MSc – Management of Innovation and Business Development

MSc – Diversity and Change Management

SUSTAINABILITY IN VENTURE CAPITALISTS' INVESTOR SENSEMAKING REGARDING NEW VENTURES

A multiple case study investigation of the impact of sustainability on the legitimacy and identity of early-stage new ventures and the investor sensemaking of early-stage venture capitalists

Master's Thesis

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Abstract

Sustainability is a growing trend in society and politics. The trend pressures new ventures (NVs) and venture capitalists (VCs) to integrate sustainability measures and ESG practices. This thesis explores how sustainability impacts legitimacy and identity in the context of early-stage NVs and the investor sensemaking of VCs. The thesis does so through a qualitative multiple case study based on interviews with founders of NVs, early-stage VCs and industry specialists, combining it with a systematic literature review (SLR) on sustainability in early-stage NVs and VCs. The findings are situated in a developed theoretical framework, which allows for understanding the interplay of legitimacy, identity, and investor sensemaking. In doing so, this thesis found that the context of sustainability complicates investor sensemaking due to a vicious cycle of hindrances which includes e.g., a lack of guidance and knowledge on sustainability as well as differing understandings of sustainability. These hindrances make VCs mostly perceive sustainability factors as different from their typical decision-making process, which dominantly focuses on economic metrics. Furthermore, the findings showed heterogeneity in the VC scene in the context of sustainability, highlighting the complexity of legitimacy and NV identity. The findings of the interviews in connection with theory and literature imply a need from practitioners and academia to break the vicious cycle of hindrances and establish a common guidance and understanding to enable a deep sustainability and ESG integration in early-stage NVs and VCs.

Visual Abstract

RESEARCH QUESTION

How does sustainability impact legitimacy and identity in the context of early-stage new ventures (NVs) and the investor sensemaking of venture capitalists (VCs)?

METHODOLOGY

Philosophy of Science: critical realism; Research Approach: abductive

Research Strategy: multiple case study

Secondary Data: Systematic Literature Review with two search strings in SCOPUS: Sustainability and NVs (n=334) and sustainability and VCs (n=49)

Primary Data: 18 semi structured interviews (7 NVs; 7 VCs; 4 Specialists) which have been transcribed

Data Analysis: Thematic Analysis via NVivo

SYSTEMATIC LITERATURE REVIEW

(1) Three pressures (regulative, societal and LP demand) drive sustainability in NVs and VCs
(2) NVs need to re-think their business models – shift towards sustainable business models
(3) Value-adding services of VCs lead to a re-birth of NVs post-investment
(4) NVs and VCs play key role for sustainable development

THEORETICAL FRAMEWORK

Based on Zimmerman & Zeitz (2002), Navis & Glynn (2011), and Fisher et al. (2016):
Highlights the investor sensemaking process based on the proposition of multiple legitimacy thresholds, which lead to varying stakeholder expectations (VC being one of them). This results in NVs having the need to adapt their identity before an investor sensemaking process, in which a final plausibility judgement creates legitimacy for an NV in the new institutional environment.

ANALYSIS

6 core thematic clusters identified in the context of sustainability:

(1) Pressures towards Sustainability (societal, regulative & LP + interconnections)
(2) Shift towards sustainable business models
(3) Differences in VCs (Structure, individual motivation, sustainability foci)
(4) Diversity (as a part of) Sustainability
(5) VC Interaction with NVs (NV-VC fit, Screening, Active Ownership)
(6) Threats to the Sustainability Trend

CORE CONTRIBUTIONS

(1) Vicious cycle of hindrances impeding VCs and NVs (different understandings, lack of resources, lack of guidance, measurement challenges, lack of knowledge)
(2) Re-think process on both NV and VC side
(3) Heterogeneity of VC sustainability expectations
(4) Multiple identity adaptations of NVs based on the differing VC sustainability expectations
(5) Individual VC sensemaking influenced by sustainability understanding, VC structure, and “Looking Good” vs. “Doing Good” debate
(6) Re-birth process on VC side to alleviate resource constraints with the aim of later stage funding

CONCLUSION

Sustainability leads to added complexity in investor sensemaking caused by the vicious cycle of hindrances, which shows itself in a strong heterogeneity of VCs in the context of sustainability. While economic factors are perceived by all VCs as legitimate, sustainability factors are mostly seen as “different” and not legitimate. The strong heterogeneity results in the need of NVs to not only adapt to the focus on economic metrics but also the different understandings of VCs of sustainability, leading to multiple identity adaptations. This raises the question if sustainability factors can be universalized for all VCs to be perceived as noncontroversial.

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Abbreviations

BA(s) = Business Angel(s)

CSRD = corporate sustainability reporting directive

ESG = environmental, social and governance factors

EU = European Union

IPO = initial public offering

KPI = Key Performance Indicator

LP(s) = Limited Partner(s)

ROI = Return upon investment

SBM(s) = sustainable business model(s)

SDG = Sustainable development goals

SFDR = sustainable financial disclosure regulations

SLR = Systematic Literature Review

SRI = Socially Responsible Investing

Sustainable NV(s) = NV(s) with a business case for sustainability

TBL = Triple Bottom Line

NV(s) = New Venture(s)

UN = United Nations

VC = Venture Capital

VCs = Venture Capitalists

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1. Introduction

In 1987, a sub-organization of the United Nations (UN) came together to create a shared understanding of sustainable development. In the final so-called Brundtland report, sustainable development was defined as "…development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (UN, 1987, p.54). The definition implies a long-term focus and a need to overthink economic, environmental, and social issues of the socio-economic system (Bocken et al., 2013). In the business context sustainability is referred to and signaled through concepts such as the triple bottom line (TBL), a multi-stakeholder perspective, or impact (Baldassarre et al., 2020).

However, research and practitioners raised issues with the concept of sustainability. For example, Robinson (2004) criticizes the concept of being an oxymoron by questioning the assumption of endless growth, which pervades the Brundtland Report. Moreover, Hall et al. (2010) question if businesses can develop in consistency with economic, environmental, and social foci as the current players of the socio-economic system seem not to be inclined to change their views on economic growth. Further, it is even questionable if concepts, such as the TBL, work for businesses as the system tends to favor short-term views, which is the greatest threat to sustainability (Bansal & DesJardine, 2014). Therefore, the concept of sustainability faces criticism, such as the endless growth concept and short-terminism of the economic system, leading to the question of whether sustainability might be an oxymoron.

To address the need for a long-term approach and broaden narrow neo-classical approaches, the Agenda 2030, with its 17 sustainable development goals (SDGs), was introduced to drive sustainable development (UN, n.d.). The achievement of the SGDs requires the involvement of governments, businesses, investors, and other stakeholders to address economic growth, environmental protection, and social equity (UN, n.d.). The UN (2020) highlighted the importance of entrepreneurship for addressing sustainable development challenges and contributing to the Agenda 2030. Entrepreneurship can tackle social and environmental issues while driving economic growth (UN, 2020). Thus, the increasingly relevant sustainability context builds the foundation for this thesis, which focuses on the business endeavors of new ventures (NVs), also called startups, as these entrepreneurs can support the achievement of the Agenda 2030 through their lean and quick way of work (AicRaise, 2020).

The opportunity of NVs helping to solve bigger problems is seen as a business opportunity to catch up upon by investors, as highlighted by Larry Fink (2022), stating that "The next 1,000 unicorns won't be search engines or social media companies, they'll be sustainable, scalable innovators – startups that help the world decarbonize and make the energy transition affordable for all consumers". Environmental, social, and governance (ESG) metrics are increasingly used in both the NV and investment context to incorporate sustainability in business practices and investment decisions (CFA, n.d.; Glover, 2021). In this thesis, the type of investor in focus with NVs are Venture Capitalists (VCs), as they play an important role in pushing NVs towards contributing to sustainable development (PRI, 2022).

1.1 The Role of NVs and VCs for Sustainable Development

As mentioned above, NVs play an important role in driving sustainable development and tackling social and environmental issues alongside economic growth. Glover (2021) underlines the importance of NVs in driving this development by stressing that they "...have a social and environmental impact like any other business." In a survey by 500 Startups (2020b), 43% of NVs stated that the inclusion of ESG metrics and policies had a positive impact on their funding. However, Glover (2021) criticizes that while more NVs integrate ESG metrics to attract funding, ESG investment frameworks used by VCs are made for assessing established companies. Thus, there is uncertainty from VCs when it comes to using ESG metrics in investment decision-making for NVs, slowing the shift from VCs to invest more in NVs with a business case for sustainability (sustainable NVs) (Glover, 2021). Lenhard (2021) also stressed the need for a shift from VCs to invest more in "green zebras", which are NVs that, next to profitability, include sustainability, positive social impact, and ESG considerations in their business. These "green zebras" have the potential to show VCs that it is possible to be sustainable and have an impact next to commercialization aspects (Lenhard, 2021). Thus, NVs and VCs increasingly see the benefit of sustainability and ESG integration.

A survey conducted by TechFounders and Akzente (T&A; 2020) supports the findings from Glover (2021) and 500 Startups (2020b) related to the increasing integration of sustainability measures in NVs. In their survey, T&A (2020) found that 86% of NVs "...thought about the role and relevance of sustainability for their business model. Two thirds have already actively taken measures to foster sustainability within their companies..." (p.5). Most NVs stated that sustainability integration positively impacted their "...customer acquisition and retention (64%) and competitive advantage (61%)." (T&A, 2020, p.5). However, the positive effect of integrating sustainability was not associated with increasing profits, mainly due to the higher costs associated with integrating sustainability measures. An interesting finding from the survey was that NVs that are not backed by venture capital (VC) are more likely to integrate sustainability measures, while VC-backed NVs are less likely. Since the survey focused on NVs, the specific reasons for this lack of integration on the part of Venture Capitalists (VCs) cannot be determined. However, the finding implies that "...VCs are currently not driving startups to think about sustainability." (T&A, 2020, p.5). Thus, while NVs are increasingly moving towards integrating sustainability, VCs are apparently not driving this development in their portfolio companies.

However, the importance of VCs to invest more in sustainable and ESG conscious NVs, and thus drive this development, is stressed by the PRI (2022), stating that VC "...is a vital part of the financial ecosystem and a significant engine for job creation and innovation. It is hugely influential in how we will all live in the future." (p.5). Therefore, VCs need to consider ESG aspects in their investments into early-stage NVs as they can ingrain these aspects before an NV scales, thus, being able to influence the whole investment chain (PRI, 2022).

Besides the importance of integrating ESG aspects, an increasing number of VCs view impact as an important investment decision factor for NVs and invest in NVs with an SDG focus (Terp, 2022). Even though sustainability and ESG integration is becoming a must-have in the VC space, the integration of metrics in investment decision-making is hampered (e.g., Glover, 2021). There is a lack of a common definition and standards for integration for VCs when investing in NVs (Glover, 2021; PRI, 2022). Moreover, while it is difficult for VCs to evaluate whether their investments have a real impact (Terp, 2022), there is still a dominant perception from VCs that, in the case of VC, "...ESG issues are not material..." (PRI, 2022, p.25). This perception is rooted in the fact that NVs mainly focus on growth and often fail and "...struggle to be profitable." (PRI, 2022, p.27). While only few VCs include sustainability and ESG principles, they face increasing pressure from NVs, consumers, and employees to do so (Lenhard, 2021). The pressure results in the upcoming need for VCs to include impact as a decision-making factor when analyzing the growth potential and competitive advantage of NVs (Porter et al., 2019). Thus, it is important for VCs to realize that investing in impact is an upcoming necessity, which can significantly drive economic value and increase returns.

1.2 Problem Statement and Theoretical Foundation

As outlined in the previous sections, NVs and VCs play an important role in driving sustainable development by integrating sustainability measures and ESG aspects in their business and investment processes. However, while NVs increasingly follow this shift, VCs face uncertainties related to sustainability and ESG integration in investment processes or do not see the materiality of their role – a point highlighted as needing to change. This thesis focuses on both NVs and VCs to gain a holistic picture of how sustainability impacts NVs and VCs in the investor sensemaking process. This holistic approach allows for uncovering the mechanisms between these two groups in the context of sustainability, which is of essence to understanding why VCs and NVs are hindered in their sustainability integration. To explore this interplay of both NVs and VCs, this thesis views the concept of investor sensemaking as integral. During investor sensemaking, VCs decide whether sustainability in NVs is perceived as legitimate or not legitimate, highlighting the interplay and research focus. According to Suchman (1995), legitimacy shows what is perceived as proper and desirable in a certain context. As sustainability is gaining prominence in society and business, the concept of legitimacy is necessary for exploring what is proper and desirable in the eye of VCs related to NVs in the sustainability context. Furthermore, the concept of identity of NVs plays a significant role in the construct of legitimacy and investor sensemaking, ingraining the NV focus on investor sensemaking (Navis & Glynn, 2011; Fisher et al., 2016). Therefore, this thesis aims to answer the following research question:

How does sustainability impact legitimacy and identity in the context of early-stage NVs and the investor sensemaking of VCs?

The research question is answered by using a multiple case study in connection with a theoretical framework and a systematic literature review (SLR) to explore the research context. The theoretical framework is based on three core theoretical papers identified in the SLR. Firstly, Zimmerman and Zeitz (2002) focus on legitimacy as a driver for NV growth. Secondly, Navis and Glynn (2011) highlight the importance of entrepreneurial identity for the judgment of NVs by investors. Thirdly, Fisher et al. (2016) emphasize the impact of identity adaptations to meet VCs' expectations and gain legitimacy for an NV in a new institutional environment. In the discussion, the theoretical framework is extended to the context of sustainability based on the generated data, which is the main contribution of this thesis. To do so, this thesis is guided by a critical realist philosophy of science and uses a qualitative approach based on a multiple case study, including 18 semi-structured interviews with early-stage NVs, VCs, and Specialists in the field. The multiple case study allows not only for exploring the viewpoints of both NVs and VCs but also for high generalizability when applying the theoretical framework to the sustainability context. Furthermore, as there is, to our knowledge, no research focusing on the interrelationship and mechanisms of early-stage NVs and VCs in the sustainability context, the methodological approach allows for gaining a deep understanding of the unexplored field.

1.3 Structure of the Thesis

To address the defined research question, this thesis is structured into 7 chapters. Chapter 2 introduces the results from the SLR in relation to sustainability and ESG integration in both NVs and VCs. This is followed by the development of the theoretical framework in Chapter 3 and the chosen methodological approach in Chapter 4. In Chapter 5 the results from the semi-structured interviews are reflected in a thematic analysis, followed by the discussion in Chapter 6, where the proposed theoretical framework is discussed in the sustainability context by applying primary and secondary data to gain new insights. Finally, Chapter 7 concludes this thesis by answering the research question and touching upon limitations and proposals for further research.

2. Systematic Literature Review

This chapter firstly provides a short introduction to ESG and sustainable investments and the regulations around them. Secondly, section 2.2 gives an overview regarding the early business endeavors for sustainability through reviewing basic papers on their understanding of sustainability in business endeavors with a focus on NVs identified through the SLR. This is followed by an overview of literature related to the integration of sustainability and ESG in business models. The section ends with an identified paradox of a trend and need for sustainability in business but a lack of generated funding by sustainable NVs. Thirdly, section 2.3 focuses on financing sustainable NVs with a focus on VC and outlines how VCs finance sustainability and which characteristics these VCs show. The chapter closes with a conclusion and visualization of the SLR in section 2.4.

2.1 Sustainable Investments and ESG

This thesis understands sustainable investing "…as a generic term for investments that seek to contribute toward sustainable development by integrating long-term ESG criteria into investment decisions." (Busch et al., 2016, p.305). The term binds together the financial sector and the drive for sustainable development which is needed to achieve Agenda 2030 as well as the European Green Deal (European Commission (EC), n.d.). Sustainable investing is leveraged through forms such as impact investing, socially responsible investing (SRI), and ESG, with ESG being seen as metrics measuring sustainable performance (Widyawati, 2020). SRI itself is an umbrella term confining all interests of different stakeholders to make investments that create social and environmental value, whereas impact investing is proactively focusing on creating social and environmental impact (Agrawal & Hockerts, 2021). Therefore, sustainable investments are the financial sector's instrument for sustainable development leveraged in different forms with a focus on utilizing ESG metrics to create social and environmental value.

Sustainable investments are gaining relevance. There has been an increase in the values of portfolios under SRI (Widyawati, 2020), with increasing interest showing a trend towards sustainable investing (O'Conner & Labowitz, 2017). Furthermore, the number of signatories to the UNPRI is steadily rising, which signals the increasing relevance of ESG metrics for investment processes and decisions (CDC Group & FMO, 2020). Investors increasingly see the value of utilizing ESG, as its incorporation leads to higher financial returns (Khan et al., 2016), improvement of brand value and customer relationships (Winterberg et al., 2020), and even better performance of portfolio companies (CDC Group & FMO, 2020). The demand for sustainable investments is also rising as investors' willingness to pay is not hindered by the potential of lower returns (Barber et al., 2021). However, compliance with principles such as the UNPRI or the increasing demand for sustainable investments do not mean that a true TBL or shared value concept is being utilized (Barber et al., 2021). This shows itself in the paradoxical reality that even though SRI is increasing, businesses fail to move towards sustainable development on the social and environmental dimensions (Busch et al., 2016). Concluding, sustainable investments and ESG gain relevance steadily, but their impact on sustainable development is questionable.

2.1.1 Regulations driving Sustainable Investments

The European Green Deal has introduced a broad sustainable finance framework that drives the transition towards a low-carbon economy by 2050 (EC, n.d.). With the European Green Deal, the EU has introduced three main sustainability-related disclosure tools which aim at pushing businesses and investors towards more sustainable activities: the corporate sustainability reporting directive (CSRD), EU Taxonomy, and the sustainable finance disclosure regulation (SFDR) (EC, n.d.). The CSRD applies to businesses with an average of 50 employees and a net turnover of over four million EUR starting with the financial year of 2023 (EC, 2021). The EU Taxonomy is a green classification system that clearly defines green economic activities through six environmental objectives and four conditions, which must be met for any economic activity to be Taxonomy aligned (EC, n.d.). Therefore, the EU Taxonomy is a regulation aiming at creating a shared understanding of environmental sustainability for the financial sector and business sector alike.

The SFDR, which is applicable since the 10th of March 2021, complements the EU Taxonomy and the CSRD as it directly addresses corporate reporting "…for financial products and financial entities." (EC, n.d., p.3). Thus, complying with this "comprehensive reporting framework" (EC, n.d., p.3) not only affects the behavior of financial entities, such as investors but has an indirect impact "…on the business models of companies that are being invested in." (EC, n.d., p.3). The introduction of these EU regulations is crucial for driving businesses towards supporting sustainable development, as managers and business strategies are influenced by governmental regulations (Christensen et al., 2019). This can force businesses to adapt their activities and operations, which can hold potential savings and can, in the long term, lead to a competitive advantage (Christensen et al., 2019). To conclude, investments are steadily regulated regarding sustainability disclosures which drives the integration of sustainability in businesses, thus enabling sustainable development in the long run.

2.1.2 Sustainability in the Business Context

The concept of the TBL is prevalent in the business context and sustainability. The TBL is a sustainability framework proposed by John Elkington in 1994, which stated that organizations must focus on creating economic, environmental, and social impact (Elkington, 2018). The framework itself should provoke a reconceptualization of capitalism by establishing a trade-off mentality (Elkington, 2018). The TBL has been used to evaluate and assess the impacts of organizations, making it a core concept in the audit and reporting for sustainability (Elkington, 1998). However, Elkington (2018) recalls his concept for finetuning after 25 years as the "…concept has been captured and diluted by accountants and reporting consultants" leading to very limited changes and rethinking. Still, the concept is in use with practitioners transforming it into ESG (Robeco, n.d.). Therefore, the concept, which merged into ESG, aims at triggering a rethinking of the neo-classical focus on only economic value creation towards a TBL.

2.2 Early Business Endeavors for Sustainability

This thesis focuses on entrepreneurship, specifically early-stage NVs, and how these are impacted by the increasing importance of integrating sustainability and ESG. While entrepreneurship is a broad concept, Mugione and Farinelli (2017) define entrepreneurship as the willingness and capacity of an entrepreneur to conceptualize and manage an NV while seeking rewards in terms of profit and accepting possible risks. Marques (2018) further defines entrepreneurship as the act of turning opportunities into a business, while Lazear (2005) says that entrepreneurship is not limited to initially establishing a business but could also be the reinvention of an existing company. For defining NVs, the definition by Voinea et al. (2019) is followed, who define startups as "...an entrepreneurial venture in its early stages of operations that is typically aimed at resolving a real-life issue with an innovative product or service." (p.1). Therefore, entrepreneurship is a broad term and used in studies, it can imply different understandings, which is the reason for the choice of utilizing the concept of startups as early-stage NVs in this thesis.

While the term early-stage startup is used in many papers found through the SLR, it is not clearly defined. Researchers imply that early-stage companies are in a developmental phase between conceptualization and commercialization in which legitimacy is still to be gained (Fisher et al., 2016; Islam et al., 2018). The developmental stage implies that these startups have fluid and flexible organizational structures (Voinea et al., 2019). The demonstration of the business's potential is of relevance, suggesting that the company is not of a size to attract broad interest from investors (Williams & Sharamitaro, 2002). Therefore, this thesis understands an early-stage NV as a company that is still in a developmental phase, lacking legitimacy as well as broad investor interest.

The following sections delve into early-stage NVs, their link to sustainability, and their relevance for tackling environmental and social issues. This is followed by outlining concepts of entrepreneurship in the sustainability context. The integration of sustainability in business models, its reasons, and its effect on fundraising are investigated as well.

2.2.1 NVs as an Opportunity to enable Sustainable Development

Businesses and their operational activities are increasingly seen as a major cause of the increasing environmental and social problems faced by society. As the IPCC (2021) report demonstrates, society urgently needs to reduce Greenhouse Gases as climate change is a human-made phenomenon that impacts everyone. While these problems are getting increasing attention, businesses are pressured to tackle these sustainability concerns (Joyce & Paquin, 2016; Schaltegger et al., 2016). Cantele et al. (2020) argue that society pressures businesses to become more sustainable and consider their impact on environmental and social issues. Entrepreneurship and innovative NVs especially play an important role in tackling today’s environmental and social problems (Filser et al., 2019). Therefore, on the business side, entrepreneurs and innovation face pressure to tackle environmental and social issues.

As stated in chapter 1, entrepreneurship plays a key role in addressing sustainable development challenges (UN, 2020). Entrepreneurship is crucial for achieving the SDGs as it can address all three pillars of sustainable development, meaning that entrepreneurial activities drive not only economic growth but also tackle environmental and social challenges (UN, 2020; Mugione & Farinelli, 2017). Accordingly, NVs have the potential to introduce products and services to the market, which, e.g., reduce inequalities and establish more responsible consumption patterns (Bocken, 2015; UN, 2020). Acevedo-Duque et al. (2021) support the importance of entrepreneurship for sustainable development, as it can contribute to social and environmental well-being through resource-efficient processes. Filser et al. (2019) make the connection between the SDGs and balancing the TBL, as the economic aspect of entrepreneurship has an impact on social and environmental issues and vice versa. Thus, NVs are not only influenced by the increasing pressure of tackling environmental and social issues and aligning with the SDGs, but they also play an important role in achieving the SDGs and contributing to sustainable development.

Especially in the early stages of NVs, sustainability approaches are of importance. Bocken (2015) and Bocken et al. (2014) argue that early-stage NVs must integrate sustainability in their strategies, products, and services to positively impact and contribute to sustainable development. Cantele et al. (2020) further stress that not only established firms but also NVs are pressured by external stakeholders to contribute to sustainable development and thus should use their limited resources wisely and adapt to their environment. External pressures are important to consider in the early stages, as consumers are increasingly motivated to support businesses with ethical and sustainable business practices (500 Startups, 2020a). Considering ESG risks and opportunities that can impact business activities already from the beginning is crucial for NVs to adapt to today's external pressures. Through this, NVs can build a more resilient business, prepare for increasing ESG risks and challenges with growth, and thus ultimately attract more investments in further investment rounds (500 Startups, 2020a; Winterberg et al., 2020; CDC Group & FMO, 2020). In addition, it was found in several studies that NVs which consider sustainability in their business activities are often motivated by their personal values and not solely by external pressures, making them react less strategically to these external pressures than established companies (Cantele et al., 2020). Therefore, entrepreneurs are seen as a driving force for motivating more sustainable business activities (Cantele et al., 2020). Consequently, the integration of sustainability concepts in the early stages of an NV is driven by stakeholder demands and personal values of the entrepreneurs themselves.

The drive for sustainable development provides interesting business opportunities for entrepreneurs, as NVs need to establish new products and processes which can tackle environmental and social challenges (Hall et al., 2010; Kuckertz et al., 2019). Kuckertz et al. (2019) especially refer to ecological NVs, which can create products and services that "...create value to address [...] environmental issues" (p.1138) and thus mitigate climate change. In addition, Bergmann and Utikal (2021) argue that NVs which integrate sustainability in their business approach can foster the needed "...societal transition towards a low carbon society." (p.1). Thus, it becomes evident that NVs not only play an important role in tackling environmental and social challenges but also actively use these challenges to uncover unique business cases for sustainability which foster economic growth and contribute to the Agenda 2030.

2.2.2 Types of Entrepreneurs in the Context of Sustainability

The SLR shows that academia uses different niche terms for entrepreneurship (table 1) connected to sustainable activities. However, the focus on environmental or social concerns differs. On the social side, there exist different definitions for the term social entrepreneurship, as some studies define it as a not-for-profit business, and others refer to it as a business that actively integrates social responsibility in its daily operations (Agrawal & Gugnani, 2014). In general, Agrawal and Gugnani (2014) refer to it as a business that creates wealth alongside social welfare, while the main focus is on achieving “social value and development” (p.439). On the environmental side, the term ecopreneurship describes entrepreneurship with a focus on environmental rather than on social aspects (Schaltegger & Wagner, 2011). However, even though ecopreneurs are concerned with solving environmental and, to some extent, social problems, economic value creation is still the core of their business (Schaltegger & Wagner, 2011). Another term used to describe NVs, which focus mostly on environmental issues, is green entrepreneurship, which is concerned with “more environmentally friendly” (Demirel et al., 2019, p.760) business approaches. Thus, academia shows entrepreneurship terms that focus on either social or environmental factors implying a double line.

Paper	Term	Definition
Agrawal & Gugnani (2014)	Social Entrepreneurship	„Researchers and practitioners have developed definitions of social entrepreneurship in relation to different categories like profit organisation, non-profit organisation, and social enterprise, and it has even been termed social service organisation. This paper addresses the concept of a profit making social organization.” (p.439) “Though it may true for organisations, but it will be meaningful to understand that in social entrepreneurship higher priority is given to promoting social value and development relative to capturing economic value.” (p.439)
Schaltegger & Wagner (2011)	Ecopreneurship	„The core motivation and main goals mentioned with ecopreneurship are to earn money through contributing to solving environmental problems (Table 1). Economic goals are the ends of the business, whereas environmental goals are considered as an integrated part of the economic logic of the business.” (p.223)
Demirel et al. (2019)	Green Entrepreneurship	„Born green firms, used interchangeably with “green start-ups” here, follow an entrepreneurial path that fulfils the need for a greener and more environmentally friendly approach to business, providing practical and innovative solutions for social and environmental concerns...”(p.760) “Green entrepreneurs exploit the opportunities that are inherent in environmentally relevant market failures (Dean and McMullen, 2007)." (p.760)
Schaltegger & Wagner (2011)	Sustainable Entrepreneurship	„Contribute to solving societal and environmental problems through the realization of a successful business.” (p.224) “Such an ambitious approach of entrepreneurship that attempts not only to contribute to sustainable development of the organization itself, but also to create an increasingly large contribution of the organization to sustainable development of the market and society as a whole, requires substantial sustainability innovations.“ (p.224)
Hockerts & Wüstenhagen (2010)	Sustainable Entrepreneurship	“We thus define sustainable entrepreneurship as the discovery and exploitation of economic opportunities through the generation of market disequilibria that initiate the transformation of a sector towards an environmentally and socially more sustainable state.” (p.482)

Table 1: Overview of different niche terms for entrepreneurship in sustainability context; created 15.02.2022

Another term often used by academia is sustainable entrepreneurship, which is defined by Schaltegger and Wagner (2011) “…as an innovative, market-oriented and personality driven form of creating economic and societal value by means of break-through environmentally or socially beneficial market or institutional innovations.” (p.226). However, Schaltegger and Wagner (2011) do not mention the explicit need for sustainable entrepreneurs to take the TBL approach or seek opportunities. Cantele et al. (2020) found that academia on sustainable entrepreneurship considers the interconnectedness of business activities and the SDGs. Hockerts and Wüstenhagen (2010) have explicitly mentioned opportunity recognition in their definition of sustainable entrepreneurship: "…the discovery and exploitation of economic opportunities through the generation of market disequilibria that initiate the transformation of a sector towards an environmentally and socially more sustainable state." (p.482). Sustainable NVs, also referred to as sustainable entrepreneurship in literature, combine the objectives of the above-mentioned terms in line with Hockerts and Wüstenhagen (2010), Bocken (2015) as well as Demirel et al. (2019).

2.2.3 Integrating Sustainability in NVs through Business Models

Businesses must take a system thinking approach and consider social, environmental, and economic dimensions to create shared value for multiple stakeholders, such as society and the environment (Bocken et al., 2015). Bocken et al. (2015) refer to this approach as sustainable business thinking. They argue that traditional business models are too narrowly focused on creating value for customers, making it impossible to encompass the shared value concept (Bocken et al., 2015). In the following sections, traditional business models and sustainable business models (SBMs) are introduced.

2.2.3.1 Traditional Business Models

This thesis refers to Osterwalder and Pigneur (2011) and Teece (2010) to define the principles of traditional business models. These business models have been used by many papers in the SLR and have been referred to as traditional business models (Bocken et al., 2015; Bocken et al., 2013, Baldassarre et al., 2020). Business models are to capture the core way a company delivers value to its customers, reflecting "…management's hypothesis about what customers want, how they want it, and how the enterprise can organize to best meet those needs, get paid for doing so, and make a profit." (Teece, 2010, p.172). Osterwalder and Pigneur (2011) created the business model canvas to capture and evaluate business models through nine building blocks focusing on design and strategic execution. One of these blocks is the value proposition which Osterwalder and Pigneur (2011) define as "…the bundle of products and services that create value for a specific Customer Segment." (p.66). Thus, traditional business models focus on the customer and the strategic design a company applies to create the value proposition for the customer.

Bocken et al. (2015) find that traditional business models do not focus on sustainability as they focus on "…the value proposition for the customer, and limited stakeholders…" (p.69). However, to include sustainability in a business model, society and environment must be treated as important stakeholders in the value proposition itself (Bocken et al., 2015). De Lange (2017) further mentions that the sustainability of an NV is based on the interrelation of the mission and the business model. Thus, the next section introduces the concept of SBMs, which go beyond profit maximization and focus on delivering social and environmental value.

2.2.3.2 Sustainable Business Models (SBMs)

It is important that NVs, already at an early stage, integrate sustainability into their business model to have a positive impact on the environmental and social challenges faced by society (Bocken et al., 2014; Bocken, 2015). These findings are supported by Schaltegger et al. (2016) as well as Matzembacher et al. (2020), who argue that traditional business models, which are purely focused on profit maximization, have reached their limits. Not only are environmental and social issues pressuring the transition towards SBMs and strategies, but increasing regulations also push businesses towards environmentally sustainable business practices (Al-Saleh & Mahroum, 2015; Matzembacher et al., 2020; Schaltegger et al., 2016). Entrepreneurs and NVs need to take a value-based management approach and include sustainability values and goals in their vision and mission statements based on the TBL. With this, they can ultimately contribute to achieving sustainable development, such as the SDGs (Breuer et al., 2018; Mugione & Farinelli, 2017). Consequently, NVs, at an early stage, should include a value-based management approach to meet the pressures for sustainable business practices.

For businesses to become more sustainable, they need to better understand their customers, change behavior, introduce innovative business models that foster sustainable development and actively integrate sustainability into the strategy (Baldassarre et al., 2017). The SLR has shown that several studies refer to the concept of SBMs. This concept entails that, in contrast to traditional business models, SBMs allow for a holistic view, or system thinking approach, and thus the integration of multiple stakeholders, such as the environment and society (Bocken et al., 2013; Breuer et al., 2018; Schaltegger et al., 2016). With this, SBMs can promote sustainable development and deliver value beyond economic value (Bocken et al., 2013; Schaltegger et al., 2016). Therefore, SBMs are of importance for NVs to be able to create added value and promote sustainable development.

The SLR has shown that academia connects SBMs with concepts such as the TBL. Bocken et al. (2014) stress that as SBMs include the interests of multiple stakeholders, such as the environment and society, they follow the TBL approach. Thus, SBMs "…can help embed sustainability into business purpose and processes, and serve as a key driver of competitive advantage." (Bocken et al., 2014, p.42). Therefore, the TBL allows for a broad stakeholder approach necessary for SBMs.

Bergman and Utikal (2021) mention some examples of which activities need to be considered in a business model to incorporate a TBL approach. For the economic level, it is important to consider value capture, generate revenues, create social and environmental value, and be familiar with regulations on the respective market. On the environmental level, it is crucial to identify environmental objectives, which Bergman and Utikal (2021) refer to as considering, for example, emissions and waste production in the business model. Furthermore, NVs must be able to measure their impact on the environment and define their boundaries for measuring this impact (Volkmann et al., 2019). On the social level, NVs must be aware of how their business activities are connected to the UN SDGs to understand their contribution (Volkmann et al., 2019). Consequently, each factor of the TBL needs its own assessment for its inclusion in an SBM.

However, Bergman and Utikal (2021) found that NVs often lack knowledge on how to be sustainable and integrate the TBL into their business model. Often, NVs have no understanding of how their activities contribute to the TBL, making it difficult to define parameters of importance to sustainability. Furthermore, they found that most NVs lack knowledge on how to calculate their impact. Also, many NVs do not know how their business is connected and contributes to the UN SDGs and, thus, how to include them in their business model (Bergmann & Utikal, 2021). Consequently, the lack of knowledge found in NVs concerning the integration of sustainability or the alignment to the SDGs hinders the advancement of SBMs.

2.2.4 Integrating Sustainability for Reputational Purposes

The consideration of reputation is important for NVs, especially when it comes to stakeholders, such as VCs, who consider the potential of an NV. Thus, NVs need to be aware of which factors can possibly influence their reputation from the beginning (Zerwas & von Korflesch, 2016). While reputation is important for established companies to continue with their current business activities, NVs need a reputation to build the foundation of their business. It takes a long time to establish a reputation and NVs need to consider how to drive their reputation early on, as it is influenced by expectations about future actions. Furthermore, reputation is different from stakeholder to stakeholder, while Zerwas and von Korflesch (2016) focus on VCs as key stakeholders, as they are an important source of capital for NVs, due to their willingness for risky and uncertain investments. Thus, NVs need to consider their reputation and how to build it – with VCs being a valid source.

Zerwas and von Korflesch (2016) identified five key drivers of reputation, which are crucial for NVs to consider from a VCs perspective: the team, market and industry, products and services, finance, and lastly, innovation. They found in different studies that good reputation leads to better financial performance of companies which makes it easier to attract capital and increases the confidence of an investor in the company. However, Zerwas and von Korflesch (2016) do not consider sustainability as an important driver of reputation and investor decision-making. Cantele et al. (2020) argue that including sustainability in early stages of business can positively impact reputation, competitiveness, customer attraction and can reduce costs. They found small companies to be aware that integrating sustainability in the business model can be a differentiating factor. Therefore, inclusion of sustainability in the business model in the early stages can shape reputation and lead to a competitive edge next to more established reputational factors.

Furthermore, the CDC Group and FMO (2020) state that a good ESG performance can reduce the risk of a negative reputation in early-stage NVs. They argue that not considering ESG factors at an early stage can have a negative impact on the attraction of financial capital and thus investors. Having a formal structure for managing ESG risks and opportunities from early stages can prevent an NV from reputation-damaging issues in the growth phase, which can impact the business performance. Thus, considering ESG factors in early stages can improve an NV’s reputation from the beginning and can mitigate risks in later stages (CDC Group & FMO, 2020).

2.2.5 Sustainability in NVs as a Pitfall for Investments?

De Lange (2017) connects NVs integrating sustainability in their business models, strategy, and investments. While NVs can mitigate environmental and social issues by contributing to sustainable development and “…many entrepreneurs like a sustainable business model and/or mission, investment may not follow so willingly.” (De Lange, 2017, p.838). De Lange (2017) examined 300 NVs globally, most of them located in Asia and North America, to see whether investors reward sustainability. The results showed that NVs, which are sustainable and particularly focused on environmental sustainability, were avoided by most investors. Therefore, currently, sustainable NVs are seemingly not rewarded for sustainability by investors (De Lange, 2017).

Economic gain is still the most influential factor for investor decision-making. De Lange (2017) found that investors mostly focus on returns and economic value creation. NVs which are integrating sustainability appear riskier for investors, as De Lange (2017) concluded “…that investors choose to avoid business risk rather than respond to the demand for sustainable solutions.” (p.851). Many investors expressed their concerns about value capture when investing in entrepreneurs who have not only a profit focus but follow an SBM or mission. De Lange (2017) concluded that investors “…do not seem to make the connection that the sustainable context may support the firm’s orientation and thus, reduce some of the business risk.” (p.851). Thus, an NV's mission apart from profit only appears riskier for investors even though there is evidence against it – a paradoxical situation.

2.3 Financing Early Business Endeavors for Sustainability

VC stands for a pool of money that has been raised through different partners (Encyclopedia of Finance (EoF), 2006). This pool of money is being managed by VCs who invest it into normally big equity shares of companies. The general aim is to create the highest possible return for the pool's limited partners (LPs) by either driving for an initial public offering (IPO), a merger or an acquisition, or the repurchase through the owners of the companies

(EoF, 2006). The purpose of creating a return for the partners leads to a focus on companies that grow and scale rapidly (CDC Group & FMO, 2020). These rapidly scaling companies are mostly at an early stage before they attract any broad investor interest so that VCs can buy more equity for a lower company valuation (Williams & Sharamitaro, 2002). Therefore, VCs are managers of big capital pools, which invest in early-stage high-growth NVs to gain the best possible returns.

Early-stage investments are riskier than stock market investments (Williams & Sharamitaro, 2002). VCs often invest over a long period of time (seven to ten years) in NVs that have not made any profit or revenue so far and have unproven and innovative business models, which makes it difficult to predict possible outcomes (CDC Group & FMO, 2020). As a study by CBInsights (2018) shows, only about 30% of all early-stage funded NVs made an exit, with only about 1% acquiring the status of a unicorn. Due to this, VCs drive for higher expected returns of the investment (ROI) to compensate for the risk (Williams & Sharamitaro, 2002). To decrease risk, VCs tend to get involved with their portfolio companies spanning from sitting in on board meetings to advising and connecting the portfolio companies (EoF, 2006). The actions taken by VCs beyond the mere handling of money are value-adding services that VCs see as one of their main roles (Sapienza et al., 1996). Thus, VCs compensate for the risk of making early-stage investments through higher expected rates of ROI and by providing value-adding services.

Due to the risk VCs face when investing in early-stage NVs, Winterberg et al. (2020) find it surprising that ESG risks do not play a more important role in the investment decision processes. Integrating ESG risks and opportunities in investment decision processes can reduce risks, improve financial performance and help identify value creation opportunities, which should ultimately incentivize VCs to take ESG into account to improve financial returns (500 Startups, 2020a; Winterberg et al., 2020). A possible reason for the missing ESG integration is the lack of guidance on how to incorporate ESG aspects into investment decisions for VCs (Winterberg et al., 2020; CDC Group & FMO, 2020). Winterberg et al. (2020) state that for truly sustainable practices, "…an integrated approach across all stages of the investment process" (p.20) is necessary. Moreover, VCs often perceive NVs to have lower ESG risks than mature businesses. However, it is precarious, as it can be crucial for the success of early-stage NVs that VCs include ESG considerations already in early stages to prepare for later regulatory conditions and prevent backlash (CDC Group & FMO, 2020). Consequently, currently, ESG does not play an important role in mitigating risks for VCs even if there is evidence of its importance, especially for early-stage NVs.

Academia identified different types of VCs. VCs can, e.g., differ in their choice of portfolio companies as some VCs are industry-specific, building up specialized knowledge, whereas others have a broad orientation (Williams

& Sharamitaro, 2002). Another differentiation factor are LPs who provide capital. VC partners can be private investors, corporates, non-profit organizations, or even governments which results in different types of VCs (Barber et al., 2021). Through the investment orientation, VCs can reflect their LPs' opinions which influence the investment choice of the VCs themselves (Alakent et al., 2020). Therefore, even though the term VC has a certain meaning, there are many variations in practice that emerge due to differing investment foci.

The influence LPs have on VCs, as identified by Barber et al. (2021) and Alakent et al. (2020), also becomes evident for ESG. The CDC Group and FMO (2020) state that there is increasing pressure from LPs on VCs to include ESG and sustainability aspects in investment decisions. Responsible investors increasingly expect VC funds to have a strong ESG approach in their investment decision processes as this can improve financial performance and prepare VC-backed companies for the high ESG requirements on stock markets in case of an IPO (CDC Group & FMO, 2020; Winterberg et al., 2020). A good ESG performance across the portfolio companies can strengthen the VC's brand (CDC Group & FMO, 2020). Thus, VC funds adopting a strong ESG approach can stand out, which supports their fundraising as LPs increasingly seek to invest responsibly.

This thesis focuses on early-stage VCs with a sustainability angle and their investments in early-stage NVs. In the following, the different forms of VCs with a sustainability angle are presented, and the interrelationship with sustainable development is explored. Furthermore, the influence and importance of VC for early-stage NVs is reviewed.

2.3.1 VCs in the Realm of Sustainable Investing and Sustainable Development

One special form of VC recognizes social and environmental goals next to the purely profit-related goal. The SLR showed that academia tends to have different names for this special form of VC and that there are niche regions (table 2). Terms such as sustainable VC (Antarciuc et al., 2018; Bocken, 2015), dual-objective VC (Barber et al., 2021), and impact investing (Barber et al., 2021; Holtslag et al., 2021) reflect a TBL of the investment objective of VCs. According to Bocken (2015), the avenues of impact investing are a new research field that is growing, whereas sustainable VC received less notice. However, terms such as green VC (Randjelovic et al., 2003) or philanthropic VC (Scarlata & Alemany, 2013) rather show a double line of either an environmental or social factor next to the goal of profitability. Therefore, the academic terminology regarding forms of VC with a sustainability angle differs.

Paper	Term	Definition
Antarciuc et al. (2018)	Sustainable Venture Capital	"...a category of financing offered by companies or investment funds to small-scale, young firms with excellent development capabilities that can deliver triple bottom line results." (p.2)
Bocken (2015)	Sustainable Venture Capital	Investors with "a key role in nurturing entrepreneurship and new ventures" while they "...contribute positively to the environment and society while generating a profit." (p.647))
Barber et al. (2021)	Dual-objective Venture Capital	Impact Investor = VC with dual agenda who "... exhibits an intention to generate both positive social or environmental returns and positive financial returns." (p.163)
Holtslag et al. (2021)	Impact Venture Capitalists	In accordance with the GIIN (2018) "...investments made into companies, organizations, and funds with the intention to generate social and environmental impact alongside a financial return" (p.1)
Randjelovic et al. (2003)	Green Venture Capital	Investors who "...consider the capacity eco-innovations have to add value to an enterprise, besides the risk reduction factor. Hence, it can be said that green VCs have the potential to generate 'double dividends' – the creation of both low environmental impacts or risks and financial returns" (p.246)
Scarlata & Alemani (2013)	Philanthropic Venture Capital	Investors with a "...focus on the maximization of social return through a long-term financial commitment and the provision of value-added activities." (p.75)

Table 2: Overview of different niche terms for VC in the sustainability context; created 15.02.2022

In this thesis, the interconnectedness of early-stage NVs and VC is made via the concepts of sustainability and sustainable development. In the finance sphere, sustainable investing is a branch with a direct connection to the goal of achieving sustainable development (Busch et al., 2016). Sustainable VC, which does not focus on profitability alone, aiming for a positive contribution to environmental and social impact in the long run, is a concept in the sustainable investing area (Antarciuc et al., 2018; Bocken, 2015). According to Bocken (2015), sustainable investing is related to many more narrow categories, such as SRI or impact investments. Holtslag et al. (2021) investigated the role of VC funds in sustainable market transformations, finding that impact investors in the form of VCs "…play a catalytic role in shaping and maturing early stage ventures." (p.533). Through the scaling efforts of their impact investments, sustainable market transformations were enabled, showing that VC has the potential to create sustainable market changes by altering dynamics rewarding sustainability (Holtslag et al., 2021). The disruptiveness that portfolio companies, the NVs, of VCs tend to have, highlights the urgent need for more responsible investment practices (Winterberg et al., 2020). Therefore, VCs with a sustainability focus are part of the sustainable investment area with the potential to create disruptive market changes and thus enable sustainable development through investments in NVs.

2.3.2 Characteristics of VCs with a Sustainability Focus

2.3.2.1 Fight against Short-Terminism

The investment industry is dominated by a short-term view which is "...among sustainability's greatest threats." (Bansal & DesJardine, 2014, p.73; De Lange, 2017). Short-term returns and the stock market drive investment managers' "herding behavior" towards traditional benchmarks (Himick, 2011). Short-terminism itself is defined as "…decisions and outcomes that pursue a course of action that is best for the short term but suboptimal over the long run" (Laverty, 1996: 826 in Bansal & DesJardine, 2014). The willful neglect of long-term focus is a threat to sustainability, as the definition of sustainable development suggests it being a long-term goal itself. Thus, short-terminism is enabled by the current practices of the investment industry, hindering the industry from enabling sustainable development.

Short-terminism is relevant to VCs as they focus on achieving the highest possible returns on their investments. VCs focus on profitability and have a short-term view on their portfolio companies which shapes a narrow view on the accountability for stakeholders (Alakent et al., 2020). Alakent et al. (2020) investigated the effect of VC on the CSR practices of their portfolio companies after an IPO. They found "…that VC-backed companies have poorer CSR records than non-VC-backed companies." (p.2), implying that VCs "imprint" their portfolio companies with a short-terminism as CSR needs a long-term focus and broad stakeholder engagement (Alakent et al., 2020). Furthermore, they found that VCs with environmental and social policies "imprinted" their portfolio companies towards broader stakeholder accountability as their portfolio companies showed stronger CSR records (Alakent et al., 2020). Consequently, VCs with a sustainability focus try to apply a long-term view resulting in imprinting long-term focus into their portfolio companies.

2.3.2.2 Mission Focus

Sustainable VCs are special in the VC sphere as they combine pure financial focus with an environmental and social one. The investment thesis is the guide for sustainable VCs when deciding what a positive impact is and, thus, which NVs to select (Bocken, 2015). However, the investment thesis can differ as it depends on factors such as industry focus, the LPs' characteristics, and reputational concerns (Alakent et al., 2020). Bocken (2015) identified three themes that are overarching in investment theses of a sustainable VC: the focus on "doing good and doing well" (p.653); the search for "synergistic investment areas across the triple bottom line" (p.653); and a transformation and innovation focus with investments into underinvested areas. This focus on the mission is beneficial for sustainable VCs as founders of NVs perceive them to be fairer during the investment period (Winterberg et al., 2020). Furthermore, moral commitment is a driver and enabler of sustainable VC in general (Antarciuc et al., 2018). Therefore, VCs with a sustainability focus, focus on their mission for good which is beneficial for them.

2.3.2.3 Multiple Roles with Cooperation as Key

VCs have multiple roles as they not only give out funding (financial role) but also value-adding services (non-financial role). Large and Muegge (2008) identified eight categories of value-adding services with two categories of external orientation, which are outreach and legitimization, and the six others with an internal orientation, which are mentoring, mandating, strategizing, recruiting, operating, and consulting. Holtslag et al. (2021) reviewed these roles in the light of impact VCs, finding that all roles are still relevant and can have a sustainability relation. Furthermore, these roles are mostly of relevance for early-stage NVs as they have their transformational journey still in front of them, which an impact investor can accelerate (Holtslag et al., 2021). Croce et al. (2013) support the relevance of value-adding services by stating that VCs involvement increases the performance of their portfolio companies as they receive more resources early on. To conclude, the recognition of the roles of VCs, especially for early-stage NVs, can enhance the venture's performance.

Most value-adding services are based on engagement. However, the engagement of VCs in the different categories is accompanied by a big loss of managerial autonomy on the side of NVs (Alakent et al., 2020). Scarlata and Alemany (2013) find that VCs and entrepreneurs need to cooperate instead of competing to ensure successful long-term growth. Furthermore, Antarciuc et al. (2018) identified a VCs willingness to take the time and resources for the support and engagement with its portfolio companies as an enabler for a sustainability focus in VCs. Therefore, the cooperative approach is necessary to enable the successful utilization of the different roles of VC and to foster sustainability in VCs.

2.3.2.4 Understanding SBMs

Sustainable VC investments can be enabled through different factors, one of them being an SBM. Antarciuc et al. (2018) revealed ten enablers of sustainable VC investments through an SLR. The enablers range from external ones, such as regulations for sustainable investments, to internal enablers, such as the willingness of VCs to utilize human resources for engagement, the moral commitment – mission focus – or the innovation of the business model itself. Utilizing a resource-based view, they argue that VCs need to deeply understand the business case of an NV. This is especially important for sustainable NVs, as their products and services are often more capital intensive as well as technology-driven. As VCs with a sustainability focus need to select their early-stage NVs with awareness of potential opportunities and risks, knowledge to understand the business case is especially of importance (Antarciuc et al., 2018). To conclude, a core enabler of sustainable VC is the internal knowledge and skills needed to understand an SBM.

2.3.4 Influence of VC on Early-Stage NVs

Practitioners and academics view VC as the most suitable financing medium for early-stage NVs (Croce et al., 2013). They argue that the combination of the selection of the "winning team" as well as the development of it creates a perfect combination for early-stage NVs (Bocken, 2015; Croce et al., 2013). This combination enables quick growth and value creation of the early-stage NVs (Bocken, 2015). Croce et al. (2013) further advocate the importance of VC for early-stage NVs as their comparison of VC-backed and non-VC-backed companies showed a significant productivity growth in NVs after a VC round. They even state that NVs not older than three years are most sensitive to the influence of VC engagement which will lead to a "rebirth" of the NV itself (Croce et al., 2013). This is of special importance for sustainability impacts, as they are sharply influenced by choices in the early stages (Bocken, 2015). Therefore, early-stage NVs are influenced heavily by VCs, leading to a "rebirth" enabling the growth of productivity.

The "rebirth" of an early-stage NV during the investment of VCs is based on external and internal factors. Externally, the recognition of being a possible "winning team" can result in reputational signaling showing the perceived quality to further external partners and investors (Fitza et al., 2009). This role of legitimization through VC, as mentioned already by Large and Muegge (2008), improves credibility and can lead in the cases of sustainable VCs to an increased total impact through strengthened relations (Holtslag et al., 2021). Internally, the engagement by VCs and the management dependencies on VC results in the NV's buildup of "…persistent organizational routines and structures that sustain traditions, vested interests, and ideologies…" (Alakent et al., 2020, p.4). These shaped internal cultures and processes are "imprinted", lasting even after an IPO (Croce et al., 2013; Alakent et al., 2020). The imprinting occurs in the early stage as the NV is more susceptible to influences due to organizational fluidity (Alakent et al., 2020). Therefore, VCs create legitimacy for their portfolio companies while imprinting them through acting on their roles.

2.4 Conclusion of the SLR

The SLR revealed three key findings: the need to rethink traditional business models and practices; the rebirth of early-stage NVs towards more sustainability through the funding and cooperation of VCs with a sustainability focus; and the potential contribution of sustainable NVs and VCs towards sustainable development. (1) The EU regulatory environment and social and environmental pressures lead to a need on the side of NVs to **re-think** traditional business models and move towards SBMs. According to academia, integrating sustainability at an early stage can lead to a good reputation and reduce risks; however, it potentially discourages investments, as investors often do not see the connection between sustainability and performance. (2) When it comes to funding through VC, portfolio companies gain legitimacy and tend to perform better after one year, which is related to the value-adding services provided by VCs, which ultimately imprint on NVs. This imprinting, which is relevant for early-stage NVs due to their flexible organizational structures, leads in the sustainability context to a **re-birth** of the NV. (3) Due to the imprinting role of VCs, they play a key role in **driving sustainable development**, especially as they are collaborating with disruptive NVs. NVs driving sustainable development are equally important as they can adopt SBMs, contributing to sustainable development by creating products and services which support this development. To conclude, Figure 1 visualizes the results of the SLR, highlighting the driving pressures for sustainability and ESG integration, the influencing factors originating from the pressures and driving the core processes, and the two identified core processes of re-think and re-birth.

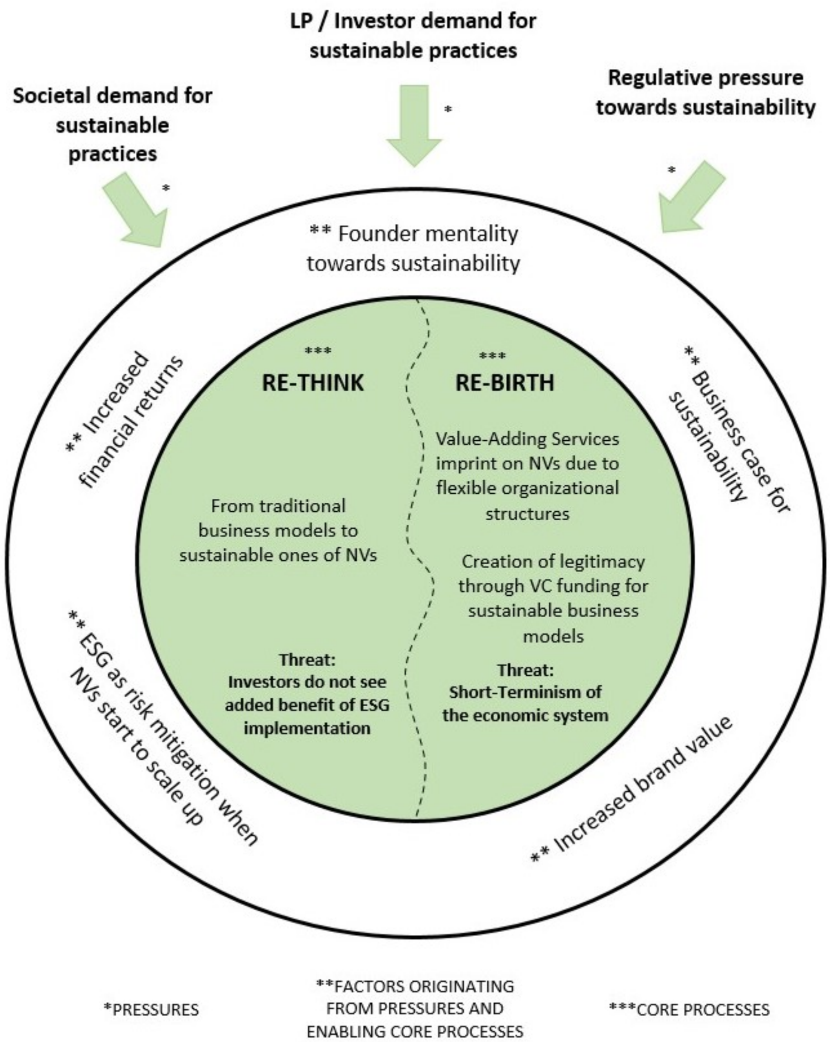

Figure 1: Visualization of the core findings of the SLR; own illustration 27.03.2022

The academic papers covered in the SLR utilized a broad approach to sustainability as well as different definitions and foci regarding entrepreneurship, NVs, and VC. Furthermore, the identified papers often do not focus specifically on early-stage NVs or entrepreneurs. For example, studies on SBMs are often related to business model innovation in existing companies. The same applies to the research on VC in the sustainability context, as most papers focus on impact investing of VCs and often do not focus specifically on investing in early-stage NVs. Thus, a research gap has been identified, as there is, to our knowledge, no work that explicitly focuses on sustainability integration in early-stage NVs as well as its interplay with VCs in the context of sustainability. The importance of both rethinking business models and the rebirthing power of VCs make it relevant to research the connection between early-stage NVs and VCs and how or if they influence each other's sustainability approach. Therefore, this thesis applies the findings from the SLR to the case of early-stage NVs and VCs in the context of sustainability to close the research gap.

3. Theoretical Framework

This chapter describes the theoretical framework used for interconnecting literature and generated data. As previously described, there is a research gap on the interconnection of sustainability integration in early-stage NVs as well as its interplay with VC. However, both literature strings on sustainability in early-stage NVs and sustainability in early-stage VC highlighted the topic of legitimacy, and the pressures asserted to generate sustainability. The SLR revealed three theoretical papers focusing on legitimacy as a driver for NV growth (Zimmerman & Zeitz, 2002), the importance of NVs' identity claims for the plausibility judgment of an investor in the investor sensemaking process (Navis & Glynn, 2011), and the impact of identity adaptations to meet VCs expectations and gain legitimacy (Fisher et al., 2016). To continue the research focus, this thesis utilizes institutional theory with a focus on the concepts of legitimacy and identity to further the understanding of the interrelationship of early-stage NVs and VCs in the context of sustainability in investor sensemaking.

In the following, the theoretical foundation of this thesis is presented in four sections. Firstly, institutional theory is briefly introduced. Secondly, the concept of legitimacy is explained in the context of the three core theoretical papers. Thirdly, the concept of identity is elucidated, focusing on the understandings of the core theoretical papers. Fourthly, the theory chapter is concluded by interconnecting the concepts of legitimacy and identity in the context of NVs and investor sensemaking, shaping the theoretical framing of this thesis.

3.1 Institutional Theory

Institutional theory allows for analyzing the relationship between organizations and institutions and understanding how the latter enables or constrains organizational behavior (Palmer, 2017). Moreover, Wooten and Hoffman (2017) argue that institutional theory not only suggests that pressures of the environment lead to actions taken by an organization. Institutional theory also sheds light on “...how social choices are shaped, mediated and channeled by the institutional environment.” (Wooten & Hoffman, 2017, p.2). During the past years, critique of institutional theory has become apparent as the term ‘institution’ is increasingly used in different settings, with different definitions, and thus became a vague concept. Thus, Alvesson and Spicer (2019) stress the importance of clearly defining the term for a research setting. The three core readings utilize the term ‘institution’ to stress the relation to institutional theory constructs or as a broader form of organization and its relation to pressures of an institutional environment, but all do not explicitly define it (Zimmerman & Zeitz, 2002; Navis & Glynn, 2011; Fisher et al., 2016). For this thesis, an institution is defined in accordance with Palmer (2017) as “(…) regulative, normative and cognitive structures that shape the behavior of organizations and their members in a delimited ‘field'” (p.2-3), making it an institutional environment rather than an organization.

3.1.1 Historic Development

Alvesson and Spicer (2019) outline a shift from old institutional theory to neo-institutional theory in the late 1970s. This transition was marked by the work of Meyer and Rowan (1977) and later DiMaggio and Powell (1983), who introduced the concept of isomorphism as outlined in the next section. Both works found that new organizational practices and structures are not adopted for reasons of efficiency but rather because they allow an organization to gain legitimacy, enhancing the survival potential of the organization. Deephouse et al. (2017) stress that the work of Meyer and Rowan (1977) placed legitimacy in direct relation to resources, suggesting that both legitimacy and resources are not only a result of efficiency but are gained by being “...isomorphic with the myths of the institutional environment...” (Meyer & Rowan, 1977, p.340). Thus, legitimacy and acceptance by society can protect an organization from being penalized with sanctions for illegitimate behavior (Meyer & Rowan, 1977). Within the schools of thought, neo-institutional theory is one of the most popular ones amongst academia (Alvesson & Spicer, 2019). Over the past years, academia stressed the importance of research which focuses on neo-institutional theory in relation to entrepreneurship (David et al., 2017; Zimmerman & Zeitz, 2002). With this approach, neo-institutional theory evolves by considering “…how institutions shape entrepreneurial opportunities and behaviors and on how actors leverage and build institutions to create new organizations.” (David et al., 2017, p.2). To conclude, institutional theory is a well-developed and changing theoretical field in which legitimacy is a central concept in understanding why institutions function and are designed as they are.

3.1.2 Isomorphism and Entrepreneurship

A groundbreaking work that dominated the shift from old institutional theory to neo-institutional theory is institutional isomorphism shaped by DiMaggio and Powell (1983). They argue that structural changes in organizations are no longer primarily driven by efficiency but through the composition of the organizational field in which they operate. The concept of institutional isomorphism describes the homogenization of organizations, which through societal and technical pressures in the institutional environment, adopt similar structures. By meeting societal expectations, an organization can gain legitimacy and thus remain able to operate (Boxenbaum & Jonsson, 2017; DiMaggio & Powell, 1983). Therefore, isomorphism, as introduced by DiMaggio and Powell (1983), shifted the focus of institutional theory to the pressures leading to organizations becoming more alike to derive legitimacy.

DiMaggio and Powell (1983) have defined three types of isomorphic pressures which lead to the homogenization of organizations situated in similar organizational fields: coercive isomorphism, mimetic isomorphism, and normative isomorphism. Coercive isomorphism is rooted in politics and power relationships, where the pressure to align with the institutional environment and the attainment of legitimacy is exercised both from formal and informal sources, such as a state or other large organizations. These isomorphic pressures can be a result of the dependency on another organization. Mimetic isomorphism is a result of uncertainty, which pressures an organization to imitate practices and structures of peers who are perceived to be more legitimate and successful, to overcome these uncertainties. Normative isomorphism derives from professionalization pressuring organizations to align with what is perceived to be a proper action or moral duty. These three isomorphic pressures can appear individually or simultaneously (DiMaggio & Powell, 1983). Thus, there are different kinds of pressures which are based on the expectations of external players on what is right, shaping the understanding of legitimacy for institutions.

The concept of organizational fields is a central concept of institutional theory and is defined as "...those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products." (DiMaggio & Powell, 1983, p.148). This definition allows for analyzing all relevant actors in the organizational field (DiMaggio & Powell, 1983). To ensure legitimacy and long-term survival, neo-institutional theory and the focus on isomorphism imply that an organization must comply with the institutionalized rules within the organizational field. These institutionalized rules can be rooted in what is taken for granted or can be enhanced through public opinion and law (Meyer & Rowan, 1977). Hence, the pressures driving homogenization of organizations show themselves in the emergence of institutional fields.

The concept of isomorphism is widely discussed when related to entrepreneurship (Navis & Glynn, 2011). The pressure of meeting societal expectations is also evident for NVs, which have to consider their institutional environment and, therefore, the social system in which they operate to gain legitimacy (Zimmerman & Zeitz, 2002). However, while isomorphic pressures lead organizations to become homogenous, allowing them to align with societal expectations in their institutional environment and thus gain legitimacy, entrepreneurship is marked by the importance of novelty and distinctiveness. Hence, "…in entrepreneurship legitimacy coexists with its contradiction – distinctiveness…" (Navis & Glynn, 2011, p.479), which Navis and Glynn stress by discussing the importance of heterogeneity of entrepreneurial identities. They make it apparent that entrepreneurship comes with making trade-offs between the expectations of society, creating legitimacy, and the distinctiveness of innovation (Navis & Glynn, 2011). To conclude, legitimacy is created through shared expectations which seemingly clash with the concept of entrepreneurship delving into the unprecedented – a notion which will further be explored in the next section.

3.2 Legitimacy

Legitimacy is a fundamental concept of neo-institutional theory, and its importance has been stressed by the work of Meyer and Rowan (1977) and DiMaggio and Powell (1983), as mentioned in the previous section. Legitimacy ultimately influences the behavior of an organization and positively affects its chances of long-term survival as well as its performance (Deephouse et al., 2017). Suchman (1995) defines legitimacy as the "…generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions." (p.574). He states that legitimacy as part of neo-institutional theory is an important concept to show how cognitive and normative influences can shape organizational actors (Suchman, 1995). However, legitimacy should not be seen as a static concept, as it is important to maintain it throughout the different stages of an organization's development (Deephouse et al., 2017; Fisher et al., 2016). Legitimacy is important due to its consequences for an organization as it affects social and economic exchanges with its stakeholders. It ensures that stakeholders are willing to engage with the organizations and thus affects market access and can lead to competitive advantage (Deephouse et al., 2017).

While most research has only focused on legitimacy in connection to established organizations, where legitimacy allows for long-term survival, Zimmerman and Zeitz (2002) have stressed the importance of studying this concept in the context of NVs. Also, David et al. (2017) argued that, as legitimacy signals appropriateness in socially constructed realities, its acquisition is crucial for the viability of an NV. They even argue that the insights from neo-institutional theory concerning normative, regulatory, and cognitive influences on organizations' activities can cover a gap in entrepreneurial research. Thus, the next section will focus on the relevance of legitimacy for NVs.

3.2.1 Relevance of Legitimacy for NVs

Often NVs lack endorsement from established and powerful institutional actors (Fisher et al., 2016). As mentioned above, entrepreneurship has received little attention in research in the context of neo-institutional theory but is an important concept "…to understand the creation, survival, and growth of new ventures…" (Zimmerman & Zeitz, 2002, p.414; David et al., 2017). Legitimacy itself is an important resource for NVs as it allows for attracting resources such as financial capital and networks, which are needed to succeed and grow. Legitimacy is crucial for NVs to attract investors, who base their decision-making on their belief in the future success of an NV (Fisher et al., 2016; Zimmerman & Zeitz, 2002). Therefore, legitimacy is an important resource as it enables NVs to acquire necessary resources for further growth and success.

To gain legitimacy, an NV's structure and behavior must align with its institutional environment (Fisher et al., 2016). Especially in uncertain institutional environments, social systems influence decision-making and the perception of legitimate behavior. The institutional theory approach to entrepreneurship is based on the concept of liability of newness (David et al., 2017; Fisher et al., 2016). According to Berkery (2007, as cited in Fisher et al., 2016), this means that "New companies are guilty until proven innocent." (p.1). This liability of newness makes resource acquisition for an NV difficult, which ultimately can hinder it from exploiting opportunities. Thus, NVs are concerned about their liability as they face a higher risk of failure than established companies (David et al., 2017; Fisher et al., 2016). Also, investors are aware of this risk and thus hesitant to invest in NVs as this could result in the loss of capital (Berkery, 2007 in Fisher et al., 2016). However, gaining legitimacy in early stages enables an NV to overcome liability of newness and exploit its opportunities (David et al., 2017; Fisher et al., 2016). Therefore, adapting to the institutional environment can help an NV gain legitimacy and thus surpass the liability of newness. However, an NV can utilize different sources of legitimacy and thus gain different types of legitimacy, which will be introduced in the next section.

3.2.2 Types of Legitimacy

Zimmerman and Zeitz (2002) outline four types of legitimacy from neo-institutional theory, which are also crucial for entrepreneurship and thus NV creation. *Regulative legitimacy* can be gained through alignment with rules, laws, and standards and thus avoiding sanctions. It is important for NVs to, already in early stages, gain regulative legitimacy and even go beyond simply complying with rules by being a good citizen (Zimmerman & Zeitz, 2002). *Normative legitimacy* can be gained through networks, positive word-of-mouth, and compliance with societal norms and values within the institutional environment of an NV. Adherence to social norms and values is vital for new businesses, as the resources needed for survival and growth are often controlled by those who represent these norms and values around the business. For *cognitive legitimacy,* an NV needs to comply with beliefs, assumptions, and the socially constructed reality in its environment. In addition to these three types of legitimacy, Zimmerman and Zeitz (2002) identify the *industry as a source of legitimacy*. They argue that different industries have different norms, values, and standards and thus a different perception of legitimate behavior with which an NV needs to comply to gain legitimacy. Therefore, just as in isomorphism, there are different types of legitimacy based on different external pressures, which lead to expectations shaping what is perceived as legitimate.

3.2.3 The Process of Gaining & Acquiring Legitimacy

Legitimacy is an important source for NVs, as it supports overcoming the liability of newness and attracting crucial resources such as financial capital. As investors cannot judge NVs based on their past performance, gaining legitimacy from an early stage can improve the chances for survival as it offers a base for judgment for investors (Zimmerman & Zeitz, 2002). Thus, it is not sufficient to focus on legitimacy in the profit stages only, as many NVs fail before this stage. Therefore, an NV must, from an early stage on, "…demonstrate its desirability by showing that it has or engages in those things considered legitimate." (Zimmerman & Zeitz, 2002, p.417). To do so, the strategies for acquiring legitimacy, as well as the threshold of when legitimacy is acquired and NV survival secured, are of importance.

3.2.3.1 Acquiring Legitimacy - Strategies

Early research on neo-institutional theory focuses on how organizations gain legitimacy, assuming that organizations are not actively aware of their legitimacy and how to use strategies to influence it (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). Newer approaches to legitimacy suggest that it is a process and can be influenced by strategic choices (Suchman, 1995). Based on this, Zimmerman and Zeitz (2002) propose two actions that NVs should follow to proactively gain legitimacy: changing themselves through new structures or business models and manipulating their environment. However, due to the limited resources of NVs, they are often not able to influence the macro environment but rather the microenvironment (Zimmerman & Zeitz, 2002).

Therefore, strategic considerations which might be limited due to a resource constraint are of relevance for acquiring legitimacy in NVs.

Zimmerman and Zeitz (2002) propose four strategies which NVs can utilize for acquiring legitimacy, basing the first three on Suchman (1995): conformance, selection, manipulation, and creation. Conformance with the environment means that an NV actively acquires legitimacy through aligning with the expectations of social structures and governmental regulations. Selection of the environment implies that an NV is choosing an environment which is most beneficial for its operations to be perceived as legitimate. Manipulation of the environment implies that an NV would change its environment to establish a fit between itself and the expectations of the environment. However, this strategy is difficult to pursue by NVs due to their resource constraint. Creation of the environment "… involves developing something that did not already exist in the environment." (Zimmerman & Zeitz, 2002, p.425). In this last strategy, Zimmerman and Zeitz (2002) refer to a paradox of legitimation for NVs, as the traditional legitimacy approach would argue for a conformation with social structures to gain legitimacy and resources. However, NVs often gain legitimacy by introducing new solutions which challenge existing ones and even contradict societal structures (Zimmerman & Zeitz, 2002). Therefore, strategy should be considered as it has the potential to alter the legitimization of an NV.

3.2.3.2 Gaining Legitimacy – the Threshold(s)

As elaborated, legitimacy can be acquired through strategic choices, but the question is at what point legitimacy is truly gained. Zimmerman and Zeitz (2002) introduce the concept of the legitimacy threshold based on their findings that NVs can strategically gain legitimacy to overcome their novelty, acquire resources and achieve growth. Below the threshold, an NV is not likely to survive as it has not gained crucial legitimacy. By strategically gaining legitimacy in early stages by aligning with stakeholder expectations in the environment, an NV can overcome the threshold which allows for achieving "…further gains in legitimacy and resources." (Zimmerman & Zeitz, 2002, p.428). However, Fisher et al. (2016), who link legitimacy to changes in stakeholder expectations during NV evolvement and growth, criticize the legitimacy threshold as introduced by Zimmerman and Zeitz. Fisher et al. (2016) argue that the concept is more complex than presented in the single threshold by Zimmerman and Zeitz, as NVs need to not only gain legitimacy in an early stage but also actively manage their existence through evolvement and growth during the life cycle. Furthermore, they state "…that the relationship between legitimacy and resource acquisition can be nonlinear." (Fisher et al., 2016, p.386). Therefore, thresholds highlight the points at which an NV gained a crucial amount of legitimacy throughout its developmental phases, showing that legitimacy needs to not only be acquired and gained but continuously managed.

The importance of managing legitimacy throughout an NV's evolvement and growth is based on the findings that legitimacy is dependent on the audience and, thus, an NV's stakeholders (Fisher et al., 2016; Suchman, 1995; Zimmerman & Zeitz, 2002). As NVs face different stakeholders in different stages of development, NVs have to adapt their legitimacy management accordingly (Fisher et al., 2016). Fisher et al. (2016) differ between three life-cycle stages: conception, commercialization, and growth. Based on this argumentation, Fisher et al. (2016) introduce multiple legitimacy thresholds which an NV faces during different life cycle stages as an extension of Zimmerman and Zeitz (2002) (Figure 2). These multiple legitimacy thresholds allow for considering the heterogeneity of stakeholders who assess legitimacy. They also show that during different stages, an NV faces stricter legitimacy expectations which ultimately create pressure to adapt and change to attract resources from relevant stakeholders by being perceived as legitimate (Fisher et al., 2016). To conclude, NVs face changing expectations from heterogeneous stakeholder groups, which change the view on what is considered legitimate, making the management of legitimacy a core competence for survival.

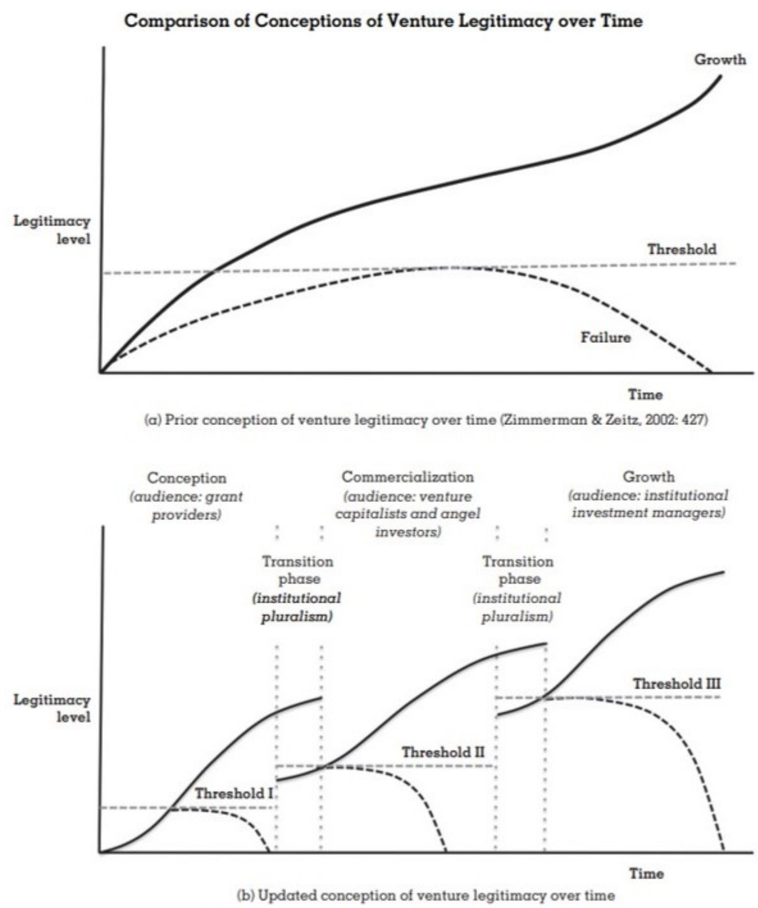

Figure 2: Introduction of legitimacy thresholds through Fisher et al. (2016) in comparison to Zimmerman and Zeitz (2002) – adopted Figure 1 from Fischer et al. (2016), p.394

3.3 Identity

Organizational identity is an often-used concept in institutional theory, but it has become a vague concept due to broad and differing definitions within research (Corley et al., 2006). Nevertheless, Fisher et al. (2016) define the concept "…as a mechanism for self-definition at both an individual and an organizational level." (p.386). On the individual level, it allows for explaining how one has developed through the influence of social interaction (Fischer et al., 2016) – as Navis and Glynn (2011) call it the "who we are". On the organizational level, identity mirrors the collective sense of what the organization is for its members and what it does (Fischer et al., 2016) – as Navis and Glynn (2011) call it the "what we do". Gioia et al. (2000) further state that organizational identity is a fluid concept that allows for changes. Hence, organizational identity is not reputation, image, or corporate identity but rather a fluid concept of what the organizational members identify as being the organization on the individual and organizational level (Corley et al., 2006).

However, the concepts of identity, image, and reputation are interlinked (Brown et al., 2006). The interrelation of the concepts is key as the understanding of "...what individuals know or believe about an organization..." (p.99) affects the response that this individual has to the organization (Brown et al., 2006) - a thought imperial to this thesis as it highlights the interconnection to the concept of legitimacy. Brown et al. (2006) criticize that research on the interrelation is hindered by numerous different definitions of the terms. They propose a unifying terminology showing the boundaries of each theme as well as their interconnectedness. Identity is viewed in line with Fisher et al. (2016) and Navis and Glynn (2011), as what the organizational members associate with the organization. Image is seen as, on the one hand, intended as what organizational members want others to think about the organization, and on the other hand, constructed as what they believe others think about the organization. In this context, reputation is seen as what shareholders truly associate with the organization (Brown et al., 2006). Gioia et al. (2000) further state to see "...a close reciprocal relationship between organizational identity and various forms of image..." (p.63). They conceptualize a theoretical framework highlighting an interplay of image and identity when a discrepancy is observed, leading to an adaptation of image and identity (Gioia et al., 2000). Therefore, the concepts of image, identity, and reputation are interlinked and influence each other, creating change.

3.3.1 Identity in Institutional Theory

Identity is a concept interconnected with institutional theory, which has been stressed since the transition to neo-institutional theory (Glynn, 2017). The concept of identity is interconnected with neo-institutional theory in two different ways. On the one hand, identity can imprint institutionalization as it is often the base for an organization and thus leads to distinctiveness (Glynn, 2017). On the other hand, institutionalization processes can also influence an organization's identity through coercive, mimetic, or normative isomorphic pressures. This, in turn, leads to the homogenization of identity within an organizational field as it allows for gaining legitimacy and credibility (DiMaggio & Powell, 1983; Glynn, 2017). However, Glynn (2017) stresses the differences between institutionalism and identity. The former is focused on the macro-level of an organization and how isomorphic pressures within the respective organizational field lead to the homogenization of actors to gain legitimacy. The latter is focused on the micro-level analysis and thus on the individual members of an organization as well as its distinctiveness (Glynn, 2017). To conclude, identity is interconnected with neo-institutional theory as it can either influence institutionalization or can be influenced by isomorphic pressures within the organizational field; however, in contrast to most institutional approaches, identity changes the lens to a micro-level analysis.

While the focus on organizational identity research has for many years been on mature fields, the focus has shifted towards entrepreneurial activities and viewing identity both as an antecedent and outcome of institutionalization (Glynn, 2017). The next section delves into the concepts of entrepreneurial identity and identity claims to introduce key concepts to understand identity from an entrepreneurial point of view as described by the core theoretical papers.

3.3.2 Changing Identity Claims and Entrepreneurial Identity

In the early stages of NVs, in which business plans are often vague, entrepreneurs make claims in identity stories about their business and proposed future (Fischer et al., 2016; Navis & Glynn, 2011). For an NV, it is crucial to define its identity through claims not only on the individual level and the organizational level but also at the market level to make it understandable for stakeholders in the respective environment (Fisher et al., 2016; Navis & Glynn, 2011). Each identity claim is "...associated [with] operating practices, narratives, and symbols..." (Fisher et al., 2016, p.397). The result of interconnecting the three levels of analysis through sensemaking to a coherent whole is entrepreneurial identity (Rindova et al., 2009 in Navis and Glynn, 2011). The identity claim of an NV can be a differentiation factor as it highlights the novelty of the NV and can also help to be perceived similar as organizations in the environment (Fisher et al., 2016). Exploring the entrepreneurial identity of an NV is a balancing act as it allows for showing a sense of homogeneity with organizational peers while driving heterogeneity and thus distinctiveness from peers at the same time. This balancing act ultimately can result in legitimate distinctiveness of the NV (Navis & Glynn, 2011). Therefore, the concept of entrepreneurial identity is a deciding factor for the distinctiveness of NVs, which has been left unexplained by legitimacy and isomorphism alone.

The identity of an NV is connected to the multiple legitimacy thresholds by Fisher et al. (2016). To meet the different expectations of stakeholders during the development stages of an NV, the concept of 'institutional pluralism' comes into play. This concept marks the context in which a venture is situated within different institutional environments (Fischer et al., 2016). It states that "...the entrepreneurial identity of the venture must appeal to the demands of differing audiences" (Fisher et al., 2016, p.395), and thus an NV must adapt its identity and identity claims to the respective stakeholders in different stages of its life cycle. This need for adaptation allows for gaining legitimacy in all stages throughout differing thresholds but bears the risk of being perceived as inconsistent and thus illegitimate by stakeholders and the individuals in the venture itself (Fisher et al., 2016). Therefore, the sensemaking process of creating an entrepreneurial identity is reoccurring in line with changing institutional environments and is an interplay with gaining legitimacy in different thresholds.

3.4 Investor Sensemaking in the Interplay of Identity and Legitimacy for NVs

This chapter so far stressed a need for legitimacy in NVs. It was shown that NVs can actively shape their legitimacy acquisition through strategic choices and entrepreneurial identity. However, legitimacy is a temporal construct as it is dependent on expectations of the environment, making the need for adaptation clear. The identity concept here comes into special play as the entrepreneurial identity must adapt to the institutional environment, striving to achieve its distinctiveness while balancing homogeneity expectations – 'institutional pluralism' (Fisher et al., 2016). Therefore, identity and legitimacy are interconnected and of relevance throughout the life cycle of an NV.

One stakeholder group with specific expectations are VCs. According to Fisher et al. (2016), they are of relevance in the commercialization stage of an NV in which the product or service created, and its market fit are of relevance. Hence, they are relevant for an NV which has already gained legitimacy with another stakeholder group during the conception stage and is adapted to that institutional environment. However, to gain legitimacy in the commercialization stage, the identity claims need to adapt to new expectations, shaping a new entrepreneurial identity. In this stage, VCs are mainly focused on achieving the highest possible returns in the long run with the goal of an exit. This "long-term self-interest" shapes the norms of assessment, shifting a focus on tangible performance metrics to counterbalance the uncertainty of the early stage of the NV (Fisher et al., 2016). Therefore, the search for VC funding places an NV in the situation of institutional pluralism, creating the need to adapt the identity to the new institutional environment to gain legitimacy.

Investors then need to make sense of the presentation of the NV and judge its plausibility, which would lead to the NV gaining legitimacy (Navis & Glynn, 2011). As mentioned beforehand, NVs shape their entrepreneurial identity to conform with norms of the environment while still showing distinctiveness. Navis and Glynn (2011) state that “institutional expectations legitimized in the claimed entrepreneurial identity” (p.484) are “institutional primes” in investor sensemaking. However, the identity claims shaping distinctiveness through “entrepreneurial variance from conventions...” (p.484) are “equivocal cues”. The institutional primes ease sensemaking and reduce ambiguity, whereas equivocal cues show distinctiveness, increasing ambiguity. An investor is likely to judge an NV as plausible if “…the entrepreneurial identity addresses the inherent tensions between legitimacy and distinctiveness, appropriate to the market category…” (Navis & Glynn, 2011, p.489). Therefore, investor sensemaking is more likely to lead to a plausibility assessment of an NV if the entrepreneurial identity is legitimately distinctive.

Fisher et al. (2016) state factors that VCs use to evaluate the legitimacy of NVs. The factors are the demonstrated progress; the entrepreneurial experience of the team and its reputation and passion; the internal knowledge in the context of the NV; the perceived market potential; the plausibility of the business model; any recognition by a credible third party; any forms of protection (e.g., patents); the goals focused on economic gain; and the general compliance with the legal requirements (Fisher et al., 2016). The factors relate to the institutional primes in the sensemaking process described by Navis and Glynn (2011), showing the need of investors to find clues that match their expectations and mental templates within the screening process of NVs. Thus, VCs evaluate legitimacy factors of NVs to see institutional primes, which will ease their sensemaking process.

However, as previously mentioned, NVs can actively shape their acquisition of legitimacy through strategical choices and their entrepreneurial identity. It can be argued that the strategies to acquire legitimacy outlined by Zimmerman and Zeitz (2002) fit within the categories of institutional primes and equivocal cues postulated by Navis and Glynn (2011). The strategy of conformance focuses on aligning with the expectations of the institutional environment, thus placing a strategic focus on shaping institutional primes in investor sensemaking. The strategy of selecting an environment is focused on shaping institutional primes, too, as here the expectations an NV needs to be aligned with are to be chosen. However, the strategies of manipulation and creation of the environment are both interlinked with giving equivocal cues. The strategies focus on shaping the environment, hence not aligning with expectations of the environment but rather placing one's distinct expectations as the new environment's norm. Therefore, the strategic choices of NVs have the potential to shape investor sensemaking through institutional primes and equivocal cues.

The investor sensemaking highlighted the interconnection of the concepts of legitimacy and identity. On the one hand, the perceived expectations which create legitimacy for NVs influence the strategic choice of identity and show a need for adaptation if the institutional environment changes. On the other hand, the strategic choice and development of entrepreneurial identity itself can create legitimacy for the distinctiveness of an NV. Figure 3 shows the developed theoretical framework, highlighting the interconnectedness of legitimacy and identity in the context of investor sensemaking and an NVs life cycle. To conclude, investor sensemaking highlights that the concepts of identity and legitimacy are not only interconnected but mutually influence each other.

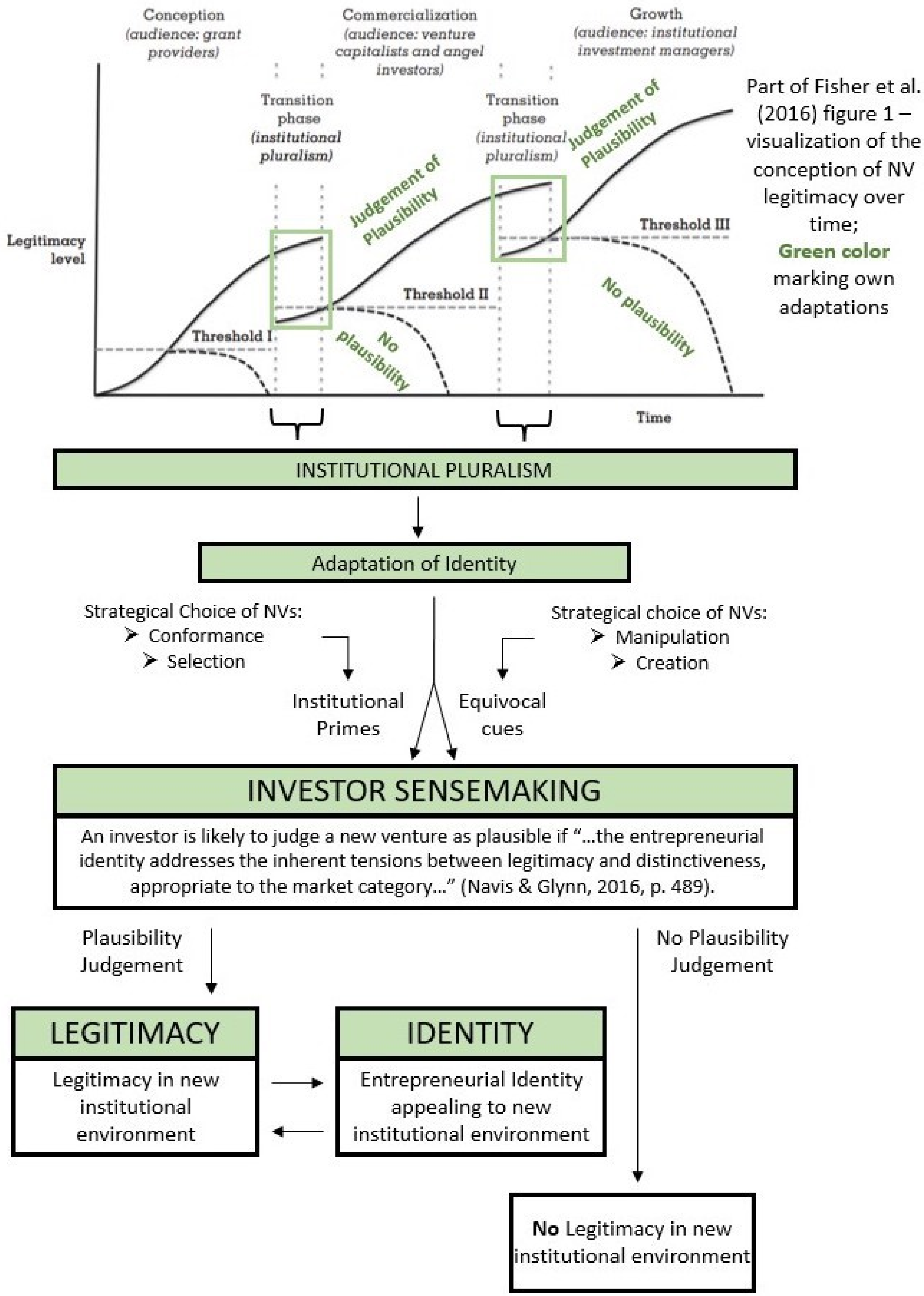

Figure 3: Developed Theoretical Framework based on Zimmerman & Zeitz (2002), Navis & Glynn (2011) and Fisher et al. (2016); own illustration 27.03.2022

4. Methodology

This chapter outlines the thesis' philosophy of science, methodological choice and strategy, as well as the approach to data collection and analysis. This chapter is inspired by the research onion as developed by Saunders et al. (2019) and the work of Easterby-Smith et al. (2018), which allows for achieving structure and coherence throughout the chosen methodology. The purpose of this research is to understand the impact of sustainability on NVs and VCs and their behavior. For that matter, this research is guided by the following research question: *How does sustainability impact legitimacy and identity in the context of early-stage NVs and the investor sensemaking of VCs?*

4.1 Philosophy of Science

The philosophy of science is "...a system of beliefs and assumptions about the development of knowledge." (Saunders et al., 2019, p.124). This thesis adopts a critical realist perspective, implying that knowledge creation, thus the understanding of the world, is a two-step process. One first experiences sensation and events, which are then shaped by mental processes and "...the underlying structures of reality..." (Saunders et al., 2019, p.138). Critical realism allows the researcher to assume that while there exists an objective social world, which is based on independent social or scientific structures, the reality, thus our knowledge, is shaped through subjectivism. Therefore, critical realism acknowledges that perceptions and social constructs are continuously changing (Saunders et al., 2019).

Critical realism positions itself as an alternative form between positivism, which requires law-like generalizations, and interpretivism, which does not allow for explanations as interpretation is favored (Archer et al., 2016). Adopting this philosophy allows the researcher to see the bigger picture and allows for explaining observed phenomena as it enables the researcher to understand the mechanism and causes through which social structures shape reality (Bhaskar, 1989). The understanding of the research question, the generated data, and the discussion of this thesis' findings are shaped by the underlying assumptions of the utilized philosophy of science (Saunders et al., 2019; Archer et al., 2016). There are two types of research assumptions which are considered for this thesis: assumptions about realities (ontology) and assumptions about human knowledge (epistemology). Therefore, understanding the basic assumptions, which are explained in connection with critical realism in the following, is of importance.

Ontology "...shape[s] the way in which you see and study your research objects" (Saunders et al., 2019, p.127), which in turn influences what is deemed as important to include in research. Connected to critical realism, Saunders et al. (2019) find that ontology must be structured and stratified. This means that there are three layers of reality: empirical, actual, and real. The empirical layer consists of the "Events that are actually observed or experienced" (Saunders et al., 2019, p.139) and implies that reality is objective. The layer of the actual consists of events that are not necessarily observed but generated by the real, making them the underlying causes of an event. The layer of the real includes the causal mechanisms and structures which generate an event (Saunders et al., 2019). Therefore, critical realist ontology allows the researchers to understand the underlying reality of an event, which cannot simply be accessed through observations or experiences, but rather through explanation and interpretation (Archer et al., 2016; Saunders et al., 2019).

Epistemology refers to "...assumptions about knowledge, what constitutes acceptable, valid and legitimate knowledge, and how we can communicate knowledge to others..." (Burrell & Morgan (1979) in Saunders et al., 2019, p.127). Thus, epistemology implies that different types of knowledge exist, which can all be viewed as legitimate. In critical realism, epistemological relativism is utilized, which acknowledges that knowledge and facts are influenced by social constructs making the context of the research dependent on existing social constructs (Saunders et al., 2016; Archer et al., 2016; Bhaskar, 1989). Epistemological relativism allows researchers freedom when choosing applied methods, as the causal mechanisms underlying knowledge and facts must be explored through a method that fits the researched subject (Saunders et al., 2019).

Following a critical realist philosophy, knowledge is a result of social constructs and perceptions and is thus tied to the social actors involved in the research. Saunders et al. (2019) note that it is crucial for critical realists "...to be aware of the ways in which your socio-cultural background and experiences might influence your research, and [...] seek to minimise such biases and be as objective as possible." (p.140). Thus, this thesis acknowledges the personal and methodological biases aiming to reduce them through a flexible research design bound to purpose rather than methodological rules.

4.2 Methodological Choice and Strategy

4.2.1 Methodological Approach

After positioning the approach to knowledge and the core assumptions which are placed on the thesis, the focus lies now on how the theory described in chapter 3 is utilized. There are three different approaches in which research can utilize theory: the inductive, deductive, and abductive approach (Saunders et al., 2019). Induction starts with viewing specific observations from which conclusions about an entire population are to be generalized, generating a theory (Danermark et al., 2002). Instead, deduction starts with theory-setting premises, which are to be tested through the data collection (Saunders et al., 2019; Danermark et al., 2002). Both are combined in the abductive approach, which "…interprets and recontextualizes individual phenomena within a conceptional framework…" (Danermark et al., 2002, p.80), allowing for theory elaboration. The concepts are all common in research and can be used by themselves or in combination, with one approach sometimes being more dominant (Saunders et al., 2019).

This thesis utilizes an abductive methodological approach. The abductive approach is implemented through the iteration of deductive and inductive logic in the form of systematic combining to allow for theoretical development through elaboration and combination (Dubois & Gadde, 2002). Deduction is utilized as the research is built upon existing theory acting as an analytical framework to which the findings from qualitative data collection can be attributed. After a deductive approach, an inductive one is utilized to generalize further based on specific observations in the collected data. Therefore, both approaches are utilized iteratively, ultimately allowing for closing the literature gap through theory development. The deductive approach allows for using collected data to test the existing theoretical knowledge, while the inductive approach allows for exploring the uncharted dynamics in the NV and VC scene in the context of sustainability. Therefore, this thesis ultimately builds upon theory through elaboration and combination through a systematic combining of deduction and induction to ease the traceability of the coding, making the research design more robust.

4.2.2 Research Design

To answer the research question, a qualitative research design with an exploratory and explanatory purpose is implemented. An exploratory study focuses on gaining insights into a problem or phenomenon to understand it (Saunders et al., 2019). This research utilizes an exploratory lens when placing the described theoretical framework into the new context for sustainability to understand the underlying mechanisms. Furthermore, as this thesis aims to close a literature gap, it operates in an unexplored research field, underlining the exploratory focus. In contrast, explanatory studies seek to "...establish causal relationships between variables..." through the study of a phenomenon (Saunders et al., 2019, p.176). The explanatory lens is needed for the research design as the theoretical framework states certain relationships, but they are not established in the new sustainability context. Therefore, the purpose of the research design has an exploratory core with a necessary explanatory side.

4.2.3 Research Strategy

Guided by critical realism and an iterative deductive and inductive approach, this thesis builds upon a qualitative research design utilizing a multiple case study. Utilizing a case study is valuable, as studying phenomena in a real-life context can allow for exploring new dynamics (Saunders et al., 2019; Yin, 2014). Thus, a multiple case study is in line with the methodological choices, as it allows for using the explored dynamics and findings for modifying or extending theory (Eisenhardt & Graener, 2007; Saunders et al., 2019). Eisenhardt and Graener (2007) provide useful insights regarding the value of multiple case studies. They argue that rich data sets are likely to lead to testable and accurate results, enabling more robust extensions to existing theory. In addition, the use of multiple cases allows for a more precise determination of the relationships and constructs that emerge from the data. This makes the results more likely to be generalizable (Eisenhardt & Graener, 2007). In this way, Eisenhardt and Graener (2007) touch on the criticism often voiced in academia regarding case studies, as the generalizability and validity of this strategy are judged differently (Easterby-Smith et al., 2018).

In this thesis, a case is referred to as an interview participant who represents a particular NV or VC or is viewed as a specialist who is or has been active in both industries. In total, 18 cases are used, which, in line with Eisenhardt and Graener (2007), ensures more robust and generalizable outcomes. This allows for developing an in-depth understanding of the role of sustainability for NVs and VCs and how their behavior is impacted. Furthermore, the multiple case study allows for understanding the dynamics between NVs and VCs in this context and the role of the external environment. Therefore, a multiple case study enables the generation of a robust set of findings to reveal unexplored dynamics.

4.3 Data Collection

This section focuses on the data collection used for the thesis and is structured in primary data, data gathered firsthand, and secondary data, data generated through third parties (Saunders et al., 2019). The primary data part explores the selection and execution of semi-structured interviews conducted for the thesis. The secondary data part is focused on exploring the conducted SLR. The mix of primary and secondary data is in line with critical realism and the research purpose as it allows for both a subjective and objective view while enabling the understanding of sustainability in the theoretical context.

4.3.1 Primary Data

The thesis utilizes primary data in the form of qualitative interviews. The reason for conducting qualitative interviews is the collection of valid and reliable data targeted to the research purpose (Saunders et al., 2019). Furthermore, qualitative interviews allow the researchers more control over the answers (Saunders et al., 2019), easing the exploration of the unknown as this thesis aims at closing a research gap. Control comes with a need for flexibility in the interview structure, allowing for either adding new or leaving out predefined questions. Semi-structured interviews allow for such flexibility as they are guided by a topic guide that allows for loose guidance during the interview (Easterby-Smith et al., 2018). Therefore, this thesis utilizes a semi-structured interview approach to let questions be guided by theory and literature on NVs and VCs while having the freedom to explore the issue of sustainability in the context.

The research effort includes 18 semi-structured interviews with participants who are clustered into three groups: 7 founders of NVs, 7 VCs, and 4 specialists acting as connectors for both prior groups (table 3). The grouping led to the development of group-specific topic guides for NVs and VCs, as well as individually adapted topic guides for the specialists (Appendix 1). The topic guides include open questions that allow for an in-depth assessment by making observations that are not limited to theory and literature. All interviews were conducted in a one-on-one setting to allow for the needed confidentiality in the industry. Each interview was audio-recorded to allow for giving full attention to the participants as well as enabling direct quotes in the analysis, reducing the researcher's bias. This effort resulted in a total of 09:37:18 hours of transcribed material using Microsoft Office's transcription tool. To minimize any data error from software solutions, each transcript has been edited manually before the data analysis. Furthermore, all transcripts have been anonymized before data analysis. This resulted in a total of 168 pages of transcribed material (Appendix 4).

Group	Name	Gender	Role	Date of Interview	Interview Length	Topic Guide
Specialist	Specialist 1	F	Ex-Founder and now Business Angel Investor	21.03.22	0:20:10	Specialist 1
	Specialist 2	F	Senior Manager at an incubator and accelerator	25.03.22	0:40:42	Specialist 2
	Specialist 3	M	Founder of platform connecting early stage NVs and investors	01.04.22	0:28:58	Specialist 3
	Specialist 4	F	Ex-Founder and now Senior Manager at later stage VC who lends money to other VCs, too.	22.03.22	0:27:21	Specialist 4
VC	VC 1	F	Senior Manager at an early-stage VC	17.03.22	0:33:14	VC (early stage)
	VC 2	M	Co-Founder of Investment-Collective focused on early-stage Investments	15.03.22	0:37:12	VC (early stage)
	VC 3	M	Co-Founder and Partner of early stage VC	22.03.22	0:31:34	VC (early stage)
	VC 4	F	Partner at early stage VC	23.03.22	0:39:48	VC (early stage)
	VC 5	F	Investment Director at early stage VC	24.03.22	0:44:13	VC (early stage)
	VC 6	M	Partner at a later stage investor with a focus on SMEs	30.03.22	0:33:09	VC (later stage)
	VC 7	M	Associate at early stage VC	01.04.22	0:40:29	VC (early stage)
New Venture	NV A	F	Founder of early-stage sustainable business with a focus on E and S dimensions	10.03.22	0:26:33	New Venture
	NV B	M	Founder of early-stage traditional business	11.03.22	0:14:18	New Venture
	NV C	F	Founder of early-stage sustainable business with a focus on S dimension	15.03.22	0:23:29	New Venture
	NV D	M	Founder of early-stage sustainable business with a focus on E dimension	28.03.22	0:43:42	New Venture
	NV E	F	Founder of early-stage sustainable business with a focus on E and S and G dimensions	28.03.22	0:20:51	New Venture
	NV F	F	Founder of early-stage sustainable business with a focus on E and S dimensions	25.03.22	0:27:04	New Venture
	NV G	M	Founder of early-stage sustainable business with a focus on E and S dimensions	01.04.22	0:44:31	New Venture

Table 3: Overview of the interview participants in three groups; created 07.03.2022

The participants were chosen based on preselected criteria to allow for formal generalizations beyond the sample itself (Easterby-Smith et al., 2018). The criteria for the NV group are based on the definition of an early-stage NV as described in the SLR, with the added criterion of either being in the funding search or having been funded through VC. The criteria for the VCs are also based on their definition in the SLR. Utilizing literature-based definitions supports the sample's representativeness for the research purpose (Easterby-Smith et al., 2018). The specialists had the criteria to be, or have been, involved with both NVs and investors. Further, this thesis aimed to be as precise as possible by interviewing as many relevant participants as possible during the data collection period. Therefore, through literature-based criteria and a high number of interviews, this thesis aimed to be as representative and precise as possible.

Further, the participants were selected based on three non-probability sampling designs: purposive- and snowballing- and theoretical sampling. Sampling methods were used to decrease the bias related to non-probability sampling, which states that participants might be used due to pressure to interview rather than credibility (Easterby-Smith et al., 2018). Purposive sampling is the usage of the above-described criteria to select relevant participants. This selection method was used in the beginning to contact relevant participants based on the personal network in the early-stage NV scene as well as through contacts who acted as multipliers in the VC scene. Snowball sampling was utilized after each interview as the eligible participants named further people of interest for the research purpose (Easterby-Smith et al., 2018). Lastly, theoretical sampling, which "...means that data sources should be chosen on the basis of their usefulness in further illuminating the emergent theory" (Murphy et al., 2017, p.294 in Easterby-Smith et al., 2018, p.109), was utilized to specifically choose the specialists in line to increase data quality. The specialists were selected to include the interconnection of sustainability with both an NV and VC focus. To conclude, the three non-probability sampling designs were chosen based on the effective use of given resources and their usefulness in fulfilling the purpose of the research.

4.3.2 Secondary Data

This thesis utilizes a multiple case study strategy and follows exploratory and explanatory research objectives. As the purpose of this thesis lies in understanding the complex and dynamic causal mechanisms which occur in the NV and VC scene in the context of sustainability, it is crucial to use primary data and secondary data. The secondary data is derived from the SLR, further described in the next section. The secondary data found through the SLR allows for outlining existing knowledge and building a theoretical framework. This provides the needed knowledge, credibility, and ability to assess discussed topics in semi-structured interviews (Saunders et al., 2019). Thus, secondary data is utilized to shape the basis of theoretical understanding and to enable a structured approach for discussing data gained through the collected semi-structured interviews.

4.3.3 Systematic Literature Review (SLR)

The secondary data has been collected through an SLR, which is an increasingly used scientific tool (Petticrew & Roberts, 2008). It is beneficial to conduct an SLR when dealing with large bodies of literature that need to be reviewed, as it offers a structured approach for locating, evaluating, and analyzing literature to answer the research question and fulfill the research objectives (Saunders et al., 2019; Petticrew & Roberts, 2008). Moreover, using an SLR can help to overcome researcher bias and can help identify "...the absence of data..." (Petticrew & Roberts, 2008, p.35), which is especially relevant for this thesis as it helps to identify the research gap. Thus, due to the meta-analytical approach taken in an SLR, its validity is higher compared to traditional literature reviews (Petticrew & Roberts, 2008). Therefore, this thesis utilized an SLR to lessen a bias in literature selection and to enable the identification of the research gap.

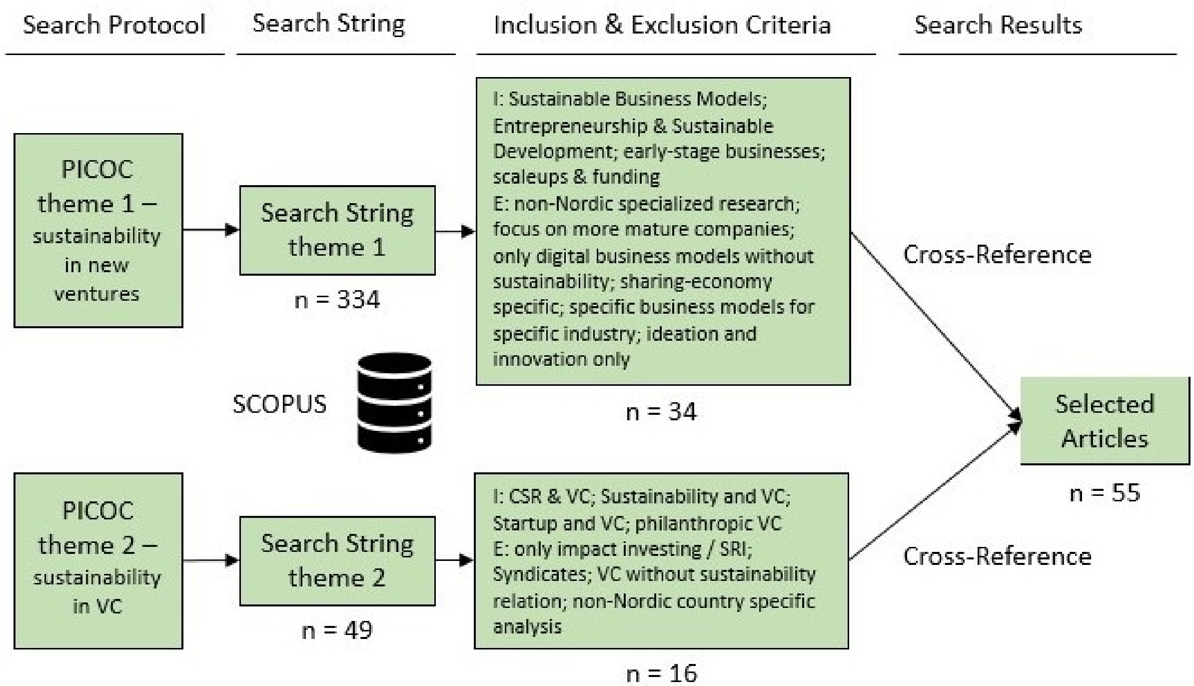

Figure 4: Visual Overview of the SLR; own illustration created 24.03.2022

4.3.3.1 Search Protocol

As suggested by Petticrew and Roberts (2008), the PICOC model was used to break down initial review questions to develop the search protocol for the SLR. The research for this thesis covered two themes, as indicated in the SLR itself. When searching for all search criteria together, no viable resources were found – the research gap highlighted beforehand. Therefore, as this SLR covers two themes, namely sustainability in NVs (theme 1, Table 4) and sustainability in VCs investment process (theme 2, Table 5), two PICOC models have been created. The following review questions have been used for applying the PICOC model:

(1) How does sustainability impact the business case of NVs and their chance on funding?

(2) What role does sustainability play in the investment behavior of VCs?

These questions were broken down into the components of the PICOC model: population, intervention, comparison, outcomes, and context (Petticrew & Roberts, 2008). This provides the researcher with the research protocol used for the initial search in the SCOPUS database, which was chosen upon recommendation from this thesis supervisor. It is acknowledged that the utilization of additional databases could have limited potential bias when using the same search strings as defined in the further course of this section. However, due to the scope of this thesis, the search was limited to the SCOPUS database only.

Population	Entrepreneurs, early stage (before Series A); sustainable business case
Intervention	Sustainable business model; ESG materiality; fundraising
Comparison	Traditional business cases with focus on profit only; financial materiality
Outcomes	Funding
Context	Nordics

Table 4: PICOC model for research theme 1; own illustration created 23.03.2022

Population	VCs with a focus on early-stage investments (before Series A); not corporate VCs
Intervention	ESG materiality; Regulations for sustainable / responsible investments; EU Regulations (SFDR)
Comparison	Traditional early-stage investments (profit only); financial materiality
Outcomes	Long-term focus; stable returns; sustainable/responsible investment
Context	Nordics; EU Regulations (SFDR)

Table 5: PICOC model for research theme 2; own illustration created 23.03.2022

The *population* is the target group of the search (Petticrew & Roberts, 2008) and the two broad themes followed in this thesis. For theme 1 to cover a broad spectrum of the term 'startup', it was necessary to include actors who are associated with these and include a sustainability focus. For theme 2, it was specified that the population is targeted towards early-stage VCs while excluding corporate VCs. The chosen *intervention* defines the topics which are interesting to review through the SLR within the different themes (Petticrew & Roberts, 2008). For both theme 1 and 2, there was a focus on studies that include sustainability-related concepts and fundraising. Including fundraising allowed for specifying the literature needed for the research objective, which is focused on gaining insights into the impact of sustainability on investment behavior.

These *interventions* are compared with the defined *comparison* criteria for both themes, focused on traditional business cases and investments which have a focus on financial materiality. This supports the research objective, as the aim is to explore how sustainability impacts business and investment practices of NVs and VCs. It was important to consider the most crucial *outcomes* from studies in the SLR. For theme 1, these outcomes were focused on NVs gaining funding, while for theme 2, investment-specific outcomes, as well as investment behavior, have been deemed as important. However, the SLR was not purely limited to the pre-defined outcomes, as it is expected that the studies included can inform other valuable outcomes for answering the research question. The specified *context* considers where the reviewed intervention is taking place (Petticrew & Roberts, 2008). While the initial context has been limited to the Nordics and the EU, the search in SCOPUS showed that there were no articles which focused on the research area, and thus the context has been deemed as not relevant.

4.3.3.2 Search Strings

Using the PICOC models has facilitated defining the boundaries for the search protocol and thus for the search string in SCOPUS. Due to the two thematic concentrations of this thesis, two search strings are used. According to Saunders et al. (2021), it is crucial that initial reading is conducted before starting the search for the SLR. Based on the previously read literature, an initial set of words was identified for both search strings. The term "AND" was used to combine different words, while "OR" was used to allow for interchangeability of word groups such as investment-related terms. The initial reading helped identify words not to be included in the search, such as corporate VC, which was excluded using the term "AND NOT" in the search string for theme 2. Using the terms "AND", "OR", and "AND NOT" allows for retrieving the most relevant studies for this thesis (Petticrew & Roberts, 2008). In both search strings, truncation (*) was used to allow for different wordings. To further increase the relevance of the results, the search was limited to English for both strings. The string for theme 1 was further limited to articles, book chapters, and the following subject areas: Social Sciences; Business, Management and Accounting; Decision Sciences; and Economics, Econometrics, and Finance. Setting these boundaries resulted in the following two search strings:

```
( TITLE-ABS-KEY ( startup*  OR  entrepreneur* )  AND  TITLE-ABS-
KEY ( sustainable*  OR  esg )  AND  TITLE-ABS-KEY ( "business
model*" )  AND  LANGUAGE ( english* ) )  AND  ( LIMIT-TO ( SUBJAREA ,  "BUSI" )  OR  LIMIT-
TO ( SUBJAREA ,  "SOCI" )  OR  LIMIT-TO ( SUBJAREA ,  "ECON" )  OR  LIMIT-
TO ( SUBJAREA ,  "DECI" ) )  AND  ( LIMIT-TO ( DOCTYPE ,  "ar" )  OR  LIMIT-
TO ( DOCTYPE ,  "ch" ) )
```

Figure 5: Search String Theme 1 – Sustainability in NVs; own illustration created 23.03.2022

```
( TITLE-ABS-KEY ( "Venture Capital*"  AND NOT  "Corporate Venture Capital*" )  AND  TITLE-
ABS-KEY ( "responsible investment*"  OR  "sustainable investment*"  OR  "impact
investment*"  OR  "Corporate Social Responsibility" )  AND  LANGUAGE ( english* ) )
```

Figure 6: Search String Theme 2 – Sustainability in VC; own illustration created 23.03.2022

4.3.3.3 Inclusion and Exclusion Criteria

The search resulted in 383 relevant articles, 334 for theme 1 and 49 for theme 2, which were screened based on inclusion and exclusion criteria (Figure 4). The inclusion and exclusion criteria are used to narrow down the search results obtained through the above-described search strings (Petticrew & Roberts, 2008). It is important to specify the inclusion and exclusion criteria which have been used to "...describe the types of study, intervention, population, and outcomes that are eligible for in-depth review..." (Petticrew & Roberts, 2008, p.61). While Petticrew and Roberts (2008) state that there are different criteria for including or excluding literature, such as the methodology used, for this thesis, literature was included or excluded based on the outcome and the studied subject. To limit potential bias, the screening was conducted individually, while discrepancies were discussed. The screening resulted in a total of 50 articles that were read by both researchers. Additional papers were included through cross-referencing, i.e., when they were mentioned in the articles read and deemed relevant, leading to a total of 55 articles included in the SLR.

4.4 Data Analysis

4.4.1 Thematic Analysis

For analyzing the qualitative data collected for this thesis, a thematic analysis is utilized. A thematic analysis is a generic approach for qualitative data analysis and is especially useful for comprehending large data sets, integrating data from different transcripts, and verifying and drawing conclusions (Saunders et al., 2019). Moreover, it allows searching for themes and patterns identified in the data set through coding and determining relationships between them (Saunders et al., 2019). The findings from data collection are coded via NVivo, as described in detail in the next section.

4.4.2 Coding via NVivo

As a thematic analysis is not tied to a specific philosophical position, it allows for an iterative deductive and inductive analysis, enabling an overall abductive approach. Thus, the coding utilizes data and theory-driven sources (Saunders et al., 2019), which allows for a holistic picture of the collected data.

Following the deductive approach, initial codes were established based on the main findings from the literature (chapter 2) and the implications of the theoretical framework (chapter 3). For that matter, dominant codes were created and defined in NVivo in a joint effort, which allowed for more consistency during the entire coding process. This step enabled the definition of initial themes from literature and theory, for which data from the interviews were used to verify or falsify the existing knowledge. In total, 42 deductive codes were generated prior to the coding based on literature and theory, and 30 inductive codes were created based on the data during the coding process. Appendix 2 shows all codes utilized during the research effort.

The interviews were coded according to the three groups. The first two to three interviews per group were coded together to ensure a consistent coding approach and clarify or discuss meanings. The remaining interviews were coded individually, which allows for capturing all relevant findings and for reducing personal bias in the coding results. For both inductive and deductive codes, sub-codes were utilized to highlight their relationship to an overarching topic, which at the same time allowed for recognizing patterns across the codes in line with the thematic analysis. Thus, the coding was an iterative process, as codes were merged in case a relationship to another code was identified during the process.

After merging the NVivo projects, the coding results were analyzed in a joint effort, including discussions about possible misalignments. In general, there were no significant conflicts in the coding projects; however, if there was a misalignment, the respective code or code description was discussed together. It is important to ensure that both researchers have the same understanding of a code and its description to allow for building a clear groundwork for the analysis. When a new inductive code was established during coding, it was ensured that both researchers had a common understanding of its meaning by clearly defining the code. If possible, the new inductive codes from both projects were merged if they had a thematic relationship. Finally, the merging led to a conclusion through thematic analysis by clustering the codes into broader themes that formed the basis for the analysis. Table 6 in the analysis (chapter 5) provides an overview of the identified dominant and sub-themes.

4.5 Research Ethics and Quality

This section considers the methodological implications of this thesis and addresses the ethical considerations as well as the reliability and validity, which determine research quality (Saunders et al., 2019). Even though reliability and validity are mainly considered in quantitative research, it is deemed necessary for this thesis to address both due to the usage of an SLR and semi-structured interviews, which can be subject to bias. For this thesis, reliability is defined as "...replication and consistency" and validity as "...the appropriateness of the measures used, accuracy of the analysis of the results and generalisability of the findings…" (Saunders et al., 2019, p.202).

4.5.1 Ethical Considerations

The ethical considerations focus on two topics: data security and informed consent. Firstly, data security was discussed by the researchers leading to the usage of the Microsoft 360 features granted through Copenhagen

Business School (CBS) only. Online interviews were conducted via teams, transcriptions were secured over Microsoft 360, and all non-anonymized primary data relating to the research project was stored on one-drive only. Secondly, the researchers obtained consent forms from all participants utilizing a standardized form from CBS. Participants received the topic guide, including the interview purpose, with the consent form to avoid deception. Furthermore, to ensure that participants felt safe, full anonymity was promised. To do so, all data was anonymized before the analysis process. To conclude, ethical principles have been taken into stark recognition during the research process.

4.5.2 Reliability

The section on reliability is split into internal and external reliability. To ensure internal reliability and thus "...consistency during a research project" (Saunders et al., 2019, p.202), both researchers have been actively included in all steps of the research process. Both researchers have worked together on the SLR, the interviews, and the data analysis and engaged in discussions and reflections on findings. Furthermore, the groundwork for the different parts of this thesis was established together, allowing for a division of tasks. This approach arguably results in higher internal reliability of this thesis.

External reliability is concerned with data collection and analysis, which, when replicated by others, should lead to similar results (Saunders et al., 2019). However, it must be considered that the goal of non-standardized interviews is not necessarily that the research can be repeated as "...qualitative research [...] will reflect the socially constructed interpretations of participants in a particular setting at the time it is conducted." (Saunders et al., 2019, p.205). Still, other researchers should be able to replicate the results by using the collected data and being able to code it to gain similar findings utilizing the same research design. Thus, this thesis coding design is aimed to be replicable, creating external reliability for the findings. Therefore, this thesis aims to be as externally reliable as possible by using an iteration of deductive and inductive coding in a reproducible way.

The main threats to external reliability are participant bias or error and researcher bias or error, which are important to consider when conducting qualitative non-standardized interviews (Saunders et al., 2019). The researchers reduced possible participant bias by conducting anonymized individual semi-structured interviews, which decreases the likelihood of the interviewees giving "...falsely positive answers..." (Saunders et al., 2019, p.203). To reduce possible participant errors, the interviewees were provided with the topic guide to increase credibility and give them a chance to assemble needed information, leading to more valuable answers. This increases the reliability and validity of the interviews (Saunders et al., 2019). Moreover, it is acknowledged that the quality of the interviews conducted can be influenced by the researchers' bias. The researchers are influenced by prior knowledge and personal relationships with some of the participants, which can lead to subjective behavior when conducting and later interpreting interview results (Saunders et al., 2019). To reduce the influence of researcher bias on participants, the same guiding questions were asked, and a list of words to avoid during the interview was defined. To reduce researcher error, the researchers asked for clarifications if a participant's statement was unclear. Furthermore, after the analysis, participant validation was conducted by sending the participants the parts of the analysis mentioning them. To conclude, different measures have been taken to reduce the participant and researchers' biases or errors to strengthen the external reliability of the thesis.

4.5.3 Validity

Saunders et al. (2019) state that validity measurements, especially internal validity, are not considered to be appropriate for qualitative research efforts as qualitative research is subjective and multifaceted. Still, external validity, which considers if findings can be generalized, is of importance for qualitative research. The generalizability of qualitative interviews is often questioned as they are based on personal insights of the participants as well as the form in which an interview is conducted. To increase the generalizability of this thesis, the interview questions have been inspired by the theoretical framework and SLR, positioning the generated findings in a broad context with theoretical significance (Saunders et al., 2019). The positioning within theory and literature is of importance considering this thesis' exploratory and explanatory purpose. Additionally, the researchers aimed to increase generalizability through a high amount of semi-structured interviews with a methodological approach to selecting participants. Moreover, the topic guides created for the thesis (Appendix 1) were designed to increase data quality through the logical order of questions, open questions, and easily understandable language. Thus, necessary steps have been taken to increase external validity and generalizability of the findings of the semi-structured interviews as much as possible.

5. Analysis

This chapter outlines the findings from the qualitative interviews which have been coded with NVivo. It must be stated that the findings are based on the interviewee's perceptions and experiences only. Therefore, their statements might not reflect the entire company they are representing in the case. However, the interviewees are selected based on their positions, allowing decision-making power in the companies. Utilizing a thematic analysis across all cases revealed core themes, which structure this chapter. Table 6 shows the themes uncovered in relation to the interviewees who mentioned them. This thesis finds six core themes, as highlighted in bold in

Table 6. Each theme is a section in the analysis. Every section starts with a summarizing table with the core findings in the following.

Interviewee / Category	Specialist				Venture Capitalist (VC)							New Venture (NV)							# voiced a theme
	1	2	3	4	1	2	3	4	5	6	7	A	B	C	D	E	F	G	
Trend towards Sustainability	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	**17**
Societal Pressure	x	x	x	x					x	x		x				x		x	**9**
Regulative Pressure	x			x	(x)		(x)	x	x	x	(x)				x	x		x	**10**
Limited Partner Pressure				x		x	(x)	x	x	x	(x)								**7**
Shift towards Sustainable Business Models	x	x	x						x	x						x	x	x	**8**
Founder Mentality Importance	x	x							x			x							**4**
Business case for Sustainability	x	x		x	x		x	x	x	x	x	x		x	x	x	x	x	**15**
VC related Factors Supporting the Shift	x	x		x	x				x	x	x				x	x		x	**10**
Hindrance of the shift																			
Lack of Resources of NVs			x				x	x	x				x				x		**6**
Lack of Trust in Sustainable Business Case			x											x	x	x		x	**5**
Focus on Economic Sustainability	x	x	x	x		x	x	x	x	x	x	x		x	x	x	x	x	**16**
Lack of Readiness for Shift				x						x					x				**3**
Differences in VCs																			
Structure of Investors	x					x	x										x		**4**
Intrinsic Investor Motivation	x	x		x	x		x	x	x	x	x								**9**
Differing Sustainability Foci			x	x						x						x	x	x	**6**
Diversity as (a part of) Sustainability	x	x		x	x	x		x	x	x	x	x	x						**11**
VC Interactions with NV on Sustainability																			
NV-VC fit																			
Team & Competency Match	x	x		x		x					x	x	x					x	**8**
Sustainability as Add-On or Conflict	x	x	x	x		x		x	x		x	x		x	x		x	x	**13**
Screening for Sustainability	x		x		x	x	x	x	x	x	x	x				x		x	**12**
Active Ownership							x	x	x	x	x	x			x				**7**
Value Adding Services																			
Sustainability Related			x		x			x	x	x							x		**6**
Business Related					x		x				x	x			x				**5**
Resulting Change in Narrative & Mindset		x		x						x						x	x	x	**6**
Challenges VCs face with Sustainability Integration																			
Measuring Sustainability		x	x		x		x										?		**4**
Lack of Sustainability Knowledge		x	x			x	x		x	x	x				x	x		x	**10**
Lack of Guidance		x	x		x			x	x	x	x			x				x	**9**
Threats to the Sustainability Trend																			
Differing Sustainability Understandings		x	x			x				x	x	x	x		x	x	x		**10**
"Looking Good" vs. "Doing Good"	x	x	x			x			x	x	x	x	x		x	x		x	**12**
Need to Re-Think Society & Economy		x		x															**2**
NV not Resposible for the Shift							x			x								x	**3**
# of Themes voiced per Interviewee	15	18	15	15	10	11	14	13	19	21	17	13	5	6	13	14	11	17	

Table 6: Core themes uncovered through coding and thematic analysis including information about which interviewee mentioned the theme, (x) = explicit no to a theme; own illustration created 15.04.2022

5.1 Pressure for Sustainability

This section outlines findings related to a trend for sustainability in equity investments and NVs, as this is highlighted by all VCs and Specialists and 6 out of 7 NVs. Also, societal, regulative, and LP demands that influence this trend are outlined.

Finding (# of finding in general)	Specialist				Venture Capitalist (VC)							New Venture (NV)							# voiced a theme
	1	2	3	4	1	2	3	4	5	6	7	A	B	C	D	E	F	G	
Definite trend towards sustainability and ESG implementation of VCs (1)	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	17
Sustainability and ESG integration are of essence for NVs today (2)	x	x		x				x	x	x	x						x		8
Societal, regulative and LP demand are three pressures driving the trends of ESG and sustainability integration in VCs and NVs (3)																			
Societal Demand: Mass population led by the younger generation are creating a demand on the consumer side which leads to VCs and NVs picking up on this pull for sustainability (3.1)	x	x	x	x					x	x		x				x		x	9
Regulative Demand: The impact on VCs is dependent on their structure and the impact on the NVs is dependent on their investors, but in general the regulative demand is driven by LPs for VCs and creates a stronger business case for sustainability for NVs. (3.2)	x			x	(x)		(x)	x	x	x	(x)				x	x		x	10
LP Demand: VCs as institutional investors are mainly driven by the demand of their LPs making an ESG and sustainability implementation a necessity due to them experiencing regulative pressure, however VCs with LPs being private investors mostly do not face this explicit demand. (3.3)				x		x	(x)	x	x	x	(x)								7
The pressures are interconnected through the system in a push and pull format for ESG and sustainability integration in VCs and NVs, however the high pressure then bears the risk that both VCs and NVs will engage in window dressing rather than deep integration (4)				x		x			x		x		x						5

Table 7: Overview of themes uncovered in interviews related to pressures for sustainability; (x) = explicit no to the theme; own illustration created 15.04.2022

All NVs, except NV B, perceive a trend towards sustainability and ESG integration of VCs. NV C and D stated that this leads to an increased interest of investors to engage with sustainable companies like theirs. While this trend is also perceived by Specialists (1,2,3), all VCs have stressed this trend. VC4 marked it as a must-have in investment decision-making, VC6 named it "...the number one trend by far right now" (29:46), and VC1 as "...a huge trend..." (30:52). While VC1 and 5 state that the trend has started surprisingly late, VC4 and 7 think it will be a regular part of decision-making in the future. An interesting point was made by VC2, stating that "...it's not just a trend, it's a fad at the moment.” (12:07, part2) and that sustainability is a new buzzword. In his view, this bears the risk of a backlash once a new buzzword comes to the market. Furthermore, VC2 is not the only one who talked about the trend’s pitfalls. NV E criticized that some investors are only superficially following the trend: “They do see the sustainability aspect as um as a marketing or as um, OK, you're following a trend rather than this is important...” (NV E, 14:42). This concern about superficial integration was supported by NV G and Specialists 1 and 2, who perceive that investors integrate sustainable solutions when they feel pressure to balance their portfolios. In Specialist 2’s opinion, it will take another decade to see the results of proper sustainability integration.

Next to integrating sustainability and ESG in equity investments, the interviews revealed that this trend is also visible for NVs. NV F highlights it, stating, “We're going to see more and more companies that are popping up, that are trying to solve the issues because we have so many issues and if we don't do something then... The world will burn...” (05:31). This statement found support from VCs and Specialists, who see NVs moving towards integrating sustainability and ESG in their businesses. VC5 underlined this by stating, "You can’t be a startup today without thinking about it” (34:59). Specialists 1 and 2 highlighted that while there is a perceived trend of NVs moving towards sustainability, more NVs are implementing SDGs in their businesses. Many NVs already have ESG policies as “...they all know that this is the way the market is going.” (VC4, 18:40). One VC stressed that, in his opinion, NVs need to focus even more on sustainability aspects such as waste and packaging, indicating that this trend will increase in the future (VC7). However, VC6, who invests in SMEs, perceives that these companies do not have sustainability integration “...very high on their agenda.” (09:47). Thus, while there is generally a trend towards sustainability integration in NVs, it seems that this trend is not as strongly followed in later stages. The interviews not only revealed this trend in moving towards sustainability integration from both NVs and VCs but also that there are three pressures driving it: societal, regulative, and LP demand.

5.1.1 Societal Demand

The interviews highlighted an increasing societal demand for sustainable products and services. This demand is especially driven by young generations interested in sustainability and ESG and a political shift (VC5, 6). VC5 stated that she perceives a societal shift towards more environmentally conscious political parties, which younger people drive as they elect these parties. This pressure from younger people, new generations, and political parties creates “...a big pull in the market...” (VC5, 06:50; VC6). Moreover, there is an increasing demand from consumers in both B2B and B2C to solve climate-related issues, increasing the pressure for sustainability integration (Specialist 1; NV A, E). This increasing demand was underlined by Specialist 2 who stated that

“...there's definitely been a positive change in the perception of sustainable products from a consumer side, which makes it easier for the startups to prove for investors: we have a market, people want to buy a product” (24:42). While NVs can be seen as “front runners” who identify the societal demands regarding sustainability (Specialist 2), the existing supply and demand for sustainable solutions in the market creates an advantage for sustainable NVs (NV A, G). The media also pushes this topic, especially in the Nordics, which again increases society's awareness (Specialist 2, 3). This societal demand pushes investors to follow the trend, as they are “...driven by the forces of the mass population...” (VC6, 29:46). Therefore, the societal demand is not only driving the trend toward sustainability integration from both NVs and VCs but also leaves sustainable NVs with a competitive advantage as they serve this demand.

5.1.2 Regulative Demand

Most interviewed VCs face a regulative demand to follow sustainability. This demand is very dependent on the structure of the VC, which will be further elaborated on in section 5.3. NVs D, E, and G perceive that EU regulations generally push big companies to adopt sustainability practices. This adoption can shape a business case for sustainability. Exemplary, Specialist 1 highlighted that regulations and laws incentivize sustainable solutions through subsidies in her view. Moreover, these regulations can strengthen the business case for sustainability, notably when the business model of an NV focuses on supporting big companies with reporting or sustainability measures (NV D, E). Also, the EU regulations are favorable for sustainable business cases, as regulations “...can also kind of drive the capitalism out.” (Specialist 4, 14:06). However, while some NVs stated that regulative developments in the EU are favorable for their product demand, the interviews did not show that NVs feel directly pressured by regulative demand but rather by their investors. In contrast, the interviews revealed that VCs are facing pressure from regulations: “...then there's also the legal, the legislation, part of it, as you probably know with the EU, what's happening there and EU taxonomy, so everything is just going in […] that direction.” (VC5, 07:28). The pressure on VCs is then pushed down to the NVs. VC5 also mentioned that the EU Taxonomy is a good initiative to avoid greenwashing and define what is green.

VC4 further stated that the regulative demand they perceive is driven mainly by their LPs, pushing their demands down on VCs, as the LPs “…need to show the whole public that they do investments that are sustainable and ESG compliant.” (14:09). VC3 and 7, who are backed by individual investors, stressed that due to their internal structure, they do not face regulative pressures. Instead, VC3 sees regulations as a hindrance to genuinely sustainable businesses, as they put more burden on a VC through, e.g., reporting. In his opinion, VC3 as an impact-driven investor, does not need to be pressured for impact. Also, VC6, who faces regulative pressures for sustainability integration, criticized that "...you have to keep up with the different regulatory things […] But I also feel that it's very difficult..." (10:49). Thus, while NVs do not face a direct regulative demand, VCs, who are backed by institutional investors, are facing pressure, which can be a burden.

5.1.3 LP Demand

As already mentioned in the previous section, the interviews indicated pressure from LPs on VCs to integrate and report sustainability aspects. In the interviews, 4 out of 7 VCs stressed that they face this demand from their LPs. In contrast, two VCs do not face it due to their structure. 4 VCs, all backed by institutional investors, face a high demand from their LPs to integrate sustainability and ESG in their investment decision-making. While VC3 argued that VCs who are connected to LPs need to adhere to stricter policies and rules for ESG criteria and reporting, VC2 more explicitly said that nowadays, one would not receive funding from governments if there is, e.g., no diversity agenda. This observation is further supported by VC4, who stated that reporting on ESG to LPs is becoming mandatory for them and is just increasing with time. VC4 even said that this demand "...is more than a push […] you need to commit to this before we [LPs] will let you have any of our funds to invest..." (12:54). VC5 and 6 underlined this demand, where the latter said that "...there's a huge pressure from our investors. That's probably the main driver. Our investors are telling us […] you have to do this. If you don't do this […] we're not going to invest in you and […] then we have trouble." (VC6, 10:25). An interesting aspect uncovered by the interviews is that Specialist 4, who is working for a bank, revealed a bottom-up effect in the financial industry. She stated that they focus more on sustainability, motivated by the increasing interest of VCs in it (Specialist 4). However, the LP demand is not apparent for smaller VCs who are backed by private investors. VC7 stated that "...not a single one [LP] has asked us about that" (12:00), leading to them not integrating sustainability in decision-making. Also, VC3 does not face any LP pressure as they make investment decisions based on a personal interest in environmental solutions from the small round of investors. Therefore, it can be said that pressure from LPs is only evident for larger VCs backed by institutional investors, who in turn are facing regulative pressures, as stated in the previous section.

5.1.4 Interconnection and Downside

The interviews revealed that the pressures mentioned above are interconnected. Specialist 4 stated that we live in a capitalist world, where everything is driven by demand: "So when consumers demand sustainable products the companies will change, and to support that demand and then the investors will follow because that's where the money is." (13:04). Moreover, VC5 argued that the pressure from young generations for more sustainability and ESG integration creates a market pull, leading to funds focusing on this trend, which is followed by regulative changes in the EU. Next to these interconnections stated in the interviews, it became apparent that too much pressure to integrate and communicate sustainability can lead to window-dressing (VC2, 7). VC7 mentioned that they are "...rebranding ourselves a bit now, but uh, I hate to say but, it sounds more like window dressing for now." (15:32). Also, VC2 addressed the problem of window-dressing, as large funds might not reveal the actual depth of sustainability integration in their investment decisions due to the fear of damaging their reputation. NV B talked about window-dressing related to NVs, when asked whether he thinks sustainability integration to be valuable for his business case: "So are you gonna paint the windows beautifully while the house is burning?" (04:59). While the three demands addressed in the previous sections can all be linked, the high pressure to integrate sustainability and ESG into investment decisions and business cases bear the risk that both VCs and NVs will engage in window dressing rather than deep integration.

As the interviews showed a trend toward sustainability and ESG integration, which is driven by society's demand, regulations, and LPs, the following section shows the findings related to the shift towards SBMs in NVs. Furthermore, it outlines factors that support the shift, such as the founder mentality, the business case for sustainability, and VC-related factors, while also highlighting factors that hinder this shift (Table 8).

5.2 Shift towards SBMs

Finding (# of finding in general)	Specialist				Venture Capitalist (VC)							New Venture (NV)							# Voiced a theme
	1	2	3	4	1	2	3	4	5	6	7	A	B	C	D	E	F	G	
Definite shift towards sustainable business models driven by the urgency for change (5)	x	x	x						x	x						x	x	x	8
Factors such as the founder mentality, the business case for sustainability, and VC related factors (increased financial returns, ESG as risk mitigation, brand value and reputational aspects) support the shift towards sustainable business models (6)																			
Founder Mentality: Founders with a sustainable business case have an intrinsic motivation to create positive impact on social and environmental issues, even if the foci can differ. (6.1)	x	x							x			x							4
Business case for sustainability: Perception of sustainability presenting a business case, with societal demand for sustainability providing business opportunities, which are strengthened by the regulative environment (6.2).	x	x		x	x		x	x	x	x	x	x		x	x	x	x	x	15
VC related Factors Supporting the Shift	x	x		x	x				x	x	x				x	x		x	10
Factors such as a lack of resources in NVs, a lack of trust in sustainable business case, the VC focus on economic sustainability and a lack of readiness for the shift hinder the shift towards sustainable business models (7)																			
Lack of Resources in NVs: Some NVs face a lack of resources and knowledge to measure or even integrate sustainability in their business case, resulting in (a) NVs which do not have a sustainable business case, to not focus on sustainability in early stages, and (b) NVs trying to make up for their lack of resources and knowledge through investor support (7.1)			x				x	x	x				x				x		6
Lack of Trust in Sustainable Business Case from the VC side makes it difficult for the NVs to gain funding (7.2)			x											x	x	x		x	5
Focus on Economic Sustainability: Interviews showed the economic focus and importance of economic sustainability which is the nature of VCs; but the hardcore focus of business VCs on profits leads to impact focused NVs becoming less attractive to VCs. (7.3)	x	x	x	x		x	x	x	x	x	x	x		x	x	x	x	x	16
Lack of Readiness for the Shift: There is a general lack of readiness from VCs and the public for sustainable business cases, making it difficult for sustainable NVs to succeed (7.4)				x						x					x				3

Table 8: Overview of themes uncovered in interviews related to a shift towards SBMs; own illustration created 15.04.2022

The interviews showed that NVs, VCs, and Specialists see a shift toward SBMs. While Specialists 1 and 2 highlight this trend, they said that it is crucial to focus on sustainability in the business model through, e.g., incorporating SDGs. In VC5's opinion, an NVs pitch deck nowadays needs to include sustainability: "...at least at the very minimum you write the SDGs. Just choose three. You can't go wrong even though they don't fit with anything 'cause they were supposed to be for countries. But start with that and then you work your way through...” (33:41). Also, VC4 highlighted that more NVs have already integrated ESG policies in their business models. While NV E, F, and G also see this shift towards more SBMs, driven by the urgency for change, they highlight that it needs to be deeply integrated at the core of the business model. It needs to be the central vision and mission to make up for all negative impacts and needs to have an impact on society by making “...sustainability everyone’s everyday business.” (NV G, 39:54; NV E). While the interviews showed that to solve environmental and social issues it is crucial to integrate sustainability in business models deeply, it became apparent that the NVs have different sustainability foci regarding this. Some NVs focus on integrating social or environmental sustainability (NV C, D), while others focus on integrating both levels in their business model (NV A, E, F, G). Thus, there seems to be no ‘one right way’ for sustainability integration, as it depends on the focus of the NV.

However, when it comes to the business case of an NV, the opinions about the characteristics of a business case for sustainability differ between VCs. For example, VC1 understands a business case for sustainability as either a sustainable product or service or a traditional business case with a product or service that is not “...particularly impact or sustainability related...” (14:49) but where the NV is run sustainably. Exemplary, VC1 highlighted that the NV could be conscious about business travels. In contrast, VC3 stated that the product of an NV needs to be focused on environmental sustainability as he supports the NV with creating the business case around the product. The examples show that also, from the VC side, there is no common definition of what makes a sustainable business case, as it depends on the focus of the VC.

While the interviews showed a general shift towards SBMs, it was identified that factors such as the founder mentality, the business case, and VC-related factors support this shift. However, the interviews also revealed hindrances to the shift. The supporting factors and hindrances are elaborated on in the following sections.

5.2.1 Founder Mentality

The interviews revealed that there are different foci of sustainability related to the passion and intrinsic motivation of the founders. The founders of NV A, E, and G all stated that their personal idea of sustainability is related to three levels: economic, environmental, and social. The personal focus of all three founders is also mirrored in their business cases. The founder of NV C is passionate about social sustainability, which her business case reflects by aiming at creating social impact in developing countries. Also, for NV D, his personal interest in environmental sustainability led to the business case focused on addressing the urgency of tackling climate change. Another finding from the interviews was that for NV F, the focus changed during their business journey.

They started by being personally driven towards social impact but ended with a focus on climate change. Thus, in general, the interviews with the NVs showed that all of them, except NV B, have an intrinsic motivation to create a positive impact on social and environmental issues, even if the foci can differ.

This intrinsic motivation was highlighted as crucial by NVs, Specialists, and VCs as sustainability needs to start with the founders. Many of the interviewed founders stressed the importance of intrinsic motivation toward sustainability to make a positive impact. Some of them said that revenue was not the focus from the beginning (NV A, C, F). In NV A's opinion, a business cannot exist without having a positive impact. This finding was further underlined by Specialist 1 and VC5, who pointed out that sustainability must be in the founder's DNA as "...we'll just put some sustainability on top" (VC5, 16:43) is not working. According to Specialist 2, a shared vision about environmental change can even be a differentiating factor for an NV, as not all NVs have this. She also stated that most NVs are not sustainable due to investor and consumer demand but rather because "...they're very passionate about environmental change or an impact somewhere on Earth." (Specialist 2, 27:50). This passion is perceived to be an essential investment criterion (Specialist 2).

Specialist 2's observation that not all sustainable business cases result from an investor or consumer demand was underlined in the interviews with NV F and D. In their cases, their intrinsic motivation to follow sustainability shaped their business idea, which ultimately proved to be an interesting business case. NV F stated that "We definitely weren't in it for […] making money. I think we wanted to make a positive impact" (04:23), but that they knew that they could only achieve this through a good business case. The same became evident with NV D, where the product started

> *"...just like a [...] hobby project and that means that sustainability of course is in the center of our business model. And now we have been putting some more revenue streams to it, but in in the first 2 ½ years like our profit was like completely tied to the impact we had on the earth."* (05:36).

Thus, an NVs product can be driven by intrinsic motivation rather than an investor or consumer demand or the focus on revenues. The following section delves deeper into the business case for sustainability as described in the interviews and how today's environment strengthens it.

5.2.2 Business Case for Sustainability

While the data shows a general perception of sustainability presenting a business case, it also showed that societal demand for sustainability provides business opportunities, which are strengthened by the regulative environment. As outlined in section 5.1.1, there is an increasing societal and consumer demand for sustainable solutions, which offers an opportunity for NVs or strengthens existing business cases for sustainability. For NV A, sustainability, which in their case has a social focus, is a prerequisite for the business case, as they are closely working with NGOs. Also, NV D and E saw an opportunity in the market for their products due to the demand for sustainable solutions. In the case of NV D, this demand strengthened their business case as “...there was a lot of opportunities to improve the area...” (08:20). Some of the interviewees especially highlighted how this demand offers an opportunity to generate money. NV G stressed the business opportunity through sustainability as “...there is fortunately a lot of money to be made in sustainability...” (08:33). Specialist 2 further underlined this argument by stating that societal demand enables sustainable NVs to generate revenues, strengthening the business case. This observation is also made by VCs, who said that due to the demand there is a lot of money going into the space for sustainable investments and NVs (VC4, 7). VC6 is in line with this as he disclosed that sustainability integration provides a “value creating opportunity” (01:31), while VC5 stated that the consumer demand makes it possible to create both impact and revenue in one business model. In line with all these arguments, Specialist 4 highlighted the importance of societal demand for sustainable solutions to enable business cases for sustainability.

The regulative environment strengthens the business case for sustainability for some NVs, especially when offering sustainability solutions for companies. NV D said that regulative pressures drive the focus from big companies towards sustainability, positively influencing their customer base. Furthermore, NV E especially highlighted the “external enabling” (07:40) in the impact investment space as there is a lot of demand for standardizing ESG reporting, which strengthens their business case based upon offering ESG information. Therefore, both societal demand and regulative pressures offer business opportunities within sustainability and, at the same time, can strengthen existing business cases for sustainability.

While the interviews, as outlined above, clearly show the business case for sustainability, Specialist 2 and VC7 criticized that often there is a lack of business cases in NVs. Even if, as outlined in section 5.2.1, the intrinsic motivation and passion of founders for sustainability is crucial, Specialist 2 mentioned that being too passionate can pose a threat to the business case. She used an example in which the founders were too passionate about sustainability aspects and forgot to build a business case around their product. This discouraged investments and finally led to the failure of the NV (Specialist 2). This observation was also shared by VC7, who disclosed that sustainable NVs sometimes lack fundamentals and have issues with presenting the business case and strategy. If this is the case, the VC is not investing in the company, even if it might be able to have a positive impact (VC7). NV G underlines these two arguments, stressing the importance of a strong business case for sustainability, as this is the only way to generate funding and scale sustainability.

5.2.3 VC-related Factors

The interviews revealed VC-related factors supporting the shift towards SBMs, such as increased financial returns, ESG as risk mitigation, brand value, and reputational aspects. For both VC1 and 6, sustainability and ESG integration in investment decision-making is crucial. They are convinced that they can generate higher returns when investing in sustainable NVs, or in VC6's case, SMEs willing to integrate sustainability. By clearly communicating this focus to the NV scene, VC1 "...hope[s] to attract more of those companies that share the same mission." (14:08). VC6 even stated that when companies integrate ESG measures, they become more attractive for investments as it has the potential to create value. In addition to the financial returns, the interviews showed that VCs include ESG practices to mitigate risk as it is "...a huge perceived risk of not being on top of the ESG agenda." (VC6, 29:46). VC7 talked about risk mitigation as more related to financial returns as they want "...to secure return. If that path has something to do with sustainability, then yes, we take it." (26:02). Risk mitigation was also addressed by NV G, who stated that both NVs and VCs use ESG implementation to reduce risks when they are not truly sustainable: "Not that they are sustainable. Not that any sustainable startups are completely, but there are […] different levels […] so it's still ESG focused in that sense of risk mitigating." (20:47).

In the interviews, it became evident that there is a perception of increased brand value through sustainability and ESG integration. It was stated that investors invest in sustainable NVs as they see it as a "marketing and [...] branding tool" for both the VCs and their personal brand (NV E, 16:33; NV G; Specialist 1). NV D especially highlighted this for business angels (BAs), who are a brand themselves and strengthen it by adding sustainable NVs to their portfolio. VC7 underlined the point made by the NVs and Specialist 1 by stating that sustainability implementation in investments is "good branding", which he wishes they would have. Also, the EU Taxonomy was denoted as a "nice marketing tool", especially for banks, as they want to look sustainable through their portfolio (VC5, Specialist 4). Finally, VC6 mentioned that ESG and sustainability integration is a branding tool for SMEs, as it can help them attract and retain talent.

The interviews also showed that the integration has a perceived effect on the reputation of both VCs and NVs. NV G highlighted that, in his perception, VCs invest in sustainable NVs mostly for "...the labeling of things" (24:38) and that a VCs effort in this scene reflects on the investor. Specialist 2 mentioned that VCs use sustainability when they see that it fits the societal demand to create a "right approach" for entering the market. VC1 further highlighted that branding or labeling as sustainable is vital for an investor as it helps attract more sustainable NVs by building a reputation as being sustainable. While these statements were solely focused on how VCs use sustainability and ESG integration for their reputation, VC6 stressed that this is also important for companies themselves as sustainability integration and compliance with regulations are especially important in some industries. Thus, in his opinion, sustainability integration can be used to maintain a good reputation as a company (VC6).

However, the interviews revealed some threats to reputation when integrating sustainability and ESG. Sustainable NV D, whose business case is built on offsetting, stated that investors were skeptical about investing in them as offsetting has created bad media, making investors conscious of the effect of investment and want to ensure that it does not reflect negatively on them (NV D). Moreover, NV G mentioned that sustainability is a complex topic containing a lot of "holes and landmines" (17:44) for investors, as it comes with the fear of communicating incorrectly and thus being accused of greenwashing. In his opinion, this leads to the rise of "green hushing" (NV G). VC1 and 7 also stated the threat to reputation. VC1 referred to one early-stage VC who lost a lot of money through the "clean tech bubble" (31:55) and stepped away from cleantech. VC7 further highlighted the importance of focusing on the VCs' competencies and the knowledge it makes money with. As VC7 is not focused on sustainability integration in investment decision-making, focusing on sustainability in their case could potentially harm their reputation as they would tap into an inexperienced field.

5.2.4 Hindrances of the Shift

While the previous sections outlined factors supporting the shift towards SBMs, it was found that there are also factors hindering this shift. The identified factors elaborated in the following paragraphs are a lack of resources in NVs, a lack of trust in the business case for sustainability, the VC focus on economic sustainability, and a lack of readiness for the shift.

5.2.4.1 Lack of Resources in NVs

The interviews showed that some NVs face a lack of resources and knowledge to measure or even integrate sustainability in their business case. Specialist 3 pointed out that sustainable NVs often do not know how to measure sustainability: "It's definitely not something that comes easy to a lot of startups. And it's true there is a lack of resources and tools for startups..." (18:07). He stated that the lack of tools NVs could use for measurements is mainly due to NVs always being "...new to the world, in a different area each time..." (18:07). In his opinion, CO2 emissions and social impact measurements pose a challenge for NVs (Specialist 3). While VC4 does not focus on the "E" due to the NVs' difficulties with measuring it, VC3 has a heavy focus on the "E" but criticizes that NVs are often asked to provide measurements and report it. VC3 states that in the early stages, it is too much of a burden for NVs, as it costs too much to measure because it takes a full-time position as "...data doesn't just drop down..." (25:03). Moreover, in VC3's opinion, early-stage NVs should focus on more important things, such as making money, and should not focus their resources on sustainability reporting. This argumentation was supported by VC4 and 5, who stressed that NVs should first focus on growth before starting to measure and report environmental data as "...you just have to get this plane up and flying." (VC5, 18:19). VC3 further mentioned that early-stage NVs have the "luxury" of not being obliged to report, while in later stages, "...a threshold will come to say now the companies at a certain size as they can afford an ESG department and then that's, you know, that's a different situation." (27:40). Before this threshold, in his opinion, it does not make sense if investors pressure NVs toward improving their environmental measures (VC3).

The need for resources and knowledge to integrate and measure sustainability results in traditional NVs not focusing on sustainability in early stages. While 5 out of 6 interviewed NVs had a product or service which is sustainability related, NV B does not focus on sustainability at all. He stated that they do not focus on integration due to a lack of resources, as in early stages, the "house is always on fire" (04:12). He further underlined this by saying, "...unless you're an impact startup, which we don't consider ourselves. I think sustainability is something. You fix when you can afford it." (NV B, 04:12). While NV B thus does not focus on sustainability, other NVs make up for their lack of resources and knowledge through investor support:

> "...it's good to have somebody who has those expertise and the environmental angle [...] it's also good to have some guiding lights about how you make business decisions if that's something that's core to your business" (NV F, 14:57).

However, not many VCs have this extensive knowledge, resulting in high demand for investors with sustainability knowledge (VC5), as further elaborated on in section 5.5.4.2.

5.2.4.2 Lack of Trust in a Business Case for Sustainability

The data shows a lack of trust in business cases for sustainability from the VC side. NV E stated that she perceives that even if investors understand parts of their business case for sustainability, they "...struggle with […] trusting that it's strong enough." (11:05). Also, NV C stressed that they had difficulties gaining funding as financial values are still at the forefront. Their focus on the "S" takes more time to generate a return, which decreases investors' trust in their business case. The challenge of finding funding also became evident in the interviews with NV D and G, who had to put a lot of effort into gaining funding, which became easier with time as the business case and financials were more proven. In general, Specialist 2 highlighted that it is difficult for sustainable NVs to gain funding, as it needs a lot of convincing about the value of the idea and the business case, resulting in many NVs being reliant on organic growth. Thus, the data shows that the lack of trust in business cases for sustainability from the VC side makes it difficult for sustainable NVs to gain funding.

5.2.4.3 VC focus on Economic Sustainability

The interviews showed that economic sustainability always comes first, as stated by nearly all NVs and all specialists and VCs. For the investor side, most of the NVs perceived the economic focus from VCs as "...regardless if they're interested in climate sustainability or social sustainability for any investor, the economical sustainability will come first." (NV A, 09:39). This observation was underlined by all four specialists who highlighted the importance of creating revenue as "...VC funds are set up […] to maximize on the return on investment of the LPs." (Specialist 4, 11:05). The importance of generating returns when investing in business cases for sustainability was also stated by 6 of the 7 VCs (VC2, 3, 4, 5, 6, 7). All of them mentioned that they need to generate returns for their LPs, even the smaller VCs who are backed by private investors such as VC3 and 7. VC3 and 6 even stated that the scene is driven by capitalistic forces, even if for them sustainability integration plays an integral role. VC2 further underlined this statement by saying that "it's not charity" (07:33), while stressing that he expects a backlash as sustainable investments are subject to the same capitalistic logic as traditional decision-making. Moreover, VC7, who does not have a sustainability focus, argued that a sustainable NV needs "...really, really clear path[s]..." (03:12) to show that it can create economic value. VC7 further stated that a sustainability case alone is not attractive to them as "...our intention is not saving the planet. Our intention is unfortunately getting good returns." (25:40). This statement shows that due to the nature of VCs being concerned with generating returns for their LPs, they have a strong focus on economic sustainability.

The interviews show that this focus from VCs is also mirrored in NVs. NV A stated that economic sustainability

> *"...will always come first and as soon as the business model is checked and […] you can clearly see from the forecast that that business can produce income while creating an impact, then the fact that there is an impact […] of the business does […] attract investors."* (09:39).

NV E supported this by saying that as investors want to generate revenues, "...it's not enough that we are sustainable and impactful." (09:51). She further said that if there is an NV in the same market that is profitable without ESG, investors would even prefer it (NV E). NV G stated that after facing challenges in gaining funding, they shifted their focus towards monthly reoccurring revenue, which ultimately became their "North Star KPI" (29:44) as it attracted more investors. Specialist 4 is in line with this argument and mentions the importance of not forgetting about the business case alongside sustainability efforts, as a business cannot exist without profit.

While it was stated during the interviews that economic sustainability is vital to VCs and thus also integrated into NVs, some interviewees stressed the importance of economic sustainability for business cases. NV G stated that it would be misleading if investors would not focus on economic returns, as then they would invest in NVs without growth potential. Furthermore, VC3 stressed that supply and demand for sustainable solutions are crucial to driving the shift towards sustainability. He refers to it as the "neo-capitalists sort of approach" (10:35) and says that by ensuring financial viability, they can ensure that an NV can stay green and "succeed as a business" (10:35). VC5 underlines this, stating that NVs need economic sustainability and growth to remain in the market, attract new capital in future funding rounds, and have an impact: "This product can't solve anything if it's not commercially viable." (36:40).

However, this focus and importance of economic sustainability can lead to impact-oriented founders refraining from getting in contact with hardcore business investors (NV C, D). It is especially the case when the business has no focus on profit from the beginning, leading to a mismatch of interests between the NV and VCs. NV C stated that they realized that due to the emphasis on social impact instead of revenue, the investors were not interested in their business case, as it would take longer to generate returns. NV D even said they were "a little afraid" (16:56) to approach VCs, fearing that they would shift the focus from impact to profits only. Specialist 4 named an example that underlined this problem, as she "...talked to one investor who was very passionate about it. He also said it can be super hard for sustainable businesses to get enough funding and to not get diluted because sometimes it takes longer to prove their business." (12:16). Thus, while the interviews showed the economic focus and importance of economic sustainability, the hardcore business focus of VCs on profits leads to sustainable NVs becoming less attractive to VCs.

5.2.4.4 Lack of Readiness

The last hindrance identified is a general lack of readiness from VCs and the public for business cases for sustainability, making it difficult for sustainable NVs to succeed. NVs still struggle to convince the public and investors that one can earn money by doing something good (NV D). NV D stated that "...we are actually trying to do something good, but we are not allowed to earn money and I think that […] it's not good for like, the landscape of new impact startups" (10:16). Specialist 4 underlined the problem for impact NVs to create impact and profit at the same time, as it "...is also sometimes hard when you are a founder of one of these companies, if you want to do good in the world then why do you want to profit from it?" (21:45). While these statements are concerned with a lack of readiness from the public and investors, VC6 highlighted that also companies need convincing when it comes to sustainability integration and its positive influence on returns. Thus, the interviews show a lack of readiness from the public and investors to accept sustainable business cases, which could harm the sustainable NV scene. However, there is also a lack of readiness from the company side to accept that sustainability can create returns.

5.3 Differences in VCs

This section covers the findings related to perceived differences in VCs regarding their structure and intrinsic motivation, ultimately leading to different sustainability foci across VCs (Table 9).

Finding (# of finding in general)	Specialist				Venture Capitalist (VC)							New Venture (NV)							# voiced a theme
	1	2	3	4	1	2	3	4	5	6	7	A	B	C	D	E	F	G	
The institutional character of the investor has an influence on how high sustainability and ESG integration is on their agenda with BAs and small VCs having no pressure by other LPs and a high flexibility to cater to their own interests and with bigger VCs dependent on institutional money having pressures from LPs and regulation to integrate sustainability and ESG (8)	x					x	x										x		4
The intrinsic investor motivation plays a role for the importance of sustainability and ESG integration in their investment decision but is differently utilized in VCs with different institutional characters (9)	x	x		x	x		x	x	x	x	x								9
The form of sustainability integration is connected to the focus of the investor, which can differ (10)			x	x						x						x	x	x	6

Table 9: Overview of themes uncovered in interviews related to differences in VCs; own illustration created 15.04.2022

5.3.1 Structure of Investors

During the interviews, it became apparent that the structure of an investor influences how high sustainability and ESG integration is on its agenda. Interviewees stated that BAs have high flexibility in their investment decisions as they do not feel pressured by LPs (Specialist 1, VC2). While Specialist 1 said that she, as a BA, is investing in sustainable NVs, NV F has the perception that BAs do not follow the trend towards sustainability integration. In NV F's view, the VCs are increasingly moving towards sustainability integration in investment decision-making. This observation was supported by some of the VCs backed by institutional investors (VC4, 5, 6). These larger VCs feel pressure from regulations and LPs to move towards sustainability integration, which is not the case for smaller VCs backed by private investors such as VC2, 3, and 7. VC2 and 3 criticized that when a VC is dependent on institutional money, it becomes less flexible, and one needs to measure impact. This inflexibility made VC2 not become a partner of a larger fund again as "...it was simply too bureaucratic" (13:03). Thus, it becomes evident that the demands, as outlined in section 5.1, are different for each investor and depend on its structure.

5.3.2 Intrinsic Investor Motivation

The interviews revealed that next to the structure of an investor, intrinsic motivation plays a role in the importance of sustainability and ESG integration in their investment decision. Specialist 1 stated that she, in her role as a BA, but also other investors, feel obliged "to give back to society" (05:07) by investing in SBMs. She is also personally concerned with sustainability and only invests in "companies that are good to the world." (Specialist 1, 00:42). However, her statement about BAs wanting to give back to society as they earned a lot of money was countered by VC7, who stated that all their LPs are wealthy individuals but are still not focused on sustainability. VC7 also stressed that if their investors wanted to invest in a sustainability fund, they would look at other VCs, as also as a VC, you need to stick to "your DNA" (12:00). Thus, while Specialist 1 is a BA with a personal interest in sustainability, VC7 perceives that their private investors do not have this high on their agenda and do not expect VC7 to make sustainability investments showing diverging statements.

On the VC side, many of the VCs stated that they have an intrinsic motivation to tackle sustainability issues, which is often reflected in the investment behavior of the VC company they work for. VC4 said that she and her colleagues are intrinsically motivated to drive the ESG agenda personally, which is reflected in their investment decision-making as they focus on NVs that integrate sustainability and ESG in their business model. Both VC1 and 3 strongly focus on the environmental side, as VC1 calls it the "most pressing issue" (07:59). VC3, due to his background, has an intrinsic motivation related to solutions that address climate issues, which is mirrored in his investment focus which is solely on the "E". VC3 stated that a product needs to lead to transition and contribute "...to the world in a positive way" (02:22). For VC5, it is personally important to make an impact in general, while she has a background in working with the "E", which was also the focus of the interview. In addition, she highlighted the personal importance of diversity, which is important to her in investment decisions regarding NVs. VC6 personally sees the urgency of climate change, stating that the VC considers the importance of the environmental and social part, as 95% of all ESG-related measures are climate- and diversity-focused. However, the environmental part dominates their investments with 70-80% (VC6).

While the data shows that most VCs are backed by an intrinsic motivation to follow sustainability, Specialist 2 stresses that investors who invest in sustainability "...really need to have like a pure heart and a love for sustainability and environment change to invest in such a startup." (16:49). In her opinion, these investors need to show full commitment to the NV and its product or service to have an impact. To achieve this, the investors need to "...relate to the overall mission of making environmental change or an impact..." (Specialist 2, 21:30). This importance was supported by VC7, as even though he is interested in sustainability, this is not followed by the VC as it is not their focus and strengths. Thus, while an intrinsic motivation from the investor can drive the direction of a VC, the data shows that it is crucial that VCs either show full commitment to sustainability integration or stay away from it.

5.3.3 Differing Sustainability Foci

While the interviews showed that sustainability integration is generally connected to an investor's institutional character and intrinsic motivation, they also revealed the existence of different sustainability foci of investors. Most of the interviewed VCs have a focus on sustainability integration; however, VC4 focuses solely on the "S" and "G" and not on the "E", while VC3 is only focused on the "E". While this shows that investors can have individual foci, Specialist 3 highlighted that some investors have no sustainability focus. VC7 was one of these investors without a sustainability focus, as it is not part of its investment decision-making.

NVs also perceive these differences in foci and importance of sustainability on the investor side. NV E stated that some investors wanted only to see a minimal threshold, while others wanted to see a quantifiable impact before investing. NV G supported NV E in the fact that investors accept if an NV is not being completely sustainable because, in his opinion, "...they're afraid of setting a bar at some point where they […] would miss out on really financially high potential startup that maybe doesn't quite meet those standards..." (33:06). These differing expectations then need to be navigated by NVs (NV E, F). NV F perceived this challenge as some investors were focused on the business case while others cared more about sustainability. This challenge of catering to different needs is not only perceived by NVs, as VC6 stressed that they need to cater to the different demands of LPs related to sustainability. NV G also mentioned the differences in investment foci on investors' sustainability, as some already have experience in this field. In contrast, more traditional investors often want only to add sustainability to their portfolios. Thus, NV G stated that they specifically searched for investors who "...already do invest in sustainably and have a strategy on that." (19:09). This difference of how deeply integrated sustainability is in an investor's strategy and that NVs might search for investors with experience was also made by Specialist 4. She stated that

> *"...most investors want to have a sustainable focus, but it's not everyone that lives by it, so some investors are very passionate about this. And they only focus on sustainable investments. And of course you open up the contact to those when you focus on sustainability."* (11:05).

5.4 Diversity as (a part of) Sustainability

Finding (# of finding in general)	Specialist				Venture Capitalist (VC)							New Venture (NV)							# voiced a theme
	1	2	3	4	1	2	3	4	5	6	7	A	B	C	D	E	F	G	
Diversity, with its dominant focus on gender diversity, is a core theme of VCs when speaking about sustainability, whereas it is less focused on by NVs in the theme of sustainability (11)	x	x		x	x	x		x	x	x	x	x	x						11

Table 10: Overview of themes uncovered in interviews related to diversity as a part of sustainability; own illustration created 15.04.2022

The theme of diversity is dominant as a type of sustainability perception, and focus (Table 10). 11 out of the 18 participants mentioned diversity explicitly or through practices around it without the interviewers prompting. As sustainability is the center of all interviews, the interviewees deem diversity to be a part of sustainability, with NV A explicitly stating that "…the moment you're talking about sustainability, you kind of need to talk about diversity as well." (18:07). Diversity was mentioned in relations to different themes such as age diversity (NV A, VC4), life stage diversity (NV A), demographics (NV A, VC2), the structure of the board and top leadership (NV A, VC2, 6, 7), nationalities (NV A, VC2, 4), and (most dominant) gender diversity (NV A, B, Specialist 1, VC1, 2, 4, 5, 6, 7). Specialist 4 even mentioned that there is a general trend towards diversity. All VCs, apart from one, mentioned diversity and both specialists who are ex-founders and now investors (1, 4), implying that diversity is a much-discussed theme for VCs. On the NV side, only two NVs mentioned diversity – one in a very positive light (NV A) and the other in a criticizing way (NV B), showing that for NVs, the theme is not as bound to the thought of sustainability and is more contested.

Gender diversity is the predominant theme in terms of diversity, as NVs and VCs often mentioned it. For VCs, it is stressed that having females in the investment team is seen as necessary (VC4, 6), however, finding female talent in private equity is hard (VC6). Concerning NVs, the underrepresentation of females in the reception of funding is perceived as something that needs to change as "…it is disturbing that only about 1.5% of capital is being used by female founders" (Specialist 1, 13:41). Attracting female founders is especially relevant for tech-based VCs (VC1, 2, 4) as there are more men than women in the industry. The business case for diversity is also mentioned by VC2, stating that he needs a "girl" in the founding team to even think about investing, as it is a requirement for most further funding through American VCs. However, criticism of this focus is voiced, too, with NV B saying that "…a female in my shoes would have been in a better position" (06:41), showing his perception of the diversity focus leading to reverse discrimination in the funding search. Furthermore, VC2 criticizes that he believes that diversity is a buzzword now and that ultimately the most important thing is to select the best talent, regardless of diversity factors. Therefore, gender diversity is a much-stated but controversial theme regarded as a key part of sustainability measures.

5.5 VCs Interactions with NVs on Sustainability

This section addresses the findings on how sustainability is (and is not) promoted by VCs in their relationship with NVs. To this end, this section shows the findings related to the fit between NVs and VCs, how VCs screen for sustainability, and what the interviews revealed regarding active ownership. Lastly, the identified challenges faced by VCs when integrating sustainability are outlined (Table 11).

Finding (# of finding in general)	Specialist				Venture Capitalist (VC)							New Venture (NV)							# voiced a theme
	1	2	3	4	1	2	3	4	5	6	7	A	B	C	D	E	F	G	
VCs match with NVs based on team and competency match, with the team match being central to an investment decision in the early stages in general and the competency match being important for both the team of the NV side as well as the VC side. (12)	x	x		x		x					x	x	x					x	8
Sustainability in the NV-VC match is seen as an add-on or even a hard clash between profitability and sustainability (13)	x	x	x	x		x		x	x		x	x		x	x		x	x	13
VCs screen for sustainability in very different ways ranging from minimalistic negative screening approaches to elaborate screening designs (14)	x		x		x	x	x	x	x	x	x	x				x		x	12
VCs engage with their portfolio companies after the investment decision (15)							x	x	x	x	x	x			x				7
VCs support their NVs through value adding services in the form of network access, business related knowledge, and sustainability related knowledge (15.1)			x		x		x	x	x	x	x	x			x		x		10
NVs feel investor pressure to change their narrative and mindset as a result of (a) the screening before the deal and (b) the engagement after the deal (16)		x		x						x						x	x	x	6
Challenges such as measuring sustainability, the lack of knowledge and the lack of guidance are hindering sustainability related engagement efforts of VCs (17)																			
Measuring Sustainability: both NVs and VCs struggle with how to measure sustainability efforts (17.1)		x	x		x		x										x		5
Lack of Knowledge: knowledge on sustainability seems to be a criterium when dealing with sustainability cases, making the involvement of consultants and experts during the screening and the engagement even more important for VCs as they tend to not have this knowledge in-house (17.2)		x	x			x	x		x	x	x				x	x		x	10
Lack of Guidance: there is a misalignment on what should be a common approach with sustainability in screening and engagement practices as there is no guidance on how to do so as conventional frameworks do not fit the NV and VC expectations (17.3)		x	x		x			x	x	x	x			x				x	9

Table 11: Overview of themes uncovered in interviews related to VCs' interactions with NVs on sustainability; own illustration created 15.04.2022

5.5.1 NV – VC Fit

It is important for investors that an NV fits into the existing portfolio (NV A). After reviewing the data on the criteria of VCs for selecting NVs, two main themes were uncovered: the team and the competency match. The team is seen as an essential part of the NV-VC fit, as the general fascination with the idea and the founding team is an important part of investor decision-making (VC2). NV B stated that he believes they gained VC funding because of a good team, among other business-related factors. Specialist 4 also underlines that it is, based on her experience, the people who make an investor buy into an idea in the early stages. This importance of the team is underlined by Specialist 2, stating that a diverse set of skills is needed to succeed, especially regarding NVs with a sustainable business case, as the team needs to reflect the skills required to make the idea work. These competency matches are necessary for the VC, too. Investors who invest in sustainable NVs need an understanding of the business field (Specialist 2), as this is what NVs are looking for (NV A, G). VC7 highlights the importance of sustainability expertise from the VC as they do not invest in sustainable NVs due to the lack of said expertise. The lack of general sustainability knowledge is a challenge in general, which section 5.5.4.2 explores. Thus, while the team match is central to an investment decision in the early stages, the competency match is important for both the team of the NV side as well as the VC side.

The interviews show that sustainability is mostly not a criterion itself but rather an add-on to an investment decision (NV A, F, G; Specialist 1, 4; VC4, 7) or even a direct clash to the perceived profitability of an NV (NV A, C, D, G; Specialist 2, 3; VC2, 5). When sustainability is seen as an add-on, VCs can take sustainability into account, but the main focus of VCs is "...to make investments great and making money to our LPs..." (VC4, 11:16). Thus, "...sustainability is just gonna be a nice add on..." (Specialist 4, 11:05) for investors until the financial focus is changed. NVs also observe this as they see that investors perceive sustainability more as a "feel-good" factor (NV A). The clash of profitability and sustainability is highlighted by VC2 stating that for him there are two parts of an investment decision, one being "that it's not charity" (07:33), thus having a financial focus, and the other one being a movement towards "these worthy goals" (08:09) which create impact. This selection of either profitability or sustainability first is underlined by NV C and D. NV D says that investors had no problem with their sustainability focus as they knew that they would be "investing in impact first" (18:58). However, NV C observed that investors are not interested in them as "…there is not enough return for them because we want the game to live rather than earn a lot of money from it." (08:21). This clash between profitability and sustainability is further outlined by VC5, who states that "…to a certain degree, investors are willing to give a little bit of discount on investing in sustainability. But they have to make money. Like, that's what investors do." (35:35). Thus, VCs differ drastically in their view of how to incorporate sustainability in their investment decision.

5.5.2. Screening for Sustainability

The drastic difference in the incorporation of sustainability in the investment decision is mirrored in the screening efforts. The screening efforts range from mandatory minimalistic negative screening to elaborate funnel designs, as shown in tables 12.1 and 12.2 below.

		Screening for Sustainability - Minimalistic Designs
Specialist	1	"I don't want to support companies that are bad for the world, so I don't invest in, in gun manufacturing or like I, as I said something that are hurting the environment. Um. So the the companies I do select is more focused on these SDG's."
VC	2	"...everybody knows the other, so there's things that you don't want to invest in. For instance, we've said that we don't want to invest in companies where we're investing through offshore vehicles to avoid taxes. We also said that we won't invest in things that are I, I mean, not tobacco or things like that, but it's not something that's written down, it's because, it's the people who know each other, so there's kind of an understanding of that."
	3	"we take a very very pragmatic approach to it. What we say is that we don't do in-depth analysis or anything. We just look at it, we say, okay, is this going to contribute to the world? And if it's a yes then we just invest."
	7	"I would call it a low barrier of responsibility investment. But I mean, there's of course things we don't invest into. And we would never do anything that is, I mean, the opposite of sustainability in, in my eyes, is not child labor and weapon industries and so on." - "There's a minimum of requirements that we have, but it's not in regards to sustainability or their CO2 footprint. It's it's more in regards to labor, fair wages, diversity in the sort of in the, in the founders team or at least not. It doesn't. It doesn't have to be diversity, but we embrace it and we would push for more diversity if we invest into a male, white male company. So more of these more low, low, low key responsibility items."
NV	E	"I think overall they are, like the majority of investors are content with the fact that we are sustainable to some degree and we're not harming. Um or doing harm, which is for some of them are very low threshold of like no gambling and no, um, I don't know like tobacco or arms or whatever."
	G	"...some of the investors that that we've gotten on board and and and and and the ones that we're talking to have like a minimum set of requirements and so on. But they're mostly about being aware of like, so measuring your your, your, your CO2 and so on. Knowing you're you're quantifying your impact as an impact startup. Uh, uh and and then having policies on on things. So right, so what is our stance on things and how do we approach them? What is our process and procedure to secure the standard that we've set for ourselves or that they have required of us? But it's minimum, UM and and and that's I think also because investors don't really know what the right standard should be and so on themselves they are not experts either."

Table 12.1: Overview of direct quotes on the screening for sustainability (minimalistic designs) gathered from the interviews; own illustration created 18.04.2022

Minimalistic screening designs focus on negative screening, which excludes particular themes such as weapons or tobacco (VC7, NV E). Another form of minimalistic screening is shown by VC2 and 3, who are based on private investors only. They use a "pragmatic approach" based on common sense and a shared understanding of what they perceive as sustainable and responsible. However, NV G showed that the perception of what "minimalistic" means differs a lot. For example, while NV G elaborated on questions around the CO2 footprint and their policies as minimal, VC7 explicitly mentions CO2 screening as not falling under his perception of minimal screenings.

		Screening for Sustainability - Elaborate Designs
VC	1	"it's a team, traction, total addressable market, timing, and a bunch of other things, UM. That is the criteria we used to look for (...) We added [name criterium] and under that we look at all the parameters that we consider to be impact or sustainability parameters (...). As part of that we look at kind of two groups of things. So one thing being the services or the products that the company put into the world. And you know the actual impact their, whatever they do has. And then secondly how they run their company. So that's also something we look at the sustainability of their operations and team management, things like and then we look at things like turnover, staff turnover, equality like gender equality. Their board, their management. We look at equity compensation packages. It's actually really, really comprehensive. And we have Uh, established a whole and we call it the ESG Survey which we ask new portfolio companies or potential new companies when they get very very far in the process."
	4	"we will incorporate both our environmental, social and corporate governance into our investment analysis." - "when we make an investment part of the due diligence of the companies will be to look at at the... whether they have any ESG policy in place. Uh,(...) how do they work towards fulfilling the ESG? And if they do not have it, we make sure that they implement it and that it's part of our active due diligence and investment decision. Uhm, when in terms of reporting and so on, it's what we focus at VC 4 is actually diversity. Because that's where we think we can make a difference. (...) primarily gender diversity is where we think we can have an impact."
	5	"It's a lot to do with dialogue and you start with the startups, you go through a process right now. I'm trying to make a triangle here like a funnel. So you start with what we call pre-screening when the first companies approach us, they send the pitch deck and then you say: OK does this taste like it's green or sustainable - I will actually split that and say their sustainability, the green, it's the E and the S. And then there's responsibility, which is the G." - "...so it's that's in the prescreening state and what happens then then you say, OK, let's have a meeting and then the next meeting, what we really look for is the the founders dedication. It it kind of like the that purpose driven. Yeah. Motivation that has to be in the DNA of the founders. Uh and in the whole way the business is set up that they think about it." - "You listen to what they say we we want to make it difference. We also want to make money, but we want to make a difference with this and we could choose any kind of investors. But we want someone who can help us on that journey. And in the selection process, this is where you're still in the the screening process where you start assessing. And then you start the dialogue and then from there you talk about the value chain. That's all the process, who are your suppliers? Who do you want to sell to? What do you if it's, uh packaging, how does how do you dispose of it? Can it be reused? Uh, and I think it's actually very dialogue based. Yes."
	6	"So, when we get a case, we do an original ESG screen. And we do that with all the cases that we have. So, all the companies we look at, we have a discussion around, we have to make an ESG paper on it for everyone, so that's kind of part of what we do. And... then you can always say we have verbal discussions if we should only invest into companies that are - which is what you're asking - have an integrated ESG model and are working on these things, or should be actually maybe... could we create more shareholder value and create more positive impact on the environment, if we actually take some of the companies where there's a potential to do this, but they don't have the tools to do it themselves, and we help them with those tools." - "...we have a kind of like a small check-the-box exercise in the beginning, where we have to describe to our own database, what are we looking at, what have we perceived on the sustainability agenda as being important. But we don't have a list, where we say we don't invest in this, this and that. We take each case. And talk about it and say what is the ESG angle in this case. How, what should we be worried about? What could we, where could we, risk the distracting value if we don't do something? And where could we actually do something that could improve value? And where we could make a difference."

~~Table~~ 12.2: Overview of direct quotes on the screening for sustainability (elaborate designs) gathered from the interviews; own illustration created 18.04.2022

Furthermore, the perception of NV G fits the screenings summarized under elaborate designs (Table 12.2). VC4 and 7 showed elaborate designs by reviewing their companies' policies and checking these for possible points to engage with the NVs at a later stage. This connection between screening and engagement is the common ground of all elaborate screening designs. VC1 and 5 broadened the elaborate screening approach as they reported the use of specific sustainability criteria and different phases of the process, allowing for deeper insights into the inner workings of the NVs regarding sustainability. Furthermore, of interest regarding the screening is, on the one hand, the focus on diversity mentioned by quite a few interviewees (VC1, 4, 7) and, on the other hand, the ESG angle used in three of the four elaborate screening designs.

Furthermore, the data showed that the screening depends on the stage of the NV. For example, specialist 4 states, from her experience as a founder, that investors want to see different things at different stages, from team and idea being more important in the early stages to the business metrics gaining more relevance in later stages. VC3 agrees with this perception by mapping out that in the very early stages (pre-seed), the product and idea are of significance then, in the next stage (seed), the product-market fit gains importance, and later (Series A), the focus is on business metrics such as customers and scaling efforts in general. Therefore, the data showed that the screening approaches vary between VCs and depend on the NV's stage.

5.5.3 Active Ownership

This section focuses on the engagement of the VCs with NVs. Generally, all VCs engage with the NVs in their portfolio either through network access or services related to knowledge support, revolving around business- and sustainability-related knowledge. NVs share this thought of VCs to be supportive (NV A), with NV D sharing that their investor is "…really active (…) trying to help us and trying to share his knowledge and ideas…" (20:11). This perception of investors being supportive is also voiced by the VCs themselves, who explain that VCs "…want to be active owners." (VC5, 23:39) They do so through an active approach supporting NVs in their growth (VC3). This support is often led by composed "owner agendas" (VC5) or "strategy plans" (VC6) outlining the KPIs on sustainability and business sides, which the NV will work on in collaboration with the VC. VC7 states that collaboration is their "…most important key advantage against others [VCs]…" (21:56). The data collected in the screening process can be the base for engagement, as VC5 outlines their dialogue approach in which gained knowledge during the screening is shared with the NV to advise them on the next steps. The following paragraphs outline the network and knowledge supports – the so-called value-adding services – and their effect on the NVs.

5.5.3.1 Value-Adding Services

The focus on economic sustainability and its importance, as outlined in section 5.2.4.3, shows itself again in the way the VCs engage with their NVs. VC3 says that they do not actively engage in anything but business-related themes with their NVs. He selects only NVs with a green product he then supports by building a solid business around. VC3 achieves this by focusing on customer acquisition, the formulation of the value proposition, the pricing, and the commercialization. VC7, who does not consider sustainability in investment decision-making, states that they only engage with their NVs on scaling efforts and support them in hiring practices towards more female leadership and diversity. Thus, value-adding services can be focused on business-related themes, either due to a lack of sustainability focus or a pointed sustainability focus in NV selection.

Another supporting factor mentioned is the networking aspect. NV A stated that its VC supports them by opening its network to them. Also, VC1 outlines that the network support is their main competitive edge as they offer 1-on-1 mentoring with experienced entrepreneurs to the founders of their portfolio companies. This support by people "…who have been through the journey of, you know, building, scaling, and selling eventually companies…" (VC1, 00:22) and having a community of like-minded people around them is of great importance for the success of the NV. However, connecting NVs to banks and further investors is another aim of networking (VC7). Thus, the network effect is a key factor of value-adding services underlined by VCs.

A couple of VCs also outlined how they engage with NVs on sustainability (VC1, 4, 5, 6). The support with sustainability-related knowledge is vital as NVs search for this support, and VCs are willing to support it as much as possible (Specialist 3). However, the interviews revealed that the range of support differs depending on whether investors have sustainability knowledge in-house or not. Investors with deep in-house sustainability knowledge are rare, making NVs flock to such investors when they announce their focus (VC5). As NV F explained, their sustainability-driven VC came in with a "…time and money split. So, [...] they came in with certain hours that they invested…" (14:57), providing a CO2 analysis and sustainability communication services. The solidification of the narrative for sustainability was also the focus of VC1 and 6, who do not have sustainability knowledge in-house. These VCs utilize external consultants to provide sustainability and ESG knowledge to support their NVs in measuring and reporting (VC4, 6). These sessions can be based on the data generated in the screening effort, as the VCs learn which areas their NVs need support with, which can be a focus on diversity points (VC4), ESG reporting (VC6), mitigating ESG risks (VC5), or creating more sustainability knowledge and awareness (VC1). The engagement in sustainability-related knowledge shows the general lack of in-house knowledge on sustainability in VCs, which is further outlined in section 5.5.4.2. It also shows the emergent need of NVs for it, leading to sustainability knowledge being perceived as a competitive advantage of a VC.

5.5.3.2 Change in Narrative and Mindset

The engagement can then result in "…a change […] in the mindset of the company" (VC6, 20:33), which is felt from the NV side, with NV F stating that they changed a lot due to the influence of the investors. NV F found this to be "…really an exhausting experience…" (12:52) that led to actual changes as they felt the need to please their investors, who all pushed and pulled them in different directions:

> *"…the ones [VCs] who really cared about the sustainability, they wanted us to really focus on marketing and branding and storytelling. And the business guys, they wanted us step away from that and they wanted us to focus on the operations and making like a scalable playbook that we could pass to another operational team and build it that way. Uhm, so I think it... It depended a lot and... Actually, I think it ended up hurting us that we brought in investors with such different motivations."* (NV F, 09:57)

NV E confirmed the pressure to change, highlighting that their investors pressured them towards specific ways to generate revenues. However, NV E stated that it is easier for him to change a narrative than the core of their business. Therefore, a VCs engagement can lead to changes in the NV, as it can feel pressured into different directions.

This pressure for change driven by investors can be seen before an investment is placed, as Specialist 2 observed one NV which changed its narrative multiple times to please potential investors. She highlighted that there are different perspectives of what is needed from investors and that NVs "... feel like they need to fulfill all the different expectations [from VCs]…" (Specialist 2, 31:43), which are not only focused on profit but sustainability narratives, too. As Specialist 4 explained from her observation of another founder, this perceived pressure can lead to founders fearing the influence and control investors can have on their business, resulting in NVs trying to survive without investor money for as long as possible. Thus, the data suggest that the pressure of VCs on an NVs narrative exists before an investment, making founders with a sustainability case hesitant to work with business-focused VCs.

5.5.4 The Challenges VCs face with Sustainability Integration

However, the engagement on sustainability-related themes does not come without its challenges. This section describes three challenges identified in the data: the measurement of sustainability, the lack of knowledge, and the lack of guidance.

5.5.4.1 Measuring Sustainability

NVs have a problem of not knowing how to measure sustainability, which is a primary motivation for choosing a specific investor with such knowledge (Specialist 3), as seen in the case of NV F. It is such a dire need for NVs, as there seems to be a mismatch of realistic expectations around which measurements NVs can provide (Specialist 2). VC3 sees this problem, too, stressing his dislike of the measurement expectations regarding sustainability. He emphasizes that NVs do not have the time and resources to adhere to such requests at their early stage.

Furthermore, he recognizes that mature companies struggle with measuring and reporting on ESG, thus making the point that it might not be fair to ask this of NVs (VC3). VC1 also mentions the need from a VC side to be conscious of not requesting too much sustainability reporting and measurements before an investment, as it can affect their competitiveness in the ecosystem, highlighting competition between VCs. Furthermore, as mentioned in section 5.5.3.1, VCs engage with NVs upon their measurements after an investment. However, VCs are hindered by their lack of knowledge in this case, as they need to utilize consultants or experts to engage with NVs on sustainability. Thus, the challenge of measuring sustainability lies heavy on the shoulders of both NVs and VCs – a point of struggle for the entire sustainability area.

5.5.4.2 Lack of Sustainability Knowledge

The lack of sustainability knowledge challenges the investors. VC7 highlighted that a lack of knowledge on sustainability-related themes and the feeling of not understanding SBMs could lead to investors deciding not to invest in sustainability. He further states that this is connected to a lack of resources, as they are a smaller team, and the inclusion of sustainability themes in investment decisions would take too many resources (VC7). A lack of understanding can then result in a lack of trust in the business case for sustainability, as observed by NV E. NV G further said that "... investors don't really know what the right standard should be and so on themselves they are not experts either" (32:27) showing that NVs are aware of the lack of knowledge on the investor side. It can lead to VCs making an investment decision only on the belief that something is somehow sustainable (Specialist 3), which shows itself in the "pragmatic approach" of VC2 as described in section 5.5.2. The media can further push towards more skepticism against sustainable business cases, as NV D's case revolving around offsetting shows. Thus, sustainability knowledge seems to be a criterium when dealing with sustainable NVs, making the involvement of consultants and experts during the screening and engagement more critical for VCs (VC1, 2, 5, 6).

5.5.4.3 Lack of Guidance

The interviewees show that a lack of knowledge is connected to a lack of guidance for early-stage VCs:

> *"[…] I think also because investors don't really know what the right standard should be and they are not experts either. Uh, they first and foremost think financially, market and business related [...] And then they're starting to get more and more knowledge about, sustainability themselves, but don't fully have it right. So they typically adopt their requirements and so on from someone else, another investor that knows a bit more or an agency of some sort."* (NV G, 32:27)

NVs and VCs mentioned a misalignment on what should be a common approach which is reflected in the different screening and engagement practices. NV C stated that "…there's a missing link like […] there's not like the same thought of how we should work together. Yeah, there's like a misalignment of just all the parties when it comes to these very unexplored fields." (18:29 & 18:43). VC6 adds to this by stating that the complexity of sustainability is partly due to differing demands of their LPs, leading to very different approaches to sustainability: "It would be simple, if you could just say that there is this one thing you have to do and then use these rules and then you do it. But everybody has an idea. We have different investors who have different demands to what we do." (10:49). The lack of the "one way" to deal with sustainability then leads to a try-and-error approach which is shown by VC1 stating that the field is evolving with regulations, making them try different things to find their way.

The lack of the "one way" persists due to a lack of guidelines, as common sustainability frameworks do not fit in the context of NVs and early-stage VCs. In this regard, VC5 mentions the misfit of the EU taxonomy with NVs as it is "…working with the mature industries. And startups, it's all new, so you can't define that, uh in advance." (13:21). Further, VC4 mentions that investor-related frameworks such as the UN PRI are not a fit, saying "...we're not a signatory because it doesn't really fit to a venture company, the UN PRI concept." (05:35). She states that the framework is not applicable because of the measurement requirement, which is adapted to bigger companies but not NVs. This lack of guidance is connected to the challenge of measuring sustainability, as Specialist 2 highlights that the lack of guidance leads to "…people didn't know what critical questions to ask you [sustainable NV]." (19:09).

Generally, Specialist 3 and VC6 and 7 believe that a common framework – a "one way" – would support them and their understanding of SBMs in the hope of solving the challenges identified in this section. As VC7 states:

> *"…going back to that framework […] that would be very helpful because of, for other reasons and that is we see a lot of cases that claim to be some sort of a sustainability company. […] we're pretty ignorant to that unfortunately. And […] I mean it would be great if I had a tool that when we talk to these companies that are within the sustainability sphere, that I could really test […] what they say is true and whether it holds truth from an economic point of view that would actually be very helpful."* (29:48)

5.6. Threats to the Sustainability Trend

Apart from the challenges of integrating sustainability for VCs and the hindrances to the shift towards sustainable business cases, the interviews highlighted several threats to the trend of sustainability in general. Four thematic foci were identified, which are explored in the sections below: the differing sustainability understandings, the "looking good" vs. "doing good", the general need to re-think society and economy, and the question of who is responsible for a shift towards sustainability (Table 13).

Finding (# of finding in general)	Specialist				Venture Capitalist (VC)							New Venture (NV)							# voiced a theme
	1	2	3	4	1	2	3	4	5	6	7	A	B	C	D	E	F	G	
Differing Sustainability Understandings: The understanding of what sustainability entails differs on both NV and VC sides leading to the trend of sustainability being threatened by the broadness of the term, the resulting lack of understanding, the usage of this knowledge gap by consultants, and a perceived saturation with the term itself (18)		x	x			x				x	x	x	x		x	x	x		10
"Looking Good" vs. "Doing Good": NVs and VCs both see the need to signal and communicate their sustainability approaches, however this results in a general critique of "looking good" vs. "doing good" regarding sustainability in early-stage NVs and investments, which hinders the trend towards sustainability in business cases (19)	x	x	x			x			x	x	x	x	x		x	x		x	12
Need to Re-Think Society & Economy: There is a systemic nature of the issue of NVs with a sustainable business model not being able to easily compete in the ecosystem stating that systemic changes are necessary to further support any shift towards sustainable business models (20)		x		x															2
NV not Responsible for the Shift: Criticism is voiced on the question on who is to be responsible for pushing the shift for sustainable business models – investors, governments, society – as well as which party – bigger companies, SMEs, or NVs – should carry the burden of the implementation (21)							x			x								x	3

Table 13: Overview of themes uncovered in interviews related to threats to the sustainability trend; own illustration created 15.04.2022

5.6.1 Differing Sustainability Understandings

NVs, specialists, and VCs underlined the understanding of sustainability to be generally different (NV A, B, D, E, F; Specialist 2, 3; VC2, 6, 7). Appendix 3 shows an overview of all quotes which support this observation. The interviews revealed that the understanding of sustainability is dependent on the person and their preferences (NV A, D, F; Specialist 2; VC2) which is in line with the described differences in VCs in section 5.3. Specialist 2 disclosed that her understanding of sustainability was shaped by the different understandings of the sustainable NVs she worked with. Also, sustainability was seen in different levels (NV D) and differing contexts (NV A). NV E stated that the differences lead to differing solutions to sustainability issues, thus seeing possibilities for business cases for sustainability. Therefore, the interviewees disclosed a broad range of understandings of sustainability, highlighting the complexity of the theme.

However, the broadness is seen critically as NV D says, "...it could be a problem that it's a really broad term..." (04:41). NV B further backed this critique, who states, "... sustainability means so many things and I think it's becoming so big. So, it's pretty useless to be honest" (02:12). For NV B, the broadness hinders his understanding of the theme. The resulting general lack of understanding of the theme shows itself in statements such as:

> *"I think it's also because so many people have different understandings of what sustainable sustainability means to them [...] especially when we're talking about ESG. There are not so many people who really understand what it is or how it works."* (NV D, 10:54)

Specialist 2 then states the theme itself to be filled with many buzzwords, whereas VC2 and 7 believe sustainability itself to be a buzzword. The wording mirrors the mentioned saturation of the general population regarding sustainability (Specialist 2). Saturation is perceived as a danger for sustainable NVs as "... if sustainable startups equals either no investment or consumers being drained. Then we really have a problem." (Specialist 2, 38:48). A similar observation was voiced by VC2, who sees these buzzwords to be "flocked by consultants" (VC2), which he explains as "Once you can see that there is a buzzword that people can make money on, then they will flog to it [and] once that is matured and saturated, then you find a new buzzword..." (13:02). Thus, sustainability is threatened by the term's broadness, the resulting lack of understanding, the usage of this knowledge gap by consultants, and a perceived saturation with the term itself.

5.6.2 Looking Good vs. Doing Good

Even though the concept of sustainability is heavily contested and complicated, NVs and VCs show the need to signal that they are implementing it. On the NV side, for example, NV A stated that they are using the Greenhouse Gas Protocol, have a B Corp certification, are part of the leaders for climate change action, and have pledged to be a part of the race to zero. Furthermore, Specialists 1 and 3 see the increased integration of SDGs in pitch decks and business models, with Specialist 2 stating that "...there's been such a huge focus on impact and the SDGs.." (31:15). VC5 even said that she advised an NV which did not state any SDGs to use them as she believes that "You can't be a startup today without thinking about it." (34:59). Furthermore, NVs increasingly tend to show ESG policies, as VC4 mentions that approximately 50% of the NVs she sees have already been incorporated. However, signaling for sustainability can be seen on the VC side, too. The later stage VC6 states that they are members of the UNPRI and Global Compact. The early-stage VC4 states that while they cannot be a UNPRI signatory due to the measurement issues mentioned already, they use it as a guide and are a member of the

DVCA, which focuses on the active engagement of investors. Thus, both NVs and VCs signal their compliance with voluntary sustainability frameworks.

Signaling is a part of sustainability communication to third parties, which NVs see as increasingly important. NV A says that "…it is necessary to communicate it, 'cause otherwise the same business is losing into the attention of the consumers or their own customers" (04:49), highlighting that only through communication they can use sustainability as a differentiation factor to traditional business models in their industry. They go as far as creating detailed stakeholder reports on their sustainability measurements. However, NV D observed that their shareholders only request the communication of financial reports stating that they believe their investors think an "… increase in revenue from our consumers means that increase in impact." (06:58). VCs also communicate their practices regarding the value of branding and reputation in section 5.2.3.

However, the signaling and communication of sustainability efforts of NVs and VCs result in the critical reflection of how much of the sustainability trend is about "looking good" instead of "doing good". 12 of the 18 interviewees mentioned this critique – 3 of them talking about NVs (NV A, B; Specialist 2), 5 talking about VCs (NV D, E, G; Specialist 1; VC2), and 4 mentioned both (Specialist 3; VC5, 6, 7). Specialist 2 perceives an uneven split between both groups: "Looking Good from the VC side definitely and then about doing good from the startup side." (34:32). However, on both the VC and NV sides, it was mentioned that there are players who do good instead of only looking good, too (NV A, D, G; Specialist 1, 3; VC5, 6). Thus, it is a theme on the mind of all ecosystem players concerning sustainability, with positive and negative thoughts on NVs and VCs.

The tendency of VCs to be perceived as looking good is connected to the branding and reputational effect described in section 5.2.3 as NV F states that "…I don't know how much they do actually care. I think some of them do […] But yeah, I think it's so much branding now." (16:33). BAs especially are seen to integrate business cases for sustainability in their portfolio "...to add it to their LinkedIn." (NV D, 12:09). However, another VC reported spotting other VCs who seemingly add responsible or sustainable investment agendas, "But […] underneath the hood nothing has changed." (VC7, 15:58). Quite a few VCs also mentioned that they perceive VCs to rather be on the "looking good" side, too (Specialist 1; VC2, 5, 6, 7), showing that it is not a one-sided perception of NVs. Here, the narrative of "old white men" and their lack of actual knowledge to implement ESG while wanting to look like they do was stated (VC5).

NVs are also criticized for doing more "looking good" than "doing good" by all groups. NV A, for example, states that she sees this trend which results in their own company only communicating its core sustainability metrics.

Furthermore, the usage of the SDGs is seen from a critical side, as Specialist 2 disclosed that a lot of NVs suddenly started using SDGs after a workshop on it, even though she felt that the change of narrative in many NVs "…didn't match like it didn't make sense." (09:12). Furthermore, Specialist 3 observed that quite a few NVs brand themselves using the SDGs on the first page of their pitch decks, even though they have a limited impact. VC7 stated that a lack of trust towards NVs "doing good" paired with a lack of knowledge makes them not invest in sustainable NVs. Thus, the data suggest a general perception of a clash of "looking good" vs. "doing good" regarding sustainability in early-stage NVs and investments, which hinders the trend towards SBMs.

However, VC5's interview shows that NVs get pressured into using the SDGs to "look good" from an investor perspective:

> *"I said, at least at the very minimum you write the SDGs. Just choose three. You can't go wrong even though they don't fit with anything 'cause they were supposed to be for countries. But start with that and then you work your way through and then just have some thoughts and integrate it into your pitch from the beginning."* (VC5, 33:41)

VC6 further shows that SMEs also perceive the push from investors but are reluctant to integrate sustainability. He stated SMEs respond: "Nah, that's not important. It's just because you guys have some investors who want to do this, and it's, you know, just to kind of check the box exercise." (13:12). Thus, the data shows a general feeling of skepticism towards all players in the ecosystem, signaling and communicating their implementation of sustainability, which is seemingly based on investor pressure.

5.6.3 The Need to Re-Think Society and the Economy

The interviews with the Specialists revealed an even deeper running criticism. Specialists 4 and 2 saw a systemic problem behind the challenges of integrating sustainability in both NVs and VCs. Specialist 4 stated that the economic system is and will be all about money and demand stating:

> *"…unfortunately I think we're still living in a very capitalistic world [...] It's basically about demand, right? So when consumers demand sustainable products the companies will change, and to support that demand and then the investors will follow because that's where the money is."* (13:04).

Thus, one then needs regulations to get the system to be more sustainable by "driving capitalism out" (Specialist 4). One critical point highlighted by both Specialists 2 and 4 is the short-terminism of the financial system. Both see that SBMs tend to need longer to become financially viable – which is the essential VC decision-making point outlined in section 5.2.4.3. Thus, investors need to commit to the long term and need the attitude of: "I want to commit to this, I want to invest in a startup where we might not see results within 10 years or so…" (Specialist 2, 12:15). However, until regulations and investor long-term thinking are ingrained in the financial system, Specialist 2 sees the need to create a “safety net” for sustainable NVs to survive and compete with traditional NVs. Specialist 4 even goes further by stating that the entire system needs to change to truly incorporate sustainability, showing the need for a “rethinking of the system” to depart from a focus on financials alone:

> *“…because otherwise you have to kind of break the entire, like society down. Because we are living in a society where we do measure growth on capital like GDP and those kinds of measures. And we measure welfare and those kind of measures as well. So, […] if you want to change. You need to change the entire society. […] Like you always measure that [innovation] in companies, and their valuations and growth and it’s always about more money and to earn more money you have to sell things, and until we kind of break that cycle.”* (22:58 & 23:18)

To conclude, Specialists 2 and 4 see the systemic nature of the issue of NVs with an SBM not being able to easily compete in the ecosystem, stating that systemic changes are necessary to support any shift towards SBMs further.

5.6.4. Who is Responsible for the Shift towards Sustainability?

Another critical thought voiced independently by NV G and VC3 and 6 is the question of who should carry the burden of the shift towards sustainability. VC3 says that NVs lack basic resources, making it harder for them to carry the burden of the shift:

> *“When you look at the people in Bangladesh, and they barely have […] enough money to feed their children, then they just don't have the luxury of also considering the environment. And the analogy […] when you have a startup company and you don't have enough money to basically pay your salaries, then if you also have a pressure to […] report on stupid stuff on ESG, then […] you don't have the accumulator surplus yet…”* (28:17)

Furthermore, VC3 states that, next to the unfairness of letting NVs carry the burden, one needs to think about the responsibility for the damage that has been done so far, saying that “…it's the biggest corporations that have accumulated surplus, and also have the […] negative impact on the environment. And they will need to make a change first and then […] you can push it [the responsibility] down.” (28:17). This thought of the bigger companies needing to change first is also voiced by NV G, who says that “…companies are just the main driver of the footprint of the world […] so they are the one that needs to drive it [taking responsibility].” (37:41). In the light of this, VC3 criticizes the burden placed on the investors, too, saying that if VCs “...think that they need to be the ones to push an ESG agenda down to their portfolio. […] my opinion is, that that's not their role.” (25:03).

VC6 then brings in a further point by stating that focusing on companies that have already implemented sustainability measures might be the wrong choice. Instead, he argues that the engagement with companies, which are lacking the drive toward sustainability, might have more impact:

> *"I think we also have a lot of companies that are small and medium sized companies who employ a lot of the workforce in Denmark and who are very important. And we need to make sure that they also implement the ESG agenda. Uh, so if everyone is just investing in green companies, I think that that's difficult. We need to improve the companies that have the potential as well."* (06:34)

Thus, criticism is voiced on who is to be responsible for pushing the shift for SBMs – investors, governments, society – as well as which party – bigger companies, SMEs, or NVs – should carry the burden of the implementation.

6. Discussion

This chapter discusses the analysis findings in relation to the SLR (chapter 2) and developed theoretical framework (chapter 3). The discussion allows for drawing practical generalizations and elaborating on the theoretical framework to answer the research question. In the following, first, the findings from the analysis will be discussed related to the trend, re-think process, and hindrances as identified in the SLR (sections 6.1, 6.2, and 6.3). Second, the findings of the analysis and SLR are used to elaborate on the theoretical framework in the sustainability context (section 6.4). Lastly, the core theoretical implications are summarized (6.5), and managerial implications are stated (6.6).

6.1 Trend towards Sustainability and its Driving Pressures

The thematic analysis (chapter 5) showed a general trend from both VCs and NVs to move towards sustainability and ESG integration and that it will be a 'must have' in the future. However, it became evident that there is disagreement about the reach and depth of this trend, as sustainability is often seen as a buzzword and ESG and sustainability are often only superficially integrated as a response to pressures. There are three pressures identified by the SLR and interviews which drive VCs and NVs towards ESG and sustainability integration: societal demand, regulative demand, and LP demand.

Firstly, the analysis showed that VCs and NVs face societal pressure due to (a) increasing consumer demands for sustainability and (b) a shift of the younger generation towards more sustainability awareness. These findings align with Cantele et al. (2020), who argue that businesses are generally pressured towards sustainability implementation by society. Moreover, the literature supports the findings of increasing consumer demand for sustainable products and services (500 Startups, 2020a). In addition, both 500 Startups (2020a) and the interviews provide evidence that the increasing demand from society is strengthening the business case for sustainability in NVs. Therefore, the interviews imply that the societal demand motivates VCs to follow the trend and integrate sustainability and ESG in their investment decisions. Thus, the societal demand pressures NVs, strengthens the business case for sustainability, and motivates investors to follow the trend.

Secondly, the analysis showed a regulative demand for sustainability and ESG integration. While Christensen et al. (2019) argued that governmental regulations force businesses to adapt, the interviews showed that the regulative demand drives VCs towards sustainability and ESG integration. However, it is found that the regulative impact on VCs is dependent on their structure. Smaller VCs do not perceive regulative pressure, while larger VCs backed by institutional LPs have stressed the importance of complying with regulations. Thus, while literature states that regulations drive businesses towards more sustainable business practices (e.g., Christensen et al., 2019; Schaltegger et al., 2016), this is arguably only the case for VCs. Moreover, it is important to consider differences in VC structures and their influence on the perceived regulative demand.

Based on the interviews, it is argued that the regulative demand is not pressuring NVs, as none of them stated that they are very aware of the regulations concerning their own business. Instead, sustainable NVs view regulations as a factor that strengthens their business case, as this leads to an increased usage of their solutions from larger companies who need to comply with regulative demands. This finding contrasts with the literature, highlighting that, already in early stages, NVs need to be aware of regulations that could impact their business in the future (CDC Group & FMO, 2020). Therefore, regulative demand only indirectly impacts NVs by strengthening the business case for sustainability.

The third pressure identified in the interviews and SLR is LP demand. The interviews highlighted that VCs are mainly driven by the demand of their LPs, making ESG and sustainability integration a necessity. While this identified pressure is in line with the CDC Group and FMO (2020), the analysis showed that the perceived LP demand for sustainability and ESG integration is dependent on the VCs structure. The findings imply that there are different types of LPs and that they influence VCs' investment decision-making, which is in line with Barber et al. (2021) and Alakent et al. (2020). In the sustainability context, it is argued that larger VCs with institutional LPs are more conscious of moving towards sustainability and ESG integration and that these VCs often require formal policies and measurements from their NVs to report. In contrast, smaller VCs, which private investors back, do not face pressure towards formal reporting of sustainability measures to their LPs. Some even state that their LPs are not interested in sustainability integration in the investment process. Thus, the findings are in line with the literature and show that LPs influence VCs' focus on sustainability and whether related formalities such as reporting are required.

Lastly, this thesis found an interconnection of the pressures as they support each other. Moreover, the interviews imply that the high pressures toward sustainability and ESG integration can bear the risk of VCs and NVs engaging in window dressing rather than deep integration.

6.2 The Re-Think Process

The SLR showed that the three pressures discussed in section 6.1 drive a re-think process towards sustainability and ESG integration. While the SLR showed the re-think on the NV side, the analysis indicates that it is also seen for the VC side. In the following, the re-think process will be elaborated on in light of the findings.

6.2.1 NV Re-Think

Generally, the interviews showed a shift toward SBMs driven by the urgency for change which is in line with the literature (e.g., Joyce & Paquin, 2016; Schaltegger et al., 2016). In line with, e.g., Bocken (2015), the interviews indicate that integrating sustainability in a business model at an early stage is crucial. However, it became evident that NVs have differing sustainability foci, implying that there is no 'one way' to integrate sustainability into a business model. The findings indicate that VCs have different expectations about what a SBM is, as some connect integration with SDGs and others more with ESG policies.

Furthermore, Volkmann et al. (2019) state that it is important for NVs with SBMs to understand how their business is connected to the SDGs at an early stage. This importance was also identified in the interviews, as VCs often expect NVs to integrate SDGs in their business models and pitch decks as it positively influences the investment decision. However, it can be argued that SDG integration in NVs is often accepted superficially by the VCs, as one VC highlighted that they just want to see some SDGs in a business model, even if it does not entirely fit. Thus, while the findings support Volkmann et al.'s (2019) statement related to SDG integration, they also imply that it is rather superficial, even though NVs are increasingly expected to do so.

Moreover, while academia stressed the importance of NVs to measure environmental impact (Volkmann et al., 2019), this aspect was mainly faced with criticism from the interviewed VCs. The criticism from VCs related to measuring environmental and general impact in early-stage NVs was based on the lack of resources and knowledge from the NV side. This critique point is supported by Bergmann and Utikal (2021), who highlighted the difficulties for NVs to measure impact. The interviews show that VCs find it more important that NVs focus on growth in early stages, which is in line with Bergmann and Utikal (2021), who stressed the importance of NVs in considering revenue generation and, thus, economic sustainability in their business models. The interviews implied that impact measurements should be a later-stage focus of NVs, while growth and economic aspects are more important in the early stages. Thus, based on the findings, it is assumed that even though ESG and sustainability integration is important for VCs and NVs in early stages, the focus still stays on financial metrics due to a lack of resources and knowledge on how to make impact feasible for investors.

Another factor influencing sustainability and ESG integration in a business case is the founder mentality. The analysis showed that sustainability and ESG integration is mainly driven by the personal motivation of the founder to tackle social or environmental issues. Motivation is often a more dominant driver for integration than external pressures, which aligns with Cantele et al.'s (2020) findings. However, in the interviews, VCs and Specialists stressed the importance of NVs not being too passionate about sustainability, thus disregarding the business case. Furthermore, if the business model lacks fundamentals and is too messy, it disqualifies these sustainable NVs for investments. Thus, the founder mentality drives sustainability and ESG integration in NVs, however, sustainable NVs still need a promising business case to gain funding.

6.2.2 VC Re-Think

The interviews showed factors such as intrinsic investor motivation and ESG as risk mitigation support the shift towards sustainability and ESG integration in investment decision-making and thus SBMs. For this thesis, it is proposed that these factors demonstrate a re-think process in VCs.

A factor that did not become apparent in the SLR but the analysis is that intrinsic investor motivation plays a role in the importance of sustainability and ESG integration in a VCs' investment decision. The interviews highlighted that all VCs showed an intrinsic motivation to be more sustainable in their private and professional life. The motivation, however, is utilized differently in investment decision-making based on different structures of VCs. The personal motivation of VC3 to address climate change drives investments, as he tackles environmental issues through NVs. This intrinsic motivation shared by his private LPs is deeply integrated into the investment decision process. For other VCs, the findings imply that personal motivation is a driver for sustainability and ESG integration in investment decisions, even though the integration is mainly driven by LP demand. For another VC, even though he is personally motivated to follow sustainability, the VC he is working for does not have a sustainability focus as private LPs backing the VC are not demanding sustainability integration. Thus, it is assumed that while the personal motivation of a VC plays a role in sustainability and ESG integration, the LPs still have the 'last word' and steer the investment behavior of the VC.

The interviews revealed that VCs perceive ESG integration in investment decisions for early-stage NVs as a way to mitigate risk. While it is in line with Winterberg et al. (2020) and 500 Startups (2020a), based on the findings, it is argued that the perceptions of early-stage VCs differ regarding which ESG risks (e.g., diversity aspects, environmental measurements) to consider and to what extent. This implies that there is no common perception of what NVs need to integrate into their business models to mitigate ESG risks in the eye of the VCs. Moreover, the findings indicate that risk mitigation might be a factor implying that NVs and VCs are not truly sustainable. The interviews highlighted that ESG risk mitigation was merely placed on top of a traditional business model, questioning if it is truly a re-think process on the VC side. Thus, even though ESG risks are a decision-making factor for VCs, the superficiality and uncertainty about which factors are important in the early stages to mitigate risks make a deep re-think process of VCs questionable.

6.3 Hindrances to the Re-Think Process and the Shift towards Sustainability

While sections 6.1 and 6.2 show a shift towards sustainability and an ongoing re-think process from both NVs and VCs, the SLR and interviews found that there are hindrances to these developments. As shown in section 6.2.1, the re-think process of NVs is hindered by a lack of resources and knowledge. The analysis indicates that this lack of resources and knowledge can result in two possible outcomes for NVs. Either, these constraints can result in traditional NVs not focusing on sustainability and ESG integration in early stages. Or the NVs which have a business case for sustainability or want an SBM to try to make up for their lack of resources and knowledge through investor support. It is argued that a lack of resources is connected to a lack of guidelines, which is mainly related to the challenge of early-stage NVs being different from established companies, which are the target of sustainability and ESG tools. Thus, while there is a re-think process from NVs, they face interconnected resource, knowledge, and guideline constraints to integrate or measure sustainability and ESG.

In addition, the interviews revealed hindrances to the shift and rethink process are also faced by VCs. The analysis indicates a lack of knowledge related to sustainability from the VC side, even though this knowledge is crucial for VCs to deal with sustainable NVs. This finding is in line with Antarciuc et al. (2018), stating that VCs need a deep understanding of the business case of an NV. However, as this proves difficult for most VCs in a sustainability context, the analysis shows that VCs use the expertise of consultants and experts during the screening and engagement process to overcome their knowledge constraints. Furthermore, it was found that some VCs refrain from investing in business cases for sustainability due to their lack of understanding. Thus, NVs and most VCs face a lack of sustainability knowledge, which hinders the re-think process.

Another hindrance identified in the SLR and interviews is a lack of guidance on the VC side. The interviews imply no common approach for integrating sustainability and ESG in the screening and engagement processes, which stems from a lack of guidance and common frameworks in the early-stage VC scene. This finding is in line with the CDC Group and FMO (2020), stating that a reason for the lack of ESG integration could be the lack of guidance for VCs on how to implement it in investment decision-making. Furthermore, based on the interviews, it is argued that the lack of guidance is related to existing frameworks such as UN PRI and EU Taxonomy not being targeted towards NVs and early-stage VCs. Arguably, this results in a missing common approach to screening and not knowing which NVs are truly sustainable, resulting in different approaches and criteria from VCs. Therefore, VCs are hindered by the lack of guidance as standards and frameworks are not made for NVs and early-stage VCs, resulting in differing integration approaches.

The lack of knowledge and guidance results in NVs and VCs being challenged in measuring sustainability efforts. While the interviews showed that some VCs need to report measurements to their LPs, some stated that such measurements are too complicated in early-stage NVs. This challenge is arguably related to the lack of guidance on measuring and the lack of resources to do so. Thus, both NVs and VCs are hindered by the challenge of measuring sustainability.

Moreover, the hindrances and challenges discussed show themselves in the differing understandings of sustainability as identified in the interviews. While the SLR highlighted the importance of considering the TBL (e.g., Elkington, 2018; Bocken et al., 2015), the interviews imply that both NVs and VCs do not always view sustainability in line with this approach. Instead, it became evident that sustainability is perceived differently, with some focusing on both S and E issues and others only focusing on one. This results in a perceived broadness of the term sustainability due to a lack of common understanding, which consultants use to make money out of the sustainability agenda. This finding is in line with Elkington's (2018) 'recall' of the concept of the TBL as mentioned in the SLR. Thus, the varying understandings and VC foci of sustainability further hinder the re-think process.

To conclude, it is argued that there is an interconnectedness of the hindrances discussed above, which results in them representing a vicious cycle of hindrances for both NVs and VCs (Figure 7). Suppose VCs and NVs lack knowledge, resources, and guidelines for integrating and measuring sustainability and ESG efforts, which results in different understandings and approaches. In that case, no one knows what the correct approach is or what even can be viewed as truly sustainable. This, in turn, leads to VCs having to bring in consultants to assist them, which drives up costs of sustainability integration. Finally, it is argued that this vicious cycle of hindrances results in a lack of readiness for the trend towards sustainability from VCs and the public, which makes it difficult for sustainable NVs to succeed.

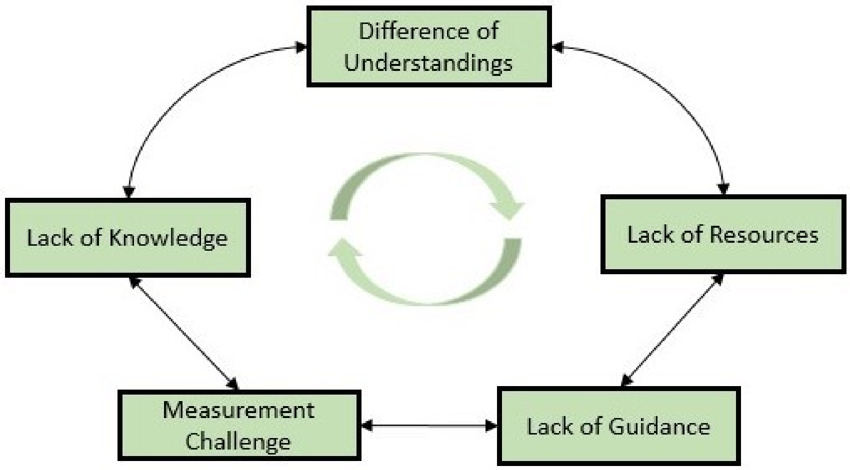

Figure 7: The vicious cycle of hindrances; own illustration 26.04.2022

6.4 How Sustainability Fits into Investor Sensemaking

After having established that there is a trend for sustainability for both NVs and early-stage VCs and that there are hindrances to the trend, the following section focuses on utilizing the findings of the analysis to show how sustainability relates to the theoretical framework. The developed theoretical framework outlines the interrelation of identity, legitimacy, and investor sensemaking for early-stage investors and NVs (chapter 3.4).

6.4.1 Legitimacy Thresholds and Institutional Pluralism in the light of Sustainability

An integral part of the theoretical framework is the existence of multiple legitimacy thresholds. The concept of legitimacy thresholds is based on the proposition that an NV faces differing audiences with different expectations during its growth journey, leading to different perceptions of what is viewed as legitimate (Fisher et al., 2016). This situation of differing stakeholder expectations faced by an NV is called institutional pluralism (Fisher et al., 2016). The interviews showed that all groups (NVs, VCs, and specialists) were aware that NVs are exposed to different expectations from different investors regarding the integration of sustainability at different stages. Furthermore, the interviews showed differences in expectations regarding sustainability integration between VCs in one threshold. Therefore, the findings contradict Zimmerman and Zeitz's (2002) assumption of a single legitimacy threshold and support Fisher et al.'s (2016) proposition of multiple legitimacy thresholds, furthermore showing differing expectations regarding sustainability from VCs for reaching one legitimacy threshold.

Fisher et al. (2016) name legitimacy evaluation factors of VCs in the conceptualization stage of an NV. These factors, such as the "perceived market potential" (Fisher et al., 2016, p.390), focus on the economic viability of an NV. The interviews supported the focus on economic factors and will be further discussed in section 6.4.3. However, the analysis showed that VCs also saw the need to incorporate sustainability and ESG measures into their decision-making process. The form of sustainability integration showed no common ground between VCs due to the cycle of hindrances. While some VCs expected early-stage NVs to show ESG policies and SDGs integrated into the business model, one VC stated that only the product itself needs to be sustainable and further measures can be added at a later stage – showing a misalignment in VC expectations of what sustainability in an NV is. Furthermore, VCs showed different sustainability foci, with some focusing exclusively on the E, others focusing on the S, and others again focusing on both. Thus, it was found that in investor decision-making, sustainability criteria played a role next to the economic criterion; however, the sustainability assessment highlighted that VCs show no common ground on what sustainability entails.

Concluding, multiple legitimacy thresholds imply that founders of an NV need to adapt when facing a situation of institutional pluralism. This need for adaptation seems to be especially true for sustainable NVs as there are highly heterogeneous expectations regarding sustainability in early-stage VCs.

6.4.2 Adaptation of Identity and Identity Claims regarding Sustainability

The theoretical framework highlighted that in a situation of institutional pluralism, an NV makes an identity claim to show that it is in line with the expectations of a new stakeholder group (Navis & Glynn, 2011; Fisher et al., 2016). The interviews showed NVs responding to investor pressures in the form of changes in narrative or mindset either before the deal as a result of screening processes or after a deal as a result of engagement practices. The interviewees described these changes in narrative and mindset, which show either an adaptation of identity or a new identity claim in the context of sustainability in two different ways. Firstly, a new focus on more economic sustainability in NVs with an SBM. Founders of sustainable NVs reported fearing this change when dealing with business-focused VCs. Secondly, a sudden focus on adding some sustainability into traditional business models, which often leads to "window-dressing" through sustainability narratives. Therefore, the investor pressure on NVs to include sustainability factors leads to adaptations of identity and identity claims from traditional business models to incorporate sustainability, whereas investor pressure in general leads to sustainable NVs adapting their identity and identity claims in favor of economic sustainability.

Investor sensemaking is the process in which an investor reviews the identity claims to make a plausibility judgment (Navis & Glynn, 2011). If an NV is judged plausible, the identity claim then merges into the entrepreneurial identity. The sensemaking process in the light of sustainability is elaborated upon in the next section.

6.4.3 Investor Sensemaking regarding Sustainable NVs

The interviews highlighted three overarching themes influencing investor sensemaking: economic sustainability, the business case for sustainability, and the understanding of sustainability. In the following, the themes are depicted.

Firstly, the interviews underlined the importance of economic sustainability in the investment decision-making process, which is in line with Fisher et al. (2016) and their legitimacy evaluation factors of VCs in the commercialization stage. The interviews showed that economic sustainability is a necessity as a sustainable NV will not have an impact without showing potential for growth and revenues. This thesis found that the VC focus on economic sustainability is especially driven by the demand of LPs to generate revenues, which is in line with the SLR depicting the main aim of a VC being the increase of returns upon EXIT for LPs (e.g., EoF, 2006; Williams & Sharamitaro, 2002). Thus, in the sustainability context, a VC first and foremost focuses on economic sustainability in an investment decision.

Furthermore, the literature found short-terminism to be the biggest threat to sustainability (Bansal & DesJardine, 2014; De Lange, 2017). While the interviewees did not directly depict short-terminism as a threat, it became evident that SBMs tend to need a longer time to generate revenues. This long-term game was then seen as clashing with the profitability focus of VCs, making it difficult for sustainable NVs to gain funding. It can be argued that the clash of short-terminism with the long-term game of sustainable NVs shows a lack of trust of VCs in business cases for sustainability to generate revenue. Therefore, the threat of short-terminism to sustainability rather showed itself through the focus on economic sustainability and the maximization of returns upon EXIT shown by early-stage VCs, which makes it difficult for NVs with a SBM to gain funding.

Secondly, the interviews underlined the importance of the business case for sustainability for investor sensemaking. The business case for sustainability is strengthened by the pressures stated in section 6.1. This finding is in line with the SLR, which highlights that the environmental and social challenges offer business opportunities for NVs (Kuckertz et al., 2019; Bergmann & Utikal, 2021), which was found to increase the interest of a VC in a sustainable NV. However, even though the interviews and SLR highlight the importance of the business case for sustainability, the interviewed VCs showed different perceptions of what it is. For some, the product itself needed to be sustainable, but for others, the way an NV was run (e.g., diverse leadership, hiring practices) showed a business case for sustainability. This lack of a common understanding relates back to the vicious cycle of hindrances as it is questionable how VCs are to know what a sustainable NV entails if they lack sustainability knowledge and guidelines. Therefore, it is found that the general notion of a business case for sustainability supports sustainable NVs in their funding search, however, a positive perception from VCs is impeded by the vicious cycle of hindrances.

Thirdly, the interviews showed that the actual integration of sustainability in the investor decision-making process is dependent on the investor's understanding of sustainability. This dependency shows itself in the screening processes for sustainability which differ, ranging from minimalistic negative screening approaches to elaborate screening designs (tables 12.1, 12.2). One example of this differing understanding of sustainability is the dominant theme of diversity seen in the interviews. Gender diversity is a core theme of VCs when speaking about sustainability, and it is implemented by some VCs in their screening approaches, whereas others do not screen for it. This misalignment leads to confusion in the field, which can hinder sustainable NVs as they might be sustainable in the eye of one VC but not in the eye of another. This then leads to the question of whether sustainability, in general, can grant legitimacy – a theme discussed in section 6.4.4. Thus, the understanding of what sustainability entails influences the investor decision-making process in general.

To conclude, the focus on economic sustainability hinders sustainable NVs through a resulting lack of trust, whereas the general business case for sustainability supports the funding search of sustainable NVs. However, the strength of either the focus on economic sustainability or the business case for sustainability is controlled individually through the investor's understanding of sustainability. In the following, the investors' interpretation of sustainability clues of NVs through identity claims is discussed, which can be in the form of an institutional prime or an equivocal cue.

6.4.3.1 Institutional Primes

If an investor interprets an identity claim as being in line with ideas, concepts, or narratives known to this person in the market context, then the claim is seen as an institutional prime (Navis & Glynn, 2011). The interviews showed four legitimacy evaluation factors of VCs in line with Fisher et al. (2016): the passion of the founding team, internal knowledge of the context, business model plausibility, and focus on economic gains. Generally, the interviews highlighted the importance of economic sustainability and VCs matching with NVs based on team and competency factors. Furthermore, Fisher et al. (2016) emphasized the focus on tangible performance metrics to counterbalance the uncertainty of NVs – their liability of newness. The interviews supported this proposition through the VCs' focus on economic sustainability and financial KPIs when reviewing sustainable

NVs. Thus, in the context of sustainability, established business-related factors are dominant in investor sensemaking in line with the theory.

The interviews showed that regarding the team match factor, a common vision from the founding team towards sustainability is a differentiating factor, which makes the NV more attractive to VCs. However, it needs to be mentioned that the interviews highlighted the threat of a team being too passionate about sustainability, as it can shift away from their focus on the business case. This observation again shows the dominance of the economic focus of VCs in their assessment of sustainable NVs. Thus, regarding sustainability, the passion of the team and team match seems to be a balancing act.

Based on the findings, it is argued that the dominance of the vicious cycle of hindrances impedes VCs in their decision-making regarding sustainable NVs. Due to a lack of knowledge on sustainability, most VCs perceive business cases for sustainability with uncertainty. This uncertainty is further driven by a lack of guidelines that result in no common 'one way' and no decision-making templates, which are highlighted by Navis and Glynn (2011) as drivers of institutional primes. The interviews showed that this results in VCs' inability to decide if an NV is truly sustainable. This inability to determine what is sustainable, in combination with a lack of trust in business cases for sustainability, further hinders sustainability factors from being perceived as institutional primes for most investors, as they lack knowledge and confidence when dealing with it. Thus, sustainability depends on each individual VC's sustainability knowledge, making it an institutional prime for investors who have extensive sustainability knowledge and feel confident in the theme of sustainability. The result is the prominence of economic metrics as institutional primes in investor decision-making, even during the assessment of sustainable NVs.

6.4.3.2 Equivocal Cues

If an investor interprets an identity claim as different from known ideas, concepts, or narratives in the market context, then the claim is seen as an equivocal cue (Navis & Glynn, 2011). Mostly, sustainability was seen as different from the known elements of investor sensemaking. The interviews showed sustainability to be instead seen as an add-on or a general clash to profitability, which is the dominant investment decision-making factor. The importance of sustainability as an add-on was highlighted by VCs pressuring their NVs to generally signal any kind of sustainability compliance through SDGs and ESG policies, as shown in the adaptation of identity and identity claims. However, the clash with profitability perceptions was seen, too, as some VCs perceived sustainability as too much of a long-term game, which made them hesitant to invest. Thus, even though VCs feel the need to incorporate sustainability signaling in their NVs and practices, they show that the concepts of sustainability itself contrast their normal ways of work, highlighting the perception of sustainability being "different" to VCs – making it an equivocal cue.

It is argued that this is the result of the vicious cycle of hindrances and the lack of trust in the success of a business case for sustainability. As mentioned above, the lack of a "template" for sustainability and ESG in investment decisions, seen during the screening process and the engagement process, paired with the lack of knowledge on sustainability, impedes VCs in their judgment. The basic judgment of whether a sustainable NV is truly sustainable is further complicated by a lack of a common definition or standard. This inability to make the basic logical judgment can be linked to the finding of De Lange (2017) that sustainability investments appear riskier. VCs showed differing sustainability foci, making it impossible to align on a general conclusion on the sustainability of a case for the entire market. Therefore, for most VCs, sustainability and ESG integration in early-stage investments comes with uncertainties as there is no industry standard, making sustainability an equivocal cue for most VCs when reviewing sustainable NVs.

Furthermore, the CDC Group and FMO (2020) argued that not considering ESG factors as an early-stage NV can have a negative impact on the attraction of investors. This statement was contrasted by De Lange (2017), who found that sustainable investments are perceived as riskier, making investors hesitant to invest in such NVs, even though there is a demand for sustainable solutions. This contrast was also highlighted in the interviews as there is a shift towards SBMs which is driven by pressures of society, regulations, and LPs, but sustainable NVs still struggle to gain funding. It is argued that this paradox exists because of the vicious cycle of hindrances that makes sustainability appear mostly as an equivocal cue, impeding sustainable NVs without an absolute focus on economic metrics in gaining funding.

6.4.3.3 Plausibility and Non-Plausibility Judgment for sustainable NVs

The plausibility judgment is the core of investor sensemaking as it is the result of the balance of institutional primes and equivocal cues that each individual VC makes (Navis & Glynn, 2011). The analysis found heterogeneity between VCs related to their sustainability understanding, focus, and integration in both screening and engagement practices. This heterogeneity shows itself in the summarization of the findings regarding the plausibility and non-plausibility judgment of VCs regarding sustainable NVs.

The analysis showed that most non-plausibility judgments regarding sustainable NVs were made due to a perceived lack of focus on the business case. However, one VC found the general focus on sustainability to be a direct non-plausibility judgment, highlighting the heterogeneity of VCs. Reviewing plausibility judgments, the analysis showed even more heterogeneity. As the screenings are dependent on the sustainability focus and understanding of a VC, it showed a plausibility judgment integrating sustainability criteria to vary between (a) the need for a truly sustainable product with an E focus, (b) the passion for sustainability being part of the founders DNA, (c) the integration of diversity criteria and thoughts in the NV, or (d) very elaborate ESG screenings focusing on detecting a deep integration of sustainability through SBMs. Still, sustainability is mostly an equivocal cue for investors next to the institutional primes of economic sustainability measures and the team and competency match. As Navis and Glynn (2011) postulate, an investor needs to address how legitimacy, through institutional primes, and distinctiveness, through equivocal cues, fit into the perceived market environment. This individual balancing act is investor sensemaking. Thus, when reviewing sustainability criteria in investor sensemaking, no common way or approach was identified in the analysis, highlighting that each investor treats sustainability differently. This differentiation arguably makes it impossible to generalize criteria for or against a plausibility judgment of a sustainable NV as the judgment itself is based on the individual investor's perception.

However, the analysis showed an ongoing discussion of “looking good” vs. “doing good” in the context of sustainability in early-stage investments, which impacts all VCs and their weighting of institutional primes and equivocal cues concerning sustainability in NVs. The interviews indicate that both NVs and VCs need to signal and communicate sustainability approaches, driven by the pressures outlined in section 6.1. However, it was found that the pressure to do so leads to “window-dressing” on both sides, resulting in the ongoing debate of if a VC or NV signals sustainability to look rather than do good. This debate hinders the integration of sustainability approaches as NVs and VCs fear being seen as only “looking good”, making people question the depth of a sustainability approach on both NV and VC sides. Arguably, this debate shows the general perception of sustainability approaches and measures to be superficial. This superficiality can be seen in the expectation of VCs that NVs of any kind show that they, e.g., integrate SDGs no matter what, as VCs see the need for the integration in NVs to demonstrate their sustainability awareness to their LPs. Therefore, a VCs’ plausibility judgment regarding sustainability in an NV arguably comes with the general suspicion of sustainability being only superficial in both NVs and VCs. This suspicion increases the perceived danger of sustainability and ESG integration in early-stage investor decision-making, making it questionable if VCs should stand at the door of valuing sustainability in the first place.

6.4.4 Legitimacy for Sustainability

Following Navis and Glynn (2011), the plausibility judgment of an investor leads to an NV gaining legitimacy in the institutional environment. As shown in the section above, each investor decides what is legitimate in their context and understanding. This thesis found that, particularly in the sustainability context, the VCs' understanding varies, whereas VCs are depicted by Fisher et al. (2016) to be in the same legitimacy threshold. Therefore, the plausibility judgment leading to NVs gaining legitimacy through a VC is heavily dependent on the individual perception of an investor, which varies a lot in the sustainability context.

The heterogenous VCs are found to be driven to include sustainability factors in their decision-making by different pressures outlined in section 6.1. The pressures and underlying trend toward sustainability show a growing awareness of the importance of sustainability, as highlighted in the re-think process. Arguably, the pressures and re-think process further show the general perception of society seeing the engagement of NVs and VCs with sustainability practices to be desirable and proper. This perception is reflected in the identified personal motives for sustainability found in both founders of NVs and VCs. For example, NV D highlighted his intrinsic motivation for tackling climate issues, which led to the creation of his company. On the VC side, VC3 stated his intrinsic motivation to tackle climate change through supporting sustainable NVs with a focus on the "E" in their product. Both examples show the interrelation of the intrinsic motivation driven by the general awareness and urgency for sustainability and the business practices on both the NV and VC side.

However, even though the re-think process shows the general perception of sustainability approaches being desirable and proper, VCs operate in a capitalistic system with norms and beliefs driving the need for generating returns. These norms and beliefs show themselves in the focus on economic sustainability, which makes up the institutional primes also in the context of sustainability. In line with Zerwas and von Korflesch (2016), the interviews found the team and competency match and the focus on financials to drive the perception of the business viability of an NV for all VCs. Business viability was found to be important to attract future funding as the NV needs to gain it in further rounds to produce a return for the VCs. However, as highlighted previously, the integration of sustainability and ESG factors largely differed between VCs due to the vicious cycle of hindrances. Still, they are seen as important due to the pressures on VCs and the perception of sustainability and ESG factors to be needed in later stages of the investment process. Thus, it is argued that in early-stage VCs, the inclusion of sustainability factors is mostly a small part of an investment decision regarding sustainable NVs, which is related to VCs' intrinsic motivation and perception of sustainability being necessary for future funding rounds. The minor importance of sustainability makes a sustainable NV gain legitimacy with the VC through its business viability rather than its sustainability approach.

Furthermore, theory states that legitimacy is needed for NVs to overcome their liability of newness (David et al., 2017; Fisher et al., 2016). David et al. (2017), Fisher et al. (2016), and Zimmerman and Zeitz (2002) state that gaining funding results in legitimacy and enables NVs to explore opportunities restricted through capital restraints, thus supporting them to overcome the liability of newness. However, the findings indicate that in the context of sustainability, the liability of newness is not only bound to capital constraints but also knowledge and impact measurement constraints in NVs. VC funding can alleviate capital restraints, but as even VCs struggle with sustainability knowledge, understanding, and measurement, it is argued that gaining funding, and thus legitimacy by a VC, might not be enough to overcome the liability of newness of a sustainable NV. Therefore, even if a sustainable NV gains VC legitimacy, the NV will still be bound by its sustainability knowledge and measurement constraints which need to be dissolved to overcome the liability of newness of sustainable NVs truly.

However, the re-birth practices performed by VCs show an attempt to alleviate these sustainability knowledge constraints in NVs, which is of importance for gaining later stage funding as found in the interviews and literature (e.g., Holtslag et al., 2021; Sapienza et al., 1996). It is argued that these re-birth practices, which are the focus of the next section, are a way of overcoming the liability of newness in sustainable NVs.

6.4.5 Re-Birth as a Measure to Imprint Sustainability in NVs post Investment

The analysis shows that VCs engage with their portfolio companies after the investment decision, which aligns with the literature (e.g., EoF, 2006; Holtslag et al., 2021). VCs perform this engagement through value-adding services in the form of network access and business and sustainability-related knowledge. The interviews showed that NVs look for VCs with sustainability knowledge, accentuating Holtslag et al.'s (2021) point of value-adding services being of great importance in the sustainability context. However, the findings showed that while some VCs have the in-house knowledge to help NVs overcome their resource and knowledge constraints, it is complicated by the vicious cycle of hindrances. The findings imply that due to the constraints and challenges faced by VCs, the high demand from NVs for sustainability knowledge often cannot be met. It is argued that this hinders the sustainability-related engagement efforts of VCs, as there is no common understanding of what is desirable in the sustainability context.

Alakent et al. (2020) state that the VC engagement with NVs leads to VCs imprinting the NVs on short-terminism and an economic focus. The interviews implied this imprinting even in the sustainability context. Based on the findings, it is argued that as VCs have different foci and expectations towards sustainability, there are different expectations too, e.g., ESG policies, SDG integration, and diversity aspects. Moreover, it was found that sustainable NVs fear that hard core VCs shift the focus from impact to economic sustainability, which in the eye of a founder, can lead to losing the bigger purpose behind the business. These findings underline the importance of engagement processes being a cooperative and not a competitive approach to result in successful growth, as Scarlata and Alemany (2013) stated. It can be argued that this cooperative approach is essential for VCs and sustainable NVs when it comes to sustainability and ESG integration, as here, the focus on social and environmental impact is often the core of the business. The interviews showed that a forced focus on revenue makes sustainable NVs reluctant to engage with hardcore VCs who heavily focus on economic aspects, which in turn is arguably negative for VCs due to the identified re-think process showing the need for VCs to attract sustainable NVs.

In general, VCs aim to create higher returns upon exit and thus making an NV more attractive to later-stage investments through engagement. This aligns with the CDC Group and FMO (2020), stating that ESG integration can help NVs build resilient business models and attract more investments in further rounds. The interviews support this as it was stressed by VCs that sustainability and ESG integration in business models is important for the NVs to attract investments in later stages. Moreover, the findings imply that both VCs and NVs are aware that without a good business model, including both impact and economic factors, a sustainable NV cannot scale and grow. Only if an NV can succeed and acquire the necessary resources can it achieve its intended impact and survive. Although the analysis shows that VCs do not have common expectations about the sustainability of a sustainable NV to grow and attract more investment, they agree that scaling and growth are critical to making an impact, highlighting their engagement in economic sustainability in line with their primary alleviation of capital restraints.

To conclude, this thesis views the re-birth process identified during the SLR as a follow-up process after gaining funding, marking the movement of an NV from the commercialization stage to the growth stage. Thus, the re-birth process allows VCs in the sustainability context to imprint values into sustainable NVs, equipping them to gain legitimacy in the next funding cycle, which marks another stage of institutional pluralism. Still, the engagement focuses on economic sustainability, and the sustainability engagements are impeded by the vicious cycle of hindrances, making it questionable if a VC can alleviate sustainability constraints to support a sustainable NV to overcome its liability of newness.

6.5 Core Theoretical Implications

Section 6.4 showed the theoretical implications and their relation to sections 6.1-6.3. Figure 8 visualizes the core theoretical contributions of section 6.4 based on the theoretical framework from chapter 3.

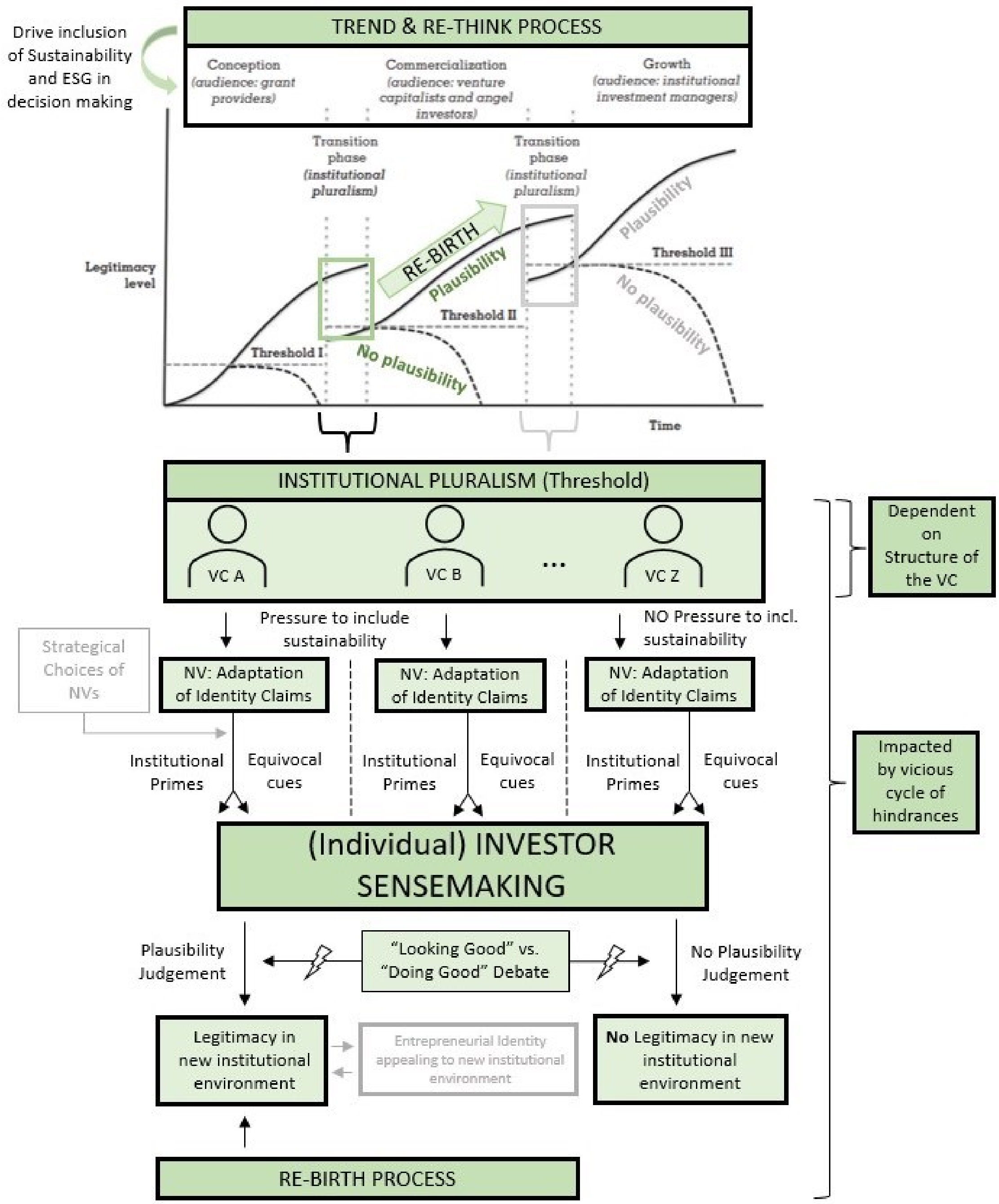

Figure 8: Visualization of the Modified Theoretical Framework in the light of the sustainability context based on core contributions of this thesis; grey areas and text highlights parts of the theoretical framework from chapter 3 which have not been addressed in the interviews; own illustration 28.04.2022

The trend and re-think process drive sustainability and ESG integration in the (a) creation of sustainable NVs and (b) investment decision-making of VCs. This finding shows the relevance of developing the theoretical framework from chapter 3 to include sustainability and ESG.

The context of sustainability leads to the first core contribution, which shows that VCs in a legitimacy threshold have differing understandings of sustainability, leading to the heterogeneity of sustainability-related expectations for NVs. The depicted heterogeneity is a product of the structure of the VC and the vicious cycle of hindrances, leading to some investors pressuring NVs to include sustainability signals, whereas others show no pressure for inclusion. This pressure then leads to an NV needing to adapt its identity to differing sustainability-related expectations of VCs, leading to NVs having to navigate a high complexity environment.

Each investor reviews the resulting identity claim differently, showing a second core contribution. The analysis revealed that economic factors are seen as institutional primes, and sustainability factors are mostly viewed as equivocal cues due to the vicious cycle of hindrances. The vicious cycle of hindrances results in VCs facing uncertainty regarding sustainability and ESG integration, thus, leading to a lack of trust in sustainable NVs. Therefore, in contrast to the theoretical framework from chapter 3, the findings indicate that it should not be investor sensemaking but individual VC sensemaking, showing the complexity faced by VCs and NVs in the context of sustainability.

This individualization of investor sensemaking further relates to the plausibility judgment, which is dependent on the structure of VCs and their understanding of sustainability. The weighting of institutional primes and equivocal cues, which leads to a plausibility or non-plausibility judgment, is further impeded by the “Looking Good” vs. “Doing Good” debate, highlighting another core contribution to theory. This results in a lack of trust, which is driven by the fear of being accused of greenwashing, which further drives superficial integration of sustainability and ESG.

The last core contribution revolves around gaining legitimacy through the plausibility judgment of VCs. In line with theory, it is proposed that an NV does gain legitimacy from VCs upon investment. However, due to the vicious cycle of hindrances, a sustainable NV is impeded not only by capital restraints, which VCs alleviate, but also by constraints related to sustainability. In the re-birth process, VCs aim to alleviate these constraints of sustainable NVs. However, VC engagement rather focuses on economic sustainability as VCs are also impeded by the vicious cycle of hindrances. Furthermore, the revealed heterogeneity of VCs raises the question if later-stage VCs have one understanding of sustainability, making it questionable if an engagement in sustainability can support a sustainable NV to gain further funds in later stages.

6.6 Managerial Implications

This research used the findings from 18 interviews to gain generalizable insights on sustainability and ESG integration in both early-stage NVs and VCs during the investor sensemaking process. In the following, the practical implications for the NV and VC ecosystem and NVs and VCs, in turn, are outlined.

For the ecosystem, sustainability and ESG integration is a trend that remains relevant and might even increase as regulatory pressures increase and more money is invested into this area. However, to avoid this trend leading to superficial integration of sustainability and ESG from both NVs and VCs, the vicious cycle of hindrances needs to be broken. For that matter, standards and frameworks for sustainability and ESG integration in business models and investment processes need to be adapted to early-stage NVs and VCs. Moreover, common knowledge needs to be established about how sustainability is best integrated into NVs. This shared understanding could provide NVs and VCs with a clearer picture of sustainability, through which best practices for NVs and VCs could be established. Furthermore, to succeed, clear communication from NVs and VCs around different sustainability foci and expectations is needed. Through transparency of expectations and collaboration, common guidelines could be established for the entire ecosystem.

For NVs, it is vital to be prepared to adapt to varying sustainability expectations from VCs and other investors. An NV might need to adapt multiple times to attract different investors until common guidelines and frameworks for early-stage sustainability investments are established. These common guidelines could translate into decision-making templates, reducing the uncertainty of VCs when dealing with sustainable NVs. Common guidelines on sustainability could further lessen the complexity experienced by NVs when dealing with different VC expectations regarding sustainability. These common guidelines could break the “looking good” vs. “doing good” debate leading to an increased trust from VCs and the public into truly sustainable NVs. In the case of traditional NVs it thus becomes increasingly relevant to consider deep sustainability and ESG integration through SBMs to not only “look good”. Still, sustainable NVs need to ensure that economic and sustainability aspects are balanced in the business model to attract investors. This balance is important as NVs that cannot scale with VC have limited impact as organic growth is slow. Moreover, more sustainable NVs must achieve success to show both VCs and the public the value of their existence and accelerate the re-think process and the creation of trust.

For VCs, it is crucial to be aware that when making investments into sustainable NVs and requiring deep sustainability and ESG integration, a balanced approach to economic sustainability and impact is needed. The balance is of relevance for VCs as they increasingly need to attract talented sustainable NVs. This development will be eased by common sustainability criteria and guidance for early-stage NV assessments, supporting VCs to identify truly sustainable NVs. Through this, it can be possible for sustainability factors to become common institutional primes, just as financial metrics. Sustainability criteria and guidance are equally important for the engagement processes with NVs on sustainability and ESG integration, as currently, the different expectations and understandings from VCs related to sustainability result in differing and vague engagement processes.

7. Conclusion

This thesis aimed to explore the following research question: *How does sustainability impact legitimacy and identity in the context of early-stage NVs and the investor sensemaking of VCs?* To answer this question, this thesis was based on an SLR focused on sustainability integration in early-stage NVs and VCs and a theoretical framework based on concepts of institutional theory. It then utilized a multiple-case study based on interviews with NVs, VCs, and Specialists to gather qualitative data for answering the research question.

The SLR showed pressures driving a re-think process on the NV side and a re-birth process on the VC side. On the NV side, the importance of integrating sustainability and ESG in an early stage into business to drive sustainable development was highlighted. On the VC side, academia questioned why not more VCs integrate sustainability and ESG criteria in their screening processes and why ESG risk mitigation is not a more dominant factor in investor decision-making. However, both sides showed a lack of common definitions. Therefore, a research gap has been identified as currently, there is, to our knowledge, no work that explicitly focuses on sustainability integration in early-stage NVs as well as its interplay with VCs in the sustainability context.

Institutional theory was used to holistically analyze the relationships between early-stage NVs and VCs. The institutional core concepts of legitimacy and identity were used in the context of NVs and VCs through the merger of three theoretical papers identified in the SLR. The resulting theoretical framework highlights the importance of viewing legitimacy and identity as fluid concepts based on differing expectations of what is seen as legitimate and what is seen as different in a new institutional context during investor sensemaking.

The discussion of the findings in the light of academia and the theoretical framework showed that while there is a general trend and re-think process from both NVs and VCs toward sustainability and ESG integration, the concepts of legitimacy, identity, and investor sensemaking need special attention in the sustainability context.

Furthermore, these three concepts are subject to a vicious cycle of hindrances related to sustainability faced by both NVs and VCs. The vicious cycle includes a lack of knowledge, resources, and guidance, a measurement challenge, and differences in understanding. In the following, the implications regarding the three core concepts are summarized in the context of sustainable NVs and VCs.

Institutional primes (VCs seeing something as normal) and equivocal cues (VCs seeing something as different) reveal what an investor perceives as legitimate during investor sensemaking. In the context of sustainability, it was found that sustainability factors are equivocal cues for most investors. Even though pressures and the re-think process drive sustainability integration, the vicious cycle hinders VC's sensemaking, leading to sustainability being seen as an add-on to an investment decision or even as a direct clash with profitability. The profitability assessment and the team and competency match are still the dominant institutional primes for all VCs. Sustainability screenings further showed rather superficial sustainability and ESG integration, highlighting the uncertainty in the sector due to the vicious cycle of hindrances. Thus, NVs face different stakeholder expectations related to sustainability, and VCs face the problem of a lack of common understanding of sustainability in early-stage NVs.

The differing stakeholder expectations are reflected in multiple legitimacy thresholds, presenting the need for NVs to adapt their identity claims to a VC context. In the context of sustainability, it was found that VCs show differing understandings and knowledge levels due to the vicious cycle of hindrances. This heterogeneity leads to a need for identity adaptations of sustainable NVs not only to VCs as a general stakeholder group regarding a refocus on economic factors but also to each individual VC and their perception of sustainability.

Investor sensemaking brings the two concepts together by reviewing the identity claim of a sustainable NV in the light of what each individual investor perceives to be legitimate in an institutional environment. The plausibility judgment of the sustainable NV's identity claim then weighs individual institutional primes and equivocal cues – a process especially individual for the sustainability context due to the differences of VCs' sustainability knowledge and understanding and a lack of best practices on sustainable NVs. The weighting is further hindered by the general debate of "looking good" and "doing good" in NVs and VCs. Thus, sustainable NVs need to not only refocus on their business case but also assess a VCs sustainability angle to make a plausibility judgment by the VC more likely.

Academia found it surprising that sustainability and ESG integration is not a more dominant factor in investor decision-making. However, this thesis shows that in the case of NVs and VCs, sustainability is mostly perceived as an equivocal cue due to the vicious cycle of hindrances, implying that it is not surprising that sustainability and ESG are not more dominant for early-stage VCs. Moreover, this thesis indicates that the vicious cycle of hindrances, impacting both NVs and VCs in the investor sensemaking context, might be the reason for the paradox of seeing more pressure to implement sustainability in NVs and VCs but not seeing a lot of funding going to sustainable NVs from VCs.

To conclude, it was found that sustainability integration in the investor sensemaking process is impeded by the vicious cycle of hindrances even though a definite trend and re-think process on both sides of NVs and VCs was identified. While it must be highlighted that there is stark heterogeneity in VCs regarding sustainability, it is found that sustainability metrics are currently not seen as legitimate for most VCs. This heterogeneity then drives identity adaptations in NVs. Sustainable NVs see the need to be more business-focused due to investor pressures while needing to reflect on their sustainability approach to see if it is in line with a VCs' understanding. This results in sustainable NVs perceiving a clash of their sustainability focus with the profitability focus of VC, as VCs are currently mostly seeing sustainability factors as equivocal cues in investor sensemaking. The perceived clash and uncertainty in the sector highlight the need for practitioners and academia to break the vicious cycle of hindrances to enable deep integration of sustainability and ESG in investor sensemaking.

7.1 Limitations

This section focuses on four key limitations of this thesis. Firstly, regarding the SLR, one faces the threat of overlooking important literature. For example, the search strings filtered for English texts and used synonyms that other researchers might define differently. Secondly, one thesis student is involved in the early-stage NV and VC scene. This involvement adds the benefit of a bigger reach for data gathering but also impacts the selection of interviewees and introduces potential personal bias. Thirdly, one needs to recognize potential biases on the side of the interviewees. Confirmation bias is an exemplary one, proposing that people tend only to share ideas and information tied to their beliefs while not mentioning possible contradictory elements (Saunders et al., 2019). A confirmation bias in interviews could lead to a loss of elemental themes; however, this thesis tried to negate the possibility through a high number of interviews and the inclusion of specialists who bring in more accentuated insights next to only NVs and VCs. Fourthly, the collected data shows a geographical focus on the Danish early-stage NV and VC scene. The focus might lead to, e.g., cultural, regulative, and political dimensions influencing the findings, possibly reducing the generalizability of the findings outside of the Danish context.

7.2 Further Research

In general, this thesis should be seen as the first step toward holistic research of the early-stage NVs and VCs in the context of sustainability and ESG integration. The thesis highlights that more holistic research into the theme is needed to create a foundation of understanding to curb the vicious cycle of hindrances, which paralyzes deep sustainability and ESG integration in both NVs and VCs. Further holistic research would also establish a base that could support and structure existing niche research into sustainable early-stage NVs or VCs. A structured approach to the research field might make it possible to include then other kinds of early-stage investors, such as BAs, and their sensemaking in the sustainability context. Moreover, it could be viable to conduct this research in an international context to see if it applies to a broader audience. Such a study could explore whether cultural or national contexts influence the sustainability context in investor sensemaking for early-stage NVs. Additionally, the inclusion of quantitative data could support further research, as it would allow for seeing if given information on sustainability integration of early-stage VCs is truly done in practice. A study of sustainability in early-stage and later-stage VC portfolios over time might also allow insights into the trend and its origin. Furthermore, there are three areas in the framework which have not been covered by the findings: strategies to acquire legitimacy, applicability of the framework for the growth stage, and the interconnectedness of legitimacy and entrepreneurial identity in the new institutional environment. For example, a focus on sustainable NVs and their possible strategies to acquire legitimacy, as outlined by Zimmerman and Zeitz (2002), could highlight the involvement of an NVs decision-making into the individual VC sensemaking. To conclude, more research is necessary to support early-stage NVs and VCs in their current struggle to integrate sustainability and ESG – a necessary trend in light of global social and environmental issues.

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Confidential Appendix (Attached)

Appendix 1: Topic guides for the interviews

Appendix 2: Overview of codes established in NVivo for the research effort

Access to NVivo project upon request only

Appendix 3: Overview of direct quotes supporting the observation of differing sustainability understandings

Appendix 4: Transcribed Interviews