aligned with the interests of actors in the economic, social, and environmental domains.

4.2 Business-based Solutions to Institutionalized asymmetries: Goods-based Logic

In this section, we analyze the potential business-based solutions aiming to solve the institutionalized asymmetries (see Table 1) using the goods-based logic. For *private goods*, the main institutionalized asymmetries refer to overproduction, planned obsolescence and overconsumption at the economic domain, negative social externalities produced by business at the social domain, and negative environmental externalities at the environmental domains. Based on these constraints, at the economic domain, optimal business-based solutions emerge when a business creates private goods that individuals need to use in their daily lives (e.g., foods, education, health, work-life balance) taking into account the needs in public domain and how value can be distributed. In this sense, institutionalized asymmetries can be solved through the growing attention to ethical consumption (Vitell, 2003) and sustainable consumption and production (Tukker et al., 2008) connected to stakeholder interactions (Hahn & Albert, 2017).

In the case of the social domain, a main solution for institutionalized asymmetries is the growing development of social business (Yunus, 2007) that combines societal goals with entrepreneurial spirit integrating two main paradoxical and hybrid logics, the market and the social logics (Battilana and Dorado, 2010). Social businesses may use the power of business to help communities or regions emerge from poverty through contributions in areas such as education, health, energy, and sanitation (Bocken et al., 2016a). These could also be seen as examples of “shared value,” where economic and social value go hand in hand. The main challenge would be to measure the optimal or balanced value creation for private goods in synergy-enabling processes across the economic, social, and environmental domains. We refer to this as the optimal value creation strategy, which permits us to evaluate which need for new private goods is real and analyze this need in the economic, social, and environmental domains. Examples of sustainable business models seeking to resolve some of these asymmetries in private goods include car-sharing models moving away from ownership to deliver the

availability and usage of a car only when needed and sufficiency-driven business models pursued by companies such as Vitsoe (furniture) and Patagonia (outdoor gear), which focus on selling “only what is needed” (Bocken & Short, 2016). At the environmental domain, institutionalized asymmetries can be overcome with the development of businesses with natural environment strategies (Hart, 1995), as well as sustainable business (Bansal, 2005). In this case, sustainable businesses consider how value is created and distributed without over-appropriation of natural resources (e.g. circular business or waste management). For example, circular businesses focus on slowing, closing and narrowing resource loops to significantly reduce resource demands (Bocken et al., 2016b; Manninen et al., 2018), while generating a competitive advantage, contributing to wellbeing and wealth (Ellen MacArthur Foundation, 2012). First and foremost companies would make products to last, support repair and reuse and mitigate over-consumption (slowing loops); after multiple reuses of products and components, materials are recycled (closing loops); and for each product the use of resources is minimized in design and manufacturing processes (narrowing loops) (Bocken et al., 2016b). In the case of *public goods*, firm-related problems are visible in all of the three domains. Most of the public goods are created by public actors: citizens pay their taxes, and public agencies and government create the goods. Therefore, society at large is designed to be the main appropriator of public goods. Systemic constraints include abuse and overexploitation of public goods at the economic domain, corruption and privatization and the social domain, while negative externalities emerge at the environmental domain. Main business solutions appear at the economic domain when business contributes to their knowledge and capabilities to the generation of improved public goods. This is for instance the case of Tesla’s open-source strategy to expand electric mobility. In this case, institutionalized asymmetries can be solved with transparency and traceability. Furthermore, in the case of the social domain the main solutions enhance business partnering with public actors to improve public goods through public-private partnerships. Businesses currently contribute with their knowledge and capabilities through public-private partnerships to the generation of improved public goods contributing to social welfare. Some businesses may be particularly established to serve health or education purposes and, in this way, contribute positively to public goods. Examples of business models seeking to resolve some asymmetries between the three domains and public goods are those businesses that work on improving education for disadvantaged groups in society, on expanding the impact of public goods, on helping society to avoid the overuse of public goods, on limiting free-riding problems, on reducing corruption and bribes, and on helping private actors make fair contributions to the public good. We see this in some B

(Benefit) Corporations¹ (Stubbs, 2016). Resources for Educators helps professors, students, and administrators in universities across the world to change the way business is taught, helping students to do business as a force for good and creativity. Education for Good (Hong Kong) offers responsible training programs in social entrepreneurship to foster social innovation. We also see this trend in the health sector. Active Health Group (Rotterdam) is a B corporation that aims to improve occupational health by changing behavior and empowering individuals to create added social value, and the Well Clinic (San Francisco) helps to make emotional health a priority, contrasting it to traditional psychological chemical therapy. In the case of environmental domain, business-based solutions contribute to the generation of positive environmental impacts of public goods. To overcome the institutionalized asymmetries embedded in public goods production, business-led initiatives that promote ecosystem services and biodiversity initiatives are potentially helpful.

For *common goods*, main institutionalized asymmetries are the tragedy of the commons at the economic domain, lack of collective action and policy failures at the social domain, and overprotection of the natural resources at the environmental domain. At the economic domain, it is possible for business organizations to enhance common goods through their operations (e.g., watersheds, forests, wildlife) as business-based solutions. The main challenge is that this positive behavior is not rewarded (although negative behavior, such as oil spills and deforestation, may be prosecuted or fined) while the benefits accrue partly to those not contributing to the benefits (e.g., businesses that abuse natural resources). In this context, the growing of commons organizing (Albareda & Sison, 2020) shows how communities are creating novel organizational design based on collective forms of commons goods production, distribution and ownership. These new commons organizing are emerging in our cities to generate entrepreneurial solutions the use and share common goods. These solutions can take form of enterprises build by communities producing collective goods (e.g., knowledge commons and open source communities), or social enterprises build by urban communities (e.g., community-based energy cooperatives, food commons and community organic gardens). However, some sustainable businesses seek to contribute positively to the environment and society, such as the DIY company Kingfisher, who, through its “net positive” initiative, seeks to do more “net good than bad” (e.g., plant more trees than it takes for its products). Another example is Patagonia, who, through their new food business, aim to increase wild salmon populations, thus taking an environmental stewardship role. Institutionalized asymmetries can

¹ <http://bcorporation.eu/> (Last accessed 23 November 2017).

be solved through the analysis of responsible supply chain management (e.g. Seuring & Mueller, 2008). At the social domain, business-based solutions appear when companies adopt collective action to manage common goods. Cross-sector interactions and commons organizing are the main solution to institutionalized asymmetries to common goods in the social domain. Finally, business-based solutions are also found at the environmental domain when companies enhance the regeneration and long-term use of common goods (e.g. sustainable agriculture). Institutionalized asymmetries can be overcome with the management of business and global commons (e.g. water ecosystems). We find examples in circular economy (Ellen MacArthur Foundation, 2012; Hofmann, 2019; Centobelli et al., 2020; D'Amato et al., 2020) as spaces where business co-manage global commons with other actors.

Table 3 summarizes our arguments on the potential for companies to increase symmetries and reduce asymmetries in the three domains and in the context of different types of goods. We also recognize key mechanisms of how institutionalized asymmetries might be overcome for each of these solutions. In addition, we include some additional known examples of such solutions. These examples represent a host of business practices, of which some are more traditional CSR (e.g., sustainable forestry initiatives), some represent the ideals of shared value (e.g., wide-reach educational tools), and some use more diverse configurations of sustainable business models.

Insert table 3

5. Theoretical implications and future research

This work has provided a conceptual starting point for identifying the institutionalized asymmetries in the field of value creation and appropriation across the environmental, economic, and social domains for private, public, and common goods. At this stage, it is important to acknowledge that our work is limited by its conceptual nature, and therefore more empirical research is needed to assess the prominence of our propositions and the overall framework from different angles. Furthermore, our model involves assumptions regarding the general tendencies of value creation and appropriation and institutional asymmetries, which might not hold in particular contexts and circumstances. In the following we discuss the implications of our study for several literature streams and provides future research

opportunities that can complement and build on the conceptual framework developed in this study.

First, our study contributes to the literature of value creation and appropriation among multiple stakeholders (Bowman & Ambrosini, 2000; Bradenburger & Stuart, 1996; Bridoux & Stoelhorst, 2016; Garcia-Castro & Aguilera, 2015; Harrison & Wicks, 2013) by expanding the analysis of value creation and appropriation dynamics, including the three domains of sustainable development. We argue that value cannot be only studied in the economic domain; instead, it must be accomplished in all the three domains and involve multiple stakeholders. Hence, the analysis of value creation involves a complex framework that includes three domains, multiple stakeholders, and different economic goods. The nature of the goods (excludability and rivalry) has been shown to affect their social issues, as well as business-related possibilities to address those (Daudigeos & Valiorgue, 2011). Our study complements these insights with a broad and multidisciplinary framework of how value creation and appropriation operate. These insights can provide stakeholder and CSR scholars with more tools to understand why particular asymmetries emerge and how those could be constructively resolved among different stakeholders. In particular, future research could focus on tools, methods, and approaches that can identify and assess the institutionalized asymmetries in value creation and appropriation. This could include methodological approaches such as qualitative analysis, but also more quantifiable approaches such as modeling, measurement, or simulation.

Second, we seek to deepen the literature that explores the intersection of business and society. While triple bottom line theorizing (Elkington, 1997) has provided the foundations for understanding the business opportunities and tensions for sustainable value creation, this paper contributes to understanding the inherent asymmetries and potential strategies for overcoming such asymmetries. Understanding such symmetries and asymmetries might help practitioners (e.g., businesses, policy, individuals) to find more adequate solutions to address the world's most profound challenges. This is a core discussion in the business and society field, including the analysis of economic goods and problems (Daudigeos & Valiorgue, 2011; Jones et al., 2016). Our research expands the analysis of value creation from economic literature and connects it with three domains of sustainable development. This allows us to better understand the emerging role of business-originated solutions that integrate the logics of a capitalist society and sustainability. Relatedly, our results inform the scholarship on sustainability-related change agency (Garud & Gehman, 2012; Koistinen et al., 2020) by providing insights into various ways how business actors can drive change. Whereas traditional CSR may have been focused on reducing asymmetries, the idea of "shared value" opened up more of an

“opportunity space,” where value is created for all stakeholders involved, including society and environment (Porter & Kramer, 2006), thus opening up a space for increasing symmetries. Similarly, proponents of conscious capitalism suggest that economic and social/environmental value creation can go hand in hand (Mackey & Sisodia, 2014). Complementing and enriching these types of discussions, our study advocates more thorough focus on the potential role of businesses as a positive contributor to the development and improvement of not only private goods, but also public and common goods. This calls for in-depth qualitative inquiries as well as broader quantitative analyses (e.g., survey-based research) on the different ways in which firms can contribute to the creation of goods.

Finally, examination of asymmetries in value creation and appropriation are a fruitful future research avenue for the field of sustainable business model innovation. Sustainable business models take a broader systems perspective and have been positioned as a potential means to overcome asymmetries as well as increasing symmetries in value creation and appropriation across the domains (Boons & Lüdeke-Freund, 2013; Stubbs & Cocklin, 2008). Several business models are possible, including ones that are environmentally, socially, and organizationally oriented (Boons & Lüdeke-Freund, 2013). Ideal types of sustainable business models would integrate social, environmental, and economic issues simultaneously and create positive value and reduce negative value through business activities (Stubbs & Cocklin, 2008). In this paper, both types of examples are presented: those that help to reduce asymmetries (e.g., fair trade) and to increase symmetries (e.g., net positive [Hollender, 2015]). However, we also acknowledge that some of the suggested solutions in any of the aforementioned streams might be still subject to institutionalized asymmetries, given that they might resolve local problems while still causing system-level asymmetries that are difficult to recognize or resolve. Therefore, research conducted in the ecosystem level of analysis (Phillips & Ritala, 2019), or more broadly in the global systems and network level (e.g., Albareda & Waddock, 2018) are important opportunities to analyze sustainable business models embedded in broader institutional environments.

6. Conclusion

In this study, we started by problematizing the existing economic system due to its inherent tendency towards over-appropriation in the economic domain at the expense of social and environmental domains, creating institutionalized asymmetries that are difficult to resolve. The known challenge is that businesses control the majority of productive resources available (Porter & Kramer, 2011), and therefore there is a need to consider ways how the institutional

asymmetries can be tackled via solutions that are business-driven to complement the existing national and supranational policy initiatives. To this end, we have identified the potential of the existing solutions that have been suggested to help to bridge the asymmetries caused by businesses (see Table 2). The current study has further proposed a new framework (see Table 3) which contributes to the theory of the profit-seeking firm including the social and environmental domains while preserving its inherent economic rationale. We have included three relevant value domains (economic, social, and environmental) (Elkington, 1997) as the main dimensions where value might be created and appropriated (Lepak et al., 2007) as well as a holistic approach to private, public, club, and common goods (Samuelson, 1954; Ostrom, 1990). In this regard, we identified asymmetries across the domains, and conceptualized these as institutionalized tendencies that follow economic logic of value creation & appropriation, and thus uphold the institutionalized asymmetries between business and society. Thus, the suggested frameworks provide both analytical as well as practical templates for scholars, business practitioners and policymakers to assess why asymmetries exist and how they can be resolved.

In particular, our framework provides applicable insights that can be put to action by companies in collaboration with the relevant stakeholders (e.g., NGOs and policy-makers). For instance, companies should aim (and policymakers facilitate) to make investments to private goods that directly contribute to creation of value in social domain (e.g., as in social enterprises; Tykkyläinen & Ritala, 2020) or to environmental domain (e.g., via energy-efficient eco-innovation; Zhang & Walton, 2017; Scarpellini et al., 2019). Furthermore, companies could also invest in creation of public goods via solutions that also benefit their businesses directly or indirectly. Examples include for example, Tesla's open-source strategy where the electric vehicle patents were provided freely available for the whole industry, as well as the various business-private partnerships and other initiatives conducted to create or maintain public goods see (Table 3 for examples). Finally, companies could also participate to the creation and management of common goods via economic initiatives such as sustainable forestry, or initiatives improving the wellbeing across global value chains, or by fostering the preservation of environmental commons (e.g.. as in circular business models Rosa et al., 2019; Centobelli et al., 2020) and the growing of new commons organizing (e.g. food, community-based energy production, knowledge, organic agriculture; Albareda & Sison, 2020). There are many ways to push forward these types of initiatives, and increasingly so they are driven by businesses due to customers' expectations and the profitability of energy efficiency, for instance. However, policymakers are still needed to make the institutionalized asymmetries that create negative

social and environmental externalities more visible to the companies, and to provide a policy environment that supports sustainable business behavior while making unsustainable behavior increasingly costly.

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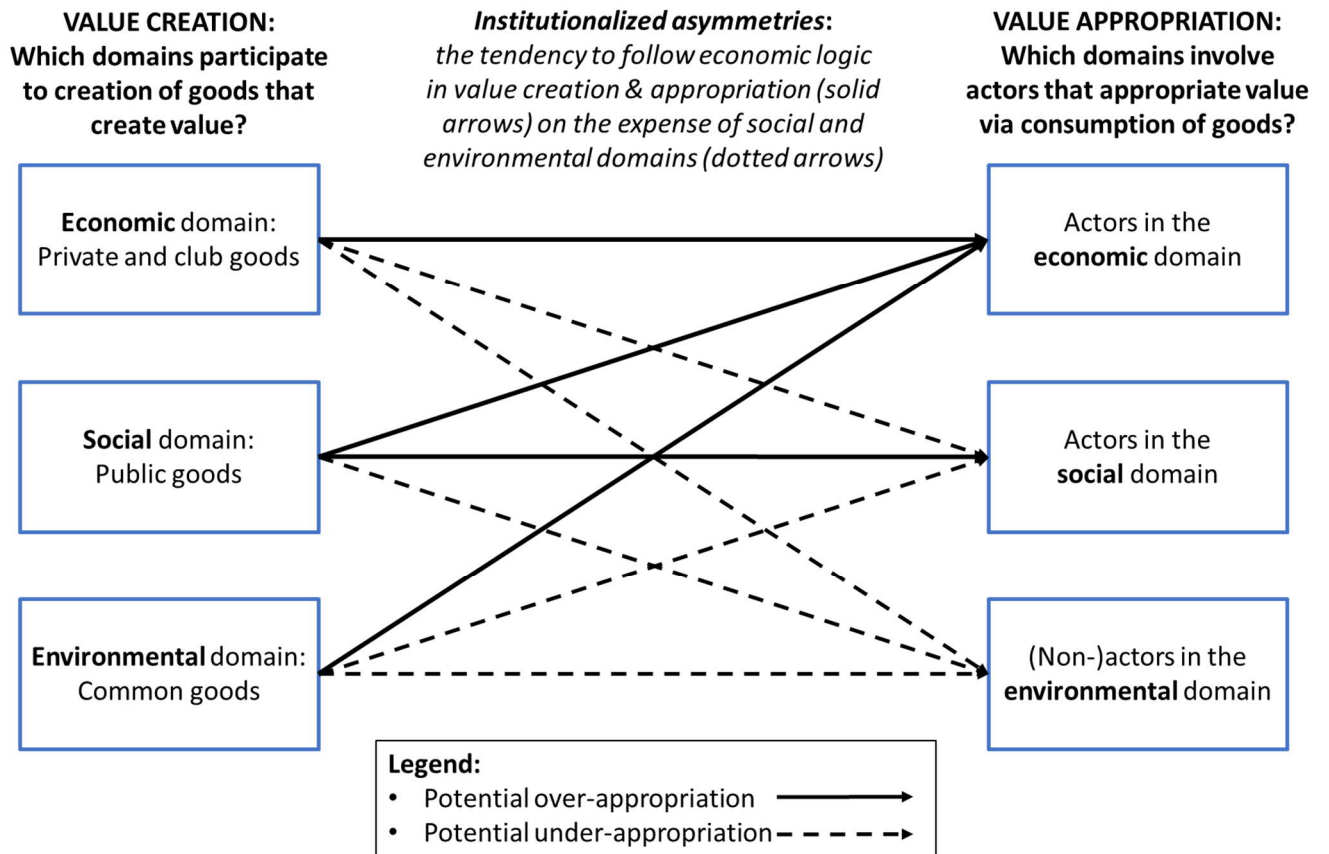


Figure 1. Conceptual framework

Table 1. Main institutionalized asymmetries in the economic, social, and environmental domains and economic goods

	Economic domain	Social domain	Environmental domain
Private and club goods	Overproduction, superfluous production, planned obsolescence, and overconsumption (Shrivastava, 1995; Bakker et al., 2014) Bargaining power and information asymmetry (Samuelson, 1954; Garcia-Castro & Aguilera, 2015)	Negative social externalities promoted by the production of private goods or services (Baron, 2001)	Negative environmental externalities promoted by the production of private goods or services (Volchenk et al., 2016)
Public goods	Abuse and overexploitation of a public good for private self-interest; Teamwork and free-riding problem (Alchian & Demsetz, 1972; Bridoux & Stoelhorst, 2014, 2016)	Corruption; Privatization of public goods (Stroebe & Frey, 1982)	Negative environmental externalities promoted by the production of public goods (Stavins, 1997)
Common goods	The tragedy of the commons (Hardin, 1968)	Collective action and policy failures (Olson, 1965)	Overprotection of natural resources (Ostrom, 1990)

Table 2. The potential of traditional CSR, shared value and conscious capitalism, and sustainable business models in institutional asymmetries reduction

	Traditional CSR	Shared value and Conscious capitalism	Sustainable business models
<i>Main idea</i>	Business voluntarily takes social and environmental responsibility (Lankoski, 2009; McWilliams & Siegel, 2010; Putrevu et al., 2012)	Business creates economic value that is aligned with social and environmental stakeholders (Porter & Kramer, 2011; Mackey & Sisodia, 2014)	Business models that take into account the tradeoffs and possibilities of value creation and appropriation in the economic, social, and environmental domains (Boons & Lüdeke-Freund, 2013; Bocken et al., 2014, 2015; Ritala et al., 2018)
<i>Key mechanisms</i>	Asymmetry-reducing (economic, social, and environmental value creation and appropriation are unevenly balanced, and these can be partially compensated)	Symmetry-increasing (economic, social, and environmental value creation increase in sync)	Asymmetry-reducing and symmetry-increasing (economic, social, and environmental value creation and appropriation can be configured with improvements in business models)
<i>Main critique</i>	Passive strategy, does not combine economic and social value creation	Idealistic, fails to recognize institutionalized asymmetries	Subject to institutionalized asymmetries at macro level, even if “local” sustainability would be achieved

Table 3. Business-based solutions and related institutionalized asymmetries to solve value creation and appropriation asymmetries across domains and goods

	Economic domain	Social domain	Environmental domain
Private and club goods	<p>Solution: Business creating private goods that individuals desire or need and capturing financial value by sales</p> <p>How it helps to resolve institutionalized asymmetries: ethical and sustainable consumption and production</p> <p><i>e.g., long-lasting functional products, classic design, upgradable, with adequate warrantee and repair services</i></p>	<p>Solution: Business creating private goods that contribute positively to society</p> <p>How it helps to resolve institutionalized asymmetries: social business adopting hybrid logics (economic & social)</p> <p><i>e.g., business providing language services (such as DuoLingo, Rosetta Stone) or educational tools (such as Arduino, Raspberry Pi)</i></p>	<p>Solution: Business creating private goods that do not contribute negatively, or contribute positively, to natural environment</p> <p>How it helps to resolve institutionalized asymmetries: sustainable business and the natural environment</p> <p><i>e.g., frugal innovations (such as the Mitticool no-electricity fridge and solar cooker)</i></p>
Public goods	<p>Solution: Business contributing their knowledge and capabilities to the generation of improved public goods contributing to the use and value of these goods in the economic domain</p> <p>How it helps to resolve institutionalized asymmetries: transparency & traceability <i>e.g., former initiative Google Health, Tesla's open-source strategy to expand renewable energy use</i></p>	<p>Solution: Business contributing (partnering with the public and other social actors) their knowledge and capabilities to the generation of improved public goods, contributing to social welfare</p> <p>How it helps to resolve institutionalized asymmetries: accountability, public-private partnerships</p> <p><i>e.g., public-private partnerships; B corporations in education and health systems: Resources for Educators, Education for Good, Active Health Group, Well Clinic</i></p>	<p>Solution: Business contributing to the generation of positive environmental impacts of public goods</p> <p>How it helps to resolve institutionalized asymmetries: ecosystems services, business biodiversity</p> <p><i>e.g., Puma environmental profit & loss, net positive initiatives</i></p>

Common goods	<p>Solution: Business participating in the management of common goods, improving collective economic outcomes</p> <p>How it helps to resolve institutionalized asymmetries: responsible supply chain management and commons enterprises</p> <p><i>e.g., soil remediation services, sustainable forestry initiatives, commercial scalable solutions to reduce CO2 in the atmosphere (e.g. Neste Biofuels, community based energy enterprises)</i></p>	<p>Solution: Business adopting collective action to manage common goods, improving social outcomes</p> <p>How it helps to resolve institutionalized asymmetries: cross-sector partnerships and commons organizing</p> <p><i>e.g., businesses involving underprivileged members of society in value chain (such as Unilever Shakti); businesses engaging in the growing of food or urban commons;</i></p>	<p>Solution: Business fostering the regeneration and maintenance of common goods, improving the environmental outcomes</p> <p>How it helps to resolve institutionalized asymmetries: business and global commons, circular economy</p> <p><i>e.g., sustainable agriculture initiatives, such as Patagonia's Regenerative Organic Certification; companies like Interface working with fishing communities to turn old fishing nets into valuable items to preserve oceans</i></p>
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