

Article

# Towards a Typology of Sustainability Practices: A Study of the Potentials and Challenges of Sustainable Practices at the Firm Level

Simone Søgaard Jacobsen <sup>1,\*</sup>, Steffen Korsgaard <sup>2,3</sup> and Franziska Günzel-Jensen <sup>4</sup>

<sup>1</sup> The Index Project, 1473 Copenhagen, Denmark

<sup>2</sup> Department of Entrepreneurship and Relationship Management, University of Southern Denmark, 6000 Kolding, Denmark; stko@sam.sdu.dk

<sup>3</sup> Department of Informatics, University of Oslo, 0315 Oslo, Norway

<sup>4</sup> Department of Management, Aarhus University, 8210 Århus V, Denmark; frang@mgmt.au.dk

\* Correspondence: ssj@theindexproject.org; Tel.: +45-2618-7641

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**Abstract:** International awareness and demands for sustainable development have pushed the sustainability narrative into the forefront of the United Nations' Sustainable Development Goals (SDGs). As a result, the call for sustainable business practices has never been greater. While businesses are both needed and eager to contribute to sustainable development, current literature lacks insights into how businesses can practice sustainability. This paper aims to fill this gap and develop an understanding of the different categories of sustainability practices that firms adopt, and the potentials and challenges associated with them. Based on a qualitative multiple case study, we identify four categories of sustainability practices including inspiring and informing, productizing, co-creating and system building. We integrate these findings into a sustainability maturity typology, proposing that these four practices are associated with an increasing intensity of sustainability intention, so that firms realize increasing levels of sustainability in the focal business practices as they move from inspiring and informing through to system building. The article concludes by arguing that there is no generic "one size fits all" approach to support sustainability practices as approaches need to fit a firm's sustainability maturity.

**Keywords:** sustainability; sustainable business practices; typology; multiple case study

## 1. Introduction

The realities of climate change, social injustices, poverty, migration and hunger are increasingly pressing themselves on our collective understanding. The responses of firms to this differ, with some managers insisting that the focus of business is first and foremost to make a profit [1] and others arguing that business must take a broader societal and environmental responsibility [2]. Many firms thus decide to take up various forms of sustainability practices [3–6]. Motivations for doing so vary and may combine a number of issues including the pursuit of potentially profitable environmental opportunities, hedging against future backlash from the public, or addressing intrinsic social missions. This occurs through e.g., experiments with new business models, new modes of production, new ways of marketing or new supply chains in ways that seek to generate more social value and less environmental stress from business activities. Most recently, these efforts have begun to engage with the grand challenges stipulated in the UN's Sustainable Development Goals, but earlier efforts under labels such as corporate social responsibility [7–9], the triple bottom line [10], and blended value [11,12] have also sought to realize the potential of business to addressing social and environmental grand challenges. Notably, the attention given to sustainability in the public debate opens the possibility

of firms engaging in superficial sustainability practices for purely marketing purposes, sometimes referred to as “greenwashing” [13].

Firms that choose to engage in sustainability practices of various kinds and for various reasons have been subject to increasing research attention. The research on sustainability has proliferated over the past decades and now encompasses a range of streams specific to industries, technologies, localities and legislation. In this paper, we adopt a general focus on business practices of developing new activities that aim to generate more sustainable outcomes at the firm level [14,15]. Such practices are necessary for a general reorientation towards sustainable business at the local and global level. Business research on sustainability has largely focused on issues related to what sustainability means in a business context, whether sustainable business practices can be profitable in the short and long term, as well as how sustainable outcomes can be measured [16,17]. While such questions are essential, the realization of social and environmental value from changed business practices depends on an understanding of how and why firms adopt sustainable business practices [6,8,18]. In this study, we thus seek to develop an understanding of (i) the different types of sustainability practices that firms adopt, and (ii) the opportunities and challenges associated with these different types of sustainability practices. We do this through a qualitative multiple case study based on interviews with CEOs and sustainability managers in a heterogeneous sample of 17 firms.

Our study adds to the existing literature by introducing four overall categories of sustainability practices including inspiring and informing, productizing, co-creating and system building; and identifying the opportunities and challenges related to the practices. We summarize these findings in a sustainability maturity model indicating that the four categories represent a progression towards practices with an increasing intensity of sustainability, so that firms realize increasing levels of sustainability in the focal business practices as they move from inspiring and informing through productizing and co-creation to system building. As such our study provides important insights for practitioners, policy makers and researchers into how and why firms engage in sustainable business practices as they seek to contribute to social and environmental value creation and how they can mature in these practices.

## 2. Theoretical Background

The role of businesses in addressing grand environmental and social challenges is broadly prevalent in management and business research. That businesses are embedded in larger systems and that their activities have social and environmental externalities is thus becoming an increasingly central aspect of both research and practice of managing small and large businesses [2,4].

The research streams related to sustainability are numerous and encompass distinct streams related to specific industries, technologies, localities and legislative regimes. While a comprehensive review of sustainability literature within the broad management and business research field, is beyond the scope of this paper, in the following we introduce briefly three central themes that relate to our research objectives, and which provide the theoretical backdrop of our study. Firstly, research has sought to clarify the definitional foundation for sustainability [19,20]. Most efforts converge on an approach that, similarly to Shepherd and Patzelt’s [21] definition, which we follow in this paper, characterizes sustainability as embracing goals or objectives that focus on the preservation of nature, life support, and community. Inherent in this and related definitions lies a potential tension between not only sustainability and economic concerns, but also difficult interdependencies and trade-offs between environmental and social concerns [22,23], as exemplified at a societal level in the potential socially unequal consequences of climate change policies which were at the core of recent upheavals in e.g., France [24]. Most definitions, therefore, integrate environmental and social concerns in some way. From this definitional research stream we derive an understanding of sustainability that integrates social and environmental value creation through e.g., the solution or alleviation of social problems and reduction or reversal of negative externalities for the environment from business operations [2]. The complexity of sustainability issues is also reflected in the United Nation’s Sustainable Development

Goals (SDGs) which portray the scope of, as well as the interrelations inherent in grand challenges. Therefore, the SDG framework has become a pivotal point in discussions and policy work for addressing sustainability [25] and to some extent sustainability efforts within companies [26,27].

Secondly, important research has sought to address the central question of whether sustainability pays off [6,28]. As pointed out by several scholars, managers may feel that adopting sustainable practices requires the potential for financial profit in either the short or long term [28]. Conceptually, firms with a sustainability orientation will *ceteris paribus* be expected to be more inclined to e.g., engage in sustainable business practices, such as improving the sustainability of their products and services, reducing the environmental externalities of their production and supply or even inspire other firms and institutions to act more sustainably [29]. Such dispositions may lead to competitive advantage over time [3–5,30]. A recent study by Eccles and colleagues [31] found strong empirical evidence for a positive performance effect of adopting sustainability practices. Similar findings have been identified in other studies [17]. Interestingly, Eccles and colleagues [31] also found that the market tends to underestimate the positive effects of sustainability practices.

The potential positive effect of sustainability practices and performance is likely driven by a combination of multiple mechanisms. Expressing and demonstrating sustainability ambitions can thus increase likelihood of attracting funding [29]. Also, sustainability practices have been identified as a catalyst for innovation and creativity. Hahn et al. [32] found that sustainability orientation has a positive effect on creativity, as it forces managers to confront the tensions that exist between complex economic, social, and environmental considerations, and confronting these tensions leads to more creativity. Relatedly, Klewitz and Hansen [33] present several arguments for sustainability as an increasingly important driver for innovation in small and medium-sized enterprises, as these e.g., must respond to new and increasing demands for environmental regulations on national and supra-national levels as well as sustainability related product differentiation opportunities. Pro-active and innovative sustainable entrepreneurial ventures are more agile and better at moving beyond regulations, thus able to push markets for sustainable products. In conceptualizing the role of different sizes of firms related to sustainability it may well be argued though that larger firms, with their larger resource base and ability to engage in longer term projects, have a broader reach [34].

From this research stream we integrate into our study the possibility of seeing sustainability practices as something that firms may consider to be profitable in the long run and as something that may be taken into the core strategic debates. We also note, however, that this link between sustainability practices and profitability is contested and that different types of firms may experience the potential profitability and potential tradeoffs regarding profit and sustainability differently.

Finally, studies have highlighted the importance of the institutional context and firms' engagement in sustainable practices. The direction of the influence may be conceptualized in various ways. Institutional dynamics may thus pressure or induce firms to act more sustainably through legislation, policies, normative or discursive pressure [35]. In an interesting study Roxas and Coetzer [36] explore the effects of institutions on owner-managers' leadership attitude in the context of environmental sustainability. Here they find that the owner-manager plays a mediating role; the institutional environment can positively influence the manager's attitude towards sustainability and this, in turn, will have a positive effect on the sustainability orientation of the firm. Recent examples of such dynamics are evident in the introduction of frameworks such as the aforementioned SDGs, which stress the necessity of private firms' active participation [37]. An interesting study by van der Waal and Thijssens [27] on 2000 large stock listed companies shows that, while SDG involvement is still lacking behind, their involvement can be driven by a mixture of legitimacy and institutional motives. Similarly, the concept of circular economy represents a normative framework that firms can connect to in order to decrease the negative environmental externalities of their operations [38–40]. Circular economy is much-heralded among scholars, policymakers and professionals and changes in business models are considered a key enabler for the shift from a linear to a circular economy. It has, however, been highlighted in recent literature that the transition towards circular business models is currently

hindered by the lack of comprehensive government support, coherent classifications and competition legislation in the EU [41].

Conceptualizing the direction of the influence differently, it is well known that firms can influence their institutional context through various activities including lobbying, storytelling, introduction of new technologies and products [42]. Some firms have thus succeeded in shifting policies, legislation and norms in industries. A study of sustainable urban development projects in the Netherlands shows that entrepreneurs can influence both formal and informal institutions to create a context that is more favorable to sustainable developments through framing, theorizing, lobbying and collaboration. Furthermore, the study highlights that entrepreneurs can engage in the design of alternative formal institutions such as certificates and standards, thereby positioning themselves favorably and initiating industry-wide change [43].

From this third stream of research we derive the insight that sustainability practices emerge in contexts that enable and constrain certain pathways of action. Furthermore, we recognize the possibility of firms exercising crucial agency in shaping the context they operate in by developing or changing systems and institutions to better align with the sustainable missions that they seek to realize.

The abovementioned research streams have added essential insights into what sustainability and sustainability practices mean, why firms might seek to engage in sustainability practices, and the contextual dynamics in which such activities occur. Our focus, extend these effort by exploring how and why firms adopt different types of sustainability practices [18]. We define sustainability practices here simply as activities undertaken by, within or across firms to make the operations of the firm or firms involved more environmentally and/or socially sustainable [44–46]. This definition is deliberately broad as different firms may well have different ways of operationalizing sustainability. Further, the definition remains agnostic to the question of whether the adoption of sustainability practices actually result in sustainable outcomes. The question of the efficacy of the practices lies outside the methodological scope of this paper. We do note, however, that this makes our findings susceptible to disconnects between stated intentions and actual outcomes as with e.g., “greenwashing” [13].

Following from this definition of sustainability practices, we explore the question of how firms adopt more sustainable modes of business and the practices involved in making this transition represent a central topic. As suggested by Zollo and colleagues [6] “we are still missing today a significant investment in research and knowledge development on questions related to the processes through which firms actually navigate the multiple change requirements to identify, experiment with, and eventually realize more sustainable models of the enterprise”. In this study we address this gap, by enquiring into two interconnected research questions: (i) what types of sustainability practices do firms engage in? (ii) what are the potentials and challenges related to adopting these sustainability practices?

### 3. Research Design

To address our research questions, we adopted a qualitative multiple case study research design [47–49]. This research design was deemed appropriate as it allows for an inductive identification of organizational practices based on a close analysis of empirical data. The comparative dimension where findings emerge first from analysis of individual cases and subsequently the identification of cross-case patterns, further allows for the development of theory and propositional statements [50], which may be analytically generalized under careful consideration of contextual differences across empirical domains [51]. As such, using a multiple case design allows us to inductively generate conceptual variation in sustainability practices that represent directly the practices outlined in the data, while at the same time distilling the generic or conceptual nature of these.

For our study we sought a heterogeneous sample of firms that engage in sustainability practices. We therefore undertook an elaborate case selection process to capture case firms. Our starting point was Denmark, a country well known for being at the forefront of sustainable development [52]. This is indicated in various rankings of countries in relation to sustainability, where Denmark resides among

the most sustainable countries in the world assessed on competitiveness (The Global Sustainability Competitiveness Index), environmental (Environmental Performance Index) as well as social and governmental parameters (ESG Country Sustainability Ranking) among others. With this starting point we reached out to local and regional authorities as well as business networks to identify firms that engage in various forms of sustainability efforts. This generated an initial list of 326 firms. The webpages of these 326 firms were examined and from this list 18 firms were selected based on the following three criteria (i) coverage of all regions in Denmark, (ii) representation of all sizes of firms ranging from microbusinesses to corporations, as well as (iii) coverage across multiple industries (water supply and renovation, industry, commerce, finance and insurance, information and communication and knowledge services). One firm was later removed from the sample as we became aware that the information on the firm's website were misleading and the firm did not actually engage in activities related to sustainability. For an overview of the 17 case firms please see Table 1.

For data collection we used qualitative interviews. Interviews were primarily conducted with the CEO of the case firms, alternatively the sustainability or CSR manager, or if no such role existed, the informal go-to person for sustainability issues. The semi-structured interview questions were based on four overall categories, designed to understand: (1) the firm's understanding of sustainability and the UN Sustainable Development Goals; (2) history of engaging with sustainability and perceived relevance for the firm's development; (3) work examples related to sustainability; and (4) potentials and challenges faced when engaging with sustainability and the UN Sustainable Development Goals (interview guide see Appendix A Table A1). While each conversation was allowed to develop naturally, we sought to cover the same topics with each informant. Overall, interviews lasted between 41 and 78 min and were conducted in person. The interviews were transcribed and imported into the NVivo 12 software program for subsequent coding and analysis [53,54].

Data analysis progressed in multiple cycles of coding [54]. At the beginning of the coding process, the first author of the paper read and reread the transcripts to familiarize herself with the data and cases. At this stage attribute coding was developed to capture important dimensions of similarity and difference across the firms. This was followed by an open coding cycle, focusing on the sustainability practices of the firms. Unsurprisingly, most of the codes here were developed from the interview segments related to the work examples. This open coding resulted in 17 codes. At this stage the first author involved the second and third authors who remained outsiders to retain an objective stance on the data when critically assessing the coding. In this third coding cycle, the authors discussed the codes and returned to the literature to gain additional theoretical insights to assist the data analysis when needed. This resulted in four categories of sustainability practices derived from the open codes and refined through integration of literature. In a fourth coding cycle, using coding matrixes, the authors undertook cross-case comparison to allow for emergence of differences that could explain diverging sustainability practice patterns observed in the data. The categories include inspiring and informing, productizing, co-creating and system building. Having identified these practices a final cycle of analytical coding was undertaken to identify the challenges and opportunities related to adopting each sustainability practice. In this coding cycle we made extensive use of the data collected in the interview segments related to challenges and potentials.

**Table 1.** Case firms and overview of practices.

Firm	Industry	Size	Description	Category of Sustainability Practice			
				Inspire and inform	Productize	Co-create	System building
				Knowledge and communication practices related to sustainability are present internally in the firm. Sustainability is not part of the business model.	Sustainability is part of design and production processes. The firm works to integrate sustainability into the business model.	The firm enters partnerships with suppliers and/or external actors to improve supply chain sustainability. Sustainability is a key component in the business model.	Sustainability is in the DNA of the firm. Practices aim at changing or influencing the industry and are not necessarily justified through profit.
A	Trade	Micro	Produce mortar for the construction industry	-	(x)	x	-
B	Industry	Micro	Process waste material into raw material	-	(x)	x	-
C	Knowledge Service	Medium	Architecture firm	x	(x)	-	-
D	Industry	Small	Produce school furniture	x	x	(x)	-
E	Knowledge Service	Small	Provide AI technology for health care sector	-	-	-	x
F	Knowledge Service	Micro	Develop and install horticultures on commercial buildings	-	(x)	(x)	x
G	Knowledge Service	Medium	Design bureau	(x)	x	-	-
H	Trade	Medium	Produce work uniforms for food, health and social sector	x	x	-	-
I	Trade	Large	Produce interior textile	(x)	x	(x)	-
J	Water Supply and Renovation	Large	Combustion and waste management	(x)	(x)	x	-
K	Water Supply and Renovation	Large	Waste and recycling management	x	(x)	-	-
L	Trade	Small	Produce lighting solutions	-	x	(x)	-
M	Finance and Insurance	Medium	Bank	-	-	(x)	x
N	Trade	Large	Supermarket chain	(x)	(x)	x	-
O	Industry	Medium	Produce acoustic boards	-	(x)	x	x
P	Industry	Micro	Produce jackets made of upcycled leather	-	x	x	(x)
Q	Water Supply and Renovation	Small	Process marine plastics into raw plastic granulate	-	x	x	(x)

#### 4. Findings

In the following we outline the findings in two steps. First, we introduce the four categories of sustainability practices, namely inspire and inform; productize; co-create; and system building. Second, we outline both the potentials that incite the firms to transition towards more mature sustainability practices and the challenges experienced in the transitions.

#### 4.1. Sustainability Practices

Based on the collected data, the following section outlines how a diverse set of sustainability related practices are identified in the 17 case firms, clustered in four overall thematic categories, which we name inspire and inform; productize; co-create; and system building. Table 1 below summarizes the data sources and presents in which categories each firm enact sustainability related practices, marked with an ‘x’ where the sustainability practice is highly prevalent in the case firm, and an ‘(x)’ when a sustainability practice is partially present in the case firm. Table 2 further below provides an overview of concrete examples of the practices within each category and corresponding quotes from the data.

**Table 2.** Overview of sustainability practices.

Category of Sustainability Practice	Firms	Description of Practice	Illustrative Examples in the Data
<b>Inspire and inform</b>	C, H	Internal initiatives with the aim of informing and inspiring, such as talks, workshops or language	“We have tried (to talk more about sustainability internally), since I got convinced that this is a way for us moving forward. Now people talk more about it. And we just had a get-away for all employees across offices, 80 people, where I gave a presentation about the SDGs.”–Sustainability and Innovation Officer, case C
	H, K	Attend external learning and inspiration initiatives	“After the SDG bootcamp for the executive level we held a series of internal workshops in order to boil down the activities even further, asking: How can this goal materialize?”–Sustainability Manager, case K
	D	Employ intern to help identify potential match between existing business activities and SDGS	“We’ve have had a sustainability student and she was tasked with evaluating our activities to identify the extent to which they meet any of, or specific [SDG] goals.”–CEO, case D
<b>Productize</b>	D, G, H	Include sustainability in the product design	“We’re launching a new catalogue in 2019 and in this we’ll present recycled polyester and BCI cotton; a sustainable cotton, not organic. That’s a choice we’ve made, even though many customers demand organic cotton because they think that’s the best.”–Sustainability Officer, case H
	I	Continuous testing within upcycling of waste material	“We’re currently testing how to recycle broken yarn, or excess fibres. We just launched [product name] which is a fabric made of 45% recycled wool. And how to recycle products used by customers into new products.”–Sustainability Manager, case I
	L, P	Operate with take-back-models on product or packaging	“We used to deliver the lamps on pallets with several forms of packaging to protect the product. That left the customers with excess waste. Now we deliver in wooden boxes that are returned to us or can be recycled.”–Sustainability and sales responsible, case L “You can rent a jacket for three months, or you can buy it with a repurchase guarantee.”–Founder and CEO, case P

Table 2. Cont.

Category of Sustainability Practice	Firms	Description of Practice	Illustrative Examples in the Data
Co-create	A, J, N, P	Partner with other areas of expertise, industry or sector with the aim of increasing sustainability	<p>"In Lisbjerg we're part of a project called [project name]. A house designed to be reused with 90% of its original materials, e.g., instead of using the usual concrete in the foundation, we use chalk mortar."—CEO, case A</p> <p>"We're part of scientific environments and let students use our recycling centres in their work. We contribute with knowledge about waste and environment and have some high-profile experts from our development and environment department to sit on these projects."—Sustainability Manager, case J</p> <p>"We have a partnership with MSC (certificate for sustainable fishing) and then we feature their products in our flyer and communicate which SDG goal the products support."—Sustainability Manager, case N</p> <p>"Say, a firm that produces coats or jackets. They'll generate a lot of offcuts which usually get burnt. But instead of burning it they send it to us; we process it, produce e.g., a new lining that they can use for the jackets. This way we help them reduce the purchasing and costs of raw material lining. And they become waste free."—CEO, case B</p>
	B	Business model built on waste fragments from other companies	"What matters is that we think in a circular way."—Founder and CEO, case Q
	A, B, P, Q	Apply to circularity processes and certification	
System building	E, M, O	Practice advocacy and education of the external environment	<p>"We could earn a lot of money on being less ethical and spend less time on educating people. But ethics is core in what we do, and we want people to be able to ask ethically strong questions."—Founder and CEO, case E</p> <p>"I go out and teach other firms how they can get started with sustainability, circularity and the 17 SDGs based in the experience we've acquired. Because it hasn't all been a walk in the park."—CEO, case O</p>
	F	Lead and run a zero-waste gardening system for commercial buildings	"We've developed this technical concept where a horticulture leverages excess energy from the building it is built on top of. The horticulture then supplies the building directly with products. We remove the supply chain and are creating a brand around that called 'From here', not 'Local' but, even closer."—CEO, case F

#### 4.1.1. Inspire and Inform

Practices that can be categorized as seeking or providing inspiration and information related to sustainability were motivated by an understanding "that this is the way for us moving forward" (Sustainability and Innovation Officer, case C). All four firms that enact this practice, describe themselves as being at the beginning of their engagement with sustainability. An open-mindedness towards and curiosity about sustainability is present but, uncertainties around understanding how to integrate it into the daily business practices remain. Therefore, all the firms seek out knowledge externally. As an example, in one of the firms, a sustainability student from a local university was tasked with "evaluating our activities to identify the extent to which they meet any of, or specific [SDG] goals" (CEO, case D), whereas other firms attended workshops or projects aimed at providing a road map for identifying and operationalizing activities directed towards sustainable development, as illustrated in the following quote:

*"When you look at all these [SDG] targets, you're like: 'What does this have to do with our business? How can we relate it to what we do?' We're attending the first workshop I've seen targeted the textile industry, to figure out how we direct our activities towards the SDG goals."*

*(Sustainability Officer, case H)*

Additionally, Case H coined an internal slogan, “We Care”, in order to “gather all [sustainability-related] activities under one hat” (Sustainability Officer, case H) in an attempt to support the sustainability mission internally and inspire their staff. The utilization of the SDG framework as a source of inspiration for understanding the complexity of sustainability and to translate sustainability goals into their business is common across these case firms. Similarly, the managerial level in case K acquired knowledge by attending an SDG bootcamp providing them with information and guidance to run staff workshops, that aim at supporting internal understanding and appreciation of sustainability activities, as illustrated in the following quote:

*“After the SDG bootcamp for the executive level we held a series of internal workshops in order to boil down the activities even further, asking: How can this goal materialize?”*

*(Sustainability Manager, case K)*

#### 4.1.2. Productize

The practices presented in this category display an intensified incorporation of sustainability into the business. In the previous category, inspire and inform, the sustainability practices were mainly characterized as a means to create internal value, whereas the practices in this category have matured to revolve around the productization, hence create value for external customers. Such practices include using the SDG framework in consultancy as a “guiding star to indirectly push clients that are not moving in a sustainable direction” (Creative Director, case G), targeting “waste production ( . . . ) and mass resource consumption” via take-back-models (Founder and CEO, case P and Sales Officer, case L), introducing and testing sustainable materials and recycling processes as part of the product design (CEO, case H and Sustainability Manager, case I), or planning and designing their product to increase social sustainability, as exemplified in the following quote:

*“The function of our products is that you can find rest and immerse yourself, which is a social element that kids need. An activating learning space was introduced because you can’t use a ‘one size fits all’ approach to children’s learning life. With this concept we supply school furniture and planning advice so the children can work in groups or sit by themselves and immerse in a book. There’s hard furniture, soft furniture, high tables and low ones.”*

*(CEO, case D)*

While the CEO of case D does not mention sustainability directly in the quote, he elaborates on how the firm is contributing to improving the social aspect of learning spaces in school by actively planning and designing their products around various social needs of their users.

Case H has made an effort in seeking information and knowledge about the most sustainable ways to produce their key product, workwear. In 2019 they launched new products using textiles that meet sustainable standards:

*“We’re launching a new catalogue in 2019 and in this we’ll present recycled polyester and BCI cotton; a sustainable cotton, not organic. That’s a choice we’ve made, even though many customers demand organic cotton because they think that’s the best.”*

*(Sustainability Officer, case H).*

#### 4.1.3. Co-Create

The practices categorized as co-create are all characterized as being a joint creation of value by the firms and their stakeholders [55,56]. They are no longer solely creating products *for* stakeholders but, also *with* stakeholders. For these firms this represents an increased intensity in their intention towards becoming a sustainable business. Common for the firms that enact co-creation sustainability practices seems to be a realization that their sustainable products are more easily absorbed in the industry and market if they are designed, produced or tested in collaboration with their stakeholders.

Within seven of the firms, co-creation practices were identified. Such practices include partnering with actors across industries to co-designing and producing new products (case A and case O), engaging in knowledge partnerships with the purpose of minimizing the gap between sustainability in practice and sustainability in theory (case J) or establishing sustainability enforcing branding partnerships with suppliers (case N). Case P perceives partnerships as an inevitable part of business sustainability:

*“We work in partnerships to secure a sustainable business model. ( . . . ) Recently, we were contacted by a brand who wants to collaborate with us around making bags and apply our take-back process.”*

*(Founder and CEO, case P)*

A similar practice is identified in case O in which the team has turned a waste related cost into an income through a cross-industry partnership:

*“We initiated a project with the purpose of changing a cost to an income. Some people said: ‘That’s impossible—there’s always been a cost linked to getting rid of waste’. Yes, but now we’re setting the bar high. We established a work group to help think about our waste in a different way—and that resulted in a partnership with [a partner firm] who takes off fractions of our waste.”*

*(CEO, case O)*

Within this category we also identified several practices related to circularity, an approach towards business that requires partnerships with suppliers and producers. Case Q emphasizes that “what matters is that we think in a circular way” but “if we have to solve the world’s biggest problems, we can’t do it alone. It demands private, public, multi-stakeholder, cross-sector partnerships” (Founder and CEO, case Q) referencing the firm’s focus on targeting the SDG 17: *Partnerships for the goals* [57] through their work. Case Q’s understanding goes hand in hand with the intention of the member states of the United Nations who by including SDG 17 have explicitly pointed out that partnerships across sectors are pivotal for working on innovative solutions to grand challenges.

#### 4.1.4. System Building

Whereas the practices identified in the co-creation category are more or less characterized by co-creating value with stakeholders, be it suppliers, producers or customers, in order to succeed with business sustainability, the practices within the system building category are characterized by working strategically to nourish mind-sets, develop skills, offer knowledge and create markets [58]. In line with the social innovation literature, we define system building as a scaffolding activity where the focal firm initiates and supports the building of a favorable environment and community of practice and push for socio-cultural change [59,60]. So, while the co-creation practices emerge as relatively structured partnerships, system building practices can be viewed as broader but also looser and less defined interactions between the firm and actors targeted by the firm’s sustainability practices.

The firms that have initiated system building practices, not surprisingly, all express themselves as being founded on the sole purpose of sustainability, or with sustainability in their DNA. Some of these firms thus operate beyond sustainability certifications or labels and very few of them articulate sustainability in their vision or daily language, simply because it is so inherent in what they do there is no need for it. Such deeply anchored perceptions of sustainability as being part of the business is seen, among others, in case F where sustainability is “just the way the business was born” (Founder and CEO, case F). Two of the cases leverage on competitive advantages in order to try and change mindsets in their industries. Such practice is seen in case M, “a forerunner of sustainable development and social responsibility in the Danish banking sector since 1982” (website case M) and widely reputable for its’ impact purpose, in which partnership requests are declined if there is no sufficient match between values:

*“Some of the bigger banks have expressed interest in working with us but we’ve politely declined. We can’t keep our integrity and work with them at the same time. I hope this will push the bar.”*

*(Impact Investment Advisor, Case M)*

Similarly, case O intends to leverage on their market share to encourage suppliers to work more sustainably: “We’re building our second factory. So, in three months we’re the biggest supplier of wooden cement which gives us some muscles to push our suppliers in a better direction” (CEO, case O).

Two firms characterize their system building practices as educational. Case E is an artificial intelligence technology firm targeting the health sector but, views its own purpose as something reaching far beyond just one sector. As phrased by their founder and CEO: “ethical teaching of people is prioritized over earning a lot of money” (Founder and CEO, case E). On a similar note, besides leveraging on the competitive advantage as mentioned above, case O shares experience and knowledge with other firms for the purpose of nourishing the sustainability market, as indicated in a quote by their CEO: “I go out and teach other firms how they can get started with sustainability, circularity and the 17 SDGs based in the experience we’ve acquired. Because it hasn’t all been a walk in the park” (CEO, case O).

#### 4.2. Potentials and Challenges Related to the Sustainability Practices

Having identified the four categories of sustainability practices, we now progress to exploring the potentials and challenges related to each sustainability practice. The potentials essentially represent the motivation that drives the firms to engage with the focal practice. The challenges on the other hand represent obstacles that constrain the firm in successfully engaging in the focal practice. The aspects represent an essential source of insight in building a better understanding of how and why firms engage in sustainability practices. Table 3 below outlines experienced potentials and challenges tied to progression within each category of practices.

**Table 3.** Potentials and challenges in transitioning through sustainability practices.

Description of Potentials	Firms	Description of Challenges	Firms
<b>Inspire and Inform</b>			
A sustainable approach enforces strategizing towards long-term impact	C	Many firms reach for the SDGs as a tool to help introduce more sustainable practices but, translating the framework into actual business practices is difficult	C, H, K
Business opportunities and customer demands are present	D, H	The sustainability concept is experienced as something abstract which complicates internal and external communication	C, D
		Acquiring knowledge and understanding of a new field demands resources	C
<b>Productize</b>			
Strengthen employer brand	G	Scaling requires resources	L
Business opportunity and customer demands	G, L	It is difficult to price compete with sustainable products	P
Maintain reputation as innovative brand	I		
<b>Co-create</b>			
Structural and cultural changes hold big business potentials	A, N, Q	Circularity creates additional paperwork	A
		Costs	N
Business opportunity and customer demands	B, N, O, Q	Old-fashioned industry norms	O, A, P, Q
<b>System building</b>			
Big scale impact potential	M	Old-fashioned industry norms	F, O, M
Ability to influence the industry	O	The SDGs risk diluting the purpose of foundationally sustainable firms	M

#### 4.2.1. Inform and Inspire

##### Potentials

Among the firms whose practices were categorized as informing and inspiring, the apparent business potential and the emerging customer demands (case D and case H) is a strong incentive to engage with sustainability practices. Case D recently succeeded in entering a public procurement deal with a large municipality, which secures access to future business, and relates this success directly to the firm's increasing sustainability focus which, as their CEO reflects, means they must be heading in the right direction:

*"The municipalities we've spoken to are really interested in sustainability; they say it's good we focus on sustainability because then they can profile themselves as a sustainable municipality which will attract families. We would never have entered the procurement with [the local] municipality if it wasn't for our sustainability focus. [ . . . ] And we make good profit with [the collaboration]."*

(CEO, case D)

Case H identified emerging demands from end-users that started to see value in sustainability already some years ago, which strengthened the early stages of the firm's sustainability journey: "Already in 2015 some of our customers, the laundry services, started asking about it [sustainability], and of course that's because they're being questioned by their end-user" (Sustainability Manager, case H). Among other things, this constitutes an incentive for the firm to integrate sustainability practices into their work processes, such as sales procedures: "Especially our external salespeople said 'wow, we can really use this [utilizing the SDGs as part of the sales procedure]'" (Sustainability Manager, case H) as a way of communicating the sustainability of their products to customers. An architecture firm (case C) noticed how the firm's increased sustainability focus has created a common ground for the internal team to work from, making it easier for them to recognize the firm's strategic direction. An opportunity that will improve their ability to implement sustainability as part of their consulting: "It [the SDG framework] gives us a common language; it helps us think in long term strategies. How can we help our clients make an impact that expands beyond their key focus?" (Sustainability and Innovation Officer, case C).

##### Challenges

Acquiring knowledge and understanding of a new field usually demands additional resources, a challenge identified as a major obstacle for the firm's ability to unleash its' sustainability potential:

*"Imagine if we had a sustainability employee who'd just sit and work on this. But we don't have the resources. And it's an important point because, if you were interviewing [big Danish corporate], they wouldn't even think about such resource challenge. But the case is different for small and medium sized firms like us, which represent the majority of firms in Denmark."*

(CEO, case D)

Simultaneously, some of the firms struggle with an experienced abstraction around the sustainability concept impeding both the internal and external communication:

*"How can we at all communicate this internally? What does it mean when we say [case D] is sustainable? We can't take off and give 12 different explanations. We have to be concrete also when we communicate externally."*

(CEO, case D)

One tool that companies use in order to understand sustainability in their context and to initiate work around sustainability are the UN SGDs. However, several of the firms are challenged with

translating the framework into actual business activities (case C, H and K). They find it “difficult to figure out how to use the SDGs” (Sustainability and Innovation Officer, case C), “really hard to try and translate the SDGs to our daily processes and operations” (Sustainability Manager, case H) and therefore need to “spend a lot of time on it” (Sustainability and Innovation Officer, case C). The SDG framework is perceived as “completely abstract” (Sustainability Manager, case H) and firms feel alienated from it. In order to ease the transition and facilitate translation, another case firm temporarily connects the SDG language to an already established internal language that staff can relate to:

*“It [changing the internal culture] is still difficult, we’re still on a journey. But we’re translating it [the SDG framework] into something that people can understand, ‘Be thoughtful about the resources’, that’s something that has always been there.”*

*(Sustainability Manager, case K)*

While some firms experience an increase in sustainability demands from customers, case C has learned not all clients are equally impressed by the SDG framework as a way to work more sustainably: “We have clients from all over the world, and not everyone likes the SDGs ( . . . ) people in the US don’t give a shit about the UN or the goals ( . . . ). They don’t trust the UN, and they can’t see how it’s relevant to them ( . . . ). Whether I articulate the SDGs in my client communication or not, very much depends on the geography of each client ( . . . ) and I almost only articulate them directly in my communication with Danish clients, otherwise it’s more indirectly.” (Sustainability and Innovation Officer, case C).

#### 4.2.2. Productize

##### Potentials

The business potential remains a focus and incentive to firms, for whom sustainability is more or less part of their product or service. Case G identifies a change in consumers’ behavior and stresses the necessity that firms respond to this by changing their business prioritization, as articulated in this quote:

*“There’s a change going on in consumers’ behavior, they demand the firms live up to something greater. We’re spending our money more and more with firms that make a positive difference in the world. Firms need to look at it from a monetary perspective, doing good is good business.”*

*(Creative Director, case G)*

Case L reports on similar positive responses from the market following their focus on sustainability, as illustrated in this quote: “We’ve contacted 34 municipalities and offered to help them become more sustainable, referencing the vision in their external communication. And it works—we’re on it!” (Sales Officer, case L). Maintaining an innovative brand reputation requires a consistency of new-thinking and to case I, a textile firm, innovating within the field of sustainable production sometimes means collaborating across areas of expertise, as illustrated in this quote: “Could we e.g., recycle wool in products as we do now but, in more cross-partnerships. That we dare to jump into something new. Because we’re an innovative brand and we have to maintain that reputation.” (Sustainability Manager, case I).

##### Challenges

Two of the firms articulate challenges related to progressing with their current products and services. Price competition impedes one of the firms from entering new customer relationships:

*“When the shops have to decide whether they want to go with the budget friendly jacket, that’ll give them a high profit, or the more costly but sustainable jacket, they go with the one they can earn money*

*on. And at the same time, they're arguing the customers do not demand the sustainable option. Well, they were never given the choice!"*

*(Founder and CEO, case P)*

Furthermore, similar to cases in the inform and inspire category a lack of resources is a challenge to a small lighting firm wishing to scale and expand their product to more industries and customer groups, illustrated in this quote: "Scaling is just super difficult, and it's not because we're saying something that isn't true, our size is just impeding us from running the marketing activities needed, we haven't got enough hands." (Sales Officer, case L).

#### 4.2.3. Co-Create

##### Potentials

While customer demand remains a driving force (case B, N, O and Q), the potential in engaging current or future stakeholders reveals a point of attention as well. Case P identifies synergetic opportunities from partnering with an industrial actor: "We'd like to enter partnerships with other textile producers. We could actually go to [high end fashion brand] today and say 'would you like to make products out of circular leather? You can use our platform'." (Founder and CEO, case P). According to several of the firms a structural and cultural change can provide a way for more partnerships. Case A refers to the inherent potential in what is currently a mismatch between emerging customer demands and an industrial resistance towards change:

*"There's a huge market here [for circular construction products], since the customer segment is growing. These are people who know what they want and are not willing to compromise. But there'll be a lot of brick layers and entrepreneurs who're going to hate them. If there could be a way to handle this, there's a big market waiting ahead."*

*(CEO, case A)*

Case Q emphasizes a structural change that recently happened and predicts this will in turn enforce change in the industries: "Right now, we're at a turning point. [ . . . ] China said stop, from 1st of January. They're not taking any more of the world's plastic waste. [ . . . ] The industries are about to understand that this is for real, and the producers [customers of case Q] are forced to make that change." (Founder and CEO, case Q).

##### Challenges

As already mentioned, one of the biggest challenges impeding firms from progressing towards co-creation, seem to be industrial culture and structures. To case O it has been difficult to pull through to suppliers and stakeholders: "The construction industry is still very traditional in many ways, one likes to speak about the hardcore values, as opposed to softer values such as environment, processes and sustainability. It was a sluggish one to get going." (CEO, case O). Similarly, due to their relatively small size, case A was challenged by a supplier that resisted to do extra paperwork following the firm's wish to comply to circularity procedures:

*"We buy pigments from a supplier in France and [following the shift to become a circular firm] suddenly they had to handle far more paperwork than they were used to. And we're one of their smallest customers. [ . . . ] It was pretty tough to get them onboard. I mean, they didn't care about our accounting processes."*

*(CEO, case A)*

Case N is a big corporation with sufficient resources to push the sustainability agenda significantly but, potential economic costs remain a counteracting mechanism, as recalled by the Sustainability Manager:

*“These things [practices towards a more sustainable business] obviously have economic consequences and eventually this is a business, so if we don’t sell anything we might as well just close down. So, it’s a matter of finding the right balance; how big a step should we take each time, in order to act responsibly.”*

*(Sustainability Manager, case N)*

#### 4.2.4. System Building

##### Potentials

The firms that lead sustainability practices with the aim of building or influencing their system, are largely motivated by the aim itself, namely creating impact that reaches beyond their business. This incentive is clearly illustrated in a quote from case O: “We cannot earn money on it [give talks on their sustainability story] but, we can go out and facilitate, find other players from the industry who’d like to try and make a similar business case out of managing waste in a more sustainable way” (CEO, case O). Similarly, case M points to the immense impact potential that lies in their system:

*“There’s a huge potential in this [impact focused bank products]. You’ve got to remember what is financed by a bank. The underlying universe that’s represented by the bank is gigantic and so important. As has been pointed out before: the way in which capital is placed within the next 5 years will influence life on earth for the next 100!”*

*(Impact Investment Advisor, case M)*

##### Challenges

The firms that work to influence or change their system seem to be challenged mostly by systemic mechanisms. Case F explains this by referring to the rather profit-oriented focus in their industry:

*“They [big firms] just don’t care. They’re just men in suits. I mean, the world is led by men in suits, and they just want to earn some money! They’re completely indifferent. So, the strategies we’re making [to try and push changes in these old-fashioned structures in the detail industry] has to involve marketing, because they like to “say” that they are [practicing sustainability].”*

*(Founder and CEO, case F)*

Case O stresses that given the size of their industry, it ought to lift a much bigger responsibility than is the case today: “If you look at the construction industry in general, it can be held accountable for 40% of the total CO<sub>2</sub> emission. It’s one of the biggest players out there. Unfortunately, it’s also one of the industries that doesn’t focus on it” (CEO, case O). For the aforementioned bank, which has been working with a fundamental sustainability focus since its establishment in 1982, the SDG framework appears as a potential challenge. It risks having a counter-productive effect, as “it [the SDG framework] dilutes our purpose a little bit” (Impact Investment Advisor, case M), a mechanism that forces the firm to communicate their history more clearly: “We go out and say ‘listen we have always done this’.” (Impact Investment Advisor, case M).

## 5. Discussion

In the study we outline four categories of sustainability practices as well as the potentials and challenges related to each of the categories. This provides important insights into what sustainability practices firms adopt and how and why they do so [6,18]. In the following we discuss our findings by first, discussing how the different categories *may* relate to each other with regards to firms’ transition towards sustainability, and second by exploring the implications of our findings for firms and policy makers seeking to promote a sustainability agenda.

The cross-sectional nature of our data inhibits us from making conclusive inferences about the processual relation between the four categories of sustainability practices. Yet, we propose that

the four categories represent an increasing maturity with regards to sustainability. As suggested by Zollo [6] sustainability practices vary in intentionality, formality and stakeholder engagement. Accordingly, in the four categories identified, a progression is implied. A shift from the practices of inspiring and informing through productizing, co-creating to system building thus represents increasing intentionality of sustainability as the firms through the practices displays a stronger intentionality in the subsequent categories of sustainability practices. Similarly, with stakeholder engagement, the initial activities of informing and inspiring involved lesser external partners and less intense collaboration with the partners. As the practices moves to the right in Table 1, the more partners are involved and intensity in collaboration increases, with system building being the most fundamental change involving the broadest range of stakeholders. By outlining the experienced opportunities and challenges in transitioning into categories of sustainability practices, it is implied in our findings that the categories of practice may represent a progression towards increased sustainability maturity. We have summarized these findings in the sustainability maturity typology (see Figure 1 below). Which practices support transitioning between the four different stages in the most sustainable way might be of interest for future research.

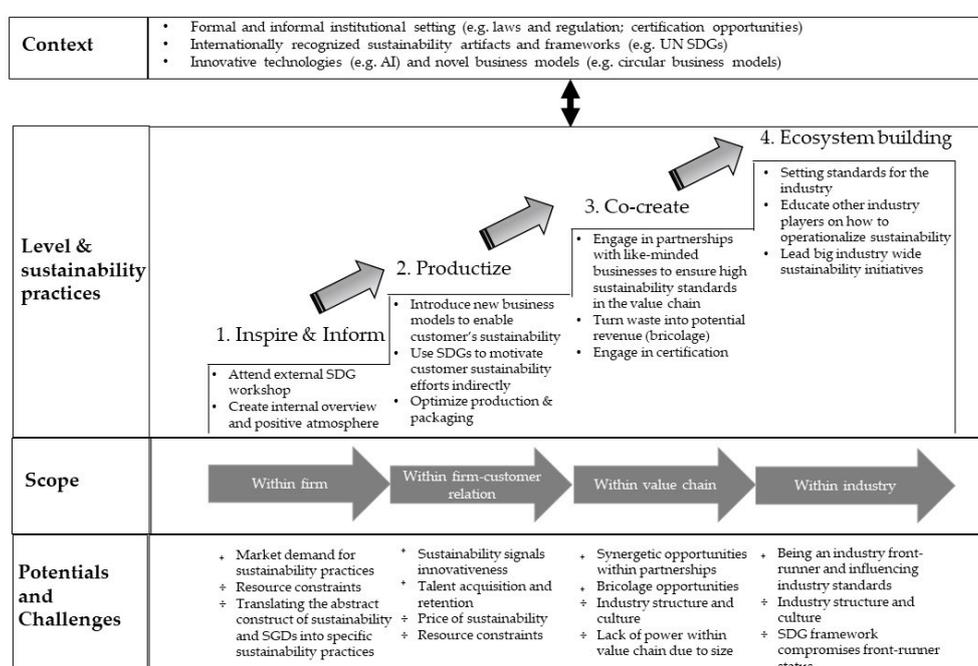


Figure 1. Propositional framework of sustainability practices.

Building on the findings described in the previous section, and the propositional framework presented above, our study suggests four contributions. First, our findings indicate that there is no generic or “one size fits all” model for firms seeking to adopt more sustainable business practices. The starting point of the firm in terms of both internal and external conditions is essential in tailoring the right first steps [61]. Internally, it seems that the existing knowledge and resources related to sustainability are important [62]. For some firms just building a knowledge base and attention around sustainability issues will be an essential first step, while for others it may be to identify specific partners with whom to co-create sustainable business activities or products. As such, a thorough reflection on the current state, knowledge and resources in the firm may serve as an important prerequisite for engaging in further sustainability practices. Externally, the industries, value chains and business systems in which the firms find themselves exert real constraints on the ability of firms to engage in a desired category of business practices. Consequently, a thorough understanding of the industry context in which the company operates is essential. In particular, it is important to question established practices within industries where dominant logics have prevailed for a long time—the construction

industry presents as a case in point in our data. Further research could investigate which sustainability practices of firms can be most influential given different industry structures and cultures in order to push the company's, value chain's and industry's sustainability agenda.

Interestingly, we did not find strong patterns of differences between small and larger firms in their engagement with sustainability practices nor across industries, despite our best analytical efforts. This is likely partially due to limitations in our sample, where there were few larger corporations—reflecting the size composition of Danish firms—and the fact that the firms studied all had committed in their external communication to engage in sustainable practices. As such the firms, by connecting to the sustainability agenda, were quite homogeneous. It furthermore potentially indicates the strength of the sustainability agenda, in that it seems that this agenda mobilizes and creates coherence across the dimensions of industry and firm size, which are otherwise expected to generate differences among firms.

Second, our findings suggest that making transitions towards sustainability maturity is difficult due to numerous reasons. The firms reveal relatively different challenges depending on which category of practice they operate within. While firms operating primarily within the inform and inspire category reveal difficulties with translating the SDG framework and sustainability in general into daily business activities, firms that co-create and, especially, those that practice system building emphasize no particular challenge connected to making sustainability work within their business but, rather point to external factors such as structural or systemic aspects as being their main constraint. Our data do not reveal any remarkable differences among these firms on size, industry or geography level, which indicates there might be other mechanisms at play independent of size, geography or industry. One adjacent aspect is the *internal* mindset, or attitude towards working with sustainability in the business. Despite size, geography or industry, the mindset and attitude present itself as a potential resource for little sustainability mature firms, that may be fostered through learning the what and how from highly sustainability mature firms. Another notable aspect of our findings related to the difficulties of transitioning through sustainability practices is that of antagonizing attitudes among *external* players towards new ways of doing things, an issue that applies especially for firms operating in the construction or detail industry. These particular industries are known for their not-so-agile processes and procedures as well as the often-strict profit-focus and as such presumably require a multi-leveled intervention including policy and legislation efforts in order to become sustainability mature, hence enabling highly sustainability mature firms to drive development on industry level.

Third, there are obvious demand side effects that will shape the likelihood of succeeding in adopting sustainability practices, especially in the productizing, co-creation and system building practices. Demand from customers—be they consumers, upstream value chain collaborators or public sector organizations—certainly helps in creating incentives and opportunities for sustainability practices [63]. This is well known and highlights the importance of end customers and public organizations to explicate. More notably, however, in our findings are the supply side effects of e.g., offering sustainable products to customers or leveraging a sustainability agenda to create partnerships with other organizations within the industry. This may be particularly relevant in industries such as construction where the established industry may be lagging behind customer demand for sustainable solutions. In our data it is suggested that both the construction and fashion sector may fit this image. As such our findings indicate that it may be problematic for firms to be too reactive to demand, both from a firm and societal perspective. With the right internal resources and competences and within the right external context, firms can aggressively push for sustainability, not within their own activities, but also with others and in the system in which they are embedded and, in the end, create the demand they aim to satisfy.

Fourth, previous literature has put a premium on how the institutional context can enable firms' engagement in sustainable practices; the UN SDGs being a recent example. While there is a strong push through SDG 17 to onboard firms this study highlights that the introduction of a macro-level framework like the UN SDGs on the micro-level can have heterogenous outcomes. Cases in the inspire and inform category see the SDGs as an inspirational tool that helps create a common language within and across firms. Surprisingly, however, born sustainable firms in the system building category seem

to be alert to the fact that the SDGs can facilitate impression management and distract from 'real sustainability' efforts therefore keeping a distance from working with the SDGs. This is notable as one could speculate that the SDGs would gain a lot from the participation of system building firms. Based hereon, this paper extends findings on SDG utilization by social ventures [63] by emphasizing limits to the SDGs as a "one-size-fits-all" framework which might carry more value for firms in the early stages of their sustainability journey. Thus, the current pursuit to rally firms en masse around the SDG framework and align their practices to a global blueprint might neglect different firm needs and preferences. Mirroring the complexity and multi-leveled nature of sustainability practices, firms should and need to engage with different frameworks that support them at the stage that they are at. Future research might aim to shed more light on which firms can most benefit from the SDG framework and which firms' engagement is most beneficial for the SDGs.

## 6. Conclusions and Limitations

In this paper we have sought to understand the categories of sustainability practices that firms adopt, and the potentials and challenges associated with them. Based on a qualitative multiple case study, we identified four categories of sustainability practices including inspiring and informing, productizing, co-creating and system building. Based on our findings we suggested a sustainability maturity typology, proposing that these four practices are associated with an increasing intensity of sustainability intention, so that firms realize increasing levels of sustainability in the focal business practices as they move from inspiring and informing through to system building. Further, we argued that there is no generic "one size fits all" approach to support sustainability practices as approaches need to fit a firm's sustainability maturity level.

The findings and discussion build on qualitative data collected from a sample of 17 Danish firms. So, while we believe the findings have merit and carry valuable insights, there are limits resulting from the sample and focus of the study that call for further research. In particular, further research is needed to parcel out differences across national cultures, institutional and industry settings and dimensions of firm size, strategic orientation and organizational structures. We suspect that the sustainability agenda is strong in Denmark and that Danish firms are quick to pick up the agenda and to communicate their efforts. Yet, the extent to which this readily applies elsewhere, and how differences in the setting influence the adoption and execution of sustainability practices is an open and important question for future research. Of particular interest, we would argue, is the translation of frameworks such as the UN Sustainable Development Goals into actual concrete action in various contexts and settings, which becomes of vital importance when researchers seek to support the development of more sustainable firms.

Furthermore, the qualitative data collection generating self-reported descriptions of sustainability practices, do not capture possible mismatches or misalignments between intentions and realized impact. This includes the issue of greenwashing. It also includes the issue of industry related differences in the efforts needed to enact sustainable impacts that go beyond legislation and industry standards. Firms operating in industries with heavy environmental regulation may find themselves generating positive sustainable impact without putting much effort into surpassing industry standards. Examples of this may well be found in e.g., waste management and water supply. Firms operating in less regulated industries and producing products or services with limited environmental footprints, may need intense effort to realize sustainability impact beyond industry standards. This calls for further research that takes into account both general challenges with translating intention into impact, and industry related differences with regards to the issue.

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## Appendix A

**Table A1.** Interview Guide.

Themes	Theoretical Background	Semi-Structured Interview Questions
(1) Firm's understanding of sustainability and the UN Sustainable Development Goals	Linnenluecke et al., 2009; Patzelt & Shepherd, 2011	<p>What is your firm's understanding of sustainability?</p> <p>What is your firm's understanding of the UN Sustainable Development Goals?</p> <p>How do you understand the relationship between sustainability and the UN Sustainable Development Goals?</p> <p>How do you know about sustainability and the UN Sustainable Development Goals?</p>
(2) History of engaging with sustainability and perceived relevance for the firm's development	Adner & Zemsky, 2006; Bansal, 2013; Grayson & Hodges 2017; Kaupi & Hannibal, 2017; Zollo et al. 2013	<p>Why and when have you started working with sustainability and the UN Sustainable Development Goals?</p> <ul style="list-style-type: none"> <li>• Timeline</li> <li>• Proactive vs. reactive engagement</li> </ul> <p>How do you work with sustainability and the UN Sustainable Development Goals?</p> <p>Do you have specific plans to further work with sustainability?</p> <p>Do you face specific barriers to work with sustainability?</p> <p>Do you have specific plans to further work with the UN Sustainable Development Goals?</p> <p>Do you face specific barriers to work with the UN Sustainable Development Goals?</p> <p>Which potentials does the firm see in working with sustainability (on the company and industry level)?</p> <p>Which potentials do you see in working with the UN Sustainable Development Goals?</p> <ul style="list-style-type: none"> <li>• Framework to communicate/brand vs. framework to develop company</li> <li>• Framework to engage with other stakeholders</li> </ul> <p>Which challenges do you face when working with sustainability/the UN Sustainable Development Goals?</p> <ul style="list-style-type: none"> <li>• Network</li> <li>• Resources</li> <li>• Knowledge/Tools</li> <li>• Political</li> <li>• Other</li> </ul>
(3) Work examples related to sustainability	Linnenluecke et al., 2009; Rizos et al., 2012	
(4) Potentials and challenges faced when engaging with sustainability and the UN Sustainable Development Goals	Günzel-Jensen et al. 2020; Hahn et al., 2014; van Zanten & van Tulder, 2018	

## References

- Friedman, M. The Social Responsibility of Business Is to Increase Its Profits. In *Corporate Ethics and Corporate Governance*; Springer Science and Business Media LLC: Berlin/Heidelberg, Germany, 2007; pp. 173–178.
- Donaldson, T.; Walsh, J.P. Toward a theory of business. *Res. Organ. Behav.* **2015**, *35*, 181–207. [[CrossRef](#)]
- Kuckertz, A.; Wagner, M. The influence of sustainability orientation on entrepreneurial intentions—Investigating the role of business experience. *J. Bus. Ventur.* **2010**, *25*, 524–539. [[CrossRef](#)]
- Vickers, I.; Lyon, F. Beyond green niches? Growth strategies of environmentally-motivated social enterprises. *Int. Small Bus. J. Res. Entrep.* **2012**, *32*, 449–470. [[CrossRef](#)]
- York, J.G.; Venkataraman, S. The entrepreneur–environment nexus: Uncertainty, innovation, and allocation. *J. Bus. Ventur.* **2010**, *25*, 449–463. [[CrossRef](#)]
- Zollo, M.; Cennamo, C.; Neumann, K. Beyond What and Why. *Organ. Environ.* **2013**, *26*, 241–259. [[CrossRef](#)]
- Grayson, D. *Corporate Social Opportunity: Seven Steps to Make Corporate Social Responsibility Work for Your Business*; Routledge: London, UK, 2017.
- Orlitzky, M.; Schmidt, F.L.; Rynes, S.L. Corporate Social and Financial Performance: A Meta-Analysis. *Organ. Stud.* **2003**, *24*, 403–441. [[CrossRef](#)]
- Wood, D.J. Beyond What and Why: Understanding Organizational Evolution Towards Sustainable Enterprise Models. *Acad. Manag. Rev.* **1991**, *16*, 691–718. [[CrossRef](#)]
- Elkington, J. *Cannibals with Forks: The Triple Bottom Line of Twenty-First Century Business*; Capstone: Oxford, UK, 1997.
- Emerson, J. The Blended Value Proposition: Integrating Social and Financial Returns. *Calif. Manag. Rev.* **2003**, *45*, 35–51. [[CrossRef](#)]
- Nicholls, A. We do good things, don't we: Blended Value Accounting' in social entrepreneurship. *Account. Organ. Soc.* **2009**, *34*, 755–769. [[CrossRef](#)]
- Delmas, M.A.; Burbano, V.C. The Drivers of Greenwashing. *Calif. Manag. Rev.* **2011**, *54*, 64–87. [[CrossRef](#)]
- World Commission on Environment and Development (1987). *Our Common Future*; World Commission on Environment and Development: New York, NY, USA, 1987.
- Margolis, J.D.; Walsh, J.P. Misery Loves Companies: Rethinking Social Initiatives by Business. *Adm. Sci. Q.* **2003**, *48*, 268. [[CrossRef](#)]
- Nielsen, J.G.; Lueg, R.; Van Liempd, D. Managing Multiple Logics: The Role of Performance Measurement Systems in Social Enterprises. *Sustainability* **2019**, *11*, 2327. [[CrossRef](#)]
- Mura, M.; Longo, M.; Micheli, P.; Bolzani, D. The Evolution of Sustainability Measurement Research. *Int. J. Manag. Rev.* **2018**, *20*, 661–695. [[CrossRef](#)]
- Bansal, P. Evolving sustainably: A longitudinal study of corporate sustainable development. *Strat. Manag. J.* **2005**, *26*, 197–218. [[CrossRef](#)]
- Hopkins, M.S. How Sustainability Fuels Design Innovation. *MIT Sloan Manag. Rev.* **2010**, *52*, 75–81.
- Seghezze, L. The five dimensions of sustainability. *Environ. Politi* **2009**, *18*, 539–556. [[CrossRef](#)]
- Patzelt, H.; Shepherd, D.A. Recognizing Opportunities for Sustainable Development. *Entrep. Theory Pr.* **2010**, *35*, 631–652. [[CrossRef](#)]
- Siebold, N.; Günzel-Jensen, F.; Müller, S. Balancing dual missions for social venture growth: A comparative case study. *Entrep. Reg. Dev.* **2018**, *31*, 710–734. [[CrossRef](#)]
- Battilana, J.; Lee, M. Advancing Research on Hybrid Organizing—Insights from the Study of Social Enterprises. *Acad. Manag. Ann.* **2014**, *8*, 397–441. [[CrossRef](#)]
- Baber, Z. Climate Change and the Yellow Vest Movement. *Econ. Political Wkly.* **2019**, *54*, 13.
- George, G.; Howard-Grenville, J.; Joshi, A.; Tihanyi, L. Understanding and Tackling Societal Grand Challenges through Management Research. *Acad. Manag. J.* **2016**, *59*, 1880–1895. [[CrossRef](#)]
- Günzel-Jensen, F.; Siebold, N.; Kroeger, A.; Korsgaard, S. Do the United Nations' Sustainable Development Goals matter for social entrepreneurial ventures? A bottom-up perspective. *J. Bus. Ventur. Insights* **2020**, *13*, e00162. [[CrossRef](#)]
- Van Der Waal, J.W.; Thijssens, T. Corporate involvement in Sustainable Development Goals: Exploring the territory. *J. Clean. Prod.* **2020**, *252*, 119625. [[CrossRef](#)]
- Gao, J.; Bansal, P. Instrumental and Integrative Logics in Business Sustainability. *J. Bus. Ethic* **2012**, *112*, 241–255. [[CrossRef](#)]

29. Calic, G.; Mosakowski, E. Kicking Off Social Entrepreneurship: How A Sustainability Orientation Influences Crowdfunding Success. *J. Manag. Stud.* **2016**, *53*, 738–767. [[CrossRef](#)]
30. Pacheco, D.F.; Dean, T.; Payne, D.S. Escaping the green prison: Entrepreneurship and the creation of opportunities for sustainable development. *J. Bus. Ventur.* **2010**, *25*, 464–480. [[CrossRef](#)]
31. Eccles, R.G.; Ioannou, I.; Serafeim, G. The Impact of Corporate Sustainability on Organizational Processes and Performance. *Manag. Sci.* **2014**, *60*, 2835–2857. [[CrossRef](#)]
32. Hahn, T.; Preuss, L.; Pinkse, J.; Figge, F. Cognitive Frames in Corporate Sustainability: Managerial Sensemaking with Paradoxical and Business Case Frames. *Acad. Manag. Rev.* **2014**, *39*, 463–487. [[CrossRef](#)]
33. Klewitz, J.; Hansen, E.G. Sustainability-oriented innovation of SMEs: A systematic review. *J. Clean. Prod.* **2014**, *65*, 57–75. [[CrossRef](#)]
34. Hockerts, K.; Wüstenhagen, R. Greening Goliaths versus emerging Davids—Theorizing about the role of incumbents and new entrants in sustainable entrepreneurship. *J. Bus. Ventur.* **2010**, *25*, 481–492. [[CrossRef](#)]
35. Kauppi, K.; Hannibal, C. Institutional pressures and sustainability assessment in supply chains. *Supply Chain Manag. Int. J.* **2017**, *22*, 458–472. [[CrossRef](#)]
36. Roxas, B.; Coetzer, A. Institutional Environment, Managerial Attitudes and Environmental Sustainability Orientation of Small Firms. *J. Bus. Ethic* **2012**, *111*, 461–476. [[CrossRef](#)]
37. Van Zanten, J.A.; Van Tulder, R. Multinational enterprises and the Sustainable Development Goals: An institutional approach to corporate engagement. *J. Int. Bus. Policy* **2018**, *1*, 208–233. [[CrossRef](#)]
38. EMF. *Towards the Circular Economy: Economic and Business Rationale for An Accelerated Transition*; Ellen MacArthur Foundation: Cowes, UK, 2013.
39. Korhonen, J.; Honkasalo, A.; Seppälä, J. Circular Economy: The Concept and its Limitations. *Ecol. Econ.* **2018**, *143*, 37–46. [[CrossRef](#)]
40. Stahel, W.R. The circular economy. *Nature* **2016**, *531*, 435–438. [[CrossRef](#)]
41. Rizos, V.; Behrens, A.; Van Der Gaast, W.; Hofman, E.; Ioannou, A.; Kafyeye, T.; Flamos, A.; Rinaldi, R.; Papadelis, S.; Hirschnitz-Garbers, M.; et al. Implementation of Circular Economy Business Models by Small and Medium-Sized Enterprises (SMEs): Barriers and Enablers. *Sustainability* **2016**, *8*, 1212. [[CrossRef](#)]
42. Gast, J.; Gundolf, K.; Cesinger, B. Doing business in a green way: A systematic review of the ecological sustainability entrepreneurship literature and future research directions. *J. Clean. Prod.* **2017**, *147*, 44–56. [[CrossRef](#)]
43. Woolthuis, R.K.; Hooimeijer, F.; Bossink, B.A.; Mulder, G.; Brouwer, J. Institutional entrepreneurship in sustainable urban development: Dutch successes as inspiration for transformation. *J. Clean. Prod.* **2013**, *50*, 91–100. [[CrossRef](#)]
44. Linnenluecke, M.K.; Russell, S.V.; Griffiths, A. Subcultures and sustainability practices: The impact on understanding corporate sustainability. *Bus. Strat. Environ.* **2009**, *18*, 432–452. [[CrossRef](#)]
45. Pullman, M.; Maloni, M.J.; Carter, C.R. Food for Thought: Social Versus Environmental Sustainability Practices and Performance Outcomes. *J. Supply Chain Manag.* **2009**, *45*, 38–54. [[CrossRef](#)]
46. Sharma, S.; Henriques, I.; Sharma, S. Stakeholder influences on sustainability practices in the Canadian forest products industry. *Strat. Manag. J.* **2004**, *26*, 159–180. [[CrossRef](#)]
47. Yin, R.K. *Case Study Research*; Sage: Newbury Park, CA, USA, 1989.
48. Gehman, J.; Glaser, V.; Eisenhardt, K.M.; Gioia, D.; Langley, A.; Corley, K.G. Finding Theory—Method Fit: A Comparison of Three Qualitative Approaches to Theory Building. *J. Manag. Inq.* **2017**, *27*, 284–300. [[CrossRef](#)]
49. Eisenhardt, K.M.; Graebner, M.E. Theory Building from Cases: Opportunities and Challenges. *Acad. Manag. J.* **2007**, *50*, 25–32. [[CrossRef](#)]
50. Eisenhardt, K.M. Building Theories from Case Study Research. *Acad. Manag. Rev.* **1989**, *14*, 532. [[CrossRef](#)]
51. Flyvbjerg, B. Five Misunderstandings About Case-Study Research. In *Qualitative Research Practice*; Seale, C., Gobo, G., Gubrium, J.F., Silverman, D., Eds.; Sage: London, UK, 2004; pp. 420–434.
52. Sachs, J.; Schmidt-Traub, G.; Kroll, C.; Lafortune, G.; Fuller, G. *Sustainable Development Report 2019*; Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN): New York, NY, USA, 2019.
53. Linneberg, M.S.; Korsgaard, S. Coding qualitative data: A synthesis guiding the novice. *Qual. Res. J.* **2019**, *19*, 259–270. [[CrossRef](#)]
54. Miles, M.B.; Huberman, A.M.; Saldana, J. *Qualitative Data Analysis: A Methods Sourcebook*; SAGE Publications, Incorporated: Thousand Oaks, CA, USA, 2013.

55. Alvarez, S.A.; Young, S.L.; Woolley, J. Opportunities and institutions: A co-creation story of the king crab industry. *J. Bus. Ventur.* **2015**, *30*, 95–112. [CrossRef]
56. Ramaswamy, V.; Chopra, N. Building a culture of co-creation at Mahindra. *Strat. Leadersh.* **2014**, *42*, 12–18. [CrossRef]
57. United Nations. Sustainable Development Goal 17. Available online: <https://sustainabledevelopment.un.org/sdg17> (accessed on 14 January 2020).
58. Murphy, S. Corporate Partnerships for Entrepreneurship: Building the Ecosystem in the Middle East and Southeast Asia. Working Paper No. 62. Corporate Social Responsibility Initiative, 2010. Available online: [https://www.hks.harvard.edu/sites/default/files/centers/mrcbg/programs/cri/files/workingpaper\\_62\\_murphy.pdf](https://www.hks.harvard.edu/sites/default/files/centers/mrcbg/programs/cri/files/workingpaper_62_murphy.pdf) (accessed on 23 June 2020).
59. Moolaert, F.; Martinelli, F.; Swyngedouw, E.; González, S. Towards Alternative Model(s) of Local Innovation. *Urban Stud.* **2005**, *42*, 1969–1990. [CrossRef]
60. Moore, M.-L.; Riddell, D.; Vocisano, D. Scaling Out, Scaling Up, Scaling Deep: Strategies of Non-profits in Advancing Systemic Social Innovation. *J. Corp. Citizsh.* **2015**, *2015*, 67–84. [CrossRef]
61. Lloret, A. Modeling corporate sustainability strategy. *J. Bus. Res.* **2016**, *69*, 418–425. [CrossRef]
62. Litz, R.A. A resource-based-view of the socially responsible firm: Stakeholder interdependence, ethical awareness, and issue responsiveness as strategic assets. *J. Bus. Ethic* **1996**, *15*, 1355–1363. [CrossRef]
63. Adner, R.; Zemsky, P. A demand-based perspective on sustainable competitive advantage. *Strat. Manag. J.* **2006**, *27*, 215–239. [CrossRef]



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