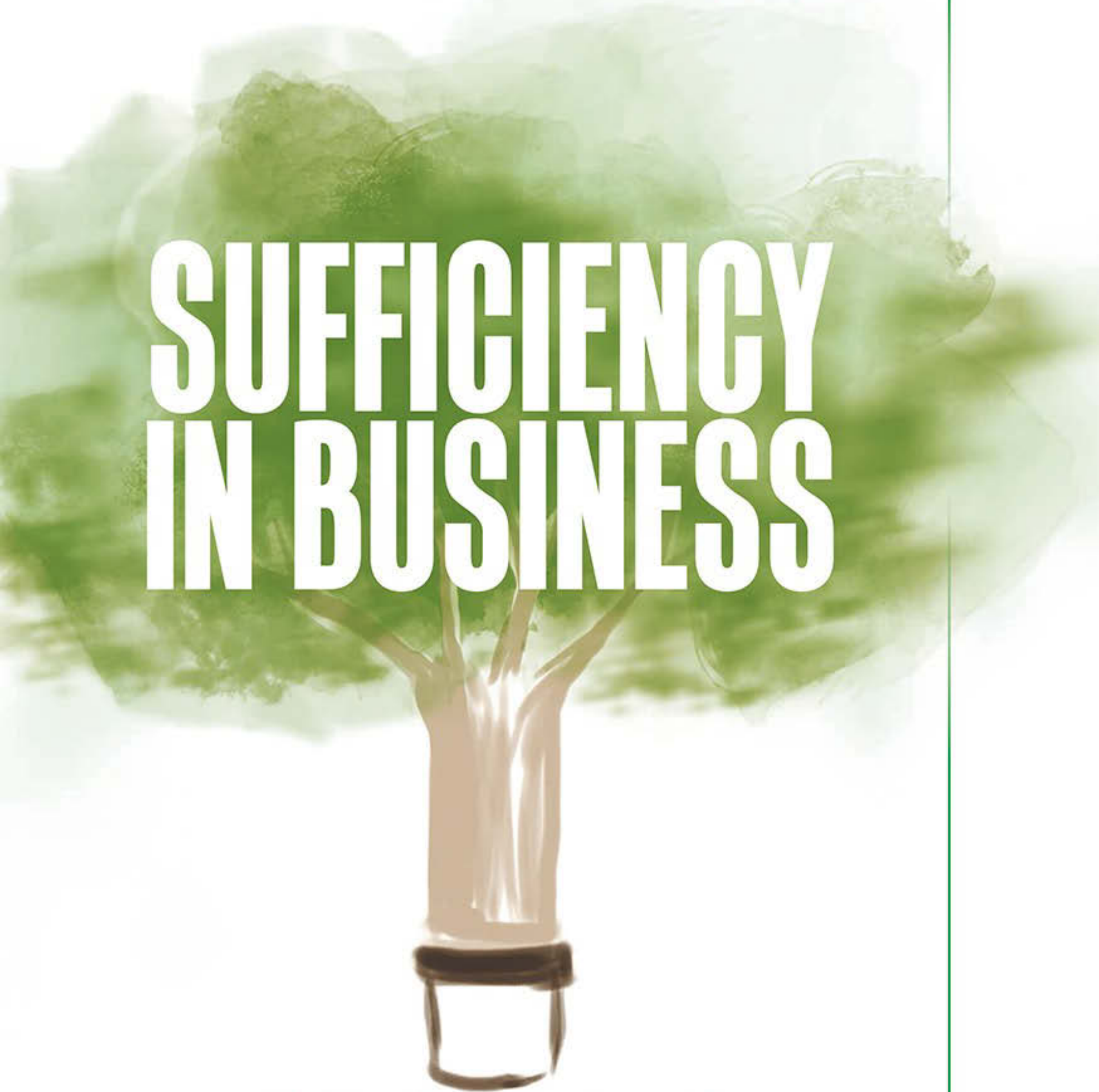
Maike Gossen, Laura Niessen (eds.)



SUFFICIENCY IN BUSINESS

The Transformative Potential of Business for Sustainability

[transcript] New Economies

From:

Maike Gossen, Laura Niessen (eds.)
Sufficiency in Business
The Transformative Potential of Business for Sustainability

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Businesses want to be sustainable but how can they promote sufficiency? Sufficiency-oriented business models focus on creating sustainable value, promoting reduced resource consumption and adjusting production volumes to planetary boundaries. The contributors to this volume present real-life examples of sufficiency-oriented companies across diverse industries. These experts share their insights on sufficiency strategies in business, barriers and opportunities discovered, and the impact on customer behavioural change. They address the far-reaching changes in business, society, and policy required for this paradigm shift and suggest future research directions.

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Foreword

Nancy M. P. Bocken

Sufficiency is a concept that is becoming ever more important in developing nations to come to sufficient levels of health, education and nutrition for all, and in developed nations, to start addressing unsustainable levels of consumption. In this way, sufficiency is at the heart of sustainable development. However, the world is on fire, and at the time of writing in autumn 2023, 6 out of 9 planetary boundaries have been crossed (Richardson et al. 2023). And still, we do not yet have a concrete plan to break through business as usual.

The way in which products and services are produced and consumed drives our global footprints. From a business perspective, this can be captured conceptually in a "business model", which provides an overview of how a business proposes value; creates and delivers this value and captures financial and other forms of value, preferably in a sustainable way. The business model lens therefore has the potential to break through unsustainable production and consumption patterns.

In the now popular area of the circular economy, we coined the resource strategies of narrowing the loop (using less resources per product and using less in general), closing the loop (in essence, recycling), slowing the loop (extending the life of products) and regenerating loops (improving natural resources). While the closing the loop model is still the most common circular business strategy, ample research has shown that we cannot recycle ourselves out of the environmental crisis, as recycling uses energy, exacerbating carbon emissions and cannot continue perpetually because of material degradation.

One solution would lie in pursuing a *sufficiency-driven business model* – the ultimate type of business model to counteract unsustainable consumption. This idea emerged from the observation that not all businesses had the typical "take-make-waste" linear model based on planned obsolescence but quite the opposite. Mark Adams, Managing Director of furniture company Vitsœ talks about his company enabling: "Living with Less that Lasts Longer". Outdoor company Patagonia asks us to not buy stuff at all or to buy second-hand where possible. Inspiring examples led us to conceptualize a sufficiency-oriented business model.

Sufficiency in business might sound like an oxymoron but there are many opportunities to create value in a more *sufficient* way. These would include longer lasting and durable products, offering quality over quantity, designing for upgrading and multiple life cycles, offering second-hand or vintage marketplaces, frugal innovations, offering alternatives to materialistic consumption and services rather than products.

While this idea of *sufficiency in business* stimulated discussions on desirability, feasibility and viability, on top of the long-term concerns about *the economy* if we were to consume less, I am happy to see that Sufficiency in Business is now an important theme in business and academia.

The editors of this book have taken on the challenge to bring together different perspectives on Sufficiency in Business. It is almost impossible to do this type of research without a personal conviction to make a change in the world. Maike Gossen and Laura Niessen have created their own strong voices in shaping the *sufficiency debate* and how business could play a role in this. Sufficiency in Business is no longer a term to shy away from but a topic to investigate, debate and put in practice. On the macro-economic scale, debates about degrowth and alternative forms of valuing the world around us, beyond the economic, are continuing to take shape.

Some final words from others that find themselves on a sufficiency journey and feel insecure about the future – a word of wisdom borrowed from American computer scientist Alan Kay: "The best way to predict the future is to invent it!" So let us all try and contribute to this positive future.

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Introduction

Maike Gossen and Laura Niessen

The cover of this book shows a tree in a much smaller flowerpot. Why might this image seem strange to observers? The tree is green and thriving, even though it feeds off little soil. For us, this is an analogy of sufficiency in business. Sufficiency in businesses is about strategies that reduce production levels, curb sales and promote lower consumption with the aim to stay within ecological planetary boundaries and ensure well-being. This is at odds with current economic thinking and, like the tree in our image, does not yet stand firmly on solid ground. However, the growing interest in research and practice in sufficiency-oriented businesses promises a blooming future. This book is a contribution to present some of the latest work and provide an interdisciplinary perspective on this innovative field of research.

What is sufficiency and how does business relate to it? There is no generally agreed definition of sufficiency but the idea is intuitive: "It is the sense that, as one does more and more of an activity, there can be enough and there can be too much. I eat because I'm hungry but at some point I'm satiated. If I keep eating I become bloated." (Princen 2005: 6) This is similarly logical at the collective level, because it is recognized that sufficiency is not an individual responsibility but a collective endeavor. In the context of ecological overshoot, this commonplace principle of sufficiency has been revived to represent an ecological principle: when does too much resource and material use threaten social well-being and ecological boundaries?

Sufficiency in the sustainability context thus is a response to two major challenges: First, it addresses environmental degradation, with its accompanying effects, such as the extraction of more resources than can be replenished and the emission of more greenhouse gases than can be absorbed. Here, it is often understood in a triad with efficiency and consistency. Efficiency means using fewer resources to produce the same amount or even more. Consistency refers to producing in accordance with nature: designing products that are not harmful or closing the resource cycle, such as in a circular economy. Sufficiency complements these two principles by reducing the overall consumption of resources.

The second major challenge that sufficiency addresses is to secure human needs and social well-being. Many humans struggle to meet their basic needs, while the wealthier sections of society consume far more than is necessary for their basic well-being. A particularly striking example is that in 2018, one per cent of the world's population caused 50 per cent of CO_2 emissions from commercial aviation, particularly private aircraft (Gössling/Humpe 2020). This contrasts with the estimate that 89 per cent of the world's population did not travel by air. Similar examples can be found across sectors, where the excess by some groups is mirrored by the scarcity of others. Sufficiency addresses this inequality, as it proposes to reduce overconsumption in affluent communities so that resources are left for communities that are struggling. As such, it aligns with the goals of a Doughnut Economy (Raworth 2017), where the social needs of all should be met within the ecological boundaries of the planet.

Sufficiency has seen increased interest both in academic research (Sandberg 2021) and in the real world. Global events such as Russia's invasion of Ukraine in 2022 and the following energy crisis increased public awareness in Europe of the need to reduce resource and energy consumption. While it is still the "ugly duckling" of sustainability principles and often left aside next to its more popular siblings efficiency and consistency, sufficiency is starting to step out of the shadow as a real necessity for a sustainable future.

One highly under-researched question is: what role can businesses play in driving sufficiency? As a central decision maker in processes of production and consumption, businesses are increasingly called upon to take responsibility in a sustainability transformation (Hoffman/Ehrenfeld 2017). Businesses can create new demands and wants, with mainstream marketing and advertising practices stipulating that people keep buying new products. As such, the node of business is a potential transformation point in spreading the sufficiency principle across society. The field of research on sufficiency-oriented companies can be traced back to the 1990s, when Wolfgang Sachs (1993) defined four dimensions of a sufficiency economy: less clutter, less speed, less distance and less market. Dyllick and Hockerts (2002) also introduced sufficiency as a fundamental element of a sustainable company. A few years later, Bocken and Short (2016) used practical examples to demonstrate how companies can develop sufficiency-oriented business models. Niessen and Bocken (2021) built on earlier work and provided an overview of strategies that companies can use to promote sufficiency. The most common strategies originate from the marketing toolbox (Gossen et al. 2019): Sufficiency-oriented product strategies that focus on the development of durable, high quality and repairable alternatives to conventional products, as well as extending the warranty period and offering repair services. These strategies are often complemented by communication measures such as anti-consumerist messages, raising awareness of the impact of consumption on the environment and humans and challenging the materialistic norms of a consumer society.

This book is a snapshot of the growing interest and community around sufficiency-oriented businesses. With ecological and social challenges becoming ever more pressing, it is necessary to imagine alternative forms of business and explore real-world cases of courageous frontrunners. The book is structured into three parts. It combines contributions from academics and practitioners, some of which are based on empirical data and some of which are conceptual in nature.

Part I introduces sufficiency in business more broadly, through presenting different viewpoints. Julia Bruckner gives an overview of the existing academic debate on sufficiency-oriented business. Christel Maurer then looks at strategies that businesses can pursue for sufficiency. This is followed by a chapter by Maren Ingrid Kropfeld and André Reichel on transforming into a purpose-driven business. Part I also includes an exploration of what sufficiency in business means through the lens of critical realism by Iana Nesterova and Hubert Buch-Hansen. Finally, Laura Beyeler connects sufficiency to the principle of care.

In Part II, experiences with sufficiency in business are explained using empirical examples. The chapter by Jana-Michaela Timm and Michaela Hausdorf deals with community-supported business models in various sectors. Jessica Jungell-Michelsson and Iana Nesterova explore the process of embedding sufficiency in the food business. The chapter by Joshua Hurtado Hurtado, Heini Salonen, Tina Nyfors, Pasi Heikkurinen and Kristoffer Wilén stays in the food sector and looks at cultures of sufficiency in business. Beatriz Garcia-Ortega, Javier Galan-Cubillo, F. Javier Llorens-Montes and Blanca de-Miguel-Molina then provide an example from the fashion sector: they examine social media communication of a sportswear brand for sufficiency. The chapter by Maëlle Soulis and Oksana Mont explores how the sufficiency-oriented business model is applied in French fashion SMEs. Then, Viola Muster and Marlene Münsch examine the role that minimalism can play in hindering sufficiency. The next chapter by Laura Niessen, Nancy Bocken and Marc Dijk gives an example of how sufficiency-oriented efforts can influence users in the mobility sector. Then, Isabelle Dabadie reports on her experiences with sufficiency in the ICT sector. Finally, Jana Gebauer, Laura Niessen and Maike Gossen look at how sufficiency can address the rebound effect in a steel and metal processing company.

Part III goes beyond businesses and deals with the necessary changes in broader society. Isaac Arturo Ortega Alvarado critically reviews the role of the market in social transformation. Maike Gossen, Josephine Tröger and Vivian Frick discuss economic and societal barriers that still stand in the way of sufficiency businesses. The broader part of the transformation is then linked to politics with the chapter by Jonas Lage, Benjamin Best, Tobias Froese and Carina Zell-Ziegler, who examine the interplay between business action and policy for sufficiency.

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Towards a Characterization of Sufficiency-Oriented Businesses

Enhancing their Understanding and Identifying Key Dimensions

Julia Bruckner

Abstract *This chapter examines the prevailing understanding of sufficiency-oriented businesses and identifies their (ideal) characteristics along six dimensions according to the current state of knowledge. Based on a systematic literature review and expert interviews, it offers a conceptual basis for future research and provides guidance for the integration of sufficiency in businesses.*

1. Introduction

In response to the current environmental crisis, the sufficiency approach, which seeks to align current production and consumption levels with planetary boundaries while ensuring a decent standard of living for all, is gaining scholarly interest across various academic domains (Sandberg 2021; Jungell-Michelsson/Heikkurinen 2022). For businesses operating within the current growth-oriented economic system, sufficiency seems to represent a comprehensive and far-reaching concept that necessitates a fundamental shift in traditional business logic (Jungell-Michelsson/Heikkurinen 2022). While existing publications on corporate sufficiency have discussed the concept mainly with regard to specific sufficiency-oriented business models (e.g., Bocken/Short 2016), business strategies (e.g., Freudenreich/Schaltegger 2020) and corporate marketing (e.g., Gossen et al. 2019), the need to incorporate sufficiency as a holistic principle throughout the business has been emphasized for effective implementation (Bocken/Short 2016; Gossen et al. 2019; Beyeler/Jaeger-Erben 2022; Niessen et al. 2023b). Recent studies have begun to take initial steps towards a more comprehensive approach by empirically examining the constituent elements of general sufficiency-oriented business practices (Beyeler/Jaeger-Erben 2022) and of entire businesses driving a sufficiency-based circular economy (Bocken et al. 2022).

However, as the prevailing conceptualization of corporate sufficiency reveals contradictions and ambiguities (Jungell-Michelsson/Heikkurinen 2022), a comprehensive and systematic characterization of sufficiency-oriented companies is warranted. A pressing need has emerged to advance our understanding of sufficiency-oriented businesses, including their partly distinctive conceptualizations, and subsequently to identify their characteristics based on the existing state of knowledge. This would provide a crucial theoretical foundation for future research and guide companies in embedding sufficiency throughout the business.

To address this research gap, this chapter aims to both enhance the general understanding of sufficiency-oriented businesses and to provide a systematic synthesis of their (ideal) characteristics according to the current state of knowledge. Hence, the following research questions are investigated: (1) How is corporate sufficiency currently understood and conceptualized in research? And (2) which characteristics constitute or should constitute sufficiency-oriented businesses? For this purpose, a systematic literature review was conducted to identify prevalent themes in the understanding and common characteristics of sufficiency-oriented businesses. Additionally, semi-structured expert interviews with corporate sufficiency scholars were employed to validate the findings and obtain deeper insights into their understandings, complementing the findings from published work.

2. Method

2.1 Systematic literature review

As systematic literature reviews (SLR) aim at assessing the existing knowledge of a research field and identifying research gaps (Tranfield et al. 2003), this method was used to investigate the general understanding and (ideal-typical) characteristics of sufficiency-oriented businesses. This study followed the recommended procedure of Snyder (2019) for SLR in business research.

The SLR included articles published before May 2023 and used the Web of Science, ScienceDirect, Emerald, Wiley, EconBiz and WISO databases. Initially, the search strings "sufficiency" and "business", including synonyms and wildcards in English and German, were used in the "title" and "abstract" search fields. Since this yielded an unmanageable number of results given the ubiquitous applicability of the term "sufficiency", the search strings were further restricted by using "sustainability" as an additional keyword and excluding the term "self-sufficiency". To restrict the search string as much as necessary, but as little as possible, these two additional keywords were only applied to the search field "abstract", as the results of the "title" search field were still manageable with the initial search string. Consequently, the following search string was used:

Title = sufficiency* AND (business* OR compan* OR corporat* OR firm* OR enterprise*) OR
Abstract = sufficiency* AND (sustainab*) NOT self-sufficiency AND (business* OR compan* OR corporat* OR firm* OR enterprise*)

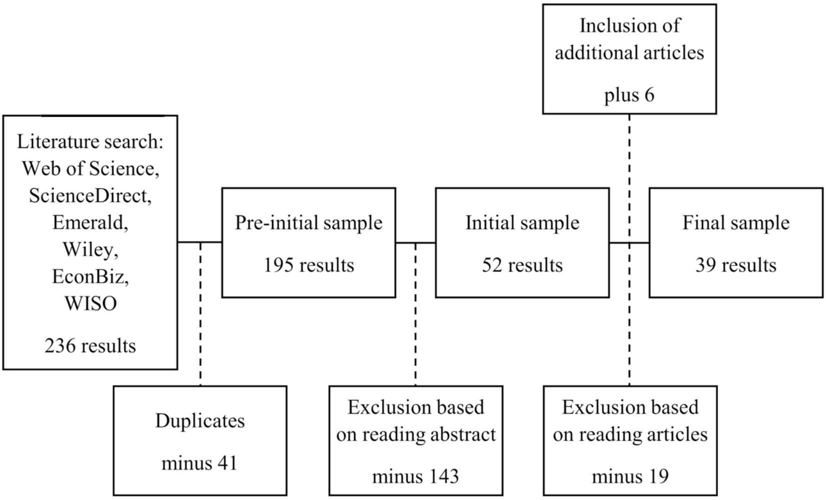
Articles were selected by screening abstracts to make an initial selection, followed by in-depth reading of the articles to ensure that they fulfilled all determined criteria (see Table 1). Papers published in non-peer-reviewed journals and book chapters were deliberately included since this would otherwise limit the sample size and prevent a comprehensive approach to understanding sufficiency-oriented businesses, as recommended by Jungell-Michelsson and Heikkurinen (2022) for SLR on sufficiency in specific contexts.

Table 1: Inclusion and exclusion criteria for the SLR

	Inclusion criteria	**Exclusion criteria**
Language	English or German	All other languages
Search parameters	Search string keywords in title or abstract	Search string keywords in other search fields
Source	Scientific journals or book chapters	Other sources, e.g., dissertations
Meaning of sufficiency	Sufficiency in the sense of reducing or changing consumption/production or ensuring a minimum level of consumption/production	Sufficiency with a different meaning, e.g., as a general expression for "enough" or as part of the Thai "sufficiency economy"
Business context	Discussion of sufficiency in the business context	Discussion of sufficiency in other contexts, e.g., politics
Notions of sufficiency-oriented businesses	Author-made conceptualizations or descriptions of existing/ideal-typical characteristics of sufficiency-oriented businesses	Other statements on sufficiency-oriented businesses

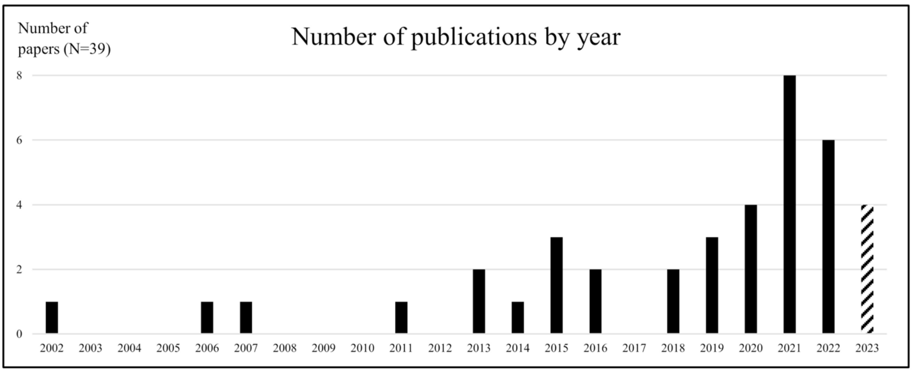
The articles of the initial sample were further complemented by six articles that were known to the author but were not found via the search strategy. In total, 39 relevant articles were identified. Figure 1 presents a summary of the search process. An overview of the final sample is provided in Appendix A.

Figure 1: Overview of the search process.



The distribution of the publications on corporate sufficiency until 2023 is shown in Figure 2. The first year that the term "sufficiency" was used in the business context was 2002 and in the subsequent years, only a few articles were published. Since 2013, publications have mostly remained at a modest level. From 2019 on, the number of publications on corporate sufficiency has risen considerably.

Figure 2: Distribution of publications across time.



After the final sample was determined, qualitative content analysis according to Mayring (2015) was used. Categories were built inductively and were thus directly derived from the material. On that basis, the publications were analysed line by line and all complete and generalizable statements by the authors on the understanding or characteristics of corporate sufficiency were coded.

2.2 Expert interviews

Explorative expert interviews assist in organizing research and gaining orientation in novel or unstructured research fields (Bogner et al. 2002). Semi-structured, explorative expert interviews were thus employed to validate and complement the findings of the SLR.

The interview participants in this study comprised current or former researchers possessing a record of publications on corporate sufficiency. These experts were particularly qualified to validate the findings and supplement essential information to the research field, as they possessed a comprehensive and systemic understanding of corporate sufficiency that went beyond the firm level. In total, 14 experts were identified and contacted. Additionally, the request was published on the mailing list of a sufficiency research network. This resulted in seven experts participating in the interviews of this study (six based in Germany, one in the Netherlands). Table 2 provides an overview of all participating researchers, their main research focus and the abbreviations assigned to them for presenting their statements in the results section.

Table 2: Sample of the expert interviews

Expert	Main research focus	Abbreviation
Prof. Dr. Niko Paech	Post-growth economy	A
Dr. Maike Gossen	Sufficiency-oriented consumption and marketing	B
Prof. Dr. Uwe Schneidewind	Sustainable transformation processes	C
Prof. Dr. Alexandra Palzkill	Sustainability transformations	D
Laura Niessen	Sufficiency-oriented businesses/business models	E
Laura Beyeler	Sufficiency-oriented businesses/business models	F
Prof. Dr. André Reichel	Post-growth economy	G

The interviews were conducted between April 2022 and May 2022. All interviews took place online in German or English and were recorded and transcribed. The interviews lasted between 43 and 70 minutes. Since explorative expert interviews are guided by an open interview style, aimed at generating a wide range of knowledge rather than closing knowledge gaps in an exhaustive and standardized way (Bogner et al. 2014), the focus was on gaining in-depth insights versus extensively covering all interview questions.

Similar to the SLR analysis, qualitative content analysis according to Mayring (2015) was used while the two data sources were analyzed separately. In contrast to the previous procedure, deductive categories, i.e., pre-determined categories based on the SLR findings (ibid), were built first, enabling a broad initial categorization of the material. Subsequently, additional categories were built inductively.

3. Findings

This section presents the findings of the SLR and the expert interviews and is structured according to the research questions outlined in the introduction. For better readability, the references of the SLR are presented as numbers in line with the table of the final sample in Appendix A.

3.1 General understanding of corporate sufficiency

Corporate sufficiency as a principle for absolute reduction of environmental impacts

In the current debate, corporate sufficiency is mostly conceptualized as a principle for addressing issues of overconsumption and overproduction. The primary goal of sufficiency strategies according to the literature [7; 11; 12; 15; 19; 21] and expert interviews (B, C, D, E, F, G) is hence the reduction of environmental impacts in absolute terms to comply with maximum limits defined by planetary boundaries. References to minimum-level considerations, i.e. acknowledging and addressing the lack of basic needs satisfaction experienced by economically disadvantaged individuals, are only made sporadically, either by advising sufficiency-oriented businesses to ensure that reducing consumption does not push people below the poverty line [12], or by referring to business models that enable the fulfillment of basic needs by offering simplified products in low-income contexts [7]. Hence, the literature [33; 35] and expert interviews (D, E, F) emphasize the importance of a comprehensive understanding of corporate sufficiency, which considers both environmental and socio-economic concerns.

Conceptualizations of corporate sufficiency

The early corporate sufficiency discourse primarily framed sufficiency as an issue of consumers, who were expected to drive sufficiency in the business sphere by putting external pressure on companies through, for example, consumer boycotts [1; 2]. In contrast, current publications acknowledge the active role of businesses in driving sufficiency. However, when it comes to the attributed scope of action and the actual nature of sufficiency-oriented businesses, the contemporary literature shows ambiguities [34]. Building on the distinction between externally-oriented and internally-oriented corporate sufficiency strategies according to Maurer [17], three conceptualizations of sufficiency-oriented businesses were identified: (1) externally-oriented, (2) internally-oriented and (3) integrated.

(1) Externally-oriented conceptualization The most prevalent notion in the literature [3; 5; 6; 7; 11; 13; 19; 20; 29; 33; 36] and the expert interviews (B, C, D, F) is that sufficiency-oriented businesses support consumption reduction or shifts towards sufficiency-oriented consumer practices. This conceptualization makes consumers the primary object of performing sufficiency and involves both the quantitative dimension of reducing consumption and the qualitative dimension of promoting shifts towards sufficiency-oriented consumption practices. However, it was cautioned that narrowing the focus solely on this conceptualization exceedingly shifts the responsibility to the consumer (F, G). As Reichel[1] expresses:

> It is pretended that consumers have to save the world. But how can they do that if they are part of a political-economic system that doesn't actually allow them to do that, or if they do, it breaks down. That's why you have to think about production […] and the political-economic environment (G).

(2) Internally-oriented conceptualization Since sufficiency does not necessarily imply "doing things differently, but simply doing less or not doing more" (A), corporate sufficiency does not automatically imply supporting customers' sufficiency-oriented practices, e.g., by realigning the business model with sufficiency (A, D). Rather, some scholars apply the principle of sufficiency to the business itself and its activities, which can include limiting production volumes, employee numbers, profits or the geographical scope of action [9; 17]. This conceptualization would thus imply proactively serving less demand than would otherwise be attributed to the business (A). It was stated that this type of sufficiency is often applied in owner-managed businesses to maintain quality, sustain corporate culture, or increase resilience (A). However, applying the sufficiency principle solely to the business carries the danger of not delivering any environmental benefits, as this may not prevent consumers from buying products from competitors who will accordingly serve the unsatisfied demand [15; 17]. Hence, these businesses "are then sufficiency-oriented,

1 All original quotes from interviews that were conducted in German were translated into English.

but sufficiency unfortunately does not have the overall effect, in macroeconomic terms, of contributing to a smaller economy and thus to sustainable development" (A).

(3) Integrated conceptualization Conflating the previous conceptualizations, some publications state that placing limits on production and business activities independent of demand stimuli *along with* supporting sufficiency-oriented consumption is the ultimate aim of sufficiency-oriented businesses [12; 15; 18; 21; 22; 35]. More generally, sufficiency-oriented businesses have been recommended to apply the sufficiency principle to all internal processes as well as external strategies [35], determining at which point enoughness is achieved and further accumulation would serve abundance (F). Thereby, the suggestion has been to limit the number of products and services to the extent that human needs as opposed to wants are met [21; 35]. This conceptualization was partly deemed essential (C, F), since businesses were considered responsible for proactively limiting production (F).

Corporate sufficiency frameworks

To operationalize corporate sufficiency, various frameworks have been developed and used to investigate how businesses can promote sufficiency (see Table 3). While these frameworks predominantly focus on describing externally-oriented strategies for business model innovation, they also sporadically include internally-oriented strategies, such as regionalising supply chains ("less distance" as part of the four lessens) or limiting production ("less clutter" as part of the four lessens) [4; 8; 11; 18; 19; 24; 33]. Only one publication predominantly applies the framework to internally-oriented sufficiency practices [9].

Table 3: Sufficiency Frameworks

Framework	Strategies	Sources
Four lessens	Less clutter, less speed, less distance, less market, (less dependency)	[4; 8; 9; 35]
Higher levels of the waste hierarchy	Avoid, reduce, reuse	[11; 19]
Management and use perspective framework	Extended use, reuse, partial reuse – less clutter, less speed, less distance, less market	[18]
Business for sufficiency framework	Rethink, reduce, refuse – less clutter, less speed, less distance, less market	[24; 33]

3.2 Characteristics of sufficiency-oriented businesses

Six dimensions were identified which businesses should realign as part of their pursuit of sufficiency. Several interdependencies between the different dimensions and their characteristics were found, demonstrating that the holistic integration of sufficiency into the business is crucial. For instance, effective business model innovation is indicated to require aligning marketing, corporate growth, incentive systems [7; 11], governance and corporate culture [11] with sufficiency. Also emphasized was the necessity of guiding principles to ensure that sufficiency is considered in all decision processes of the business model [12]. Conversely, to increase effectiveness and avoid greenwashing when pursuing sufficiency-promoting marketing, all business activities must be compatible with sufficiency [16], including the purpose [28; 30] and the business model [25; 30].

Purpose

The significance of sufficiency-oriented purposes, i.e. explicit reference to the idea of sufficiency, is highlighted in the literature [21; 28; 33; 35] and the expert interviews (C, F). A sufficiency-oriented purpose not only serves as a fundamental guidance for all business actions (F) and a transformative narrative can even steer established companies towards sufficiency [10], but it also shifts existing customer preferences towards sufficiency more effectively (C).

Nevertheless, most sufficiency-oriented firms examined in the literature refer to sustainability-oriented purposes, i.e. addressing social and/or environmental challenges [11; 19; 30; 33]. Sometimes, neither sustainability nor sufficiency concerns are explicitly articulated in the companies' purpose, making sufficiency an indirect consequence of their operations, as exemplified by the purpose of delivering high-quality products [33].

Guiding principles

As described in section 3.1, sufficiency-oriented businesses aim towards reducing absolute environmental impact to contribute to operating within the biophysical limits of the earth. Hence, sufficiency-oriented business activities are guided by their quest to satisfy needs while respecting ecological carrying capacities [12; 15]. Their scope of action is thus defined by the businesses' impact on planetary boundaries [12] and sufficiency-oriented companies must determine how to conduct their activities within these carrying capacities and contribute to restoring them (G).

A closely related guiding principle for corporate sufficiency is to move away from profit maximization [12; 21; 27; 28; 35]. Sufficiency-oriented companies are reported to still be profitable, but they do not make "profit for the sole sake of profit maximization" [28: 169] and profits are primarily reinvested to further promote sufficiency [35]. In this context, the notion of profit sufficiency has been introduced, which means that businesses generate profits that are merely sufficient to sustaining the company in the long term [12; 28]. However, profit sufficiency may be applicable to owner-managed firms but not to shareholder businesses due to their obligation to increase shareholder value (E).

Moreover, creating a learning environment for sufficiency, i.e. providing opportunities for stakeholders, like customers or employees, to learn sufficiency-oriented practices while constantly learning and receiving feedback from them, is essential for sufficiency-oriented businesses [18; 28; 30; 35] and ensures effectiveness of sufficiency practices [35]. Sufficiency-oriented businesses can thus be understood as communities of practice where members learn from each other by sharing experiences and building competences related to sufficiency [28; 30].

Business model

The value proposition of sufficiency-oriented business models refers to supporting sufficiency-oriented consumption [7; 13; 27; 33]. The frameworks presented in section 3.1 show various ways of providing this support. Instead of serving or even creating insatiable consumer wants, sufficiency-oriented businesses aspire to satisfy basic needs with their offerings [18; 29; 35; 38]. Hence, the question "why and for whom do we produce and consume?" [38: 12] arises. However, the challenge of adequately defining needs has been emphasized [19; 35].

Value creation of sufficiency-oriented business models involves aligning practices of the business and its stakeholders with sufficiency in the sense of the proposed value [7]. According to some authors, this requires the active involvement of the consumer in the value creation process, shifting the role of consumers to prosumers [27; 28].

Value capture of sufficiency-oriented business models goes beyond the economic value generated and the company boundaries and refers to generating ecological and social value alongside economic value [7; 13; 27; 28]. While ecological values can include generating more ecological equity [27; 28], societal values can refer to the fulfilment of basic needs or sufficiency education [7; 8; 13; 28]. Economic value for the business itself is captured, for instance through enhanced customer loyalty, positive reputation [7; 13; 24; 28] or increased resilience to macroeconomic fluctuations [31].

Business infrastructure and operations

Several publications highlight the critical role of a sufficiency-compatible legal structure and governance in facilitating corporate sufficiency [4; 11; 16; 33; 35]. Sufficiency-oriented companies are predominantly privately owned [33; 35], which enables autonomous decision making in the sense of sufficiency [4; 33; 35]. Nevertheless, there are empirical examples of sufficiency-oriented stock corporations [33], which have the advantage of owning the necessary capital to drive transformative processes [4]. However, some experts emphasized the inherent conflict between sufficiency and the growth paradigm within shareholder companies (A, C, E). Hence, it was questioned whether sufficiency could be embraced solely by small, owner-managed companies, where the owner can independently influence the entire corporate strategy towards sufficiency (A). Lastly, collaborative business forms [4] and involvement of stakeholders into ownership structures and corporate governance [33; 35] are viewed as predestined to foster sufficiency, although autonomous decision-making by organizational members has also been identified as a potential barrier to the adoption of sufficiency [21].

Furthermore, sufficiency-compatible financing with an investors' focus on driving sufficiency, such as crowdfunding, has been shown to be pivotal for sufficiency-oriented businesses [33; 35]. This is because traditional financing requires high growth rates, which contradicts the logic of sufficiency [11; 24; 33]. Empirical evidence has demonstrated that traditional financing can be the predominant factor impeding the adoption of sufficiency strategies [32]. Nevertheless, the study of Bocken et al. [33] revealed that the majority of a sample of 150 sufficiency-oriented companies relied on conventional financing.

The need for sufficiency impact accounting, i.e. measuring the impacts of sufficiency strategies, has been highlighted to inform target setting, design incentive systems [33] and evaluate performance [24; 33]. Quantifying sufficiency impacts is hence seen as a key factor for facilitating businesses' transition towards sufficiency and provides the basis for understanding which business activities should be expanded and which should be reduced (G). However, the lack of unified metrics for assessing actual impacts of sufficiency offerings has been emphasized [33; 37]. Hence, the field of sufficiency impact measurement merits more research (E, F). A major challenge lies in quantifying purchases that have not yet been made [24; 30] and determining the causality between a company's sufficiency strategies and changes in consumption patterns [24]. Bocken et al. [33] suggest defining product category-specific target values for sufficiency-oriented consumption as a baseline and then establishing metrics such as repair rates. Initial empirical assessment approaches include surveys on customer behavior [24; 33], some combined with interviews [37] or downloads of repair guides [30].

Sufficiency-oriented supply chain management is another characteristic of sufficiency-oriented businesses, which entails limiting production systems [4; 9; 18; 20; 35] and consumption space [9; 35] to local or regional settings. This involves shifting focus to primarily serving local needs rather than catering to distant commercial markets [20; 35]. Shortening production systems has been found to improve transparency [18; 35], while proximity to customers strengthens relationships with consumers and local communities, which is vital to, for example, provide direct access to repair services [35]. Still, most of the sufficiency-oriented companies in Bocken et al.'s study [33] operated at the national or international level.

A holistic sufficiency strategy additionally involves sufficiency-oriented human resource management (F, G) and a corporate culture oriented towards sufficiency. The strong internal drive for sufficiency is mentioned as a crucial prerequisite for the implementation of sufficiency given the demanding enforceability of this approach [11; 24]. Accordingly, top leadership promoting sufficiency [11; 19] and ensuring that every employee is committed to sufficiency [19; 24], for instance, by intensively communicating corporate values [11; 19], becomes essential. Moreover, as building internal expertise on sufficiency is decisive for sufficiency-oriented businesses, companies should strategically hire individuals with respective qualifications and provide targeted training on sufficiency (G). Since employees are consumers themselves, businesses should also facilitate their adoption of sufficiency-oriented lifestyles (F).

Lastly, corporate sufficiency requires sufficiency-promoting marketing and sales [7; 33]. The goals of sufficiency-promoting marketing are supporting consumption reduction in the first place [14; 16; 23; 25; 30], enhancing well-being [16], valorizing sufficiency-oriented lifestyles [14] and conveying sufficiency-related knowledge and competences to customers [35]. The experts further stressed the role of marketing in communicating the significance of sufficiency-oriented lifestyles, supporting the development of skills (G) as well as identifying and appropriately serving stakeholder needs (D). Concerning sales, establishing internal incentive systems that are aligned with sufficiency is essential [7; 11; 13]. This could, for instance, include incentivizing sales staff to undersell products [11].

Corporate growth

Suitable growth strategies for sufficiency-oriented businesses are generally assessed based on whether they induce a decline in aggregate output on the macro-level (A, C, D, G). Hence, high growth rates while substituting less sustainable alternatives is the predominant growth strategy attributed to sufficiency-oriented businesses in the literature [11; 17; 19; 24; 25; 33; 35] and expert interviews (C, D, F, G). The decisive factor is whether businesses reduce environmental impact by crowding out the market share of conventional companies in a way that the demand reduction induced by the sufficiency-oriented firm is higher than its own growth rate in the long term [11; 33]. Thus, the rationale for growth aspirations becomes the scaling of sufficiency-oriented production and consumption practices [35], and growth becomes part of a process for positive change (G). It was argued that high growth strategies are particularly important for businesses with sufficiency-oriented offerings that fulfil basic needs such as food or education (C). However, this growth strategy should also be examined critically due to the uncertainty regarding whether and how substitution will occur (B, C, E), since determining these market effects is exceedingly complex and lacks data (B). For example, competitive dynamics within a segment could imply that the growth of one sufficiency-oriented business could be accompanied with the decline of another sufficiency-oriented company, preventing market shares of other segments from changing (C), or the growth of companies with sufficiency-oriented offerings could lead to additional consumption and production (B). Hence, high growth rates can scale adverse impact [33] and are subject to undesirable systemic impacts such as rebound effects [17] or the erosion of a firm's sustainability orientation [19; 24].

Another common strategy of sufficiency-oriented businesses is to moderate growth [11; 33] or to not actively pursue growth due to the priority of qualitative over quantitative aspects [35]. Benefits of moderate growth include maintaining sufficiency-oriented corporate culture or value chains [11; 35]. However, it has been emphasized that relying on sufficiency-oriented companies to grow organically would not lead to a significant system-level change in due course and could additionally endanger the businesses' viability [11].

While only a few companies have already set absolute limits to growth [30; 35], envisioning a limit to growing to the point where they have enough power to influence structures is common for sufficiency-oriented businesses [35]. Particularly for companies offering conventional products, absolute growth limits could trigger reassessing how wants can be better met with reduced production volumes (C). However, defining appropriate limits to corporate growth is challenging according to the literature [35] and experts (D, G). Moreover, it was noted that sufficiency-oriented businesses must be at least profitable to be viable and hence probably need to grow (E). More investigation is needed on how political regulations should be designed to support non-growing companies (B).

Collaborative advancement of sufficiency transitions

It is considered crucial for sufficiency-oriented businesses to strongly engage with customers [7; 11; 13; 18; 27; 28; 33; 35]. This can result in a notably closer customer relationship compared to conventional businesses (C, D). Reasons include the necessary feedback from customers for improving sufficiency-focused offerings [35] and the continuous support of customers in fostering sufficiency-oriented practices [18; 35]. As a sufficiency orientation of customers does not often exist from the outset, businesses take individuals on a "customer journey towards a sufficiency-oriented lifestyle" (C). Hence, sufficiency-oriented businesses aim to transform existing preference structures (C) and establish new meanings for sufficiency-oriented practices, which may ultimately trigger irritations in the mainstream in the direction of sufficiency (D). Consequently, sufficiency-oriented businesses are constantly considering the socio-economic structures in which they are embedded and work towards transforming them: "Thinking within sufficiency categories automatically means understanding the company in its socioeconomic context and the impact of its products and services in the context" (C).

However, as sufficiency-oriented businesses are still part of the current socio-economic and political system, a sufficiency-oriented business' scope of action and the effectiveness of its actions are highly constrained by these boundary conditions (G). Effectively fostering sufficiency transitions requires structural changes at the policy level [26; 33; 35; 37; 39]. Hence, to drive substantial change, lobbying for sufficiency-oriented political changes is proposed [15; 35; 37; C, D, E, F]. An alternative option is to support customers to advocate for political changes towards sufficiency (C). If successful, businesses would have a competitive advantage themselves [15].

Moreover, sufficiency-oriented businesses typically collaborate with businesses and other stakeholders to initiate change towards sufficiency [28; 33; 35], which is decisive to effectively advance sufficiency transitions (F). Collaborating with various stakeholders helps to create acceptance for implementation [5] and can increase credibility and know-know [33]. Examples include transferring practices and know-how to other entrepreneurs [35] or participating in joint campaigns to increase customer awareness [28; 33].

4. Discussion

This chapter sought to provide insights into the characterization of sufficiency-oriented businesses according to the current state of knowledge by providing the first systematic literature review and conducting expert interviews with leading scholars in the field.

The findings yield significant implications concerning the current understanding of sufficiency-oriented businesses (see Table 4). Firstly, they underscore that the prevailing understanding of corporate sufficiency primarily focuses on aligning production and consumption with planetary boundaries. However, sufficiency also encompasses ensuring a minimum level, i.e. providing a social foundation for all (Spengler 2016; Gossen et al. 2019; Spangenberg/Lorek 2019; Jungell-Michelsson/Heikkurinen 2022). Future research should thus systematically explore the potential social implications of corporate sufficiency strategies. For example, strategies involving the provision of durable or second-hand products that satisfy basic needs could give economically disadvantaged individuals permanent access to essential products. However, other sufficiency strategies, such as premium pricing, pose the risk of limiting access to sufficiency-oriented offerings to affluent individuals (Gossen/Kropfeld 2022; Niessen et al. 2023b). Meriting further investigation is also how businesses can systematically support individuals to move from a state of deprivation of certain basic needs to their adequate supply while respecting planetary boundaries.

Secondly, recognizing distinct conceptualizations of corporate sufficiency (internally-oriented, externally-oriented, or integrated) is essential as they substantially influence the expected scope of action attributed to sufficiency-oriented businesses. In practice, most cases will exhibit a mixed type, such as an externally-oriented conceptualization with some internally-oriented elements (e.g., limiting supply chains to a regional level). These conceptualizations should therefore be viewed as points along a continuum, with externally-oriented and internally-oriented approaches at opposite ends and the integrated notion situated in the middle (see Figure 3). This continuum perspective provides a pivotal analytical foundation for future research.

Thirdly, it became apparent that a purely internally-oriented conceptualization and hence solely applying sufficiency to the business itself seems to lack effectiveness as customers will likely satisfy their demand through other firms in competitive markets. Conversely, purely externally-oriented conceptualizations supporting customers in adopting more sufficiency-oriented lifestyles could reduce overall consumption and production but also carry the risk of adding to material-energy throughput. The effectiveness thus depends on the reactions of other market actors in terms of actual changes in consumption or production patterns and levels, which is why sufficiency-oriented businesses will have to continuously and carefully adapt their externally- and internally-oriented activities to align overall practices with sufficiency. Hence, an integrated perspective, considering both customers and businesses as objects of corporate sufficiency, may be most effective. This could extend to limiting production quantities and forgoing profits if their externally-oriented sufficiency strategies would likely lead to an increase in energy-material throughput in the long term rather than its reduction. Where exactly in the continuum sufficiency-oriented businesses should be positioned to be most effective may greatly depend on contextual factors, such as the sector and type of sufficiency (as categorized by Sandberg 2021), and thus requires further investigation.

Figure 3: Overview of the understanding of sufficiency-oriented businesses.

Understanding sufficiency-oriented businesses			
Aim	Sufficiency-oriented businesses aim for the absolute reduction of environmental impacts		
Conceptualization	Externally-oriented	Integrated	Internally-oriented
	Customers as the primary object of sufficiency		Businesses as the primary object of sufficiency
	Supporting consumption reduction and/or shifts to sufficiency-oriented consumption practices		Limiting production and applying sufficiency to business practices
Frameworks for operationalization	Four lessens [4; 8; 9; 35] Higher levels of the waste hierarchy [11; 19] Management and use perspective framework [18] Business for sufficiency framework [24; 33]		

Turning to the second research question, the findings propose a set of (ideal-typical) characteristics of sufficiency-oriented businesses that provide guidance for businesses to implement sufficiency (see Figure 3). It should be noted that these characteristics are compiled based on studies that assume either customers, businesses or both as objects of corporate sufficiency, which is why certain contradictions could be observed. For example, shareholder-oriented businesses and those reliant on traditional, growth-driven financing, while offering access to substantial capital for sufficiency, may struggle to pursue sufficiency of profits and the logic of satisfying needs rather than wants may become increasingly difficult. Similarly, a trade-off exists between leveraging growth to reduce environmental impact by replacing other offerings, which cannot be guaranteed and risks eroding sufficiency values, and constraining growth, which may endanger viability and impede opportunities to scale sufficiency. As discussed earlier, the relevance of the characteristics depends on the context, underscoring the importance of empirical investigations into the circumstances in which specific characteristics hold greater or lesser importance.

Other areas warrant further scholarly attention. These include establishing guidelines for business actions, e.g., for determining appropriate limits to corporate growth, assessing the impact of sufficiency-oriented business actions and distinguishing between actual needs and wants. Additionally, empirical studies on the implementation of sufficiency in human resource management or supply chain management would be beneficial. Another neglected area concerns the application of sufficiency principles to production processes.

The findings underline that sufficiency, due to its radical nature, requires anchoring in the entire company, which could necessitate a comprehensive reorientation of businesses. Yet, the adoption of a holistic approach towards corporate sufficiency can pose significant challenges for companies given the prevailing growth paradigm and consumerist culture (Bocken/Short 2016; Gossen et al. 2019; Niessen/Bocken 2021; Gossen/Heinrich 2021). This situation poses a complex dilemma: While sufficiency-oriented businesses aspire to reshape existing socio-economic and political structures, they still operate within the prevailing system, which significantly influences the possible extent and effectiveness of their sufficiency actions. Future studies should explore strategies to mitigate this dilemma, including how varied framework conditions could widen businesses' scope for sufficiency action.

Finally, the characteristics reveal striking similarities of sufficiency-oriented businesses with other business types. For example, degrowth businesses aim to benefit the environment and society instead of maximizing profits and growth while fostering sustainable consumption and advancing systemic change (e.g., Hankammer et al. 2021). Equally, strongly sustainable businesses prioritize creating positive environmental and societal impacts over maximizing profits while permanently recognizing systemic embeddedness (e.g., Upward/Jones 2016). A systematic analysis of the differences and similarities between these related business types could greatly enrich the corporate sufficiency debate.

Table 4: Overview of the characteristics of sufficiency-oriented businesses

Characteristics of (ideal-typical) sufficiency-oriented businesses	
Purpose	– sufficiency-oriented purpose – sustainability-oriented purpose
Guiding principles	– satisfying needs while respecting ecological carrying capacities – moving away from profit maximization – creating a learning environment
Business model	– value proposition: supporting sufficiency-oriented consumption while satisfying basic human needs – value creation: aligning practices of the business and its stakeholders with sufficiency – value capture: generating ecological, social and economic value
Business infrastructure and operations	– sufficiency-compatible legal structure and governance – sufficiency-compatible financing – sufficiency impact accounting – sufficiency-oriented supply chain management – sufficiency-oriented human resource management – sufficiency-promoting marketing and sales
Corporate growth	– high growth rates under substitution of less sustainable alternatives – moderate growth rates – absolute limits to growth
Collaborative advancement of sufficiency transitions	– strongly engaging with customers – collaborating with businesses and other stakeholders – lobbying for sufficiency-oriented political changes

5. Conclusion

The central aim of this chapter was to advance the understanding of sufficiency-oriented businesses and investigate their (ideal) characteristics through a systematic literature review and expert interviews. Next to demonstrating the prevailing focus of sufficiency-oriented business research on ecological considerations, this study proposes a nuanced understanding of corporate sufficiency conceptualizations along a continuum between externally-oriented and internally-oriented notions. The various characteristics identified provide guidance in implementing sufficiency into businesses and assessing the general orientation of businesses towards sufficiency along six dimensions. While the actual scope and effectiveness of corporate sufficiency will always be contingent upon the socio-economic and political context in which businesses operate, this study shows that corporate sufficiency can serve as an overarching principle for companies that build on an alternative way of doing business.

One major limitation of this study is that the SLR relied on specific search strings conducted in a restricted number of databases. Including non-peer-reviewed articles decreased the risk of missing relevant articles but added less sophisticated and academic publications to the sample. Moreover, due to the literature and expert sample, the study applied a European (particularly German) perspective to sufficiency and business. Further research is thus needed to examine cultural differences, including, for example, the Thai conceptualization of sufficiency-oriented businesses. Finally, the experts who participated in the interviews were exclusively scholars, implying that the assessment of the characteristics is primarily theoretically-driven. Hence, empirical studies should delve into the contextual factors that determine the varying relevance of these characteristics.

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