

Article

Sustainability Concepts in Nordic Business Research: A Critical Perspective

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Abstract: Current sustainability challenges force companies to radically rethink their operations to account for their business models' long-term ecological and social impact. Scholarly works on the topic reveal no solid consensus in defining sustainability for businesses, echoing the sustainability discourse in general. Such lack of clarity might in turn detrimentally impact the business logic that can arrive from such sustainability concepts. The few existing typological reviews of sustainable business literature are lacking in their investigation of underlying theoretical frameworks of sustainability and, more importantly, the implications of their application are largely missing. This study describes and analyses the main sustainability concepts identified in a body of 69 scientific articles from the field of sustainable business literature. Secondly, it proposes a basic sustainability taxonomy to support a critical discussion, and implications of the sustainability concepts, in both discourse and practical application. The findings suggest a predominance of concepts that only partly encompass the key aspects of sustainability, such as social and ecological issues, and long-term perspectives, and they lack the systemic understanding present in fields such as the Earth Sciences.



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1. Introduction

There is an increasing expectancy of the private sector to develop more sustainable businesses that provide better strategies for products and services. Current business paradigms are inherently limited in their ability to effectively address the social and ecological challenges of our time. In response, companies are increasingly addressing sustainability issues in all aspects of their businesses. However, scholars suggest that the current economy's fundamental operating paradigms pose a significant hindrance to these efforts' progress and impact [1], resulting in a continuous decline of the environment [2–4]. Therefore, it is argued that the transition of industries and businesses towards more sustainable value creation depends on a number of factors, an important one being the capacity for innovation, both at an organisational level and in business models [5].

As a result, we can observe a surge in academic writing on business innovation's role in addressing sustainability. The literature shows, however, that the concepts of sustainability and sustainable business are not well-defined, neither by corporate organisations nor stakeholders or the public [6]. Moreover, it remains unclear how and to what extent they are adopted and operationalised by the private sector.

In both academic and practical fields, few concepts have seen such rapid proliferation as that of sustainability. The catch-all nature of the term and its timeliness have given the concept a reputation for being unwieldy, lacking in definition and precision. This has not reduced its popularity and adoption in a range of topics, the area of business being one of the more prominent ones.

Attempts to clarify sustainability in the field through literature reviews exist, but they commonly address a specific industry or sector [7–12]. Furthermore, reviews generally

focus on a specific definition of sustainability at the onset and, therefore, do not necessarily investigate the reviewed articles' understanding of it [13]. Other studies apply an initial definition or concept of sustainability as a means of exclusion in the selection criteria of articles, for instance, Adams et al. [14] (p. 186), where the Triple Bottom Line concept by Elkington [15] is used.

Such approaches to the literature are arguably in contradiction to contemporary sustainability research, which emphasises a holistic rather than a reductionist perspective. The complex, interdependent network of causes and multi-level, multi-stakeholder contexts implies that sustainability challenges are systemic in their nature [16,17] and should be addressed as such. Thus, the scientific basis for this investigation is found in diverse bodies of literature, including that of persistent systems challenges [18,19], earth systems perspectives [20–22], and contemporary sustainability frameworks [23,24].

The aim of this paper, then, is to shed critical light on the dominant concepts of sustainability in the Nordic business literature, based on systematic literature analysis. The paper is organised as follows. Section 2 presents our investigation's theoretical framing and current agenda in the field. The method for our literature analysis is described in Section 3, followed by a presentation of the findings in Section 4. In Section 5, we analyse and discuss our findings with a basic taxonomy of sustainability concepts. We conclude the paper in Section 6, in which we highlight the implications of the concepts in use in the literature and indicate directions for future studies to clarify the landscape of sustainability and sustainable business research for practitioners, in particular.

2. Background

The study was carried out within Futuring Sustainable Nordic Business Models (Futuring Nordics) (Futuring Sustainable Nordic Business Models research group at the UiO website, <https://www.uio.no/english/research/strategic-research-areas/nordic/research/research-groups/futuring-nordics/>, accessed on 3 April 2021), an interdisciplinary research group consisting of researchers from the Department of Private Law and the Department of Informatics of the University of Oslo. The group studies the possibilities and significant challenges of globalisation, digitalisation, and the UN's Sustainable Development Goals (SDGs) (Sustainable Development Goals Knowledge platform website, <https://sustainabledevelopment.un.org/>, accessed on 3 April 2021) to Nordic businesses.

The Nordic focus is argued to be of specific interest in sustainability research. Nordic companies also rank disproportionately well on major CSR and sustainability reports [25], including the Dow Jones Sustainability Index (DJSI) and the Global 100 Index. Characterising features of the Nordic approach in the context of business include socio-cultural traits [26] related to power distance (hierarchy), collectivism, stakeholder involvement, managerial style, and innovation focus. This Nordic approach is set within the narrative of the Nordic Model [27], based on the notions of social dialogue and the welfare state [28,29]. Progressive policies [30] and a deeply embedded environmentalist legacy [31] are also suggested as explanations for the favourable narrative of the Nordics.

However, the ecological impacts of this approach are increasingly scrutinised. Concerns have been raised over the effect of high consumption in the region with its consequent CO₂ emissions and resource use [32,33]. In response, sustainable economic development, through ideas such as Green Growth, is increasingly on the agenda in the Nordics [34]. We, therefore, seek to understand better how sustainability is understood and implemented in the Nordic business context.

3. Methodology

The basis for our study was an exploratory literature review (ELT), based on the overarching research questions and thematic areas of investigation guiding the Futuring Nordics research group's work. The ELT was conducted as a meta-study of previous research. The review covered different bodies of literature, academic and grey literature, and was systemic in that it followed a strict protocol and was comprehensive [35]. The aim

of the review was to provide a body of literature that could be further queried with criteria relevant to the different research topics in Futuring Nordics. The ELT resulted in a body of 482 articles.

For our study's purpose, we implemented a further screening of this body of articles, guided by a set of theoretical criteria informed by our particular research interest. The result was a second body of literature consisting of 69 articles. These articles formed the basis for the analysis presented and discussed in this paper.

3.1. Research Questions and Search Terms

The ELT was based on three research questions:

1. How does the literature define a sustainable business model in the Nordic/Scandinavian countries?
2. How is sustainability defined or described in each of these definitions of a sustainable business model in Nordic/Scandinavian countries?
3. What is the role of digitalisation (ICTs, IoT, machine learning, etc.) in sustainable business models in Nordic/Scandinavian countries?

In accordance with the objectives of the Futuring Nordics research group, relevant keywords were extracted to inform the selection of search terms. These terms were combined in a single comprehensive search term in order to prevent overlapping results and to increase geographic and thematic precision. The final search terms, thus, became the following:

“sustainable business model” OR “business mode*” OR “circular economy” AND “sustainability*” AND “digitalisation” OR “digitalization” OR “information and communication technology*” OR “ICT*” AND “Nordic OR “Scandinavia*” OR “Sweden” OR “Norway” OR “Denmark” OR “Finland” OR “Iceland” OR “Norwegian” OR “Swedish” OR “Danish” OR “Finnish” OR “Icelandic”.

We limited our search to publications from the past decade (2010–2020), expecting a large number of results, to focus on the most current works in a rapidly evolving field.

A comprehensive search was conducted through a number of databases and search engines, resulting in a large number of suggested publications (see Table 1).

Table 1. Resources for literature review.

Database/Search Engine	Results	Publication Period	Category
ACM Digital Library	57	2010–2020	General
Business Source Complete	1797	2010–2020	Business and Economics
EconLit	0	2010–2020	American Economic Association
EconPapers	16	2010–2020	Economics Database
IDEAS	15	2010–2020	Economics Database
IEEE Xplore	22	2010–2020	General
Google Scholar	2770	2010–2020	General
Scopus	144	2010–2020	General
Semantic Scholar	34	2010–2020	Computer Science and Biomedicine
SSRN Digital Library	28	2010–2020	Social Sciences and Humanities

All results were reviewed to assess their relevance to the three research questions described in Section 3.1. This resulted in a set of 482 publications, which were made available through a reference management system, providing a body of literature supporting the different studies of the Futuring Nordics research group.

3.2. Screening the Review for Our Study

For the purpose of this particular study, we applied further screening criteria to the body of 482 publications. Our aim was to critically investigate the dominant concepts of sustainability found in the Nordic SB literature. Therefore, our interest was in articles that

discussed business models or business model innovation in the context of sustainability. The inclusion criteria for the second review were as follows:

1. Explicitly discuss SB and/or SBMs: Only studies explicitly discussing SB or SBM conceptually or empirically (by stating it or referring to it directly) were retained.
2. Implicitly discuss SB and/or SBMs: Studies that implicitly or indirectly provided conceptual or empirical references to SB or SBM (such as discussing the value creation logic of companies through a Product Service System application) were retained.
3. Nordic perspective: Ensure the Nordic dimension was present as a key perspective of the study or referenced as a substantial case in the investigation of the publication.
4. Peer-reviewed: Peer-reviewed studies were retained. Non-peer reviewed publications, some reports, and masters' theses entered the first review through the Google Scholar search were not retained for this study.

The screening resulted in a final body of 69 scientific articles for use in our study.

3.3. Coding Method

The 69 articles were imported to Nvivo, a qualitative research tool that we used for a double cycle coding method, combining descriptive coding and pattern coding [36]:

Descriptive coding: topic mapping. Descriptive coding is a form of deductive coding, by which our research questions directed the inquiry. Our code list, based on the topics addressed in our research questions, contained the following five codes: Sustainability, Business Model, Digitalisation, Nordic Country, and Sector (the particular field of activity that was the focus of the publication).

We implemented a hybrid form of descriptive coding, combining the more deductive topic coding with inductive coding of sub-topics. After all the articles were coded, they were organised in a spreadsheet that contained the five main codes. For each article, the codes related to each topic were given.

Pattern coding: dominance mapping. In the second cycle, we applied a pattern coding strategy. In pattern coding, pieces of text are grouped into a smaller number of topics. For example, pattern coding enabled us to understand the different meanings of sustainability found in the articles. Most articles referred to particular sustainability concepts. This enabled us to identify the most frequently used concepts for sustainability and sustainable business.

After the descriptive coding cycle, the articles were organised in a spreadsheet for pattern coding. The results of the analysis will be discussed in Section 4.

3.4. General Characteristics of the Sample Set

Cases from Sweden had the highest frequency (41%), followed by Finland (30%), Norway (26%), and Denmark (17%), with cases from Iceland being least present in the reviewed literature (see Table 2). In addition, 5 articles covered a "Nordic" or "Scandinavian" perspective, and as such, did not reveal a specific country of focus.

Table 2. Publications by country.

Country	Percentage/Count	Reviewed Articles (See Appendix A)
Sweden	41%/28	6, 7, 9, 10, 12, 13, 14, 16, 17, 20, 21, 22, 25, 27, 28, 31, 32, 41, 45, 46, 52, 55, 56, 57, 60, 61, 63, 66, 67
Finland	30%/21	4, 15, 21, 22, 24, 26, 28, 33, 35, 36, 37, 39, 51, 53, 54, 58, 59, 60, 63, 64, 65
Norway	26%/18	2, 5, 8, 11, 18, 20, 21, 22, 28, 29, 30, 38, 44, 47, 48, 50, 60, 62,
Denmark	17%/12	2, 19, 21, 22, 26, 27, 28, 43, 60, 62, 68, 69
Iceland	4%/3	21, 22, 28

The publications were also identified and organised by the common three-sector economic model of activities. The first sector, concerned with raw materials and agriculture, was represented in 13% (9) of the articles. The secondary and tertiary sectors were both described in nearly half of the publications, with 49% (34). Some articles presented cases in more than one sector (see Table 3).

Table 3. Publications by sector.

Sector	Industry Type	Percentage/Count	Reviewed Articles
Primary	Agriculture, Forestry, Oil and Gas, Fishing, Mining	13%/9	8, 10, 11, 31, 32, 35, 37, 53, 57
Secondary	Manufacturing (Furniture, Food, Textile, Electronics), Construction, Marine Technology, Waste Treatment	49%/34	1, 2, 5, 6, 8, 9, 19, 21, 22, 23, 25, 28, 30, 33, 36, 38, 41, 42, 44, 46, 49, 50, 52, 53, 54, 55, 58, 61, 62, 63, 65, 66, 68, 69
Tertiary	Services (Financial, Tourism, Health Care, ICT, Information, Mobility and Transportation), Public services	41%/28	3, 5, 12, 15, 16, 17, 18, 20, 21, 22, 26, 27, 28, 29, 34, 39, 40, 41, 43, 45, 47, 48, 51, 56, 59, 60, 64, 67

SB innovation has been closely linked to the innovation of value proposals and offerings often associated with services and new business models. It was therefore not surprising to find that most publications focused on cases in the tertiary and secondary sectors. An additional 10 articles addressed cases in the public sector.

4. Results

In this section, we describe how we organised and interpreted the concepts addressed in the articles into the two dominant categories of “sustainability” and “sustainable business”. The individual concepts are described by defining traits, and examples of applications in respective articles from the sample body are provided.

4.1. Organising the Concepts

The iterative coding approach of descriptive and pattern coding enabled us to organise the concepts into the two main categories identified in our research questions: “sustainability” and “sustainable business”. For each category, we identified the top five most frequently mentioned concepts, either as explicitly referenced concepts or interpreted to represent a concept by description.

For instance, the “Three Pillars of Sustainability” concept is often a reference to the seminal work by Barbier [16], which describes three intersecting dimensions (pillars) representing environmental, social, and economic concerns in describing sustainable development. However, several authors in our literature review list three similar aspects in their description of sustainability, citing other references or omitting a reference altogether. For example, [37] states that “The concept of sustainable development arose in order to address some of the world’s pressing social and environmental issues, and is based on the balance between economic prosperity, social equity, and environmental integrity”(p. 341). Although no explicit reference is given, we interpret this example to be closely aligned with the “Three Pillars” concept and, therefore, identified it as such in our study. The concepts were listed by the simple majority of use and do not necessarily reflect a hierarchy of importance.

Furthermore, it was necessary to delineate what constitutes valid concepts of sustainability and sustainable business in our study. The absence of clear positioning or applications of the theoretical framework of sustainability in the articles could be understood as reflecting the general lack of coherence and agreement to the actual concept of sustainability. The concept’s usefulness is vigorously debated, exacerbated by the term’s rapidly increasing use and abuse. Robinson [38] argues that the meaning of sustainability tends “rather to reflect the political and philosophical position of those proposing the definition more than any unambiguous scientific view” (pp. 373–374). The author further suggests that this very lack of definitional precision might carry certain advantages, such as constructive ambiguity. The term’s open-endedness can be useful in the development of a highly evolving, interdisciplinary field.

Despite the contested nature of the term “sustainability”, it appears to be serving some scientific and practical purposes when supported by a delineating modifier, such as “environmental” or “economic”, pointing us towards key elements of concept formation.

Identifying attributes can provide necessary and sufficient conditions for locating examples of the phenomenon, which, together with the norms of established usage, are considered distinct approaches to concept formation [39].

Our study applied the perspectives mentioned above to identify and organise the articles' dominant concepts. One could assume that the concept of "environmental sustainability" is considered to be a general term; however, we argue that it has become a so-called "Strong Concept" in that it conveys an idea (of a phenomenon), spanning a particular meaning and application through its use, even if its use is not exhaustive in its description.

It could also be argued that "sustainable development" is the dominant sustainability concept, as the term is used in 50% of the articles. However, we interpret their use and meaning in the articles to be very widely rendered and, therefore, more accurately positioned if traced back to a source of reference or additional delineating descriptions.

Rather than searching for concepts pertaining to descriptions of what would constitute a notion of "sustainable business", we have identified concepts related to sustainability in the business rationale and/or operational aspect of an organisation. In other words, a "circular economy" is not in itself something that would constitute a sustainable business; rather, it is described as a possible operational framework for the cycling of resources in a sustainable economy.

4.2. Dominant Sustainability Concepts

The five most common sustainability concepts found in the review are:

Environmental Sustainability (ES): Several articles in our study are mainly or solely concerned with, or refer to, "environmental sustainability". They address one or more of the range of concerns connected to the use of natural resources, pollution, climate change, and so forth, which can be related to our planet's natural environment. Morelli states that "...the use of the word 'environmental' quite often tends to be associated with some kind of human impact on natural systems" [40] (p. 4). Such an interpretation is reflected in the articles of our study, of which nearly half of the articles (48%) refer to specific environmental challenges (such as climate change, carbon emissions, pollution, or resource depletion) or simply state "environmental issues" or "environmental impact" when addressing the subject of ES. Some articles state an obvious topical rationale for addressing ES issues, such as Vehmas' article on consumer attitudes and circular fashion:

Sustainable consumption and production are important elements in preserving limited natural resources and avoiding climate change. In the textile sector, the increased consumption is mainly due to fast-changing, affordable fashion that results in an increasing amount of textile waste [. . .]. The environmental impacts of textile production include energy consumption, water use, chemicals, dyes and finishes, and greenhouse gas emissions [41] (pp. 286–287).

We also see environmental issues being increasingly addressed to research outside of primary and secondary sectors, such as the detrimental sides of ICT and digitalisation, as described in Eriksson, Creutz, and Hasselqvist's article on Sustainable IT Business:

Information and Communications Technologies (ICTs) offer numerous opportunities to address sustainability in society. These include, but are not limited to, digitalisation and de-materialisation, increased energy efficiency and travel substitution [42] (p. 1).

Three Pillars of Sustainability (TP): Often depicted as a Venn diagram or three supporting pillars, this tripartite concept includes economic and social considerations in addition to the environmental perspective. The attractiveness of the concept lies in its simplicity, enabling the concept to become mainstream and reinforcing itself as a dominant interpretation of sustainability. Numerous sources and variations can be found in the literature, but several scholars trace its origin back to Barbier's "The Concept of Sustainable Development" [16]. This link between the concepts of TP and SD is frequently seen in the sample set, such as in Johansdottir and McInerney's article on sustainability strategies for

Nordic insurers: “Sustainable development suggests a balance between the three pillars of economic, environmental, and social sustainability” [43] (p. 1256).

The notion of the TP concept as a cumulative tripartite approach can also be found in the articles reviewed for this study:

Whilst Karlsson and Luttrupp (2006) define ecodesign as being design that encompasses both ecology and economy (two of the three pillars of sustainability), it seems likely that the proverbial “person on the street” or, more relevantly, the “person on the factory floor” would associate ecodesign purely with environmental (ecological) design [44] (p. 104).

In response to such a critique of the classic three-partite-system understanding [16], scholars’ responses investigate a more integrated and multi-processual view.

Sustainable Development Goals (SDGs): The SDGs are, as the term implies, oriented towards sustainable development for the global society. The goals are a culmination of initiatives by the UN, spanning from the 1992 Earth Summit that resulted in the Agenda 21, through the Millennium Summit in 2000, with the declaration of the Millennium Development Goals (MDGs), and finally, the adoption of the SDGs in 2015 at the UN Sustainable Development Summit. As described by the UN, the SDGs are “a shared blueprint for peace and prosperity for people and the planet, now and into the future.” The 17 SDGs are the following: (1) No Poverty, (2) Zero Hunger, (3) Good Health and Well-Being, (4) Quality Education, (5) Gender Equality, (6) Clean Water and Sanitation, (7) Affordable and Clean Energy, (8) Decent Work and Economic Growth, (9) Industry, Innovation, and Infrastructure, (10) Reducing Inequality, (11) Sustainable Cities and Communities, (12) Responsible Consumption and Production, (13) Climate Action, (14) Life Below Water, (15) Life On Land, (16) Peace, Justice, and Strong Institutions, (17) Partnerships for the Goals. The SDGs are frequently cited in the articles with reference to a specific goal:

The central role of cities in sustainable development is clearly reflected in the Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda for Sustainable Development, which is about making cities resilient and sustainable (SDG Goal 11) [45] (p. 2).

Building upon the definition of sustainable development by the WCED (1987), the SDG framework has received praise for its universal, non-nation approach, as opposed to the MDGs (Millennium Development Goals). However, its macroscopic nature has raised the question of the SDGs’ measurability.

Intergenerational Sustainability (IGS): “Our Common Future”, the title of a report commissioned by the United Nations and published in 1987, introduced the concept of intergenerational equity as a key principle for Sustainable Development (SD). It describes SD as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” [46]. This perspective is frequently cited or paraphrased to delineate short-term and long-term perspectives in the literature:

More importantly, CE calls for novel business models that will simultaneously ensure the creation of environmental quality, economic prosperity, and social equity to benefit current and future generations [48] (p. 570).

The Brundtland report, named after chairperson Gro Harlem Brundtland, was the culmination of a 900-day process initiated by the UN General Assembly by establishing the World Commission on Environment and Development (WCED). The report has been credited for giving the global community an SD concept that has helped structure the discourse since its inception by introducing several defining features into the mainstream, such as intergenerational equity and the interrelated nature of the environment, society, and the economy.

Planetary Boundaries (PB)—The Planetary Boundaries framework was established by an international group of scientists led by the Stockholm Resilience Centre [24,49]. The framework describes nine interlinked and fundamental earth system processes, each with an

associated quantifiable threshold (boundary): (i) climate change; (ii) rate of biodiversity loss (terrestrial and marine); (iii) interference with the nitrogen and phosphorus cycles; (iv) stratospheric ozone depletion; (v) ocean acidification; (vi) global freshwater use; (vii) change in land use; (viii) chemical pollution; and (ix) atmospheric aerosol loading. The crossing of any one of the boundaries is understood to cause unacceptable environmental damage:

At the same time as we are crossing the planet's boundaries for environmentally safe operations each day in order to supply the global consumption demand and keep our industries afloat (. . .) [50] (p. 282).

The biophysical boundaries defined by the PB framework are argued to be "thresholds in key Earth System processes (that) exist irrespective of peoples' preferences, values, or compromises based on political and socio-economic feasibility" [24]. However, the Intergovernmental Panel on Climate Change and several founders of the PD framework acknowledge that it is not possible to avoid a normative position when considering the human perspective of risk [51]. Scholars also approach the PD framework as a concept to guide business and industry:

To assess the environmental impact of the company's business from a more holistic perspective, the Planetary Boundaries framework developed by Rockström et al. (2009) and updated by Steffen et al. (2015) introduced, in 2015, to provide a deeper understanding of important issues in product development and production processes [52] (p. 12).

Table 4 summarizes the different frameworks discussed.

Table 4. Dominant sustainability concepts.

Concept	Key References in the Reviewed Literature	#	%	Explanation	Reviewed Articles
"Environmental Sustainability" (Climate change, natural resources, ecology, energy)		33	48%	Concerning one or more of the following: natural resources, energy, biodiversity, and climate change	3, 6, 13, 16, 20, 21, 22, 24, 25, 28, 33, 38, 41, 45, 46, 47, 49, 50, 51, 53, 54, 55, 56, 57, 58, 59, 60, 61, 63, 65, 67, 68, 69
"Three Pillars" (Social, economic, and environmental sustainability)	"The Concept of Sustainable Economic Development. Environmental Conservation" [16]	32	46%	Three intersecting dimensions/pillars representing environmental, social, and economic concerns: Sustainable Development is defined in the report as: "... development that meets the needs of the present without compromising the ability of future generations to meet their own needs."	1, 3, 5, 7, 8, 10, 13, 15, 17, 18, 20, 21, 22, 24, 28, 29, 31, 32, 36, 37, 42, 43, 44, 47, 51, 52, 55, 57, 61, 67, 68, 69
"Intergenerational Sustainability"	"Our Common Future: Report of the World Commission on Environment and Development" (Brundtland report) [46]	13	19%	"A blueprint to achieve a better and more sustainable future for all by 2030"	7, 8, 12, 13, 15, 17, 28, 29, 31, 38, 41, 42, 43
"Sustainable Dev. Goals" (SDGs)	"Transforming our world: the 2030 Agenda for Sustainable Development" [53]	12	17%	Nine interlinked planetary boundaries proposed for defining preconditions for human development	6, 7, 12, 13, 29, 30, 36, 43, 49, 56, 57, 62
"Planetary Boundaries"	"A Safe Operating Space for Humanity" [24]	9	13%		10, 11, 13, 25, 40, 43, 44, 50, 51

4.3. Dominant Sustainable Business Concepts

The five most common sustainable business concepts found in the literature are the following:

Circular Economy: It is historically linked to other concepts that address the issues of natural resource depletion in traditional linear production models, such as Industrial Symbiosis [54] and Industrial Ecology. Circular Economy (CE) gained considerable attention through the European Union CE Action Plans (2015 and 2020) (European Union, https://ec.europa.eu/environment/circular-economy/pdf/new_circular_economy_action_plan.pdf, accessed on 3 April 2021) and has been popularised through the works of the Ellen MacArthur Foundation (Ellen MacArthur Foundation, <https://www.ellenmacarthurfoundation.org/>, accessed on 3 April 2021), which defines it as the following:

(...) an industrial system that is restorative or regenerative by intention and design. It replaces the “end-of-life” concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse, and aims for the elimination of waste through the superior design of materials, products, systems, and, within this, business models.

It cannot be traced to a singular origin and the review by [55] identifies as many as 95 different definitions of CE. Major proponents of CE include Walter Stahel and Michael Braungart, as reflected in the articles:

Rather than linear economy, which converts natural resources into waste, circular economy shifts the focus away from “end-of-life”, and towards a “cradle-to-cradle” approach [56] (p. 5).

While the exact meaning of circular business models remains subject to scholarly debate, the discussions are often centered around the principles of reduction, reuse (including repair and remanufacture) and recycling [57] (p. 4).

The CE concept has rapidly gained interest from both scholars and practitioners, as it, in many ways, presents a framework to operationalise the notion of sustainable development [58]. Vast attention is given to the subject, but the numerous variations and applications and the global-scale coordination needed prove CE difficult to envision.

Sustainable Business Model (SBM): The Sustainable Business Model (SBM) concept builds on the underlying Business Model concept that rapidly evolved in the 1990s and is concerned with describing the logic of how an organisation proposes, creates, delivers, and captures value [59–61]. Based on a literature review of the SBM field, Geissdoerfer suggested the following definition of SBM:

(...) we define sustainable business models as business models that incorporate pro-active multi-stakeholder management, the creation of monetary and non-monetary value for a broad range of stakeholders, and hold a long-term perspective [10] (p. 403).

The innovation capability of business models is seen as a key driver in enabling companies to transition towards a more sustainable economic system [62,63]. The innovation aspect of SBM is a frequently discussed topic in the articles under review and is even considered a key driver of the sustainability agenda in business:

Lock-in implies that sustainability transitions require disruptive action, even purposeful destabilisation (Geels 2014). Transition research has particularly emphasised the role of radical technical niches in disrupting incumbent socio-technical systems. The focus on niches has broadened from merely technical innovations to consumer niches (Smith 2007), and only recently to niches employing new business models [...]. [64] (p. 750).

This usually is materialised in either the organisation's goals or as an integral part of their BM logic [10], which traditionally focuses on a company's ability to create, deliver, and capture value [60,61,65]:

A traditional linear business model creates economic value for the actors in the value chain (i.e., the focal firm and its partners, suppliers and customers) (Amit and Zott, 2010). By contrast, a sustainable business model entails a broader understanding of value and stakeholders, since it 'captures economic value while maintaining or regenerating natural, social and economic capital beyond its organisational boundaries' [65] (p. 2).

Corporate Sustainability (CS): The Corporate Sustainability (CS) concept has been used synonymously with CSR, as they both relate to responsible corporate behaviour on both environmental and social aspects, external to the organisation (Montiel, 2008). However, differences can be identified:

The definition states that companies should operate sustainable value creation processes with little or no negative effects on the future generations. Thereby, corporate sustainability addresses the going-concern, long-term business models of companies, not just single events or situations as does CSR [47] (p. 346).

Dyllick and Muff expand on this notion by defining CS as "meeting the needs of the firm's direct and indirect stakeholders (such as shareholders, employees, clients, pressure groups, communities, etc.), without compromising its ability to meet the needs of future stakeholders as well" [66] (p. 131).

The CS concept has arguably evolved from the expectancy that businesses should apply their institutional and financial capacities towards contributing to sustainable development.

Triple Bottom Line (TBL): Frequently in reference to the book titled "Partnerships from Cannibals with Forks: The Triple Bottom Line of 21st-Century Business" [15], the Triple Bottom Line (TBL) concept refers to what is commonly known as the "3Ps": Planet, People, and Profit. In the book, Elkington examines a company's social, environmental, and economic impact as a managerial effort, tracking both the value added or destroyed by its business. The concept has, since its inception, seen rapid adoption, to the extent of being institutionalised [67] to a rate that no longer warrants referencing or further explanation, as observed in the articles studied:

It could also lead to greater professionalisation, an issue raised in the ongoing discussion of new ways forward in rural tourism, leading to a more effective and sustainable "second generation" rural tourism, able to play a more holistic role in ensuring the triple bottom line of the countryside, its natural and cultural heritage, and its people's welfare [68] (p. 1401).

It has also become a dominant approach to corporate reporting. A study [69] points out that, beyond Elkington's original description, it is hard to find any real definition of the TBL, but suggests two positions that are found among the proponents of the concept, namely the possibility of measuring the "additional bottom lines" in objective ways and that companies should use the results to improve their environmental and social performance:

By being able to retrieve more than 270 indicators and categorize them according to CE strategies ranging from dematerialized and function-oriented strategies through recycling and recovery, the findings revealed that each strategy can be measured by a set of indicators that cover each TBL (triple bottom line) dimension [70] (p. 2).

Eco-Efficiency (EE): The concept of Eco-Efficiency (EE) was introduced by the World Business Council for Sustainable Development (WBCSD) in the early 1990s, but its origins can be traced back to economic ideas surrounding ecological modernisation in Europe a decade earlier [71]. The following is a popular definition of EE by the WBCSD:

[. . .] being achieved by the delivery of competitively priced goods and services that satisfy human needs and bring quality of life, while progressively reducing ecological impacts and resource intensity throughout the life cycle, to a level at least in line with the Earth’s estimated carrying capacity” [72] (p. 3).

Traditionally focused around the efficient use of natural capital in the production of goods, the EE concept has seen expansion into adjacent aspects of the industrial system, and it is even suggested to be the “business link to sustainable development”: “Increased use of eco-efficient services, rather than products, is considered to be one of the important solutions for directing western society towards a more sustainable path” [73] (p. 89).

Table 5 lists the dominant Sustainable Business concepts found in the reviewed literature, with Circular Economy and Sustainable Business Model (Innovation) concepts being used in 45.7% and 32.9% of the articles, respectively.

Table 5. Dominant concepts of sustainable business.

Concept	Key References	#	%	Explanation	Reviewed Articles
Circular Economy	Towards the Circular Economy—Economic and Business Rationale for an Accelerated Transition [74]; The Circular Economy [75]	32	46%	Systems approach to economic development that moves from a linear “take–make–waste” model to a cyclic, regenerative-by-design approach that aims to decouple growth from the consumption of finite resources.	6, 9, 11, 16, 19, 24, 25, 30, 32, 33, 36, 38, 40, 43, 44, 46, 49, 50, 52, 53, 54, 56, 57, 59, 60, 62, 65, 66, 67, 68, 69
Sustainable Business Model (Innovation)	A Literature and Practice Review to Develop Sustainable Business Model Archetypes [13]; Business Models for Sustainability: Origins, Present Research, and Future Avenues [76]; Sustainable Business Model Innovation: A Review [10]	22	32%	“Business models that incorporate pro-active multi-stakeholder management, the creation of monetary and non-monetary value for a broad range of stakeholders, and hold a long-term perspective”	1, 8, 9, 10, 19, 23, 25, 28, 31, 32, 42, 50, 51, 52, 54, 55, 60, 61, 63, 64, 66, 67
Eco-Efficiency	Eco-Efficiency: Creating More Value with Less Impact [72]	19	28%	Progressive reduction of ecological impacts of economic growth, production, and delivery of services by the means of efficiency in the use of (natural) resources.	1, 7, 11, 16, 20, 25, 28, 30, 31, 32, 37, 42, 44, 45, 52, 53, 65, 68, 69
Corporate Sustainability	Clarifying the Meaning of Sustainable Business: Introducing a Typology from Business-as-Usual to True Business Sustainability [6,66]	12	17%		2, 9, 10, 28, 29, 31, 36, 41, 42, 43, 49, 52,
Triple Bottom Line (Planet, People, Profit)	Cannibals with Forks: The Triple Bottom Line of 21st Century Business [15]	11	16%		1, 3, 5, 8, 17, 18, 32, 36, 43, 50, 52

5. Analysis and Discussion

The result of our review was a set of frequently referenced or described sustainability and sustainable business concepts. In this section, we analyse and discuss our findings. Secondly, we developed a basic taxonomy, organising these dominant concepts by their distinctive characteristics and perspectives based on key aspects of the sustainability discourse. This taxonomy does not intend to be an exhaustive or quantifiable organisation of the concepts but rather an entry point for further discussion of the implications of their application for both academic and practical purposes.

5.1. Analysis of the Findings

Our review identified a significant number of articles addressing Environmental Sustainability (ES). Such presence can be assumed to reflect its “catch-all” nature. However, in the reviewed articles, “environmental” outnumbered “ecology” and “ecological” by 3:1, as terms describing sustainability issues connected to our natural environment. This is an interesting finding, as the ecological definition of sustainability can be considered more advanced and useful for our current sustainability discourse [77]. In this sense, it adheres to the notion that “environmental” perspectives should be considered a subset of the ecological concept. About 60% of the articles using the ES concept were identified to be related to primary and secondary industries, and as such, frequently concerned the issues of natural resource management. Robinson’s [38] notion of “environmental assets” proposes that, from an economic perspective, these resources should be valued in the light of manmade capital, and their preservation becomes a function of overall financial analysis. He suggests that an ecological approach will better fit the characteristics of the current situation where conventional economic reasoning must be challenged.

The “Triple Bottom Line” (TBL) concept is suggested to integrate the environmental and social dimension into businesses’ economic impetus in a manner reflecting that of the Three Pillars (TP) [78]. They are also strongly interwoven with the notion of economic development and economic growth, suggesting it is indeed an anthropocentric concept and being criticised as such [79]. This critique is apparent in the debate on the visual representation of balance prevailing in the “pillars” or the “three-legged stool” analogies used. Dawe and Ryan [80] state that “Simply put, humanity can have neither an economy nor social well-being without the environment. Thus, the environment is not, and cannot be a leg of the sustainable development stool. It is the floor upon which the stool, or any sustainable development model, must stand” (p. 1450). The TBL concept has been criticised by scholars on several aspects, ranging from difficulty of measuring to “green-washing”. The originator of the concept has even recalled it; Elkington states that the commonplace dilution of the TBL framework will not support an economy-scale sustainability transition unless the reported data is being aggregated and analysed in a way that will “genuinely help decision-makers and policymakers to track, understand, and manage the systemic effects of human activity” [81] (p. 4).

Similarly, the shortcomings of Sustainable Business Models (SBM) are commonly criticized for being short-term oriented and exhibiting limited perspectives on interdependencies of actors and ecosystems [82]. This arguably reflects the tension that arises from businesses’ short-term commitments towards shareholders that prevails in the current economic system and their traditional operational scope. One could argue that the concept of the “Doughnut Economy” [83] suggests a different perspective, as it is based on the foundations of the “Planetary Boundaries” concept.

Interestingly, we see an emergence of new SBMs, such as Strong Sustainable Business Models [84] and Business Models for Sustainability; concepts that suggest an approach that addresses the long-term, intergenerational perspective, which is presently lacking in current sustainable business concepts.

Such distinctions are largely shared within the criticisms of Circular Economy (CE). The CE has been suggested to be “restorative or regenerative by design”. However, we would argue that articles referring to CE focus mainly on closed-loop material flows,

aiming to keep resources at their highest utility and value throughout the economic system. Such a dominant understanding of CE correlates with the academic work mainly focused on the manufacturing industries [55]. Furthermore, Korhonen et al. [85] list several unresolved aspects of the CE concept, including the Thermodynamic Law that would limit the possibility of endless recycling of materials due to entropy. Lastly, however, CE strategies' impact has yet to be well understood. Several studies report that a CSR approach might negatively impact traditional economic performance [86,87].

Beyond the scope of economic performance, the role of a healthy economy is still considered vital in the advancement of humanity and our societies. The perspective of intergenerational equity by the Brundtland report [46] highlights social and distributive justice and the equality of conditions as the core of social equity. As such, it must combat exclusion from participation in the social, economic, and political life of a community.

Much like the Millennium Development Goals, the SDGs then face the criticism of economic perspectives inherent to sustainable development, as described by the WCED report, namely "continuing the improvement of living conditions for those in need while at the same preserving the ecological integrity of the planet for future generations" [88]. Hopwood et al. [89] argue that the WCED report approached sustainability in a scope that reflected its current ideals of economic growth as a legit means to societal advancement, albeit reformed, but still well within the existing mechanisms of economic development. Furthermore, the so-called "needs" stated in the report are being criticised for being defined within anthropocentric terms [90,91].

The promises of improved quality of life through affordable goods and services are frequently coupled with the development agenda. However, sustainable business concepts like Eco-Efficiency (EE) do not adequately address the concern over the impact of consumption in the perspective of the increased global population and prosperity goals [92]. Furthermore, the implication of a change in consumption pattern to a more sustainable one is arguably revoked by the possibility of the "Rebound Effect" and Jevons' Paradox. Therein lies an inherent conflict that leads some scholars to argue for a more radical approach to serving human needs through the absolute decoupling of growth from resource consumption. Dyllick and Hockerts even suggest that integration with the notion of sufficiency is needed to achieve a natural case of Corporate Sustainability [6].

To a larger degree, the SDGs include an eco-centric value perspective of development through its five goals related to the natural environment but are criticised for being non-hierarchical in prioritising the goals [93]. Furthermore, it is unclear how the SDGs could be monitored or measured, and potential inconsistency can be found between the goals [94,95]. The International Council for Science (ICSU) identified such internal inconsistency between ecological sustainability and socio-economic progression [96]. Attempts have been made to integrate the eco-centric and anthropocentric aspects, for instance, a hierarchical representation of the SDGs organised upon critical earth systems, as presented in the Planetary Boundaries (PB) concept. The PB concept in itself has seen criticism for lacking sufficient consideration of political aspects of goal-setting in a global context. Proponents of ecological democracy suggest the PB concept is democratically problematic in that it could be understood as restricting opportunities for developing countries [97]. In response to the critique of being expert-driven, Pickering and Person suggest that PB can be informed by social values through a division of evaluative labour between experts and policymakers in a dialogical process with civil society to gain democratic legitimacy [98].

The social dimensions have also come into focus in the business literature in an attempt to operationalise sustainability in corporations beyond the scope of traditional CSR. Dyllick and Hockerts suggest that Corporate Sustainability (CS) must address the societal case and the environmental one [6]. A key component in the realisation of sustainable value creation revolves around the notion of Sustainable Business Models (SBMs). This suggests that CS is achieved through innovative revenue mechanisms and rethinking a company's business logic to encompass sustainability considerations. Authors in the field even suggest that companies' efforts and investments should be viewed as opportunities for innovation

and strengthened competitiveness [99,100]. The emphasis on the individual organisations dominating the research on CS is being met with criticism, as it draws focus away from the contextual interdependencies and towards the merits of individual firms [63]. However, it is suggested that CS can have an important role in strengthening implicit contracts with stakeholders throughout the value chain and improving motivation among management and employees on sustainability issues [47].

5.2. Comparative Overview of the Dominant Concepts in the Study

Based on our discussion of the sustainability concepts, we suggest a comparable mapping based on our interpretation of key aspects found in sustainability discourse. We identified four sets of key aspects:

- **Short-term and long-term perspective of sustainability:** Long-term, intergenerational stewardship of the environment is arguably a premise for sustainable development. It encompasses natural timescales, such as climate change, biological evolution, and ecological succession [101]. However, the term “sustainable business” is frequently described in a way that reflects the need for short-term performance. The managerial tensions between the operationalisation of long-term sustainability and goal-setting for immediate impact are extensively discussed, for instance, the recent comparative evaluation on approaches by Rauter et al. [102].
- **Human-centric and planet-centric sustainability:** The human-centric nature of sustainable development is a frequent critique of the political sustainability agenda, resulting in anthropocentrism as arguably an inevitable consequence. Whether values in nature are anthropocentric or eco-centric is a long-standing debate [103]. However, the debate’s relevance was pushed forward by the growing attention to biological and ecosystem conservation as integral aspects of the sustainment of our global societies. In light of such interdependence, some authors propose that anthropocentrism may be a positive, motivating factor for environmental protection.
- **Economic and societal sustainability:** The historical perspective on economic sustainability implied a system that satisfies consumption without compromising future needs. As such, economic growth has been considered a fundamental aspect of sustainable development as a means to lift people out of poverty, improve living standards, and create jobs [104], thereby increasing equity. While sustainability from a business perspective has traditionally been referenced to a corporation’s ability to last in time, both in terms of economic performance and productivity, the discourse on social responsibility developed in the context of corporations particularly associated with the notion of CSR.
- **Natural resources and earth-systems:** As discussed in Section 4, the sustainable business literature has largely approached environmental sustainability in the context of resource management. Such a utilitarian view is similarly expressed in sustainable development, as described in the World Charter for Nature [105], in which environmental sustainability can be understood as maintaining productivity and supporting humanity. However, the Planetary Boundaries framework popularised an earth systems perspective that expands beyond the notion of ecosystem services suggested by the Millennium Ecosystem Assessment [A].

Each sustainability and sustainable business concept is annotated with “high”, “low” or “non” applicability in the key aspects of sustainability—blank fields in the table indicate non-applicability (see Table 6). We propose this taxonomy as a comparative tool to analyse the implications of the dominant sustainability concepts.

Table 6. An overview of key characteristics of the sustainability and sustainable business concepts.

	Concept	Short-Term Perspective				Long-Term Perspective			
		Human-Centric		Planet-Centric		Human-Centric		Planet-Centric	
		Economy	Society	Resources	Earth Systems	Economy	Society	Resources	Earth Systems
Sustainability	Environmental Sustainability	High		High					
	Three Pillars	High	High	High		Low	Low	Low	
	Sustainable Development Goals	High	High	High		High	High	Low	
	Intergenerational Sustainability	High	High	Low		High	High	Low	
	Planetary Boundaries		Low	Low	High		Low	Low	High
Sustainable Business	Circular Economy	High		High		Low		Low	
	Sustainable Business Models	High	Low	High		Low	Low	Low	
	Eco-Efficiency	High		High		Low		Low	
	Triple Bottom Line	High	High	High					
	Corporate Sustainability	High	High	High		Low	Low	Low	

The taxonomy shows that only the Planetary Boundaries concept encompasses the ecological perspective sufficiently, albeit with a strong focus on the global perspective. It could also be suggested that the anthropocentric perspectives of sustainable development are dominating the literature by proxy to the TP, SDG, and IGS concepts. Furthermore, the dominant short-term focus of the sustainable business concepts reflects the current economic paradigms in which they have been developed.

The implication of the dominance of sustainability and sustainable business concepts that are short-term and human-centric, focusing on economic sustainability and resources, is a deficient transition to a sustainable business model [106]. It will result in the greening of business but not seriously engaging with the long-term consequences of ongoing unsustainable consumption and increasing pressure on planetary boundaries, which could be argued is fundamental to “strong sustainability” in business [1,83,85,107].

On a contemporary note, it is also worth reflecting on the recent introduction of the so-called EU taxonomy (https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities_en, accessed on 3 April 2021)—a classification system for identifying “sustainable activities”. As a part of new regulations to be gradually introduced across a number of sectors [107], this taxonomy will become an important instrument to meet the EU’s climate and energy targets and objectives of the European Green Deal. Economic activities in the region will need to align with six environmental objectives, both through active contribution and harm reduction. The objectives include climate change mitigation and adaptation, pollution prevention, sustainable marine resources use, a circular economy, and finally, a healthy ecosystem. In addition, compliance with social safeguards is required. In light of these perspectives and events, we argue that it is more important than ever for companies and practitioners to gain a deeper understanding and experience with the application of sustainability concepts in a business context.

5.3. Limitations of the Study

Our study focused on recent sustainability and sustainable business literature with a Nordic scope. Such delineation brings certain limitations, as a broader sample set in terms of geography and publication date could yield different outcomes. However, it is apparent that the Nordic sustainable business literature, to a large extent, has international representation, as two-thirds of the authors have a non-Nordic background. It could also be argued that the sustainability discourse has moved well into the global, interconnected per-

spective. As such, our study presents generalisable findings that go beyond our geographic framework.

We acknowledge that the taxonomy presented in this discussion is simplified and should not be understood as an empirical representation of the concepts in the quantifiable sense but rather as an interpretation of the ongoing sustainability discourse. The accuracy and efficacy of such an overview would need a deeper analysis of the literature, by which the references and citations found in our articles need to be pursued beyond their initial first level of reference. Such studies could very well be scope for further research.

6. Conclusions

Our literature study has found that it is possible to identify distinct, predominant concepts of Sustainability and Sustainable Business in Nordic business research. Our findings reflect the increasing interest in sustainability issues in the academic field of business innovation and the public policy agenda.

Furthermore, the study has provided a critical analysis of the concepts by applying a taxonomy of Sustainability and Sustainable Business concepts. These concepts were structured to support more coherent navigation of the sustainability discourse through our interpretation. Furthermore, the discussion of the individual concepts provides for a reflection on key sustainability characteristics, which could help navigate the existing literature.

In general, our findings suggest a predominance of articles referencing concepts that present a limited understanding of sustainability. More advanced and credited concepts, including earth systems perspectives, like Planetary Boundaries [24] and the Doughnut Economy [83], present a broad understanding of sustainability, including a human and planet-oriented, long-term perspective. Still, they have only marginal representation in the sample set. This is partly explainable by the fact that they are fairly recent works and possibly have yet to reach the mainstream attention of scholars and the public. However, other contemporary concepts, such as Circular Economy and SDGs, have seen significant uptake within the same time span. It is not possible at this time to provide a comprehensive answer to the implications and influence of their dominance. However, we believe the discussion of this study can contribute to the understanding of the considerations that should take place in practical application by businesses and practitioners. Further investigations that include perspectives beyond the Nordic context and that of business model innovation is an important next step for future research.

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Appendix A. Reviewed Literature

Table A1. Reviewed literature.

1	Ali, F.; Stewart, R.; Boks, C.; Bey, N. Exploring “Company Personas” for Informing Design for Sustainability Implementation in Companies. <i>Sustainability</i> 2019 , <i>11</i> , 463.
2	Faheem, A.; Verhulst, E.; Boks, C. “The ‘Nordic Approach’ and How It May Support Design for Sustainability”. In <i>DS 85–1: Proceedings of NordDesign 2016, Volume 1, Trondheim, Norway, 10th–12th August 2016</i> ; The Design Society: Glasgow, UK, 2016.
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4	Anttonen, M.; Halme, M.; Houtbeckers, E.; Nurkka, J. The Other Side of Sustainable Innovation: Is There a Demand for Innovative Services? <i>J. Clean. Prod.</i> 2013 , <i>45</i> , 89–103.
5	Bakås, O.; Powell, D.; Resta, B.; Gaiardelli, P. The Servitization of Manufacturing: A Methodology for the Development of After-Sales Services. In <i>Advances in Production Management Systems: Competitive Manufacturing for Innovative Products and Services</i> ; Emmanouilidis, C., Taisch, M., Kiritsis, D., Eds.; Springer: Berlin/Heidelberg, Germany, 2013; Volume 398, pp. 337–344.
6	Beliatas, M.J.; Lohacharoenvanich, N.; Aagaard, A.A.; Acharya, K.S.; Presser, M.A. Internet of Things for a Sustainable Food Packaging Ecosystem Insights from a Business Perspective. In <i>2019 Global IoT Summit (GloTS)</i> ; IEEE: Aarhus, Denmark, 2019; pp. 1–6.
7	Bibri, S.E. Backcasting in Futures Studies: A Synthesized Scholarly and Planning Approach to Strategic Smart Sustainable City Development. <i>Eur. J. Futures Res.</i> 2018 , <i>6</i> , 13.
8	Birkin, F.; Polesie, T.; Lewis, L. A New Business Model for Sustainable Development: An Exploratory Study Using the Theory of Constraints in Nordic Organizations. <i>Bus. Strat. Environ.</i> 2009 , <i>18</i> , 277–290.
9	Bocken, N.; Morales, L.S.; Lehner, M. Sufficiency Business Strategies in the Food Industry—The Case of Oatly. <i>Sustainability</i> 2020 , <i>12</i> , 824.
10	Brozovic, D. Business Model Based on Strong Sustainability: Insights from an Empirical Study. <i>Bus. Strat. Environ.</i> 2020 , <i>29</i> , 763–778.
11	Egelyng, H.; Romsdal, A.; Hansen, H.O.; Slizyte, R.; Carvajal, A.K.; Jouvenot, L.; Hebrok, M.; Honkapää, K.; Wold, J.P.; Seljåsen, R.; et al. Cascading Norwegian Co-Streams for Bioeconomic Transition. <i>J. Clean. Prod.</i> 2018 , <i>172</i> , 3864–3873.
12	Eriksson, E.; Creutz, J.; Hasselqvist, H. Sustainable IT Business in the Making: An Exploratory Case Study. In <i>Proceedings of the 6th International Conference on ICT for Sustainability</i> , Lappeenranta, Finland, 10–14 June 2019.
13	Fauré, E.; Arushanyan, Y.; Ekener, E.; Miliutenko, S.; Finnveden, G. Methods for Assessing Future Scenarios from a Sustainability Perspective. <i>Eur. J. Futures Res.</i> 2017 , <i>5</i> , 17.
14	Feller, J.; Finnegan, P.; Nilsson, O. Open Innovation and Public Administration: Transformational Typologies and Business Model Impacts. <i>Eur. J. Inf. Syst.</i> 2011 , <i>20</i> , 358–374.
15	García-Rosell, J.-C.; Mäkinen, J. An Integrative Framework for Sustainability Evaluation in Tourism: Applying the Framework to Tourism Product Development in Finnish Lapland. <i>J. Sustain. Tour.</i> 2013 , <i>21</i> , 396–416.
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19	Guldmann, E.; Huulgaard, R.D. Barriers to Circular Business Model Innovation: A Multiple-Case Study. <i>J. Clean. Prod.</i> 2020 , <i>243</i> , 118160.
20	Haarstad, H.; Wathne, M.W. Are Smart City Projects Catalyzing Urban Energy Sustainability? <i>Energy Policy</i> 2019 , <i>129</i> , 918–925.
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Table A1. Cont.

22	Halme, M.; Korpela, M. Scarcity or Abundance? Examination of Resources behind Responsible Innovation in Small Enterprises. <i>AMPROC</i> 2013 , <i>2013</i> , 12877.
23	Halse, L.L.; Ullern, E.F. Getting Ready for the Fourth Industrial Revolution: Innovation in Small and Medium Sized Companies. In <i>Advances in Production Management Systems. The Path to Intelligent, Collaborative and Sustainable Manufacturing</i> ; Lödding, H., Riedel, R., Thoben, K.-D., von Cieminski, G., Kiritsis, D., Eds.; Springer International Publishing: Cham, Switzerland, 2017; Volume 513, pp. 247–254.
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25	Holtström, J.; Bjellerup, C.; Eriksson, J. Business Model Development for Sustainable Apparel Consumption: The Case of Houdini Sportswear. <i>JSMA</i> 2019 , <i>12</i> , 481–504.
26	Ilsoe, A. <i>Shaping Industrial Relations in a Digitalising Services Industry: The Nordic Case</i> ; Technical Centre for Social Innovation: Wein, Austria, 2018.
27	Jakobsen, H.S.; Moltke, I.; Brix, J. Disruptive Innovation in the Nordic Countries' Healthcare Systems. <i>Chin. Bus. Rev.</i> 2014 , <i>13</i> , 179–191.
28	Johannsdottir, L. Transforming the Linear Insurance Business Model to a Closed-Loop Insurance Model: A Case Study of Nordic Non-Life Insurers. <i>J. Clean. Prod.</i> 2014 , <i>83</i> , 341–355.
29	Johannsdottir, L.; McInerney, C. Developing and Using a Five C Framework for Implementing Environmental Sustainability Strategies: A Case Study of Nordic Insurers. <i>J. Clean. Prod.</i> 2018 , <i>183</i> , 1252–1264.
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