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Navigating Financial Complexities: Accessing Capital for Sustainable Start-ups and Small Businesses

A Case Study in the Frisian Context

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Abstract

This study explores the mechanisms and challenges of accessing capital for sustainable start-ups and small businesses in Friesland. Through qualitative interviews with local entrepreneurs and financiers, we uncovered a complex financial landscape characterised by fragmentation, subsidy acquisition costs, loan financing challenges, and strategic regional positioning strategies. Entrepreneurs need help navigating this landscape, including securing subsidies amidst stringent criteria and paperwork requirements. Moreover, the financial pressure imposed by loans and the need for alignment between loan structures and sustainable business models present formidable challenges. However, utilising Friesland's unique assets and capabilities, collaborative efforts and innovative regional positioning offers opportunities for sustainable businesses to succeed. Despite these challenges, financiers are starting to recognise the value of sustainable entrepreneurship. The findings of this study underscore the importance of tailored approaches and collaborative efforts to address the complexities of financing sustainable entrepreneurship in Friesland.

Keywords: Sustainable Entrepreneurship, Access to Capital, Start-ups, Small Businesses, Friesland.

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Introduction

Background and Context

Entrepreneurship is a hot topic in the business field. It usually requires creating new businesses and taking the associated risks to achieve potential profits. It boosts social welfare, economic growth, competitiveness, and productivity. However, entrepreneurship can also have negative consequences, such as unequal economic distribution and environmental degradation. The concept of sustainable entrepreneurship emerged due to the growing interest in using entrepreneurial abilities to address social and environmental challenges, as well as concepts such as ecopreneurship and social entrepreneurship. According to research, entrepreneurs can play an important role in improving social and environmental sustainability by offering solutions to urgent challenges (Gutterman, 2018).

Sustainable entrepreneurship has recently gained traction as a way to address environmental, social, and economic challenges while fostering business innovation and growth (Gutterman, 2018). However, the relationship of sustainable entrepreneurship with access to capital and investment opportunities for start-ups and small businesses needs to be explored more, especially within local contexts such as Friesland. This study examines the dynamics between sustainable entrepreneurship and the availability of capital and investment opportunities for start-ups and small businesses operating in Friesland.

Regional Relevance of Friesland

Friesland, a province in the Northern Netherlands, presents a unique case study for examining sustainable entrepreneurship due to its distinct economic, social, and environmental

characteristics. The region is known for its strong agricultural sector, rich natural landscapes, and commitment to sustainability. These qualities are reflected in multiple local initiatives and policies promoting sustainability (Provincie Fryslân, n.d.). By focusing on Friesland, this study can provide insights into how regional factors influence sustainable entrepreneurship and access to capital, contributing to the broader understanding of these dynamics in similar contexts nationally and globally.

Research Question and Objective

This study's central research question is: What strategies and challenges are involved in accessing capital for sustainable start-ups and small businesses in Friesland? This research aims to identify and examine the challenges and opportunities faced by sustainable entrepreneurs in accessing capital and to explore the perspectives of financiers regarding providing capital to entrepreneurs in the context of sustainability.

Significance of the Study

The significance of this study lies in its potential to contribute valuable insights to academic research and local decision-making within the context of sustainable entrepreneurship and access to capital in Friesland. Understanding the challenges and opportunities for sustainable start-ups, sustainable small businesses, and financiers can inform policy development and the industry in Friesland. Moreover, by identifying factors that influence access to capital for sustainable entrepreneurs in Friesland, this study can help foster an environment that promotes economic development and sustainability. By shedding light on the dynamics between

sustainable entrepreneurship and access to capital, this research provides stakeholders with insights to help them make informed decisions that support the growth and success of sustainable business practices in Friesland.

Ultimately, the significance of the study lies in its potential to increase knowledge, inform policymakers, and help stakeholders promote economic development, social equity, and environmental sustainability within the region.

Scope and Limitations of the Study

This study focuses on sustainable start-ups and small businesses in Friesland, examining their access to capital and the perspectives of financiers within the region. The scope of an in-depth local context analysis is limited to this geographical area. Possible limitations of the study include the availability and willingness of local entrepreneurs and financiers to participate in the study and the representativeness of the sample. The findings may only be generalisable to other regions if specific local factors are taken into account.

Outline of the Thesis

This thesis examines the dynamics of sustainable entrepreneurship and access to capital in Friesland. The study consists of the following chapters, each with a specific function.

The Literature Review chapter provides key concepts and frameworks related to sustainable entrepreneurship and access to capital. Existing research and theoretical foundations are reviewed to provide a comprehensive understanding of the topic.

The Methodology chapter describes the research design, sampling strategy, and data collection methods used to collect and analyse data. This section serves as an outline for the empirical route taken in the study.

The Landscape of Sustainable Entrepreneurship in Friesland provides an overview of the Friesian sustainable environment and innovation ecosystem. It sheds light on the unique dynamics of Friesland and adds essential context.

Results: Perspectives of Local Entrepreneurs and Financiers offers personal insights from sustainable entrepreneurs about their experiences obtaining capital for their businesses. It also presents the views of financiers and highlights the factors they evaluate when investing in sustainable practices.

The following section discusses and analyses the study's findings, connecting the findings to the current literature. It examines the challenges and opportunities in financing sustainable businesses, as well as relevant policy implications and recommendations in both theory and practice.

Finally, the Conclusion summarises the study's main findings, contributions to the understanding of sustainable entrepreneurship and access to capital in Friesland, limitations of the study, and suggestions for future research.

Literature Review

Sustainability is a concept that emerged in response to growing concerns about the earth's finite resources and the potential consequences of uncontrolled economic growth. Advocates of

the "limits to growth" theory, a theory that gained recognition after the publication of "The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind" in 1972 (Meadows et. al.), warned of the harmful effects of rapid population growth, accelerated industrialisation, widespread malnutrition, depletion of nonrenewable resources, and environmental degradation. This report revealed that if the growth trends in these areas continued at the same rate, the planet would reach its limits within the 21st century. These concerns underscored the need for a more holistic approach to economic development that considers environmental and social factors in addition to traditional economic goals (Gutterman, 2018).

Opponents of the limits of growth theory believed that technological innovation and market mechanisms could limit environmental degradation and resource depletion. They argued that market forces, such as rising prices for scarce resources, would encourage efficiency improvements and resource conservation, ensuring sustained economic growth without catastrophic consequences. This debate laid the foundation for conceptualising sustainability and its relevance to entrepreneurship. The publication of "Our Common Future" by the World Commission on Environment and Development (1987) further stressed the importance of sustainable development by defining it as meeting the needs of the present without compromising the ability of future generations to meet their own needs. This definition emphasises the balance between economic growth, environmental protection, and social equity. Sustainable entrepreneurship incorporates the principle that long-term environmental and social outcomes are as important as short-term financial goals (Gutterman, 2018).

By the 1990s, sustainability had become a multidimensional concept that included environmental protection, economic development, and social equity (Gutterman, 2018). In 1998, John Elkington published his book "Cannibals with Forks: The Triple Bottom Line of 21st

Century Business”. He introduces and elaborates on the concept of the Triple Bottom Line (TBL). He emphasises that businesses should prioritise social impact, environmental stewardship, and financial profit - the “three P’s” (people, planet, and profit). This approach encourages companies to incorporate sustainable practices into their activities. Businesses can positively influence society and the environment by considering societal impact, environmental responsibility, and financial profitability while achieving economic success. In many cases, adopting sustainability initiatives has been shown to lead to business success (Miller, 2020).

Defining Sustainable Entrepreneurship

In this study, sustainable entrepreneurship is defined as doing business within planetary boundaries and according to ethical standards while contributing to economic development and improving the quality of life for various stakeholder groups, including employees, their families, local and global communities, and future generations (Gutterman, 2018). This definition recognises the importance of considering multiple stakeholder groups, not just shareholders, when making management decisions and conducting operational activities. By operating within planetary boundaries, sustainable entrepreneurship recognises the earth’s finite resources and ecological limits of our planet. According to Rockström et al. (2009), there are nine planetary boundaries that are essential for maintaining the Earth’s stability and supporting human life. These boundaries include climate change, ocean acidification, ozone depletion, biogeochemical flows (including nitrogen and phosphorus cycles), global freshwater use, land system change, biodiversity loss, chemical pollution, and atmospheric aerosol loading.

This study focuses on sustainable entrepreneurship within the context of companies that emphasise sustainability from the outset. This distinction explicitly distinguishes sustainable

entrepreneurship from the efforts of established organisations to address sustainable development issues through CSR initiatives. Although CSR is often compared to sustainable entrepreneurship, there are differences between the two concepts. CSR primarily revolves around the actions of established companies that have reached a certain level of maturity and scale. These companies recognise a responsibility beyond traditional profit goals. However, they often lack some fundamental attributes associated with sustainable entrepreneurship, such as consistently providing environmentally friendly products and services and making internal operational changes to integrate sustainability into employee management and the production processes (Gutterman, 2018).

Dimensions of Sustainable Entrepreneurship

Sustainable entrepreneurship involves three interconnected dimensions: the social, economic, and environmental (Katsikis et al., 2007). This approach requires focused navigation through various economic, social, cultural and ecological contexts in which companies operate (Gutterman, 2018).

While entrepreneurship, whether sustainable or not, inherently seeks to generate profit, sustainable entrepreneurship embraces a broader conception of profit, including non-economic benefits to individuals, the economy, and society. Profit is essential in sustaining business activities and facilitating reinvestment in sustainable initiatives (Gutterman, 2018). While the industry is a significant contributor to environmental degradation, it also has the potential to mitigate negative consequences through new sustainable innovations (Katsikis et al., 2007). Entrepreneurial activities must equally prioritise social, environmental, and economic objectives, adhering to the triple-bottom-line approach (Gutterman, 2018).

The SDG Wedding Cake, conceptualised by the Stockholm Resilience Centre (2016), shows the United Nations' Sustainable Development Goals (SDGs) arranged in layers resembling a wedding cake. Each layer represents a different theme of sustainability (Biosphere, Society, and Economy), and the ranking of each layer corresponds to the relative importance of that goal. The illustration was developed to show the interconnection and hierarchy of the SDGs. This model aligns with sustainable entrepreneurship's aim to equally prioritise and integrate social, environmental and financial impact.

Technology Readiness Level

Understanding the Technology Readiness Level (TRL) is crucial for start-ups and small businesses that want to introduce innovative solutions to the market. TRLs provide a framework for assessing the development stage and readiness for market entry (SNN, 2023).

- **TRL 1-3:** These phases involve conceptualisation, basic research, and transforming concepts into working proof-of-concept prototypes through experimentation.
- **TRL 4-6:** These phases encompass the refinement of technologies, reducing technical obstacles, and enhancing performance with prototypes tested in relevant environments.
- **TRL 7-8:** These phases include testing and demonstrating prototypes in operational environments, requiring significant investments for optimisation and market expansion.
- **TRL 9:** Finally, the entrepreneur achieves a market-ready innovation that is commercially viable for launch into the target market (SNN, 2023).

Business Model

A sustainable business model encompasses a company's strategy to achieve profit while protecting people and the environment. It identifies the products or services, target customers, costs, and the complexities of the supply and distribution chain (North, 2023b).

Unlike conventional models focused on profit only, sustainable models prioritise the long-term well-being of all stakeholders, ranging from individuals to the future generations, and achieving environmental conservation. While traditional models prioritise short-term gains, sustainable models prioritise resilience, adaptability and enduring impact (North, 2023).

Drivers and motivations

A key driver of sustainable entrepreneurship is the increasing consumer demand for transparency and accountability of companies regarding their environmental and social impact. Consumers are becoming more conscious about the products and services they buy and are looking for businesses that are committed to ethical and sustainable practices (Gutterman, 2018). Studies reveal significant statistics supporting this shift: 66% of consumers are willing to pay more for products from sustainable brands, and 81% of global consumers believe that businesses should contribute to environmental improvement (North, 2023b).

This trend is reflected in the workforce, where employees increasingly value job attractiveness, satisfaction and a sense of purpose by contributing to the greater good (North, 2023b). Research from the Decade of Disruption: “Future of the Sustainable Workplace” shows the growing importance of environmental responsibility among employees, with 72% of respondents indicating concern about this topic. This research is further reflected in the finding that almost two-thirds (65%) of the respondents are more drawn to work for businesses with

strong environmental initiatives (Unily, 2020). Research also showed that sustainable practices increase employee motivation to perform within a business (Crals, 2000).

Moreover, investors play an important role in encouraging sustainable business practices. By incorporating social responsibility criteria into investment decisions, investors can enable businesses to prioritise sustainability initiatives. Businesses that are committed to environmental and social responsibilities are more likely to attract investors, as they are increasingly recognising sustainable business models' long-term value and resilience. This pressure from investors is a powerful motivation for businesses to embrace sustainable entrepreneurship when they seek access to capital (Gutterman, 2018).

Furthermore, regulatory pressures and policy initiatives promoting sustainability contribute to the momentum behind sustainable entrepreneurship. Governments are increasingly involved in regulating social conduct, and this includes promoting sustainability. In response to these legal requirements, companies recognise the strategic need to incorporate sustainability into their core businesses (Gutterman, 2018). Research showed that various government strategies can encourage pursuing sustainable entrepreneurship. These strategies include boosting production capacity, aligning with national and global regulations, considering environmental impacts, fostering an entrepreneurial culture, and enhancing scientific research and international cooperation (Reuther et al., 2023).

In addition, besides these external factors that drive entrepreneurs to engage in sustainable initiatives, research showed that many entrepreneurs pursue social and environmental initiatives because of their positive personal values towards sustainability (Reuther et. al., 2023).

Challenges and barriers

Sustainable entrepreneurs face more challenges doing business as regular entrepreneurs do. Sustainable entrepreneurs often operate in markets that are characterised by imperfections and failures. These imperfections and failures include issues related to public goods, externalities, monopoly power, inappropriate government intervention, and imperfect information. These market barriers complicate value creation and the pursuit of opportunities (Hoogendoorn, 2017).

Additionally, sustainable entrepreneurs need a wide range of knowledge and networking skills to succeed in the market. They often operate in contexts where markets and regulatory systems do not support their goals. As a result, they must invest time and effort in learning from others, collaborating with different people and organisations, and building their expertise (Hoogendoorn, 2017).

Moreover, sustainable entrepreneurs face challenges in natural resource management and environmental conservation. There are unclear definition of property rights, an absence of resource pricing mechanisms, and concerns about resource depletion which further complicates their business efforts (Hoogendoorn, 2017).

Furthermore, the lack of entrepreneurship education hinders the development of sustainable entrepreneurship. Research showed that participation in an entrepreneurial course is a motivating factor for sustainable entrepreneurship, because graduates that are equipped with entrepreneurial abilities are more likely to pursue entrepreneurial opportunities. In addition to formal education, exposure to successful entrepreneurial role models in classes appears to influence students' entrepreneurial intentions (Reuther, 2023).

Opportunities and innovations

Sustainability challenges offer a wave of new opportunities for entrepreneurs as innovations are needed. The World Business Council for Sustainable Development states: “Sustainability is the greatest economic opportunity of our time”. Indeed, pursuing sustainability goals drives innovation, and therefore, drives the development of new solutions and providing opportunities for business growth and resilience (North, 2023b). While addressing pressing environmental and social challenges, sustainable entrepreneurs are at the forefront of pioneering innovations (North, 2023).

The Interplay between Sustainable Entrepreneurship and Access to Capital

Challenges for Sustainable Entrepreneurs in Accessing Capital

Sustainable entrepreneurs often encounter difficulties when they seek financial support for their businesses. One of the main reason for these difficulties lies in the decision to generate a positive social and environmental impact, leading to less potential profit. However, this strategic approach presents challenges when they seek capital from investors who prioritise financial returns on their investments (Hoogendoorn, 2017).

Moreover, investors might only be willing to invest in sustainable entrepreneurs if they can see that they will get enough financial returns on their investment. The absence of a standardised metrics to measure the social and environmental impact that sustainable entrepreneurs generate further complicates the investment decision-making process for financiers, and therefore entrepreneurs (Hoogendoorn, 2017).

By prioritizing social and environmental ethics, sustainable entrepreneurs create a good reputation. Conversely, if a business is perceived as unethical, it risks damaging its reputation. This damaged reputation can lead to financial losses due to consumer boycotts or reduced demand for its products. Investing in sustainable practices therefore helps reduce the risk of reputation damage and maintains revenue, profits and share value (Crals, 2000).

Furthermore, sustainable start-ups rely heavily on government support, such as subsidies and grants. However, accessing these benefits requires complex paperwork and unclear application procedures. Additionally, the involvement of multiple stakeholders increases requirements related to monitoring and reporting, adding to the administrative burden of starting a sustainable business (Hoogendoorn, 2017).

Especially in the early stages of the business, when the sustainable entrepreneurs have not yet made a lot of financial gains, the entrepreneurs have restricted budgets. These restricted budgets make it difficult for entrepreneurs to allocate funds for their innovations. Innovation projects require upfront investments in research, development, and implementation. Start-ups and small businesses may find it challenging to access capital markets where they can secure funding. Instead, they rely on traditional sources such as bank loans or risk capital funds. These capital sources often have high risks and unfavorable borrowing conditions. Moreover, it might be difficult for sustainable entrepreneurs to secure loans, considering they are seen as risky businesses with uncertain returns. Due to these financial constraints and limited access to capital, entrepreneurs may be hesitant to implement environmental innovations, and instead pursue a more traditional business model to avoid the financial risks (Talić et. al., 2020).

Strategies for Sustainable Entrepreneurship in Accessing Capital

As mentioned before, investors play an important role in encouraging sustainable business practices by incorporating sustainable criteria into investment decisions. Sustainable entrepreneurship does not rely on finite resources, and by focussing on social and environmental impact they promote long term-sustainability and resilience (Crals, 2000). Investors increasingly recognise that sustainable business models offer more than just reputational benefits. They see them as forward-looking strategies demonstrating resilience in the face of global challenges and a firm commitment to people and the planet. This mentality shift is driven by several factors (North, 2023).

Firstly, sustainable business models integrate environmental, social, and governance (ESG) factors, mitigating potential business risks. Companies that adhere to strict environmental standards are less vulnerable to environmental accidents, scandals (Crals, 2000), fines or negative public backlash, this is interesting for investors that seek stable and sustainable returns (North, 2023).

Secondly, companies prioritising sustainability are often better able at adapting to changing regulations and consumer preferences. This adaptability enhances the durability of a business and delivers consistent returns, which is attractive to investors that look for resilient and future-proof investments (North, 2023).

Moreover, many investors are looking for investments that align with their values. They actively look for opportunities to support companies that positively contribute to the society and the environment (North, 2023).

Furthermore, sustainable entrepreneurs grow and maintain high-quality relationships with important stakeholders. Companies with meaningful relationships with their customers,

shareholders, and employees were more likely to have better access to financing and have less capital constraints. Researchers argue that this is due to factors such as low agency cost and increased revenues (Turner, 2023).

Lastly, sustainable entrepreneurs are often better at communicating their environmental and social plans to the public and key stakeholders. This communication increases transparency and accountability, which will built trust and reduces the perception of risk among stakeholders and investors. As a result, these entrepreneurs face fewer constraints in accessing capital (Turner, 2023).

Methodology

Research Design: Qualitative Approach and Case Study

This study employed a qualitative approach, using interviews as the primary data collection method. Qualitative research was chosen for its ability to delve into the complex dynamics and nuanced perspectives on the interplay between sustainable entrepreneurship and access to capital within the regional context of Friesland.

The sample was drawn from start-ups and small businesses actively involved in sustainable practices in Friesland, and financiers operating within the region. A purposive sampling technique was utilised to ensure diversity in participant profiles and perspectives, in order to enrich the depth and breadth of the data that was collected.

This study will incorporate a literature review to complement the qualitative data collection, providing valuable insights into sustainable entrepreneurship's historical, economic, and regulatory aspects.

This research constituted a case study in Friesland, aiming to capture the core of sustainable entrepreneurship practices and financing through real-world examples. The focus was on sustainable businesses that had developed within the context of Friesland. The case study involved an in-depth exploration of various aspects of the selected companies, offering valuable insights into the local ecosystem's challenges, opportunities and dynamics.

In addition to exploring the perspectives of Friesian sustainable entrepreneurs, the case study shed light on the financiers' viewpoint in Friesland. The case study highlighted the interactions between sustainable businesses and financiers, showcasing the challenges and opportunities encountered from both sides of the financing equation.

Sampling Strategy and Participation Selection

This study employed a purposive sampling technique to select participants that are directly involved in sustainable entrepreneurship practices or financing activities within Friesland. Various recruitment channels were utilised to ensure variety in participant profiles and perspectives.

Firstly, participant recruitment was conducted through a LinkedIn post, inviting individuals involved in sustainable entrepreneurship or financing in Friesland to participate in the study. This approach enabled access to a broad network of entrepreneurs or financiers who might provide me with valuable insights and experiences relevant to the research topic. Additionally, sustainability networks and organisations within Friesland were contacted to assist participant

recruitment. These networks served as hubs for individuals and businesses actively engaged in sustainable practices, making them ideal sources for recruiting participants. Furthermore, I leveraged personal networks cultivated through my internship at the Municipality of Leeuwarden when reaching potential participants. The municipality's involvement in promoting sustainability initiatives and supporting local businesses provides access to diverse stakeholders willing to participate in the study.

Future studies might benefit from more explicit documentation of the criteria used for participant selection to enhance reproducibility further. This study focused on the following criteria for participant selection:

- Start-ups and small businesses were selected to ensure the focus remained on early-stage and developing companies and capture various experiences and challenges.
- Companies that were actively engaged in sustainable practices were selected.
- Only companies located in Friesland were included.
- Financiers with experience in financing sustainable businesses and focussing on the Friesian region were selected.

Member checking was implemented as part of the data validation process to enhance the credibility and trustworthiness of the findings. Participants were asked to review and provide feedback on the interpretations and conclusions that were drawn from the collected data. This process ensured that the research findings accurately reflected participants' perspectives and experiences.

Interviews were transcribed using GoodTape.io to streamline the transcription process and manage time effectively. However, transcriptions were manually reviewed and corrected to maintain accuracy and thoroughness. A maximum of 24 hours was allocated for transcribing the interviews to expedite data analysis and ensure the timely completion of the study.

Data Collection: Semi-Structured Interviews

Semi-structured interviews served as this study's primary data collection method, this allowed for a flexible yet focused approach to gathering the data. This method provided an opportunity for in-depth examination of the participants' perspectives.

The semi-structured nature of the interviews allowed for a predetermined set of open-ended questions while also allowing spontaneous exploration of emerging themes or topics. This approach ensured a dynamic interaction between the interviewer and participant, leading to a deeper understanding of the complexities and nuances of the research topic.

Interview questions were carefully designed to gain detailed responses from participants on various topics. Follow-through questions were used to clarify answers, delve into specific areas of interest, and encourage participants to elaborate on their perspectives.

During the interviews a standardised interview guide was developed to ensure consistency and accuracy in data collection. This interview guide outlined the sequence of questions used. However, the flexible nature of semi-structured interviews allowed the guide to be adapted and refined based on the changing needs of the research process.

Interviews were conducted in person or virtually, depending on participant preference and logistical considerations. Each interview lasted approximately 45 minutes, allowing for sufficient time for participants to share their insights at length.

Interviews were audio-recorded and transcribed word-for-word, with the participants' consent, to facilitate data management and analysis. Transcriptions were anonymised to ensure participant confidentiality and privacy. Additionally, field notes were taken during and after each interview to capture contextual details, non-verbal cues, and reflections on the interview process.

Transparency and Reproducibility in Data Collection

To enhance transparency and reproducibility:

- **Interview Protocols:** A standardised interview guide was developed, outlining the questions used during interviews. This interview guide is included in the Appendix for reference.
- **Recording and Transcription:** Interviews were audio recorded with the participant's consent to ensure accuracy. Transcriptions were then manually reviewed and corrected as needed.
- **Member Checking:** Participants were asked to review and provide feedback on the interpretations and conclusions that were drawn from the collected data. This process ensured that the research findings accurately reflected participants' perspectives and experiences.
- **Field Notes:** Detailed field notes were taken during and after each interview to capture contextual details, non-verbal cues, and reflections on the interview process.

Data Analysis

A thematic analysis was done to identify and organise patterns within the data. For this purpose, the data analysis software ATLAS was utilised.

The data were systematically coded, with meaningful segments of text assigned descriptive labels or codes that captured the essence of the content. Once the initial coding was complete, the codes were organised into broader themes or categories based on the similarities and relationships.

The final stage of data analysis involved interpreting the identified themes in relation to the research question and synthesising findings into a coherent narrative that addressed the study's overarching aims.

Potential Weaknesses and Limitations

While the chosen methodology provides a framework for exploring sustainable entrepreneurship and access to capital in Friesland, it is essential to acknowledge potential weaknesses and limitations:

- **Sampling Bias:** While aiming to ensure diversity, purposive sampling may introduce bias as the selection is based on specific criteria. This sampling method could limit the generalizability of the findings to other contexts or regions. Future research could consider using additional sampling methods to mitigate this bias.
- **Interview Bias:** The semi-structured interview relies on participants' willingness to share their experiences openly. There is a risk of an interview bias if participants provide

socially desirable responses or keep back information they consider sensitive. Establishing trust and ensuring confidentiality are crucial to mitigate this risk.

- **Member Checking:** While member checking increases validity, there is also a possibility of participants adjusting their responses upon reflection, which could affect the consistency of the data. This potential limitation should be addressed by clearly communicating the purpose of member checking to the participants.

The Landscape of Sustainable Entrepreneurship in Friesland

Overview of the Friesian Sustainable Environment

In Friesland, there is a deep sense of pride in the landscape and community spirit. This pride is reflected in the collective commitment of stakeholders to prioritise the well-being of the environment and the people of Friesland. The focus is on nurturing a healthy, clean and contended Friesland. This commitment drives the transition to a circular economy, sustainable energy usage, water conservation, biodiversity preservation, public health promotion, and social inclusiveness (Provincie Fryslân, n.d.).

In 2017, Friesland was named the most circular region in the Netherlands (Meet in Friesland, 2022). By 2023, Friesland aims to become the most circular region in Europe (Provincie Fryslân, 2023). This ambitious goal is pursued through “Vereniging Circulair Friesland”, in which all municipalities in Fryslân, along with knowledge institutions and an

increasing number of companies, have united to strive towards this circular goal (Provincie Fryslân, n.d.).

Friesland stands at the forefront of locally generated sustainable energy, with solar and wind power that are integral parts of the provincial landscape. The emergence of local energy cooperatives gained significant traction from 2007 onwards. Therefore, Friesland now nearly has 60 of such initiatives (Fossylfrij Fryslân, 2022).

Water constitutes 50% of the geographical area of Friesland, a fact that makes residents both proud and knowledgeable. After struggling with water-related challenges for centuries, Frisians have adapted specialised knowledge and skills, including strategies to mitigate flooding, desalinate seawater and utilise energy potential. The nomination of Leeuwarden as the Capital of Water Technology underscores the region's leading position in this field, thanks to its rich ecosystem of research institutions, educational facilities and companies engaged in water-related technologies (Meet in Friesland, n.d.).

Friesland has diverse natural landscapes, including the Wadden Sea, lakes, and forests. However, like other regions in the Netherlands, its biodiversity faces significant threats such as salinisation, escalating drought, and detrimental effects of nitrogen and pesticides (Kuypers, n.d.). Despite these challenges, there is a substantial commitment to biodiversity restoration, a crucial aspect of nature conservation in the province. The biodiversity restoration program is designed to reverse the downward trend of biodiversity to an upward trend. The aim is to achieve this trend reversal by 2025 and maintain this upward trend over the long-term within natural, agricultural and urban areas. The program focuses on improving the quality of habitats for both sensitive and common species. These efforts include optimising the Nature Network Netherlands, managing Natura 2000 areas, managing agricultural nature, and creating meadow

bird core areas. Attention is also paid to water and air quality, with measures for clean water and healthy soil (Provincie Fryslân, 2021).

There are five recognised Blue Zones worldwide, areas where people live notably longer and healthier lives. Friesland aspires to become the sixth Blue Zone (Meet in Friesland, n.d.). The aim is to tackle the ageing population's challenges while promoting healthier and more vibrant communities. By bringing together various stakeholders, including healthcare institutions, social organisations, and local government bodies, this initiative encourages residents to adopt healthier lifestyles (Planbureau Friesland, 2021).

Innovation Ecosystem

Within the ecosystem in Friesland, governmental bodies, entrepreneurs, and knowledge institutions play important roles, collaborating closely in order to foster sustainable development. Parties such as Verening Circulair Fryslân (VCF), the Friese Ontwikkelingsmaatschappij (FOM), and Innovatiepact Fryslân (IPF) stimulate this collaboration (de Boer, 2021). Moreover, Friesland is working on differentiating and positioning the region by promoting specific clusters.

A prime example of this is the Water Campus, which aims to be the central hub of the Dutch water technology sector. The campus creates synergies between governments, knowledge institutions, and (inter) national businesses, fostering innovation and water technology expertise (Water Campus Leeuwarden, n.d.). Leeuwarden, the Frisian capital, is seen as the water technology capital of Europe (Founded in Friesland, n.d.). The Water Campus is a meeting place for scientists and businesses from all over Europe, strengthening the position of European water technology (Water Campus Leeuwarden, n.d.).

Another significant cluster is Innovation Cluster Drachten, an internationally operating ecosystem of high-tech systems, material companies, and knowledge institutions in Friesland. This cluster is at the forefront of global innovation, focusing on five high-tech areas: robotics, 3D metal printing, remote sensing and big data, visual intelligence, and renewable propulsion. Innovation Cluster Drachten also plays a vital role in the Smart Industry Hub Northern Netherlands, helping businesses enhance their products, services and processes through digital innovation. This hub promotes co-creation, open innovation, and education, aligning business growth with a sustainable future (ICDrachten, 2023).

Adding to these clusters, the Dairy Campus in Leeuwarden is a premier research and practice centre for dairy farming. This innovation hub is dedicated to advancing the dairy sector through research, education and applied learning. The Dutch dairy sector is committed to finding more sustainable and efficient ways to produce dairy products while considering environmental and societal expectations. At Dairy Campus, scientists and entrepreneurs explore new milk production and processing applications, focusing on smart farming, biodiversity, green energy, emissions reduction, resilience, and feed and soil management (Dairy Campus, n.d.).

Lastly, Energy Campus Leeuwarden is another cornerstone of Friesland's innovation ecosystem, serving as a collaborative space for companies, knowledge institutions, and start-ups to work and experiment with sustainable solutions. The campus is committed to discussing sustainability and actively implementing it. This commitment is achieved through effective collaboration between companies, knowledge institutions and governments, all working together to realise the energy transition (Energie Campus Leeuwarden, 2023).

Results: Perspectives of Local Entrepreneurs and Financiers

Complex Financial Landscapes for Sustainable Ventures

Fragmentation prevails in financial support, with sustainable entrepreneurs constantly checking available subsidies. Multiple financial institutions, funds, and diverse sources exist within this landscape, each one with its unique investment strategies and operational approaches. This complicated web of funding options creates a challenge for entrepreneurs seeking financing, since they have to navigate a complex web of choices and meet multiple criteria to get access to financial support (Interviewee 7).

Going over the intricacies of subsidy applications can be daunting, especially for those unfamiliar with the process. As one interviewee reflects:

“With a subsidy project, it is a lot of paperwork, a lot of data. You have to expose your whole business. It is a lot of record-keeping and a maze of paperwork. It is a lot though, a lot. And if you do not have experience with that, then you really have to pay attention to all the details.” (Interviewee 2, originally Dutch, translated by author).

Securing subsidies involves a lot of paperwork and data disclosure, often requiring precise attention to detail (Interviewee 2). Subsidies, particularly, acquire a substantial portion of the entrepreneurs' time and effort, especially during subsidy release periods, as they are busy researching, apply for, and securing available funding opportunities (Interviewee 1). One of the interviewees emphasises the importance of adhering to the strict accountability measures that are associated with subsidies, recognising that they entail a comprehensive documentation process and you have to adhere to specific expenditure guidelines. Each subsidy program has different rules and regulations, further complicating the matter for those wanting to apply (Interviewee 2).

Acquiring grants presents a significant challenge for entrepreneurs. The application process often involves submitting proposals and waiting in uncertainty for the results. It is further complicated by the fact that specific grants are subject to strict criteria, such as the “three-year argument,” which determines that succeeding years of financial loss can lead to a company being disqualified from receiving grants. To make the process easier for innovative entrepreneurs, a better funding structure that aligns with the specific needs of sustainable businesses is needed. This approach would ensure funds and subsidies that match the longer development timelines that are typically associated with sustainable businesses. However, the current financing landscape has limited resources, resulting in inefficiencies and wasted efforts for many companies (Interviewee 7).

Some subsidy programs only target specific materials and technologies, which creates challenges when innovative yet non-traditional projects want to secure funding. This narrow focus can hinder innovation and discourage businesses to explore new sustainable solutions. Consequently, there is a need to foster a more inclusive and flexible approach to subsidy allocation that promotes experimentation and supports a broader range of innovative endeavours (Interviewee 2).

Costs and Risks Associated with Subsidy Acquisition

Despite the potential rewards of successful subsidy acquisition, it is crucial to acknowledge the substantial investment of time, resources and effort that is required to begin and maintain subsidy-funded projects. One of the interviewees underscores the inherent risk involved in such efforts, where a single misstep or oversight in compliance could jeopardise the entire

business, leading to potential repayment obligations. Given these challenges, some entrepreneurs do not pursue grant-funded initiatives, preferring to focus on their core business, even if it means missing out on growth opportunities (Interviewee 2).

Moreover, one interviewee noted that applying for subsidies requires a high level of expertise in paperwork and compliance, skills they and their team lack. Hiring external consultants to manage the subsidy application process would add costs and not guarantee success. This uncertainty and the significant investment of time and resources led them to decide to not pursue subsidies (Interviewee 4).

“ ... neither of us are adept at it. Therefore, you either have to bring someone in externally, but that also costs money and then you're not even sure if it works. Or you put a lot of time and energy into it, and then again you're not even sure if it works. So we were like, well, we won't do it.” (Interviewee 4, originally Dutch, translated by author).

Subsidies and grants typically only cover a part of the financial needs of a project or business. Entrepreneurs need sufficient financial resources to make investments and cover operational expenses before any revenue is generated. Careful financial planning and management are required to ensure that the available funds are utilised effectively and efficiently. Therefore, while subsidies and grants offer valuable support, entrepreneurs must also seek alternative funding sources and be prepared to invest their personal financial resources (Interviewee 2).

While various subsidies are available, the process is often case-specific and unreliable for comprehensive financial planning. One interviewee notes a common misconception that their operations are heavily subsidised, but in reality, they rely minimally on such funding. When

applicable, subsidies are often limited and insufficient to support somewhat larger-scale initiatives (Interviewee 3).

Loans and Financial Pressure

The primary challenge associated with taking out a loan is the financial pressure it holds on the entrepreneur. The organisation faces the obligation to repay the loan with interest, which requires generating sufficient revenue within a limited time frame. However, these loan structures do not consider different business models for sustainable entrepreneurs. Unlike a linear model, which only focuses on financial impact, sustainable business models also focus on social and environmental impact. Sustainable businesses typically require a longer time to become profitable due to these non-financial contributions (Interviewee 3).

“... if we do not include the social and the circular parts in our business, we could make a lot more profit and be able to pay back the loan more easily. But that's something we so precisely don't want. But anyway, that's still the way the economy is. We still measured it financially, but the social and the circular; that's not measured. We think that's worth as much as financially, maybe more.” (Interviewee 3, Originally Dutch, translated by author)

This situation reflects a broader systemic issue where the economic framework does not yet incorporate the value of social and environmental impacts.

Strategic Regional Positioning and Collaboration

When pursuing economic growth and innovation, regions like Friesland should focus on their unique strengths and resources rather than wanting to excel in every industry. Friesland

should leverage its abundance of water-related assets and head start in circularity. By strategically positioning itself in this way, Friesland can distinguish itself globally and attract like-minded businesses and investors (Interviewee 5). This targeted approach attracts investments and fosters collaboration within the local ecosystem.

As one of the interviewees highlighted, clusters should be created around crucial themes, involving key stakeholders from relevant industries to actively participate in these clusters (Interviewee 7). By combining ideas and resources, entrepreneurs can elevate their initiatives into concepts that resonate with larger entities, such as corporations, municipalities or housing associations. The ultimate goal is creating alliances between individuals that are committed to a shared vision, enabling a smoother path to sustainable solutions (Interviewee 8). While sector specialisation may not necessarily originate from governmental directives, there is a clear opportunity for collaboration between public and private entities to lead Friesland towards its sustainable goals. Initiatives such as sector-specific funds tailored to Friesland's unique strengths could serve as catalysts for attracting businesses and knowledge to the region, driving economic growth and sustainability (Interviewee 5).

Drawing from one of the interviews, it becomes clear that effective support mechanisms are crucial for the success of start-ups. The interviewee emphasises the need for guidance from experienced individuals who can provide valuable insights and mentorship.

“... I think that you need guidance from some experienced people. What you often see in practice is that entrepreneurs, young or not, create a certain group around them. They believe in the plan, but sometimes the critical perspective is missing. [...] I think it would be good if you could have someone there who has no financial interest, is just neutral, and just wants to help you.” (Interviewee 6, Originally Dutch, translated by author)

This guidance, from an independent team that is not financial interested, enhances the viability of start-up businesses by offering advice and strategic direction. The interviewee proposes the establishment of a start-up board with sustainable entrepreneurs providing support and connections to emerging businesses (Interviewee 6). By using the expertise and networks of experienced professionals, start-ups can navigate the early TRL phases and the complexities of the funding landscape.

Moreover, Friesland has to think beyond local boundaries and collaborate on a larger scale, such as European initiatives, to address complex challenges. Ultimately, the goal is to prioritise impactful projects and initiatives, regardless of who benefits financially, to drive successful regional outcomes and progress in sustainability (Interviewee 7).

Barriers and Solutions in Market Integration

Start-ups transitioning from TRL 6 to TRL 7 often face challenges beyond funding. Progress within the market landscape is essential, because products must be brought to market and assessed promptly. It is common to see companies make a lot of progress in development phases only to encounter obstacles in transitioning to operational production environments for testing. Many companies need help finding market partners that are willing to collaborate at this critical time. Therefore, addressing these issues in the early development phase is important. Often, technically oriented entrepreneurs need to pay more attention to the importance of this step and not start too late. The reluctance of existing market participants can hinder the adoption of innovative solutions, exacerbating financing problems. These multifaceted challenges thus impede innovative start-ups' progress towards proven technology (Interviewee 7).

Additionally, market validation plays a pivotal role in investment decisions. Evaluating the market ensures a viable market for the proposed solution. Financiers stress the significance of thoroughly testing market development at every stage, considering consumer behaviour and willingness to pay for sustainable alternatives (Interviewee 7).

Financiers' Perspectives on Sustainable Investing

From the lens of financiers, a nuanced approach to risk management emerges as a fundamental aspect of sustainable investing. Funders emphasise the importance of strong leadership and visionary founders while highlighting the crucial role of a diverse and skilled team in driving the success of companies (Interviewee 7). A brilliant idea alone is insufficient; with a capable founder and a competent team, the idea may materialise into a viable business. Therefore, financiers prioritise assessing the capabilities and qualities of the individuals involved, focusing on their commitment, resilience, and ability to execute the proposed solution effectively (Interviewee 5).

Many sustainable start-ups focus on innovative, cutting-edge technology, and their biggest challenge is the long development time required. As one interviewee mentioned:

“A lot of sustainable start-ups that are really doing innovative technology, cutting-edge technology, have a very long development time. And that's a mindset that we as investors find very difficult. [...] The risk is much higher obviously, because you're at an early stage. The amounts are often high and the development time is very long.” (Interviewee 7, Originally Dutch, translated by author)

Significant investments may not yield a return if technical challenges arise or performance expectations are unmet (Interviewee 7). Consequently, to mitigate these risks,

financiers tend to allocate their investments to start-ups in the later stages of TRL (Interviewee 8).

Moreover, the long development cycles, often lasting more than a decade, differentiate from investors' expected returns within 2 to 3 years. This difference requires a distinct mindset among investors:

“The scope is much longer than 3 years. And that needs a whole different mindset. Because you also get setbacks. Those are part of it, too. And you have to be able to deal with that. It's going to cost more money again. You may well have to take a loss on that in your initial investment. So yes, that mindset should be different.” (Interviewee 7, Originally Dutch, translated by author).

Therefore, technology investing requires a specialised way of thinking and financial approaches, which are not universal among investors. Not everyone has the patience or resources to make long-term investments (Interviewee 7).

The investment landscape is evolving, mainly focusing on integrating Environmental, Social and Governance (ESG) principles. This evolution reflects a broader shift towards sustainable and ethical business practices, where companies are expected to prioritise the well-being of both people and the planet in their operations. Furthermore, diversity and inclusivity initiatives are included within investment agreements, highlighting the importance of fostering diverse and equitable workplaces (Interviewee 7).

Discussion

Interpretation of Results in Relation to Existing Literature

The results of this study highlight several challenges and opportunities faced by sustainable entrepreneurs and financiers, offering a nuanced understanding of the complex financial landscape in which they operate. These findings align with insights that were found within existing literature, but furthermore it also expands upon this literature.

The fragmentation of financial support and the processes involved in obtaining subsidies and grants align with Hoogendoorn's (2017) observations regarding market imperfections and regulatory complexities. As confirmed by the interviewees, sustainable entrepreneurs often navigate a "complicated web" of funding options, which echoes Hoogendoorn's statement. As highlighted by the interviewees, the substantial investment of time and resources required to secure subsidies aligns with the administrative burdens described in the literature. The decision of some entrepreneurs to avoid subsidies due to these challenges is a reflection of the literature by Hoogendoorn (2017) on the administrative burdens and the potential for missteps to jeopardise ventures.

As the literature by Talić et al. (2020) discussed, it is challenging for entrepreneurs to gain access to capital in the early stages of the business when sustainable entrepreneurs have not yet made a lot of financial gains. It might be difficult for sustainable entrepreneurs to secure loans, considering they are seen as risky businesses with uncertain returns. This aligns with the results of the interviews, where financiers mentioned that they typically invest in later TRL phases, when there is more certainty in a business.

As North (2023) found, investors increasingly recognise that sustainable business models offer more than just reputational benefits. They see them as forward-looking strategies demonstrating resilience in the face of global challenges and a firm commitment to people and the planet. This aligns with the interviews, where one investor mentions the evolving landscape focusing on integrating ESG principles, and diversity and inclusivity initiatives are included within investment agreements, highlighting the importance of fostering diverse and equitable workplaces.

The current economic framework fails to incorporate the value of social and environmental impacts and this poses a systemic challenge for sustainable entrepreneurs, as reflected on by Gutterman (2018), there is a need for financial models that account for triple-bottom-line principles. This need is also reflected upon in the interviews.

The emphasis on strategic regional positioning and collaboration in Friesland underscores the importance of leveraging local strengths and fostering innovation clusters, a strategy supported the Province of Friesland. By focusing on core competencies and creating sector-specific funds, regions can attract investment and drive sustainable economic growth. This targeted approach aligns with the initiative of the province on regional economic development and the creation of supportive ecosystems for sustainable entrepreneurship.

Overall, this study's findings contribute to the existing literature by providing insights into sustainable entrepreneurs' specific challenges and strategies. The results underscore the need for more inclusive and flexible funding structures, improved regulatory frameworks, and targeted regional strategy to support sustainable innovation.

Barriers to Financing Sustainable Ventures in Friesland

The financial landscape for sustainable ventures in Friesland is characterised by several barriers that hinder the growth and success of innovative entrepreneurs in the region. One of the primary challenges is the fragmented financial support system. Sustainable entrepreneurs often navigate a complicated web of funding options, each with unique criteria and application procedures. This complexity requires considerable time and effort, leading to inefficiencies and missed opportunities. Entrepreneurs often struggle with the substantial paperwork and adherence requirements associated with grant applications, which can overwhelm those unfamiliar with the process.

Another notable barrier is the strict criteria of specific grants, such as the “three-year argument,” which excludes companies from receiving grants if they experience financial losses over three consecutive years. Given the fact that sustainable businesses typically require longer development timelines before achieving profitability, this is a major challenge. Additionally, certain subsidy programs are narrowly focused on specific materials or technologies, limiting the scope for innovative yet non-traditional projects. This narrow focus can hinder innovation and discourage businesses to explore new sustainable solutions.

The significant investment in time, resources, and sometimes outside expertise required to apply for and manage grants also discourages many entrepreneurs who will not pursue grant-funded initiatives even if it means missing out on growth opportunities. The risk of failure to comply and potential repayment obligations can be daunting. Moreover, grants and subsidies often cover only part of a project's financial needs, requiring additional funding and careful planning to cover operational expenses before revenue is generated.

Loans are an alternative source of financing but also present challenges. The organisation faces the obligation to repay the loan with interest, which requires generating sufficient revenue within a limited time frame. However, these loan structures do not consider different business models for sustainable entrepreneurs, who typically require more time to become profitable because they focus on social and environmental impacts. The current economic framework does not take into account the value of these non-financial contributions, creating systematic challenges that further complicate access to financing.

Opportunities for Enhancing Access to Capital for Sustainable

Entrepreneurship

Despite these barriers there are multiple opportunities to improve access to capital for sustainable entrepreneurship in Friesland. One promising approach is to develop a more inclusive and flexible grant allocation system that encourages experimentation. The financial landscape can become more supportive and efficient by tailoring financing structures to the specific needs of sustainable businesses and taking into account the longer development times typically associated with these businesses. Creating sector-specific funds tailored to Friesland's unique strengths can attract like-minded businesses and investors to the region.

Strategic regional positioning and cooperation can also play a crucial role. By focusing on its unique strengths and creating clusters around key themes such as the circular economy, Friesland can foster collaboration within the local ecosystem. By combining ideas and resources, entrepreneurs can elevate their initiatives. The ultimate goal is creating alliances between individuals that are committed to a shared vision, enabling a smoother path to sustainable

solutions. Moreover, effective support mechanisms, such as start-up boards composed of experienced sustainable entrepreneurs who provide mentorship and strategic direction, can significantly increase the viability of start-up businesses.

It is essential to encourage broader collaboration on a larger scale, as merely Friesland, to strengthen the sustainable ecosystem further. By participating in more extensive networks, Friesland can address complex challenges more effectively and prioritise impactful projects regardless of who benefits financially.

From the investor's perspective, emphasising the importance of strong leadership and diverse, skilled teams can improve investment outcomes. Investors should prioritise assessing the capabilities and qualities of individuals involved in sustainable businesses, focusing on their commitment, resilience and ability to implement proposed solutions.

Implications for Theory and Practice

The results of the study contribute to theoretical frameworks by highlighting sustainable entrepreneurs' complex challenges. The study shows the evolving role of financiers and investors, emphasising the importance of risk management, long-term investment horizons, and the integration of ESG principles. Future research could explore new investment shifts prioritising social and environmental impact alongside financial returns.

For policymakers, the findings underscore the need for streamlined regulations, targeted financial support, and regional initiatives to foster sustainable entrepreneurship.

The study highlights the importance of adopting a long-term perspective and integrating ESG criteria into investment decision-making processes for investors. Investors can drive

positive change while achieving financial returns by recognising the value of sustainable business models.

The findings underscore the importance of strategic planning, market validation, and collaboration for entrepreneurs in navigating complex financial landscapes. By leveraging regional strengths, building diverse networks, and looking for investors aligned with their values and objectives, entrepreneurs can overcome funding challenges and accelerate the growth of their sustainable business.

Policy Implications and Recommendations

Policymakers are essential in shaping the environment for sustainable entrepreneurship in Friesland. Based on the interviews, a number of policy implications and recommendations have emerged. Firstly, policies should streamline the subsidy and grant application processes, reducing bureaucratic challenges and making it easier for businesses to access public funds. Introducing more flexible and inclusive subsidy programs that facilitate a broader range of innovative projects that encourage experimentation.

Secondly, by recognising the unique financial timelines of sustainable businesses, policymakers should advocate for loan structures that align with these longer development cycles. This could involve models that allow longer repayment periods and integrate social and environmental impact into financial assessment criteria.

To further enhance regional competitiveness, strategic policy initiatives should keep focus on fostering specialised clusters and sector-specific funds that leverage Friesland's strengths.

Lastly, policies should prioritise creating support networks for start-ups, including advisory boards that can offer guidance and connections.

By implementing these policy recommendations, Friesland can enhance access to capital for sustainable entrepreneurship, driving economic growth and sustainable development in the region.

Conclusion

In conclusion, this study delved into the complex dynamics of sustainable entrepreneurship and access to capital, revealing numerous challenges and opportunities inherent in pursuing sustainable businesses.

Summary of Key Findings

Throughout our investigation, the focus was on the central research question concerning the financial landscape for sustainable entrepreneurship: What are the mechanisms and challenges involved in accessing capital for sustainable start-ups and small businesses in Friesland?

The mechanisms and challenges in accessing capital for sustainable start-ups and small businesses in Friesland are multifaceted and complex. Our research indicates a complex financial landscape characterised by fragmentation in financial support, complex subsidy acquisition process, financial pressures, limited resources and funding options, market validation and collaboration, and regional positioning strategies. Sustainable entrepreneurs face significant

hurdles navigating this landscape, including securing subsidies with strict criteria and a lot of paperwork requirements. Additionally, the financial pressure imposed by loans and the need for alignment between the lengths of loans present challenges. However, strategic regional positioning and collaboration provide opportunities for sustainable ventures to grow by using Friesland's unique strengths and resources. Despite these challenges, financiers are increasingly recognising the need for sustainable entrepreneurship, which is driven by the integration of Environmental, Social, and Governance (ESG) principles, and the inclusion of diversity and inclusivity. Overall, the findings highlight the importance of tailored approaches and collaborative efforts to address the challenges that sustainable entrepreneurs face when seeking financing in Friesland.

Contributions

This study contributes to the existing literature by presenting insights into the challenges and opportunities faced by sustainable entrepreneurs when seeking financing. Firstly, it explains the specific barriers that sustainable entrepreneurs face when seeking financing, such as the fragmented financial support system, the demanding requirements of subsidy programmes, and loan structures that are not aligned with the longer development cycles of sustainable businesses. These findings elaborate on the knowledge of financial challenges in sustainable entrepreneurship, emphasising how these issues emerge in a regional context.

Secondly, this study presents comprehensive insights into the subsidy acquisition process and identifies specific barriers that might hinder sustainable economic growth. This work is particularly important for policymakers aiming to improve the subsidy application processes, making them more accessible to innovation entrepreneurs.

Additionally, the study conducts a critical evaluation of the current loan financing methods, presenting the financial pressures and risks associated with loan repayment. This study advocates for a new financial model and loan structure that better meet the needs of sustainable entrepreneurs.

Lastly, the study also offers opportunities for improving access to capital, such as developing inclusive and flexible grant allocation methods, establishing sector-specific funds that are adapted to Friesland's capabilities, and focussing on regional innovation clusters. These opportunities serve as a road map for regional governments when they aim to attract and promote sustainable entrepreneurship.

Limitations and Future Research

Despite the richness of our findings, this study has limitations. The research focuses primarily on a specific region and may not fully capture the diversity of financing nationally or globally. Future research could explore cross-regional comparisons and longitudinal studies. These studies could assess the influence of the region and the evolution of sustainable entrepreneurship financing over time.

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Appendices

Overview Interviewees

Interviewee 1	Entrepreneur	Interviewee 5	Financier
Interviewee 2	Entrepreneur	Interviewee 6	Financier
Interviewee 3	Entrepreneur	Interviewee 7	Financier
Interviewee 4	Entrepreneur	Interviewee 8	Financier

Interview Guide: Exploring Sustainable Entrepreneurship in Friesland

Introduction (5 min)

- Introduction Researcher and the purpose of the interview
- A brief overview of the interview structure and timeline
- Ensuring confidentiality and consent for recording the interview
- Mention that the interviewee has the right to withdraw at any time

Start recording

Background and Experience (10 min)

- Can you briefly introduce yourself and your sustainable entrepreneurship venture in Friesland?

- What inspired you to start a sustainable business, and what are your primary motivations and goals?

Business Model and Sustainable Practices (15 Min)

- Could you describe your business model and how it integrates sustainable principles?
 - How do these sustainable principles or initiatives contribute to your overall mission?
- What challenges have you faced in implementing sustainable practices in your business, and how have you addressed them?

Access to Capital and Funding (15 min)

- How did you initially fund your sustainable entrepreneurship venture, and what sources of capital have you utilised since then?
 - Why did you choose these funding sources?
- What challenges have you encountered in accessing capital and investment opportunities for your sustainable business in Friesland?

Future Plans and Outlook (10 min)

- What are your plans and aspirations for your sustainable business in Friesland?
- How do you envision the future of sustainable entrepreneurship in Friesland, and what role do you see your business playing?

Conclusion (5 min)

- Is there anything you would like to add?
-

End recording

- Thank the interviewee for their time and insights
- Repeat confidentiality and the right to withdraw at any time will be ensured.
- Clarify the use of member-checking

Interview Guide: Exploring Sustainable Entrepreneurship Financing in Friesland

Introduction (5 min)

- Introduction Researcher and the purpose of the interview
- A brief overview of the interview structure and timeline
- Ensuring confidentiality and consent for recording the interview
- Mention that the interviewee has the right to withdraw at any time

Start recording

Background and Experience (10 min)

- Can you briefly describe your role and responsibilities as a financier, especially regarding funding sustainable start-ups and small businesses in Friesland?

Investment Criteria and Evaluation (15 min)

- What factors do you prioritise when evaluating investment opportunities in sustainable entrepreneurship ventures?
 - Are there separate criteria applied for sustainable entrepreneurs?
 - If yes, what are they?
- How do you assess the potential impact of sustainable entrepreneurship initiatives on financial returns and social/ environmental impact?

Challenges and Opportunities (20 min)

- What challenges do you typically encounter when financing sustainable entrepreneurship ventures in Friesland?
- How important is risk management to you when making investment decisions?
 - How do you incorporate risks into your decision-making process?
 - What strategies do you employ to mitigate risks associated with investing in sustainable entrepreneurship ventures?
- From your perspective, what are the key opportunities and areas for improvement in promoting sustainable entrepreneurship and access to capital in Friesland?
- Where do you see the future of sustainable entrepreneurship financing heading in Friesland?

Conclusion (5 min)

- Is there anything you would like to add?

End recording

- Thank the interviewee for their time and insights
- Repeat confidentiality will be ensured, and the right to withdraw at any time will be ensured.
- Clarify the use of member-checking

Participant Consent Forms

Impact of Sustainable Entrepreneurship on Access to Capital

Consent Form of Participation

You are invited to participate in a research study by Justine van der Veen, a student from the University of Groningen. This study investigates the impact of sustainable entrepreneurship practices on access to capital for start-ups and small businesses in Friesland. Your participation is voluntary, and you can withdraw anytime.

Study Procedures

You will be asked to participate in a semi-structured interview if you agree. The interview will be in person or via video conference, based on your preference. The interview will last

approximately one hour and involves questions about your experiences with sustainable entrepreneurship and access to capital in Friesland.

Confidentiality and Anonymity

Your responses will be kept confidential and anonymised in any reports or publications resulting from the study. Only the researcher will access your data, and strict measures will be taken to ensure your identity remains protected.

Voluntary Participation and Withdrawal

Participation in this study is entirely voluntary, and you can withdraw anytime. Any data collected up to that point will be excluded from the study if you cancel.

Potential Benefits

Participation in the study may benefit the broader community by contributing to the understanding of sustainable entrepreneurship practices in Friesland.

Contact Information

If you have any questions or concerns about the study, please contact Justine van der Veen at Additionally, if you wish to file a complaint about the study, you can contact the academic supervisor overseeing the research at ...

By signing this form:

- If I approve, I understand that my audio will be recorded during the interview.
- I can request to have the audio recording or transcript.

- I understand that my words may be directly quoted.
 - I understand that I do *not* have to participate and can stop anytime.
 - I understand that any information I have given will be destroyed if I no longer wish for it to be used.
 - I understand that all personal information given will be destroyed at the end of the research project.
-

Participant

Name: _____

Signature: _____

Date:

Researcher

Name: _____

Signature: _____

Date: