Contextual Implications on Sustainable Entrepreneurship

A qualitative study on Food Waste Platforms contribution to reducing food waste in Sweden

Gabriella Peyron

Degree project/Independent project • 30 credits
Swedish University of Agricultural Sciences, SLU
Faculty of Natural Resources and Agricultural Sciences/Department of Economics
Environmental Economics and Management – Master's Programme
Degree project/SLU, Department of Economics, 1567 • ISSN 1401-4084
Uppsala 2024

Contextual Implications on Sustainable Entrepreneurship

A qualitative study on Food waste platforms' contribution to reducing food waste in Sweden

Gabriella Peyron

Supervisor:	**Hanna Astner, Swedish University of Agricultural Sciences, Department of Economics**
Examiner:	Per-Anders Langendahl, Swedish University of Agricultural Sciences, Department of Economics

Credits:	30 credits
Level:	Master's level, A2E
Course Title:	Master Thesis in Business Administration
Course code:	EX0904
Program/education:	Environmental Economics and Management – Master's programme 120,0 hp
Course coordinating dept:	Department of Economics
Place of publication:	Uppsala
Year of publication:	2024
Title of series:	Degree project/SLU, Department of Economics
Part number:	1567
ISSN:	1401-4084

Keywords:	Sustainable Entrepreneurship, contextualized entrepreneurship, interactions, cocreation, agency, values, shared economy, sustainable business model.

Swedish University of Agricultural Sciences
Faculty of Natural Resources And Agricultural Sciences
Department of Economics

Abstract

The global issue of food waste persists, with local digital solutions emerging to address aspects of this problem. Inspired by new economic models like the shared economy, Food waste platforms embody sustainable entrepreneurship. The platforms aspire to deliver social, environmental, and financial values in the process of creating value from waste in redistributing food in a secondary market. However, given the high degree of interactions due to the involvement of many actors in these sustainable business models and the existing gap in studies focusing on these interactions, it is currently unclear how these dynamics can either be an opportunity or a limit for sustainable entrepreneurship. Additionally, the process of navigating these opportunities and the challenges that the context poses is not well-explored. This study combines sustainable entrepreneurship with contextualized entrepreneurship to enhance the understanding of interactions as micro-processes within the entrepreneurial context of business models in the shared economy. Through a multi-case study involving three food waste platforms in Sweden and their partners, key findings reveal that these platforms evolve through co-creation with many actors, facilitated through agency in their operating context. The study emphasizes the importance of context in comprehending sustainable entrepreneurship, while giving insight to what collaborative business models in the shared economy means for the sustainable entrepreneurship in the creation of values.

Sammanfattning

Det globala problemet med matsvinn kvarstår, med lokala digitala lösningar som dyker upp för att adressera olika aspekter av detta problem. Inspirerade av nya ekonomiska modeller som delningsekonomin representerar matsvinnsplattformar hållbart entreprenörskap. Dessa plattformar strävar efter att leverera sociala, miljömässiga och ekonomiska värden i processen att skapa värde från avfall genom att omfördela mat på en sekundär marknad. Men med tanke på den höga graden av interaktioner på grund av deltagandet av många aktörer i dessa hållbara affärsmodeller och den befintliga kunskapsbristen när det gäller dessa interaktioner är det för närvarande oklart hur dessa dynamiker kan vara antingen en möjlighet eller en begränsning för hållbart entreprenörskap. Dessutom är processen att navigera dessa möjligheter och de utmaningar som sammanhanget medför inte välutforskad. Denna studie kombinerar hållbart entreprenörskap med kontextualiserat entreprenörskap för att öka förståelsen för interaktioner som mikroprocesser inom det entreprenöriella sammanhanget för affärsmodeller i delningsekonomin. Genom en flerfallsstudie som involverar tre matsvinnsplattformar i Sverige och deras partners avslöjar nyckelfynd att dessa plattformar utvecklas genom samskapande med många aktörer, underlättat genom handlingsutrymme i deras verksamhetskontext. Studien betonar vikten av sammanhanget för att förstå hållbart entreprenörskap samtidigt som den ger insikt i vad samarbetsinriktade affärsmodeller i delningsekonomin innebär för hållbart entreprenörskap i skapandet av värden.

Table of contents

List of tables

List of Figures

1. Introduction

This study is about contextual implications on sustainable entrepreneurship of fod waste platforms. The opening chapter of this study serves to establish the contextual background of the problem, articulate the studys problem statement, and underscore its significance. It offers insights into the existing knowledge within the field, highlights the study's contribution, and elucidates the studys aim, research questions, and delimitations.

1.1 Problem background

In a world where the global population is steadily rising, the paradoxical problem of needing more healthy food while wasting a significant portion of it persists as an important problem (FAO 2023; Richards et al. 2021). As the global population is projected to reach over nine billion people by 2050, the need for food will increase (UN 2022). Despite this, roughly one-third of all food produced is either lost in supply chains or wasted at the retail and consumer level (UNEP 2021). Consequentially, food loss and waste do not only result in the disposal of food but contribute to sustainability and food security issues such as environmental degradation, resource inefficiency, increased greenhouse gas emissions, and increasing hunger and global food insecurity (USDA 2022). Additionally, it leads to economic loss and increased costs for handling the waste (Ellen Macarthur Foundation 2023). Furthermore, it's not only a matter of practicality but also a moral obligation to address food waste and ensure that we use food responsibly in a world where many still go hungry (Ribeiro et al. 2018). Thus, the phenomenon of food loss and waste represents a critical issue with no benefits and demands analysis and attention (UNEP 2021). Instead of the current food systems that lead to loss and waste, circular and sustainable food systems that reduce negative impacts and improve health are considered desirable (Ellen Macarthur Foundation2023).

To tackle the problem, it is crucial to understand its size and the causes of it (UNEP 2021). Furthermore, The reasons for food loss and waste are many (UNEP 2021). Nevertheless, the reasons can be boiled down to overproduction, consumer behavior, poor storage, and cosmetic standards (European Commission 2023). Namely, the root issue is a lack of awareness among various stakeholders within

food systems about the scale of the problem, its potential solutions, and the benefits of food waste reduction (European Commission 2023). Specifically, food waste that happens at the retail and consumer level has been identified as the dominant obstacle in moving to sustainable and circular food systems producing 8-10% of global greenhouse emissions (Mbow et al. 2019; UNEP, 2021). Recognizing the gravity of the issue, the United Nations has set sustainable development goals, aiming to halve global food waste by 2030 (UNEP 2021; UN 2023). However, progress is slow, with 14% of food lost in production and 17% wasted at the retail and consumer level by 2023 (UN 2023). Shifting production, logistics, retailing, consumption, and waste handling practices is necessary to meet the target (UN 2023). Better data and measurement tools, such as those developed by the European Union and the Food Waste Hierarchy by the Waste and Resource Action Programme (WRAP), are crucial for understanding causes and taking effective actions (European Commission 2023). According to the hierarchy, The most resource-efficient and preferable option is to prevent waste. The second best is to reuse human consumption and animal feed and then follow recycling, recovery, and disposal (Papargyropoulou et al. 2014). Thus, as the world is putting its focus on the problem and developed tools help to highlight what's important it not only creates momentum to solve to problem but also calls for new entrepreneurial actions (UNFCCC 2018). At the same time, the digital revolution has enabled connectivity between people and has transformed the way organizations work and create value in most sectors (Michelini et al. 2018). Together with urbanization and the global financial crisis, digitalization has spurred the emergence of the sharing economy concept (Michelini et al. 2018), i.e. a new socio-economic model where costumer share instead of owning goods (Bocken et al. 2014). The digital revolution has given rise to entrepreneurs exploring new economic models in the shared economy, particularly in response to the need for sustainable practices (Fuerst et al. 2023). This further creates opportunities by changing production and consumption logic to more sustainable practices (Michelini et al. 2018).

Digital solutions, like food-sharing platforms, have emerged to address retail and consumer-level food waste (Oroski et al. 2022; Harvey et al. 2019). These platforms can be seen as tools for developing innovative economic models such as sharing and circular economies (Oroski et al. 2022). By creating ecosystems and promoting responsible food consumption, these platforms enhance sustainable development in the food system (Mu et al. 2019). They achieve this by connecting supply and demand, locating discounted products, facilitating community sharing, and providing guidance on food preservation (Cane et al. 2020). These platforms present a range of models, from profit-driven surplus product sales to non-profit initiatives connecting donors with charities and community-oriented platforms enabling food exchange among citizens (Michelini et al. 2018). Some platforms

also concentrate on reshaping food consumption habits through educational initiatives and promoting individual and family food planning (Cane et al. 2020; Mazzucchelli et al. 2021; Schroder et al. 2021). Aligned with the WRAP's waste hierarchy, these platforms not only curtail food waste by connecting surplus items with alternative consumers but also contribute to enhancing resource efficiency in the food chain (Papargyropoulou 2014; Makov et al. 2020). Their dedication to sustainability values, such as waste reduction and promoting responsible consumption, exemplifies sustainable entrepreneurship (Oroski et al. 2022). Michelini et al. (2018) emphasize how platforms within the shared economy foster connections and network-building, challenging conventional norms of ownership (De Bernardi et al. 2019). This underscores the social and communal aspects embedded in these platforms, when interacting with many actors. In Sweden, various platforms connect supply with demand, providing local solutions for restaurants, cafes, retail stores, and consumers to combat food waste (Besoksliv 2016).

To sum up, the problem of food waste is big and multifaceted and persists as a global problem. While initiatives have been launched to address the challenge, the problem remains pervasive. Moreover, the digital revolution and the advance of the sharing economy open up opportunities for entrepreneurs on a local level. Currently, digital solutions such as food waste platforms that aim to solve parts of the problem are gaining popularity.

1.2 Empirical Problem

Food waste platforms are gaining scholarly attention, challenging established business norms, and creating a collaborative environment that spawns new entrepreneurial opportunities (Oroski et al. 2022). These platforms serve as tools for cultivating innovative economic models, such as sharing and circular economies (ibid.). Described by Oroski et al. (2022) as sustainable business models, food waste platforms aim to provide social and environmental value in addition to financial benefits by redistributing waste in a secondary market. Sustainable entrepreneurs, functioning as agents of change, strive to achieve a balance between social, environmental, and financial values through the development of successful businesses (Fuerst et al. 2023). However, entrepreneurs in this domain must consider numerous aspects beyond technology.

Operating within the shared economy, these platforms aim to establish new reuse pathways when redistributing food by connecting supply and demand, involving multiple actors in the market (Richards & Hamilton 2018; Oroski et al. 2022). Bridging gaps in the food system requires these platforms to adopt various roles,

such as connecting actors through apps, disseminating information through education, and mobilizing third-party stakeholders (Ciulli et al. 2020). The platforms facilitate connections among stakeholders through digital platforms, creating opportunities for collaboration (Mattilla et al. 2020). Establishing networks with numerous stakeholders demands diverse efforts, including the creation and coordination of new relationships among already connected actors and stimulating market participants beyond traditional supply and demand realms, e.g., through education, (Ciulli et al. 2020), necessitating a high degree of interaction . Previous studies, such as Ciulli et al. (2020), emphasize the role of these platforms in bridging gaps in the supply chain. The challenge of a high degree of interaction involves forming networks and understanding links among different actors through knowledge sharing (De Bernardi et al. 2019). However, tensions may arise when stakeholder interests differ, affecting the potential to balance social, environmental, and financial values (Michelini et al. 2018). Thus, digital platforms must navigate a complex landscape, requiring extensive interaction while balancing social, environmental, and financial values.

Previous studies have explored the role of digital platforms in sustainable entrepreneurship by using a business model perspective (Fuerst et al. 2023). However, none have focused on the microprocesses, such as interactions between different actors in a context, shedding light on how interactions unfold in this collaborative and social space, seeking to understand the inherent opportunities and challenges in such entrepreneurship. Furthermore, due to a lack of empirical studies on food waste platforms, there is a lack of in-depth observations regarding the barriers and challenges encountered by innovators, especially during the implementation phase of these technologies (Oroski et al. 2021). Despite the promise of significant advancement, there is a lack of clarity regarding what these collaborative business models mean for sustainable entrepreneurship. Moreover, studies that provide an understanding of the challenges in a collaborative context and how these challenges are navigated are lacking. Consequently, there is a need for empirical studies to shed light on this matter.

1.3 Theoretical Problem .

Traditional entrepreneurship theories, historically focused on fostering economic growth (Kyrö 2015), have transformed the broader concept of sustainable entrepreneurship. This expanded perspective moves beyond the conventional focus on business creation and profit generation, aiming to contribute positively to both societal and environmental aspects (Welter 2011). At the same time, the shared economy introduces an innovative approach to the creation of opportunities (Cheng 2016; Korsgaard 2011). By offering products to a wider audience, enhancing

resource efficiency with under-utilized goods, and maintaining profitability (Cheng 2016), the shared economy emerges as a promising context for sustainable entrepreneurship, given that entrepreneurship thrives in a context of culture and norms that support responsible economic activities (Pacheco et al. 2010). Furthermore, exploring the shared economy as a market where entrepreneurs create value within a complex social system, involving many actors, can provide a context for an embedded relationship between social, environmental and financial values, possibly offering no tradeoffs off values, which according to Munoz et al. (2017) is how values of sustainable entrepreneurship should be considered. Thus, exploring sustainable entrepreneurship within the shared economy market gives attention to this view on sustainable entrepreneurship. Nevertheless, as mentioned previously, balancing social, environmental, and financial values in sustainable business models within the shared economy poses a significant challenge due to the high degree of interaction (Oroski et al. 2022).

In illuminating the development of entrepreneurial research, there has been a shift from a narrow focus on individual entrepreneurs, their traits, and motivations to a more encompassing consideration of entrepreneurship and its complex connections with society, as emphasized by Welter (2011). Focusing on the entrepreneur risk missing important aspects in the creation of change as it is not the pursuit of a specific group of people but as a process of social change accessible to a broader audience (Welter 2011). As society and its social systems can either be an asset or liability for the entrepreneurship, it plays a pivotal role in change (Welter 2011). Recognizing that sustainable entrepreneurs are situated not only within markets but also within social systems and territories is crucial for advancing system-level analysis (Katz & Steyaert 2004). Andersson et al. (2021) highlight that entrepreneurial change occurs within a context shaped by the connections among people, things, and processes through human interaction, reflecting the micro-processes inherent in everyday life. In the context of human society, a dynamic process of creative collective organization, unfolds through interconnected relationships (Dodd et al. 2016). Therefore, utilizing context as a lens according to Welters (2011) framework, the perspective shifts from viewing entrepreneurs as solitary agents of change to understanding entrepreneurial change as a collective venture. A contextualized perspective facilitates an examination of interactions within a social system, allowing the identification of opportunities or limits that influence entrepreneurship (Welter 2011).

Existing research highlights the significance of context in the creation, capture, and delivery of values (Fuerts et al. 2023). Studies have explored the connections between social and institutional contexts and their influence on entrepreneurial behavior from a social network perspective (Welter 2011). However, there is a gap in the litterature regarding studies specifically delving into social interactions

within a social system, focusing on the contextual implications of sustainable entrepreneurship. Adopting a contextual lens provides deeper insights into various context levels, enabling a multilevel analysis. Furthermore, collaborative business models in the shared economy involve many actors collectively working to create and share value, transforming social and economic systems and reshaping how consumers, societies, and organizations live, consume, and interact (Fuerts et al. 2023; Cheng 2016). Despite the growing importance of the sharing economy, scholarly attention to entrepreneurship within this context has been limited (Atsiz et al. 2021). This limitation prompts an exploration of the implications of entrepreneurship within the sharing economy for sustainable entrepreneurship.

1.4 Aim and Research Question

By using a context lense and sustainable entrepreneurship, this research aims to examine and understand how interaction happens around food waste platforms and their contextual factors. Thereby, shedding light on how contextual factors influence the sustainable entrepreneurship of food waste reduction platforms. In doing so, we enhance our understanding of the social processes embedded in the Sustainable entrepreneurship in the shared economy market. The aim is addresses through the following research questions:

1. How are food waste platforms developed through interactions?
2. How are opportunities and challenges navigated within the contextualized sustainable entrepreneurship of food waste platforms?

1.5 Delimitation

In limiting the scope of this study within the field of business administration, several key delimitations are imperative to clarify the study's focus. The chosen theoretical frameworks, sustainable entrepreneurship, emphasize their application within the shared economy rather than the circular economy. This strategic decision aims to provide a focused and practical lens through which the study can contribute valuable insights. Geographically, the study is confined to the context of Sweden. This decision is grounded in the recognition of the unique business landscape, regulatory environment, and cultural factors that shape business practices within the Swedish context. Furthermore, the study concentrates on a specific type of digital platform—those utilized in urban settings. The choice to focus on platforms employed in cities reflects an acknowledgment of the distinctive dynamics, challenges, and opportunities that arise in urban environments. By focusing on this specific context, the research aims to provide targeted recommendations applicable

to businesses operating in urban landscapes. Moreover, the study's method of multicase study was limited to food waste platforms and their partners. A choice was made to not include the perspective of consumers in the study to ensure depth in the study. Nevertheless, choosing the cases of food waste platforms was made to provide multiple perspectives and contrasts to the study.

1.6 Structure of Report

This study is structured according to 6 chapters. Chapter one presents the problem, the aim, the research problem, and the delimitations of the study. The second chapter presents the methodology. Chapter three outlines the theories used for analyzing and understanding the gathered empirics. The gathered empirics in chapter four presents the findings and analyze from the case study, followed by the discussion of the findings and finally, the conclusion of the key findings of the study along with suggestions for future research.

Figure 1. The structure of this study.

2. Theoretical Framework

The following chapter illustrates the theories and concepts applied in this study. Utilizing Contextualized Sustainable entrepreneurship as a framework, it will delve into the contextual implications of sustainable entrepreneurship. Moreover, the sustainable business model within the shared economy market will be explained, to provide an understanding og the intended process of change specific to food waste platforms. Finally, the chapter concludes with a description of the theoretical synthesis, detailing how the theoretical framework will be employed in this study.

2.1 Contextualized Sustainable Entrepreneurship as one lens

Contextualized and Sustainable Entrepreneurship will be applied as a theoretical lens. This is done to analyze how interaction happens in a collaborative business model in the Shared Economy, such as food waste platforms.

2.1.1 Sustainable entrepreneurship as a process of change

In this study, entrepreneurship is viewed as a process of change. Furthermore, defined as a process of change that has the agency to produce values, the purpose of entrepreneurship is to bring change for the better for companies and communitites (Andersson et al. 2021). As environmental deterioration is happening and the way we do business has to change (USDA 2022), scholars argue the need to reform how entrepreneurship I viewed (Andersson et al. 2021). Instead of looking at the attributes of an entrepreneur and focusing on the growth it can provide, which neglects the values that entrepreneurship can produce, it's important to look at what drives entrepreneurship (ibid.). According to Andersson et al. (2021), this is the context where entrepreneurship happens, social places where the people involved cocreate the meaning of the process (ibid.). In other words, instead of focusing on what entrepreneurship is, the focus should lie on the values that build entrepreneurship, which should not be seen as solely financial (ibid.). Instead, entrepreneurship is something that happens in everyday life, inserted in a specific context made of rules and by connecting to people (Dodd et al. 2021). Therefore,

entreneurship is a process that gains agency by the context it operates (Katz & Steyaert 2004; Andersson et al. 2021), and this agency is what will be "actualizing opportunity" (Ramoglou & Tsang 2017). Furthermore, as it involves people "entrepreneurship is also a process of social change" (Welter 2011, 173).

Sustainable entrepreneurship, a sub-field of entrepreneurship, does compared to traditional entrepreneurship not solely focus on financial values. Instead it create sustainable change while at the same time identifying financial value(Munoz et al. 2017), which means instead of focusing solely on economic growth, entrepreneurship can lead to a change for the better without depleting natural resources by including more than just economic value (Andersson et al. 2021). Furthermore, it can be viewed as a solution to environmental changes, emphasizing that entrepreneurial activities should not cause harm to ecological and social environments (Munoz et al. 2017; Shepherd & Patezelt 2011). As evolved from the two streams of social and environmental entrepreneurship it is the one approach of entrepreneurship that combines social, environmental, and financial values with a comprehensive focus on the welfare of future generations (Hockerts et al. 2010). Thus, this approach to entrepreneurship has a transformative potential, not just progressive progress (Schaefer et al. 2015). The sustainability framework, triple bottom line (3BL) which can be used to measure business success in social, environmental, and financial areas, has been accepted as a central paradigm in research of sustainable entrepreneurship (Munoz et al. 2017). According to Munoz et al (2017), there is a risk that the field of sustainable entrepreneurship reaches an early terminological closure as a clear understanding of its nature is lacking, especially regarding the triple bottom line (3BL). Currently, the framework of 3BL is developed on economic theories, which view entrepreneurs as agents for change. However, as agents for the economy. Furthermore, instead of seeing sustainable entrepreneurship as a balancing act of conflicting values, leading to trade-offs, Munoz et al. (2017) argue that sustainable entrepreneurs aim to balance values, without making trade-offs. Instead, Munoz et al. (2017) suggest a more complex view that does not separate the values into three, instead seeing them as interdependent.

Furthermore, the Agency to bring change according to Andersson (2021) is given due to the context. Agency of entrepreneurship will be obtained in the context in which the entrepreneurship operates (Andersson et al. 2021). As agency to bring change is given by the context, it is done through the connection of things, people, and activity (ibid.). The process of change happens in a network of people and relationships, micro-processs happening in people's everyday lives (ibid.). Furthermore, according to Korsgaard (2011) opportunities are not discovered but

created. Thus, when chosen this approach in this study, opportunities are created through interactions between actors and context.

2.1.2 Context-lense

Understanding the significance of context is crucial for comprehending economic behaviors (Welter 2011). Context which can be defined as "circumstances, conditions, situations or environments that are external factors to the respective phenomena and enable or constrain it" (Welter 2011, 167). Context offers individuals both opportunities and limits for what they can and will do which means it can be either an advantage or an obstacle for entrepreneurship (Welter 2011). Conversely, entrepreneurship can exert influence on various contexts making it imperative to grasp when, how, and why entrepreneurial activities occur and by whom (ibid.).

Welter (2011) divides context into four dimensions which illustrate the multiplicity of context; *social context* looks at social connections, *spatial context,* also called *communal context, explores geographical context , institutional* explores rules and regulations aswell as norms an attitdues, and *business context explored market and industry*. However, Welter (2011) excludes the fourth context, the business context, which pertains to how industry and business factors influence entrepreneurship—an aspect that is readily investigable. Instead, the emphasis is placed on social, spatial, and institutional contexts, revealing the intricate nature of business aspects, including social interactions. In alignment with the study's focus on interactions, it also disregards the fourth context and concentrates on exploring the social, spatial, and institutional dimensions. *Social context* explores social connections, community, and households (Welter 2011). It explores the entrepreneurial network that can offer resources and support, such as financial, knowledge, potential staff, and emotional support of family and friends (ibid.) Furthermore, this can be a crucial resource when overcoming obstacles in a new market when developing a business (ibid). The *spatial context*, extends beyond social limits, manifesting in geographic scenarios and interweaving with social, communal, and geographic factors, showing how it's difficult to tell things apart (Welter 2011). Various forms of regional entrepreneurship, including community entrepreneurship in a geographic context, are explored. The communal context establishes a clear link between society and entrepreneurship, extending beyond the business sector into everyday life (ibid.). Furthermore, the community form of entrepreneurship sees change as something produced collectively in a specific geographic space (ibid.). Therefore, entrepreneurship is a powerful tool for driving social change (ibid.). *Institutional context* encompasses both official and unofficial establishments, impacting entrepreneurial opportunity identification, utilization, and access to

resources, the “rules of the game” (Welter 2011, 172). The formal institutions consist of political and economic rules that either enable or limit opportunities for entrepreneurship (Welter 2011). This encompasses regulations such as those governing market entry and departure (ibid.). informal institutions consist of attitudes and perspectives of society (Welter 2011). This will affect the opportunity identification and utilization of entrepreneurship and the possibility to get resources (ibid.). The institutional context gives attention to societal aspects of entrepreneurship as rules and attitudes will influence the very day nature of the context and therefore the essence of entrepreneurship (Welter 2011). The Society's influence on entrepreneurship emphasizes it as a tool for social transformation, highlighting its accessibility to diverse groups (ibid.). In other words, entrepreneurship is not restricted to a select few; instead, it can be undertaken by various groups. A negative aspect of spatial context, combined with the social, culminates in embeddedness that leads to a closed community network. Furthermore, communities that are defined by shared rules and meanings, especially in terms of social boundaries, serve as a possible hindrance (ibid.).

Whe contextualizing entrepreneurship, by using a context-lens it enables an understanding of entrepreneurship by examining lower and upper levels of analysis, where different aspects of entrepreneurship can influence elements on various levels (Hackman 2003). High-level analysis, such as political and economic systems interacts with low-level aspects, like opportunities recognized by the entrepreneur, producing context-specific results (Welter 2011).

2.2 Sustainable Business Models as a tool for entrepreneurial processes

Exploring food waste platforms as sustainable business models within the shared economy, this section aims to explain their significance and the value these entrepreneurial processes seek to create. Additionally, a business model framework will be presented, seen as tool to drive entrepreneurial processes forward.

2.2.1 Creating value from waste as a sustainable business model

Sustainable Business Models (SBM) incorporate a triple bottom line (TBL) strategy by including a holistic approach of financial, social, and environmental aspects for many stakeholders (Bocken et al. 2014; Bocken et al. 2013). This is considered crucial in tackling environmental issues and moving a towards sustainable economy which includes closed-loop systems, decreased consumption, and prioritizing social and environmental aspects equal to financial (Bocken et al. 2014).

Different categories of Sustainable business models exist, such as Product-Service-system (PSS) and closed loop systems which have the potential to improve resource efficiency by shifting ownership and reusing of materials, resulting in less production and improved durancy, eg car sharing or reuse of waste (Bocken et al. 2014). However, to deliver sustainability a system perspective is needed as using one approach to delivering sustainability might not be enough (Bocken et al. 2014). Therefore, Bocken et al. (2014) suggest a grouping by processes that can support building up a business model to deliver sustainability (ibid.). Aiming to develop food systems to more circular, Food waste platform aim to reduce waste and crete value by creating new streams (Oroski et al. 2022). Following Bocken et al. (2014) sustainable business models archetypes, this is equal to Creating value from waste. Creating value from waste, eliminates waste and instead develops it into useful outputs by for example aiming to create close-loop streams, reuse, uses excess acapacity or to share assets (Bocken et al. 2014). This can be done by activities to make use of under-used resources and by building new partnerships, tocaptue environmental, social and financial values by deceasing financial and environmental costs and decreasing the overall environmental footprint. (Bocken et al. 2014). However, the biggest effect can be made by reducing the production of new products (Bocken et al. 2014).

2.2.2 Business Models as a Market Device

Scholars have long sought to define "business models," resulting in multiple definitions and approaches (Schafer et al. 2005). While some view it as a description of how a company operates and generates value, others focus on what a business model does (Doganova et al. 2009). Numerous authors present a variety of interpretations regarding the business model concept. Ghaziani & Ventresca (2005) define it as a firm's rationale for generating value, while Chesbrough and Rosenbloom (2002) underscore its function in income generation and placement within the value chain. Amit et al. (2001) characterize a business model as the configuration of transactions, structure, and governance to exploit business opportunities. More recently, broad definitions regard business models as pivotal processes and frameworks for generating value and as instruments for recognizing unmet customer requirements and dealing with them (Zott et al. 2011; Teece 2018). In essence, a business model includes value generation, distribution, and acquisition, upheld by the sustaining structure, which embraces the undertakings by firms to generate and deliver value to the market while securing financial worth in return (Boons et al. 2013). Furthermore, numerous explanations are commonly followed by the recognition of elements within business models (Doganova et al. 2009). E.g. the Business Model Canvas (BMC), a popular tool for entrepreneurs as

it assists them in comprehending business operations, includes 9 parts that can be used to tailor a business (Keane et al. 2018). Diverse interpretations of business models result in conflicting empirical results concerning their influence on company performance and organizational transformation (George et al. 2010). Furthermore, many studies fail to differentiate business models from for example strategy (George & Bock 2010). This underscores the ongoing need for a standardized definition in business model research. As early as 2001, Porter (2001, p. 73) criticized the lack of clarity in the business model concepts while holding it responsible for the collapse of numerous e-businesses. Other scholars disagree, saying it can play a beneficial role in corporate management and as a popular concept it can be useful to a variety of firms (Schafer et al. 2005). If business models seem to waver between being beneficial and unhelpful, it may be attributed to scholars inadequately describing their application and functions (Doganova et al. 2009). Instead of focusing on what the business model is, the focus should lie on what it does (Doganova et al. 2009). In this study, a choice is to see the business model as a tool to drive entrepreneurial processes by exploring what it does in practice. As this study focuses on social interactions, the business model is a useful tool to understand these interaction.

Furthermore, most definitions characterize a business model as a description of a company, while entrepreneurship scholars opt for a more action-oriented approach, emphasizing what the business model does in practice (George et al. 210; Doganova et al. 2009). Doganova et al. (2009) examine business models' performative role by investigating them as a "market device" ie "as a market–enabling instrument that operates empirically for the enhancement of socially–situated practices of calculation and decision-making" (Doganova et al. 2009, 1561). Additionally, Doganova et al. (2009) draw a comparison with scale models, tools made to demonstrate architectural details to others. Similarly to the design of business models, scale models are made to produce meetings with others (ibid.). Meetings created through the models form collaborative interactions resulting in entrepreneurship, partnership, and potential development of the business model (ibid.). Thus, businesses are not only made of business models but are a complex system of not only architecture and resources but also human exchange (Sommer 2012; Bower & Doz 1979). In other words, business models can be used to demonstrate a business but to fully grasp a business, social interaction as a result of the model needs to be considered. However, partnership is not always an easy task and can lead to changes in technology (Doganova et al. 2009). If the business model can handle this the business model will result in a company (ibid.). By using a contextual lens and taking social interactions into account, a choice in this study is to look beyond the entity of a business. Moreover, this study sees the business model as a demonstration by focusing on what it develops, rather than a

representation of what a business is. Thus, this study sees business models as a device to drive entrepreneurial processes.

2.2.3 Sharing Economy as the economic logic for Sustainable business models

The Sharing Economy (SE) explains the logic of new business models that are built on collaboration and exchange. This is the food waste platform's logic for doing business.

The emergence of Sharing economy, also known as "collaborative consumption" (Cheng et al. 2016), represents a transformative economic model that diverges from the conventional economic models of extensive manufacturing, consumption, and ownership by providing access to otherwise wasted or underused assets through sharing (Roh 2016; Cheng 2016). The evolution of digitalization and the increasing prevalence of digitalized societies has driven urbanization, altered workplace dynamics, and fostered new attitudes (Richter et al. 2017). Furthermore, the increased usage of the internet and social media in societies has been a valuable structure in connecting people e.g. matching supply with demand, resulting in the development of the sharing economy (ibid.). The rapid expansion of the sharing economy can also be explained by the widespread use of the internet and smartphones (Roh 2016). Furthermore, the impact of financial crises and a growing emphasis on sustainability have influenced people's perspective on economic functioning (Richter et al. 2017).

In the sharing economy, there is a big scope of digital platforms that connect, companies and consumers in exchanging tangible and intangible assets (Mazzuccheli et al. 2021). Michelini et al. (2018) use a broad perspective in defining the sharing economy, one that includes sharing between not only individuals but between organizations and consumers as well, in generating profit. Roh (2016) structure the shared economy into Procut service systems, redistribution and sharing of knowledge as different types of sharing in the sharing economy. Product service systems (PSS) enable users of such systems to share products owned by companies. By combining product and service it provides value to the customer while challenging norms of ownership, e.g. car sharing services which combine the tangible asset car with intangible asset service (Roh 2016). Another example is a subscription of meal kits which provides customers with ingredients and with the service of providing pre-planned and portioned meals (Oroski et al. 2022). Redistribution consideres tangible resources or intangible assets in a secondary market between individuals and thereby changing ownership of products, e.g. peer-to-peer food-sharing platforms and clothing swaps platforms

(Bocken et al. 2014) As food waste aim to revored food by redistributing excess food (Mattila et al. 2020), they fit into the this type of sharing. Sharing of knowledge can be done in networks and between its actors (De Bernardi et al. 2019).

The Sharing Economy presents an opportunity to reassess traditional business practices, offering both potential for entrepreneurs and accompanying challenges (Cheng 2016). This transformative concept relies heavily on the Internet to develop business models geared toward generating profit or social benefits (ibid.). As a consequence of the sharing economy, new and contemporary business models have emerged, emphasizing trust, interconnectedness, and transparency (Richter et al. 2017). This shift in approach has not only given rise to innovative structures but has also fostered collaborative entrepreneurship within this evolving economic landscape (Fuerst et al. 2023). In this study, food waste platforms are seen as creating value from waste while redistributing food in a secondary market.

2.2.4 Using the Business Model Canvas as a tool to drive entrepreneurial processes

After suggesting a more fixed advance of the concept of business models in the Business model Ontology 2004, Alexander Osterwalder and Yves Pigneur developed the Business Model Canvas (BMC) in 2010 (BMC; Osterwalder 2004; Osterwalder et al. 2010), The popular tool is used as an instrument by entrepreneurs to portray, explain and advance a business by using 9 elements, as shown in Table 1 (Keane et al. 2018). However, the tool lacks the showcasing of relationships between components, the exchange between actors, and the core concept (source). Additionally, there is no universal business model and businesses utilize the canvas in diverse ways (Keane et al. 2018). The current discussion involves how to portray the elements (Keane et al el. 2018). A study by Keane et al. (2018) shows that Entrepreneurs and managers illustrate the nine elements across two dimensions but with differing content. Nevertheless, BMC as an established concept is a useful market device to demonstrate the general structure of a business, the nime elements are presented and explained in Figure 1.

Table 1. Description of the 9 elements of the business model canvas. (Cf. Osterwalder and colleagues)

Element	**Description**
Customer Segment	Identified target audiences, customer groups
Value Proposition	The Value offered by business through products/services. Can vary between customer segments.

Customer Relationships	The type of relationship between a business and its customers
Channels	How value is communicated and distributed to the customer segments
Revenue streams	How revenue is generated and from whom
Key Resources	Resources needed for operations such as knowledge, infrastructure, financial aids
Key Activities	Activities made to create value, e.g. services/products
Key Partners	Who does a business collaborate with to produce value?
Cost Structure	Costs accumulated in creating and delivering value to customers, including activities and resources

2.3 Theoretical Synthesis

The shared economy is a promising context for sustainable entrepreneurship. However, the high degree of of interaction pose as an opportunity or limit for the entrepreneurship. To understand how this implicate sustainable entreprenership, this study adops one lense that combines context and sustainable entrepreneurship. The study adopts Welters' (2011) framework, by using a *context-lens*, emphasizing the context's *social, spatial, and institutional* aspects to explore its interactions. Combined with the lense of sustainable entrepreneurshp, it examines the platforms process of change in producing *social, environmental and financial values.* Additionally, the business models will be mapped by using the Business Model Canvas which helps explain how Sustainable commitments are translated in to business practice, i.e how the platforms drive entrepreneurial processes when creating value. Thus, this study combines contextualized and sustainable entrepreneurship as one lense, supported by a business model framework. In addition, the study observe the platforms as sustainable business models. By applying Bocken et al.'s (2014) archetypes, this study views the platforms as create value from waste through the establishment of redistribution in a secondary market within the shared economy.

3. Method

The following chapter describes this study's philosophical position by explaining assumptions and beliefs about reality. Additionally, it outlines the research strategy and provides the rationale behind these methodological choices. Given the adoption of a multicase study approach, the selected case of food waste platforms will be introduced, emphasizing its relevance. The chapter then explicates the methodology for data collection and analysis, detailing the measures taken to ensure the quality of the study. Furthermore, it offers a reflective perspective on how quality assurance and ethical considerations have been incorporated.

3.1 Socially Constructed Knowledge

The ontological position of this study is socially constructed. In contrast to objectivistic assumptions of an objective and true reality, this study is done on the assumptions and beliefs that reality is subjective and made by processes of people in a context, and therefore socially constructed (Bryman & Bell 2019). Thus, organizations are viewed as socially constructed systems that are made by deeds, comprehensions, and values of people (Bryman & Bell 2019). Moreover, as organizations are made by human interactions reality can be continuously re-created (Bryman et al. 2019). Thus, situations produced by the research itself can be viewed as one version of reality (Bryman & Bell 2019). This stance will determine what is aimed to be understood and in which manner information will be obtained (Bryman et al. 2019). Furthermore, supported by a socially constructed stance of reality, the epistemological view of this study is interpretivistic (Bryman et al. 2019). Contrary to positivistic skeptical view of any accepted knowledge, taking the stance that reality is socially constructed, knowledge is thereby gained by being responsible for the truth of the social world (ibid.). In contrast to objectively describing, interpretation of the social world is done to understand phenomena by asking how and why questions (Bryman et al. 2019). Furthermore, as data can be viewed as interpretations of individuals it is important to focus on how we reach these interpretations (Alvesson & Sköldberg 2017).

Given the study's aim to understand interactions within the context of food waste platforms, a subjective approach proves valuable as it accommodates variations and

contrasts among people and contexts (Bryman et al., 2019). Moreover, this perspective, which views individuals as embedded in their social worlds during human encounters, grants agency to people and everyday processes (Fossey et al., 2002). This approach facilitates the exploration of social processes within an entrepreneurial context.

3.2 Research Design

3.2.1 Qualitative Methodology

The interpretivistic perspective in this study informs the qualitative strategy of how it is conducted (Bryman et al. 2019). As the study aims to understand the context of food waste platforms by interpreting a social context, it will be done by interpreting words rather than numbers which generally reflect a qualitative approach (Bryman et al. 2019). Qualitative studies are particularly advantageous when aiming to gain a profound understanding of contexts and the interactions among individuals or groups, especially in situations or contexts that are poorly understood (Fossey et al., 2002). Furthermore, Gummesson (2006) argues a qualitative approach is suitable in complex situations, easily influenced by people. In the context of entrepreneurship, where a contextual perspective is chosen, every context will be unique and can't be applied in a general manner. As a quantitative strategy, is best used when the intended output is generalizable and objective data such as numbers are used (Fossey et al. 2002), it will not give much to this study's aim. Instead, interpreting words and giving agency to people will lead to valuable knowledge about social phenomena (ibid.). Moreover, the argument for favoring qualitative research over the mainstream quantitative strategy in business studies becomes apparent when organizations are observed through a lens that incorporates social connections (Gummesson, 2006). Given that the primary goal of this study is to understand how interaction happen a qualitative strategy will be useful as it gives attention to context and human interaction.

Inductive and iterative reasoning is applied in this study, informing how data will connect to the chosen theories (Bryman et al. 2019). Inductive reasoning is used as the aim is to arrive at new theoretical knowledge (Bryman et al. 2019). Furthermore, an iterative approach is applied, when going back and forth between data and theory (ibid.) Inductive reasoning will be beneficial when understanding a specific and complex context containing repetitive processes (ibid.). As data is gathered during this investigation, the iterative approach of testing these empirical observations against the selected theory guarantees the integration of empirical findings with theory, ultimately contributing to theory development (ibid.). Furthermore, in being responsible to the social world, broad questions are asked to reflect the aim (Fossey

et al. 2002). As the study progressed, concentrated questions were asked. In this way, research remains flexible and is receptive to the context (ibid.).

As a part of the research process and inductive approach, a choice of theories was made (Bryman et al. 2019). A choice was made to develop a theory by combining two, contextualized and sustainable entrepreneurship, supported by business model. As previosult stated in this study, sustainable entrepreneurship has the potential to create positive change through social, financial, and environmental values. However, as the entrepreneurship in the context of food waste platform include a lot of interactions, using a contextualized entrepreneurship will put focus on the social processes. Giving agency to people when interpreting this collaborative space enables an understanding and development of new knowledge. Furthermore, applying a contextual lens allows an understanding of how interaction happens from within to shed light on this new model. As knowledge about contextual and sustainable entrepreneurship and how interactions happen in a business model in the Shared economy is Nascant, this study aims to develop the knowledge of this context.

3.2.2 Multicase Study Design

This research employs a case study strategy to understand a representative case for context with many interactions. Furthermore, the format is a multicase study. Engaging in a case study provides a valuable chance to acquire a thorough understanding and enable the analysis of structures and processes of the selected case (Bryman et al. 2019). Using qualitative methods like case study research involves trying to understand complex situations, and recognizing that the thing being studied can be unclear and ambiguous (Gummesson 2006). Furthermore, The case study method assists in establishing limits to the study subject and defining the field of interest (Fetters et al. 2013). As a flexible method, it allows theoretical development (Stake 1995). Multicase research can be applied when looking at a collection of cases that share some similarities (Stake 2006). This enables exploring differences and similarities within a case to enhance the understanding of a phenomenon (Stake 2006). In other words, it enables the capturing of the complexity of a phenomenon while delivering multiple perspectives.

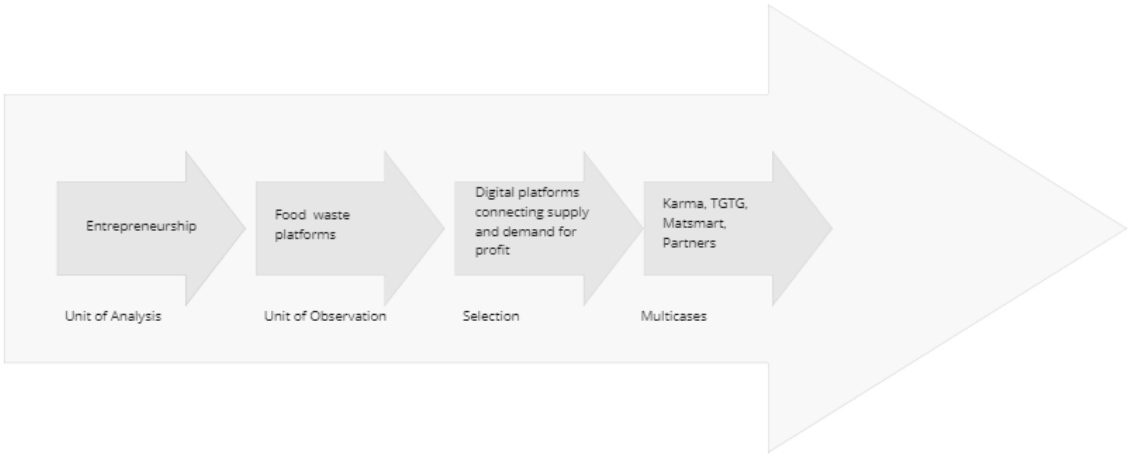
In this study, representative multicases were chosen that can represent day-to-day processes and interactions (Bryman et al. 2019). Therefore, food waste platforms were chosen. Moreover, studying the partners of such platforms delivers multiple perspectives and contrasts to the study. The aim of the chosen methodology is besides gaining deep insights, to collect rich data from a limited number of sources.

Nevertheless, This requires collecting data from participants that can represent and best inform the study (Gummesson 2006).

3.2.3 Studying Digital Food Waste Platforms

In this study, the chosen unit of analysis is entrepreneurship, with food waste platforms and partners of these, serving as the unit of observation. Food waste platforms, grounded in sustainable values, present a promising context for sustainable entrepreneurship. Sustainable entrepreneurship has the potential to effect positive change across social, financial, and environmental dimensions, making food waste platforms an ideal arena for exploration. Furthermore, as integral components of the shared economy, food waste platforms represent new sustainable business models promoting reuse, while creating value from waste. (Michelini et al. 2018) This characteristic makes food waste platforms particularly intriguing for examination within the sustainable entrepreneurship framework. Furthermore, this study explores food waste platforms that connect supply and demand, while making a profit. Business models in the shared economy signify a novel approach to generating and spending money (Oroski et al. 2022). Profit-driven platforms connecting supply and demand aim not only to generate revenue but also to create additional social and environmental value. This deliberate selection aims to explore contrasts within the study. Given the study's delimitation to the Swedish market, food waste platforms connecting supply and demand within the same geographical areas were selected for analysis. This choice enhances the study's relevance and facilitates a nuanced understanding of sustainable entrepreneurship within a specific and contextually relevant setting.

Figure 2. Show how the cases of this study were chosen.



3.3 Gathering of the Empirics

The gathering of empirics in this study is mainly primary. Primary empirics has been gathered directly from the food waste platforms and their partners by conducting interviews. Secondary data was drawn from websites and news articles. Primary empirics were collected through semi-structured interviews. This means asking a set of predetermined general questions while varying them depending on the replies (Bryman et al. 2019). Semi-structured interviews enable in-depth discussions, helping the researcher uncover detailed insights by delving into initial general responses during the interview (Kakilla 2021). The flexible nature of these interviews enables the respondent to mention information that might not been mentioned in previous literature (Bryman et al. 2019). This also means that every interview will differ depending on the findings. Telephone interviews were also conducted. There are many benefits to interviews over the telephone, such as being cheaper and quicker to administrate (ibid.). Another advantage is the distance, and its possibility to remove bias based on attributes (ibid.) Furthermore, removing any affection made by the presence of the interviewer (ibid.). Questions over mail were asked when In-person interviews or phone calls couldn't be conducted.

In collecting an adequate amount of, three key information from different food waste platforms were interviewed. All semi-structured interviews were recorded to not miss anything and not make any pre-interpretations. It is important to be mindful that the business models and size of the company will have an impact on the types of replies reviewed. The interview whose task is to sell will focus on dialogue and the data-driven founder will focus on the technological development of the app while having other staff do the sales. It is the summary picture given by the interviewees increasesrease our understanding of their context.

Table 2. Participants in this study.

Type	Company	Person	Title	Date
In-person interview	Matsmart	Hanna Thofeldt Lindström	Head of communication and impact	2023-10-06
In-person interview	Too Good to Go	Sofia Edholm	Country Manager Sweden	2023-10-11
Email	Karma	Elsa Bernadotte	Founder & Deputy CEO	2023-11-30
Phonecall	Ica Supermarket Kungsholmstorg	Anonymous	Fresh Produce Manager	2023-11-27
Phonecall	Green Rabbit	Anonymous	Shop assistant	2023-12-02

Email (Complementary questions)	Too Good To Go	Sofia Edholm	Country Manager Sweden	2023-12-06
Email (Complementary questions)	Matsmart	Hanna Thofeldt Lindström	Head of communication and impact	2023-12-08

3.4 Data Analysis

The qualitative data analysis of the gathered empirics in this study will be done with a thematic analysis. In an iterative process involving the constant back-and-forth between collected empirical data and its analysis, thematic analysis can be viewed as a strategy encompassing both the collection and analysis of data (Bryman et al. 2019). Furthermore, this study uses an inductive thematic analysis, identifying themes without any predefined codes (Yardley 2000). This was done in three steps (1) identifying and separating quotations, (2) identifying codes of every quotation, (3) identifying themes. The themes are shown as headings in chapter 5. Empirics.

3.5 Quality assurance

According to Yardley (2000), four criteria can be used for the Validity of qualitative research; (1) Sensitivity to context, (2) Commitment and rigour, (3) Transparency and coherence, (4) impact and importance. Yardley (2000) argues that qualitative research acknowledges that how we see the world isn't just about looking at things objectively. It's more influenced by our personal views, culture, talks, and what we do (ibid.). Because ideas about what is true, what knowledge and reality are, are shaped by everyone working together, there can't be strict rules to decide what's true or known (ibid.). If we set strict rules, we limit understanding and only consider the views of what one group views as right (ibid.). Instead, flexible ways of assuring quality are needed (ibid.). Therefore, this study has considered the following aspects in assuring quality.

3.5.1 Sensitivity to Context

There are different contexts to consider when assuring sensitivity. Firstly, the theoretical context is the current state of knowledge built by previous research. However, the critical aspect lies in the advanced interpretation of the data (Yardley

2000). It's crucial to consider the sociocultural context of the study, encompassing norms, ideology, history, language, and socioeconomic aspects of participants' convictions, goals, anticipations, and engagements (ibid.). Furthermore, the design of the study should consider how the researcher's traits and acts affect the research. Secondly, it's important to stay neutral in analyzing language. However, participant involvement needs careful consideration in each study phase to avoid potential misuse (ibid.). While valuing all perspectives is important, addressing the power imbalance between participants and the researcher is challenging. After all, the researcher typically initiates, oversees, and benefits materially from the research process (ibid.).

Ensuring sensitivity to context in this study was assured by conducting a literature review of relevant research within the field of entrepreneurship. Moreover, actively searching for conflicting knowledge about the topic ensures not being too influenced by exciting knowledge in those theories. Furthermore, the flexible and inductive approach to the analysis of data enables context-specific interpretations. Moreover, by conducting a multicase study of food waste platforms and their partners, the study naturally includes opinions of those with contrasting approaches. Also staying reflexive in every step of the research process.

3.5.2 Commitment, rigor

This criterion represents thoroughness in every step of the research process, in the collection of data, analysis, and descriptions. “Commitment” implies a deep engagement with the research. This dedication includes becoming skilled in the methods used and deeply engaging with relevant data, whether theoretical or empirical. ”Rigour” relates to how thoroughly data is collected and analyzed, and it is influenced by having an appropriate sample. In this study, commitment and rigor are attained by using multiple data sources, ie. “triangulation” delivering a multifaceted perspective (Yardley 2000).

3.5.3 Transparency and coherence

Transparency and coherence concern how clear and compelling the research is, affecting its rhetorical effectiveness or persuasiveness. In creating a portrayal of reality it is therefore important to be transparent (Yardley 2000). Given the subjectivity of qualitative research (Bryman et al. 2019), the author's perspectives and beliefs may influenced by various stages such as the interview process, transcription, data analysis, and interpretation, as well as the resulting findings. Therefore, it is imperative to acknowledge and address potential issues about bias,

credibility, coherence, and transparency (Yardley 2000; Yardley 2017). In this study, this is assured by presenting all steps of the collection process such as disclosing data collection, themes used to code, reflections on assumptions effect on research, and personal motivations of the researcher. (Yardley 2000).

3.5.4 Impact and importance (Ensuring reflexivity of the study)

When seeing reality as socially constructed it is important to be cautious in the research process and in presenting the findings (Bryman et al. 2019). To do so it's important to continuously attend to how knowledge is created at every stage of the process and make sure the researcher is not influencing the research too much (Yardley 2000). In other words, to acknowledge the researcher's role in the research. This is particularly important when using a qualitative research approach (Alvesson et al. 2008). As Bourdieu (2004) expresses, it's important to look at who we are, our origin, experience, and education will affect interpretations. Considering this, it becomes crucial to embrace a reflective approach throughout the research undertaking. Furthermore, the responsibility as a researcher in this study involves expressing assumptions made of how individuals and groups shape their entrepreneurial activities as unraveling processes (Lindgren & Packendorff 2009

A reflective stance was embraced throughout the research procedure of this study to consistently contemplate whether personal values, background, and interests would impact the research process. To ensure reflexivity, all interviews were audio recorded, and notes were continuously made during data collection. Moreover, a choice made in the study was to choose interviewees without any influence by food waste platforms. To stay reflective I have continuously tried to see things from different perspectives and stayed away from making any conclusions until finalizing the research. For instance, I engaged in regular discussions with colleagues and experts in related fields, gathering insights that challenged and complement my initial assumptions. Additionally, I actively sought feedback from my supervisor and, and continously engaging with the gathered empirics by reading it through at different points in time, seeking nuanced interpretations. As a big portion of the empirics in this study is collected through interviews it has been important to consider my effect on the interviewee. As a student writing a master's study to understand phenomena, I could come across as harmless. Therefore, I hold the belief that this contributed to fostering assurance in the interview environments. Further reflexivity is assured by using and presenting quotations by interviewees (Fossey et al. 2022).

3.5.5 Ethical considerations

Ethical problems can emerge during the research process and its therefore important to follow ethical principles and also incorporate it throughout the research process (Bryman et al. 2019). There are different opoinions on what ethical research is However, there are some issues that are recurrent regarding how how to treat participants involved in the study and how to avoid unethical activit, and these issues should be addressed (Bryman et al. 2019). Bryman et al. (2019) outline four key principles: Informed consent, avoidance of harm, protection of participant privacy, and prevention of deception. Informed consent involves providing participants with sufficient information to decide whether to participate. Avoidance of harm includes preventing physical or mental stress. Protection of privacy ensures participants' rights to privacy, and preventing deception involves accurately presenting the study's nature (Bryman et al. 2019).

Throughout this study, ethical considerations were integral, particularly in relation to interviews. Informed consent and avoidance of harm were addressed by informing participants about anonymity options and their right to withdraw consent. All participants with identified names signed written consent forms, knowing that they could choose to remain anonymous. The study's publication was communicated, and the subjective approach led to the choice of not sharing trasipit with participants to preserve initial interpretations.However, delayed sharing of quotes was done, giving the articipants the choise to withdraw. Protection of privacy was ensured by seeking permission before recording interviews. Deception concerns were addressed by informing participants that the study's aim would emerge during the research process, with the final aim shared before publication.
Moreover, participants from food waste platforms, holding leadership positions, willingly participated, possibly viewing it as an opportunity to disseminate knowledge. Partners opting for anonymity were respected. Considering potential differing views, the study considered the risk of harm, identifying none during the research process. Regular consultation with the supervisor further contributed to maintaining ethical standards throughout the study.

3.6 A critical view of the method

Qualitative research has been citizes for being subjective and containing problems of replication and generalization (Bryman et al. 2019). Quantitative researchers often criticize qualitative research for being *subjective* and relying on the researcher's unsystematic perspectives as well as the relationship between researcher and the research subjects (Bryman et al. 2019). Qualitative studies start open-ended, creating uncertainty about why a specific area is chosen, while

quantitative research emphasizes a clear problem formulation stage, citing existing literature and essential theoretical concepts. Because qualitative research is unstructured and relies on the researcher's creativity and preferences, it's difficult to *replicate* accurately, as there are few standard procedures to follow (Bryman et al. 2019). Furthermore, as qualitative studies usually focus on a limited scope where the interviewees hasn't been chosen randomly and therefore will match the *general* population (Bryman et al. 2019). Moreover, qritique also address the difficulty of transparency of how cases where chosen and how data analysis where conducted in qualitative research.

However, according to Alvesson & Sköldberg (2017) replication of intepretations is by nature not relevant. Making generalization of population is not the purpose of qualitative research. Instead, the goal is to make theoretical generalizations in building or develop theories (Bryman et al. 2019; Alvesson & Sköldberg 2017). The key to evaluating generalization is how good the theories are that we come up with based on qualitative data (Bryman et al. 2019). It is however important to be aware of the critique and consider it in qualitative research (Alvesson & Sköldberg 2017). According to Bryman et al. (2019) there are tools to meet the critique. While it's challenging to completely eliminate the chance of personal influence in his study, as the researchers selected the interview questions, efforts have been made to mitigate this potential bias. Open-ended questions were employed to minimize the researcher's impact on the results. Additionally, recording the interviews was done to reduce the risk of personal influence.

4. Empirics

In the following chapter, the collected empirics will be presented, featuring findings primarily derived from primary sources with a supplementary inclusion of secondary sources. The chapter is organized around themes identified through thematic analysis, commencing with an introduction to the case companies. It progresses to illustrate interactions in various contexts to then present opportunities and challenges The findings are presented by the support of the main framework of this study, through a combination of a context-lense and values of sustainable entrepreneurship. The business model has been mapped to support the findings, (appendix 2). The elements of the business model canvas can be found throughout the text.

4.1 The Companies

4.1.1 Too Good To Go

[1]Too Good To Go started in Denmark when a group of guys observed food waste at a buffet restaurant. Shocked by the industry's wastefulness, they built a platform to address the issue. Alongside a French movement, they expanded into today's global platform. Mette, now CEO, joined as CEO in 2016 and has led the company's growth to 17 markets. Calling the organization a "food waste movement" (Breakit 2020), and a "social impact company" (TT 2023) the business aims to minimize food waste by connecting supply and demand, offering education, and being a socially impactful venture with a vision for a waste-free planet. The business model combines sustainability and profitability by transforming food waste into a resource, generating positive impacts for partners and consumers. In other words, incorporating a sustainable business model.

4.1.2 Matsmart

[2]Matsmart's journey began in an ICA store, where one of the founders, Erik Södergren, an ICA merchant, repeatedly received requests from suppliers to handle surplus and inventory they struggled to sell for various reasons. These reasons ranged from items nearing expiration dates to seasonal goods and other challenges. Erik systematically began purchasing these batches, adopting a strategy of taking

1

2

all available stock at a negotiated price. He soon realized the substantial volumes associated with such challenges and recognized that his store was too small a platform. Erik enlisted the help of the other founders, Karl Andersson and Ulf Skagerström, and in 2014, they launched the e-commerce platform. The goal was to scale up Erik's approach from his store: assisting suppliers with surplus and waste challenges while offering customers fantastic deals on high-quality products.

4.1.3 Karma

Karma, the Swedish food waste app, was founded by Elsa Bernadotte, Hjalmar Ståhlberg Nordegren, Ludvig Berling, and Mattis Larsson (Karma 2023). The app connects consumers with surplus food from restaurants and grocery stores at discounted prices, reducing food waste (DN 2018 The initial idea of Karma was a loyalty app between small businesses and their customers. However, in contact with restaurants, they realized the common problem of food waste (KTH 2020). Today, offering a commercial "win-win" solution to an environmental problem, The founders are driven by solving the climate challenges on a global level with the help of technology (Ledarna 2020). This is done through the digital app Karma.

4.2 Interactions

4.2.1 Social Context

The presence of [3]Too Good To Go in Sweden is not just a local entity but part of a larger international network headquartered in Denmark, extending to 17 markets. This broader affiliation, or community allows the sharing of knowledge, strategic discussions, and lessons learned across different contexts. Driven by a mission to reduce food waste, the passionate staff actively works to sell surplus food through the platform, receiving feedback not only from friends and family but also from other platforms within their network. All platforms identify investors as key partners. Private investors, aligned with the company's long-term focus and vision, contribute financial resources. Similarly, [4]Matsmart, guided by impact and sustainable business models, engages with investors who play a crucial role in shaping the company's sustainability initiatives. This strategic partnership prompts ongoing development and sustainability efforts. Karma, with a diverse pool of investors ranging from venture capital to impact-oriented investors, aims for international expansion while aligning with global goals (Breakit 2018; DN 2018). Too Good To Go primarily receives feedback from family and friends who use the

[3] See Table 2
[4] See Table 2

app. This consumer interaction is facilitated by development staff, a key resource for the company. Apart from customer engagement, interactions involve the head office in Copenhagen and investors, both contributing vital resources—knowledge and financial aid—for operational costs. For [5]Matsmart, investor interaction is considered a key partnership, involving regular meetings that drive the company towards its sustainable goals. These interactions are characterized by questions regarding how and when to implement sustainable measures, while financial capital from investors serves as a key resource.

4.2.2 Spatial Context

Too Good To Go, Matsmart and Karma share the objective of mitigating food waste by bridging the gap between supply and demand while focusing on one of the partners as a key partner. Matsmart operates within a complex network involving key partners of 700 suppliers, engaging with diverse actors in the food and consumer product industries, and purchasing bulk products. On the customer side, Matsmart boasts over 700,000 active customers, offering them to try new products, make good deals, and decrease food waste by delivering it to their homes. As managing multiple suppliers can be challenging and time-consuming, Matsmart's approach varies based on supplier size and collaboration level. Essentially, the more crucial the supplier, the greater the resources they dedicate to the partnership. Distributors and tech partnerships enhance operational efficiency, and strategic supplier relationships shape the site's inventory. Frame agreements with their bigger partners make it easier for all stores to adopt the app. Too Good To Go prioritizes interaction with new and existing partners which is a key activity. Raising awareness and convincing partners that their solution will help them through lectures and direct dialogue. Continuous discussions every quarter are kept with the biggest partners on improvements and mutual goal settings, such as helping them adapt the content of the surprise bags and timing for pickup for the customers. Too Good To Go, constantly evolves its platform to be more helpful to partners and make it simple for the consumer, considering various factors such as different types of bags, pickup times, and product offerings.

The platforms interact with their large networks of stakeholder through their platforms and by using data. Through its app, Karma partners with numerous restaurants and bakeries, actively addressing the challenge of food waste. Daily interactions drive product evolution, maximizing relevance for partners. The app facilitates data-driven decision-making, sharing relevant information with

[5]See Table 2

businesses and customers. Karma annually recognizes partners with the Karma awards, promoted on social media. The app recommends additional sales for partners. For restaurants, Karma provides anonymized data on sales, followers, [6]goods sold, timing, popular items, and new customers.
[7] Participant,
Customer interaction involves guiding them with data-driven decisions. Karma communicates data to consumers, such as items saved, money saved, kilograms of food rescued, and nearby available items. This two-way interaction is pivotal in daily communication through the app. *"A core aspect of the interaction involves assisting the customers in making data-driven decisions"* ([8]Karma 2023). Too Good To Go interact with partners and consumers through a feedback mechanism in the app, resulting in either the development of the service or resulting in direct contact with the partner. Feedback can result in mutual campaigns with partners or the adoption of the commercial terms in contracts.

In terms of geographic channel distribution, the business model of [9]Too Good To Go necessitates customers picking up products from partner locations, making the app more prevalent in urban areas, while also gaining traction in smaller regions across Sweden. Despite shipping from a central warehouse to most areas in Sweden and to customers homes, Matsmart primarily caters to medium and small-sized regions. The strategic approach involves influencing the food system to be resource-efficient by transitioning from large volumes and offering competitively priced products. Matsmart recognizes the digital inclination of consumers in Sweden, resulting in a diverse customer base spread across the country. Karma operates extensively in the Swedish market, connecting restaurants and cafes with local customers, thereby saving money for consumers and simplifying day-to-day operations for partners.

Working as the platforms main stakeholders, partners strategically work together with the platforms in decreaing food waste. In ICA's strategy to reduce food waste, they partner up with Too Good To Go and Karma to sell food with short best before-date, among other initiates such as selling at reduced prices in store, donating, developing new products out of waste together with their suppliers, communication to customers, development of packaging prolonging shelf life and improvement of store atmosphere, prolonging shelf-life (ICA 2023). Coop works together with Too Good To Go, giving COOP a tool to decrease food waste (COOP, 2023). This collaboration is developed at local level, developing bread mats that create a "bread

[8] See Table 2
[9] See Table 2

illusion" for the customers, resulting in a 45 % bread waste decrease at COOP Visby (COOP 2023). Both ICA and Coops collaborations with food waste platforms are marketed on their websites (ICA 2023; COOP 2023). As per interviews with store representatives from local stores ICA and Green Rabbit in Stockholm, Customers initiate interaction with the store by downloading the app, and subsequent engagements take place during the bag pickup process, offering a chance for feedback. At the local store Green Rabbit in Stockholm, the majority of the loyal customers are consistent buyers ([10]Green Rabbit 2023). Furthermore, the interviewee highlights their success in using the apps "*I find the initiatives to reduce waste quite helpful. It functions effectively, contributing to a notable reduction in our waste*" (Green Rabbit 2023). Interactions between the stores and the platforms are minimal and primarily revolve around the download process. Additionally, incorporating the app into daily operations involves tasks such as monitoring store inventory, packaging, and delivering to customers. At Green Rabbit, this ultimately driving increased sales. At the local ICA stores, the impact on reduced food waste is not cear. In developing the platforms, the platforms partner up with various actors in the market. Too Good To Gos mission is articulated as actively contributing to the positive movement surrounding food waste reduction. An illustrative example of this commitment is the recent collaboration with the Swedish travel agency Ving, extending the reach of surprise bags to customers both locally and globally. In addition, Karma collaborates with companies like Martin & Servera, enabling Karma to reach a broader audience and enhance awareness of the value Karma brings. Furthermore, collaborated with the home appliance manufacturer Electrolux in developing a "smart fridge" enabling customers to pick up products with the help of a QR code, minimizing social interaction between partner and customer, further helping restaurants in their day-to-day work. (Aktuell hållbarhet 2018). Collaboration with Tribeca providing efficient payment solutions together (Instagram 2022). Matsmarts collaborations include creating menus with Linas Matkasse, addressing product issues with partnered suppliers like Coca-Cola, and developing waste-based products with Nicks. (Cision News 2022; Matsmart 2023). Moreover, the various collaborations are marketed through newspapers and social media. Too Good To Gos collaborations with large retail companies such as Lidl, Coop, and ICA are written about in online news platforms to highlight its success (Cision News 2023, TT 2023, ICA 2023). (effecting the institutional). Matsmarts media communication is supported by lifecycle analyses from IVL, aiding partner communication and exploring tech solutions for individual climate reporting (Cision News 2021).

All platforms view the coexictense of other platform positively in a indirect collaboration. Karma recognizes the need for competition in highlighting the

[10] See Table 2

collaborative nature of competition for mutual market development when *"building the market for eachother"(* (Breakit 2018). [11]Too Good To Go, Matsmart and Karma position themselves as complementary platforms, underscoring the collaborative effort required to address the multifaceted issue of food waste and drive social change. According to the interviewee at Matsmart, this recognition emphasizes the scalability and expansive audience reach facilitated by digital solutions. The interviewee at Matsmart emphasizes the crucial need for raising awareness about food waste and recognizing and appreciating initiatives by industry peers like Matsmart. Too Good To Go also engages with competitors, particularly in podcasts and collaborative efforts. This cooperative stance demonstrates a collective commitment to increasing awareness and addressing the challenges of food waste within the industry.

In sum, interactions in the spatial context involves interaction with partners, customers, media, other organizations and other platforms. Interaction is done through direct dialogue, through support and education, through the app with support of data, through direct collaboration and indirect collaboration. Larger partners are prioritized and the platforms develop ther solutions through simplifying them and adapting them to partners and customers to fit their everyday lifes and helping consumer save money. When developing the platforms, the goal is to reach a wide audience by increasing knowledge and increasing the usage of the platforms. In this way, creating a positive movement to drive social change. For one of the interviewed partners, using the platforms increases their overall sales, but for one of the interviewed stores no impact is clear. This is done with the foal to increase resource efficiency in the food system.

4.2.3 Institutional Context

4.2.3.1 Formal institutional context

Being a part of a larger organization, [12]Too Good To Go acknowledges the diverse legal landscape in different markets as some markets work more with donations than the Swedish market due to intricate legislation in Sweden. Too Good To Go express enthusiasm about the evolving waste management regulations, particularly the emphasis on separating biowaste, which aligns with their goal of reducing food waste.

[11] See Table 2
[12] See Table 2

ISO certification requirements haven't been imposed on Matsmart yet, While partially influenced by EU Taxonomy and the Sustainable Finance Directive, impending regulations, including CSRD reporting, shape Matsmart's strategies. [13]Matsmart's customers, exhibit changing attitudes, influenced by directives favoring sustainable businesses. Directives and regulations in Europe shape the market, affecting investor preferences and prompting Matsmart to align with sustainability goals. Matsmart identify a shift in the market; "Until now, our sustainable work has mainly been driven by the demands of our investors and our ambitions. However, moving forward, starting from next year, or more precisely from the 2023 reporting, a sustainability report will be revised for the first time. So, I imagine that there will be demands coming from there as well". Furthermore, The company engages with Swedish research institutions like IVL (Swedish Environmental Research Institute) to assess the climate impact of its operations. However, the complexity and scale of Matsmart's dynamic product range necessitate aggregated approaches to evaluate the overall climate footprint. External factors, such as the FAO's analysis of climate impact due to food loss and waste, have provided a foundation for communication and collaboration with partners, including suppliers, customers, and research institutions. Matsmart actively participates in global food waste reduction goals, leveraging institutional support and research findings for credibility. In the competitive landscape, Matsmart embraces diversity, recognizing the mutual positive impact on market awareness and knowledge. [14]Matsmart highlight the importance of working with production and challenge politicians who trust the market to fix itself. Matsmart points out that it is cynical for politicians to think the market will fix itself by trusting consumers to develop the market, highlighting how it shouldn't be allowed to throw away products that can be used (DN 2023). Especially, as making sustainable choices is complex (DN 2023). Moreover, it directs attention to the importance of working with production to fully tackle the issue (Cision News 2023).

4.2.3.2 Informal institutional context

Talking about information institutions [15]Too Good To Go discusses how consumers, put pressure on the partners by expecting to purchase anything from the store 5 minutes before closing it. Furthermore, how the consumers dismiss not perfect products, ie. fruit net where one fruit is not perfect (DN 2023) "I understand that the Swedish way, or the European abundance of food, is how we enter a store and see how a store is displayed or a bakery." (Too Good To Go 2023).

[13] See Table 2
[14] See Table 2
[15] See Table 2

Furthermore, the interviewee discusses how this impacts the partners and the platform. "It is the way logic is, and with the way we, consumers, place demands on the stores. But also the way stores have accustomed us to how trade is done" (Too Good To Go 2023). Therefore, they strive to make their concept as easy as possible no matter the type of business. Furthermore, Too Good To Goo meets skepticism from partners not all believe in the positive impact the platform can have on their business.

This year's food inflation has spurred the demand in the market (DN 2023). Too Good To Go sees the increased demand as a result of increased awareness and knowledge of the last date as a recommendation rather than a rule on products (DN 2023). Furthermore, despite experiencing rapid growth and increased demand, Too Good To Go faces challenges in meeting the high demand from consumers for its service. In contrast, a challenge is getting partners on board to use the platform. Therefore, the company prioritizes creating awareness and understanding among partners of how they can work with their waste most sustainably. In this way, meeting the high demand in the market.

Over time, [16]Matsmart has witnessed a positive shift in consumer attitudes, particularly in their understanding of expiration dates and the crucial issue of food waste as a climate concern. Consumers now recognize that choosing products with a short shelf life is environmentally friendly, equivalent to opting for organic options. This shift in consumer behavior has not only been significant for sustainability but has also contributed to Matsmart's success. Moreover, the interviewee recognizes how Matsmart successfully has influenced consumer behavior, challenging traditional grocery shopping habits by offering a one-stop-shop alternative that combines online and physical store experiences. Contrary to the general decline in the grocery sector post-pandemic, Matsmart has continued to grow steadily, recording approximately 25% growth from the previous year. Their studies indicate a trend toward more circular consumption, with increased purchases of products nearing their expiration date or discounted items.

They view the diverse actors across various stages of the value chain positively, recognizing the importance of digital solutions for scalability and impact. Matsmart believes that sustainable change requires solutions with broad impact potential, not just a small group altering their purchasing behavior. Matsmart's focus is on creating a positive impact on the food system. "We believe that the global market, in general, needs more business models of this kind—ones that not only address

[16] See Table 2

sustainability challenges but also have broad accessibility and a price that the average person can afford. That's how we change consumer behaviors" ([17]Matsmart 2023).

Despite the challenges faced by the restaurant industry, including the impact on operations during the pandemic, it serves as a driving force. The business model, designed to empower restaurants with increased revenue, more customers, and reduced food waste, becomes even more crucial in times when such support is paramount. Karma constantly develops the digital app while helping partners through digital tools and helping customers make great deals. Karma acknowledges a growing awareness in the market, especially environmental sustainability. "Our commitment to sustainability involves raising awareness and fostering engagement in sustainable food consumption practices. Leveraging the growing awareness, particularly in ecological sustainability, serves as a foundation for our expansion in the Swedish market" ([18]Karma 2023).

Talking about customer expectations the interviewee at ICA talks about how they used to offer a broad range of products in store, but as customer expectations leaned towards precisely accurate items as well a desire for variety beyond just apples and pears, like for example exotic fruits, they narrowed down the selection, meeting customer preference for undamaged fruits. "Customers expect top-quality goods, and from our perspective, the impact on us is not immediately evident. The demand for such products is not high in our case, which makes it challenging to discern any tangible effects " (ICA 2023). Nevertheless, motivated in trying to decrease their food waste, they continue to use the app

A conversation with staff at Green Rabbit shows a different perspective, "the streamlined approach works quite well. For instance, bread performs exceptionally, as it maintains quality, and our customers are well aware of that ([19]Green Rabbit 2023). According to an interviewee at Green Rabbit, they sell goods through the apps Karma and Too Good To Go that remain fresh the next day. This includes bread, whereas rolls with shorter shelf life, like croissants, do not. In addition to pastries, lunch items are also available. Daily salads are prepared, and by 1 PM, the surplus from lunch determines the discounted offerings. Apart from digital platforms, discounted items are sold directly in-store and through their checkout. This practice predates the affiliation with the apps. The combination of on-site and digital platform discounted offerings has proven highly successful. Careful

[17] See Table 2
[18] See Table 2
[19] See Table 2

planning of store inventory, packaging, and customer management is necessary. However, the increased sales more than compensate for the additional workload.

4.3 Challenges and opportunities

4.3.1 The Business Models

Opportunities has been identified with the platforms current sustainable businessmodels and their development. According to [20]Too Good To Go, the potential for minimizing food waste while generating more revenue presents a unique opportunity with positive side effects such as additional sales for the partners. Furthermore, Matsmart sees selling large volumes of food waste to reach a wide consumer group is seen as an opportunity in creating a social change, offering customers affordable deals, and assisting suppliers in solving efficiency problems. In addition to its core service, [21]Too Good To Go has expanded its portfolio to include new products not yet available in Sweden, like a Platform to help partners identify surplus food by checking expiration dates on products. Helping the partners identify food waste before it turns to waste. The company finds opportunities to create new revenue streams for partners, such as the Saved Meal concept, transporting full meals directly home to consumers. Furthermore, together with Coop Visby, they have developed methods in the app enabling selling bread to bear production (Aktuell Hållbarhet 2021). Expanding to other geographical areas through working with Swedish traveling agencies is another opportunity explored by Too Good To Go (TT 2023). However, the business models also offer the challenge of many suppliers and customers. The company navigates through the challenge of dealing with numerous suppliers by strategically working with a smaller number of key suppliers who contribute significantly to their purchases. Furthermore, Matsmart recognizes the potential of develeoping customer relationships by working strategically with partners as awareness has increased. Another challenge lies in the vast number of different customers, and Matsmart addresses this by developing offering on website through developing new products

For Matsmart, sustainability is essential, forming the core of our business strategy. “ Increased sustainability often translates to higher profitability, driven by the cost-effectiveness of acquiring products at risk of being discarded. This creates a lucrative opportunity for us” ([22]Matsmart 2023). Yet, challenges arise, especially when striving for profitability in a costly business. Despite the difficulties, our core

[20] See Table 2
[21] See Table 2
[22] See Table 2

business maintains clear incentives towards sustainability. High-risk products are cost-effective, simplifying profitability in our product assortment.

4.3.2 Customer expectation, partner scepcism and regulations

Customer expectations, particularly regarding store appearances, present challenges for the partners. The interviewee at ICA underscores the importance of meeting customer expectations for perfect and varied products, making adjustments to its product range offered at platform to meet diverse customer needs. Similarly, this adaptive approach is employed at [23]Green Rabbit. However, the smaller size of Green Rabbit allows them to effectively minimize food waste by combining discounted in-store products with the app. In contrast, [24]ICA has encountered challenges in completely eliminating food waste, primarily due to the recurring administrative workload associated with managing and adjusting product offerings. To address this, ICA has opted for a reduction in the overall variety of available products. Conversely, Green Rabbit mitigates this challenge by leveraging additional sales, resulting in no perceived negative effects on waste management in their store (Green Rabbit 2023). The interviewee from Green Rabbit emphasizes that digital platforms offer an opportunity to reduce waste to a certain degree. The successful combination of in-store discounts with app-based promotions has proven effective in selling surplus items and minimizing waste. The interviewee highlights the advantage of the store's size in waste management and [25]acknowledges the potential challenges faced by larger stores. At ICA, the current focus centers on exceeding customer expectations, particularly with coffee pastries. However, the administration and adaptation of the product range demand significant efforts. Assembling a fruit bag can be challenging, prompting a decision to limit the assortment to a specific type of bag that includes bread and pastries. Colleagues note that managing a limited amount of products is often easier, helping avoid excessive administrative burdens. As the stores present varying results, both ICA and Green Rabbit are driven to use the platforms to decrease food waste. Moreover, to adjust to consumer needs, a collaborative effort between Too Good To Go and Coop Visby involved strategically placing pictures of bread on shelves. This innovative approach created the illusion of full shelves, ultimately leading to a 50% reduction in the store's bread waste (Aktuell Hållbarhet 2021).

[23] See Table 2
[24] See Table 2

The platforms also have to meet partner scepcicim which is a challenge when getting them onboard in using the platform. Some partners express concerns about cannibalization, that sales through the app will replace sales of full-price items. [26]Too Good To Go has minimized this by setting strict pickup times for consumers. Being able to show data for additional sales as an effect of selling through the app further helps to convince partners. A Study conducted by TooGoodTo Go in collaboration with Coop showed that 9% of customers in stores were new and that 62% purchased something additional (Cision News 2023).Furthermore, the dynamic nature of partner days and the tendency to postpone discussions pose additional challenges. This challenge is met by educating through lectures and working together with the suppliers. Moreover, Too Good To Go focuses on impact and simplicity for the partners in their day-to-day jobs. This is seen as the key to their success (Breakit 2020).

Too Good To Go recognizes legislative opportunities, such as biowaste regulations, to positively influence partners' incentive to sell rather than discard. Furthermore, this allows the platform to educate the partners.

4.3.3 Collaboration

The platforms, navigates a landscape filled with opportunities and challenges. One notable opportunity lies in Collaboration with partners to tackle food waste as close collaboration usually pays off. Close collaboration with other organizations like for example Karmas collaboration with Electrolux and Trivia enables them to develop their technological solution as well as make it easier for restaurants. For Too Good ToGo opportunities arise in learning from other markets within the corporate conglomerate as the community share knowledge, technical solutions and financial means. As the company group is profitable, it enables the organization to develop new solutions in the Swedish market. Furthermore, competition in the market is seen as something positive and identified as an opportunity, "*The competition in the market drives us to constantly improve our platform and meet the needs of the market more efficiently*" ([27]Too Good To Go 2023).

4.3.2 Technical solutions and data

Furthermore, using data is seen as an opportunity in communication to various stakeholder and understand consumer behaviour. [28]Matsmart recognizes using data to help customers and partners navigate in making sustainable choices. This can be done by communicating WRAPS waste hierarchy, FAOs calculation on food waste

[26] See Table 2
[27] See Table 2
[28] See Table 2

impacts, and collaborating with IVL on life cycle analysis on an aggregated level.Matsmart's comprehensive tracking extends to the purchase and sale of products, providing them with a detailed understanding of customer behavior. Matsmarts meticulous tracking involves monitoring every product purchased on the site, providing precise data on quantities, contents, and packaging weights. Utilizing product data, including names, ingredient lists, and packaging weights, they analyze order quantity, recycled weight, and product type. The interviewee explains the belief in e-commerce as a viable solution, especially when it seamlessly integrates with physical commerce, *"I personally also believe strongly in e-commerce as an enabler of more efficient systems for consumer goods because, of course, there are significant challenges associated with many physical outlets all maintaining physical inventories"* ([29]Matsmart 2023). The platforms are seen as a key resource and a key activity is maintaining and development of the platforms.

4.3.4 Financial situation

Amidst the prevailing economic situation marked by increased inflation and rising interest costs, an opportunity arose. "*As consumers actively seek ways to reduce their expenses, this economic landscape presents a unique chance for more individuals to discover Karma's platform and leverage its benefits*" (Karma 2023). Nevertheless, the app was secondarily affected during the global pandemic in 2020 as restaurants were selling less. Resulting in the development of a business model by selling full-priced items on the platform, offering deliveries through the platform, and developing a new offer the "Karma-box", a subscription bag (Breakit 2021). The adverse effects of the global pandemic led to a shift in Karma's business model, introducing the "order & pay concept" segment, updating their value proposition to their partners by offering simple payments at the local restaurant. This results ina new revenue stream for Karma. This adaptation allowed Karma to include products less susceptible to waste while maintaining its core mission of minimizing food waste.

[30]However, according to Matsmart, lacking a climate footprint for each specific product and order, cost considerations pose a challenge. This is due to a big variation of unpredictable supply as well as varied purchasing behaviors. However, while searching for affordable solutions, the concept is in progress. Furthermore, discussions with IVL involve examining Rebound effects, considering the possibility of increased purchases due to affordability. Examining this poses a possible opportunity to improve their sustainable impact while also posing a potential challenge in delivering environmental values.

[29] See Table 2
[30] See Table 2

4.3.5 Tradeoffs

According to Matsmart, balancing sustainability with financial constraints can lead to conflicts in our purchasing decisions. Matsmart outlines two potential trade-offs: investing in costly solutions to calculate possible rebound effects and opting for expensive eco-friendly transports. The adoption of fossil-free alternatives, albeit environmentally friendly, poses financial challenges for a presently non-profitable business. Despite these hurdles, Matsmart remains committed to prioritizing sustainable choices, recognizing the economic benefits associated with such decisions. It emphasizes that achieving a balance between sustainability and financial considerations requires careful navigation. In contrast, [31]Too Good To Go asserts that there is no trade-off between environmental and financial values. The interviewee emphasizes the advantages of being part of a larger, profitable company at the group level, highlighting the supportive context that aids in navigating the intersection of environmental and financial considerations

4.4 Summary

In summary, the landscape of sustainable businesses is characterized by the intricate interplay of dialogue, collaboration, communication through app, media, social media and by using data. Interactions in the *social context* is with community, family &friends, and investors. Secondly, interaction in the *spatial context* is in different geographical areas, the platforms work directly with prioritized partners and indirectly together with other platforms in building the market together and in creating social change and in delivering environmental values. Furthermore, interaction is data-driven to consumers and small-size partners. The formal *institutional context* works to their advantage, spurring the partners to work with them. In the informal *institutional context*, the platforms acknowledge consumer attitudes and expectations and skepticism from partners. Nevertheless, experiencing a high demand from customers. Furthermore, *social values* are delivered to partners, customers, and society. Firstly, social values are delivered to society by improving efficiency in food systems to reduce food waste and simultaneously increasing awareness in the market by close collaborations and communication. Secondly, it's delivered to customers by providing good deals on food and other products. According t the platforms, they will continue to do so by gaining reach. Lastly, it is provided to partners by supporting their hectic work environment, by helping them with food waste while providing them with an opportunity to improve their revenue. The platforms deliver *environmental values*, by promoting redistributing and creating a secondary market while improving resource efficiency in the food system when creating value from waste. *Financial*

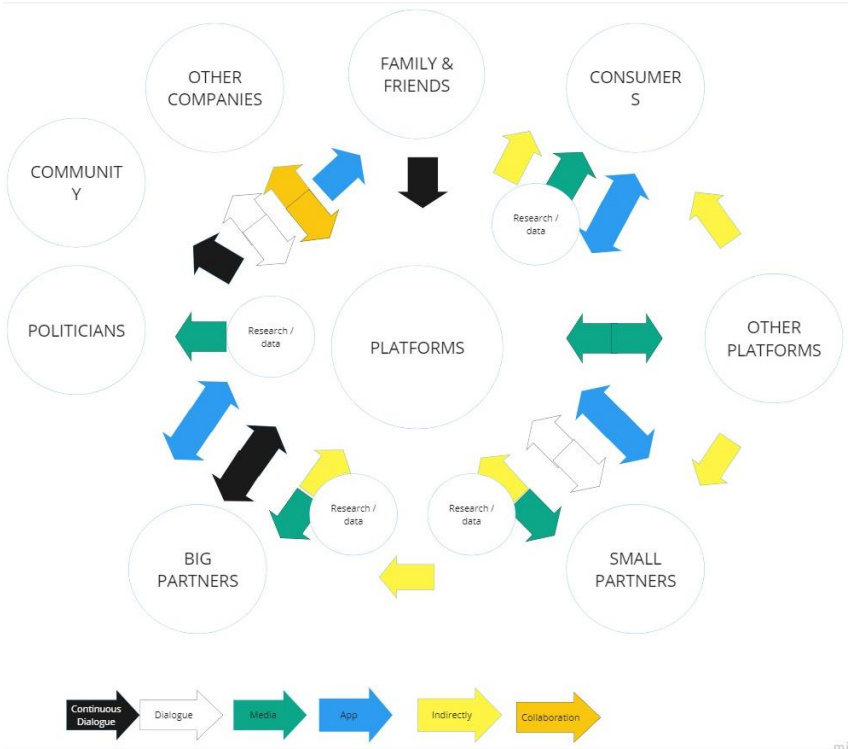
[31] See Table 2

Value is gained by the growth of the platforms and reach more customers and partners, due to natural incentives to be environmental and at the same time be profitable. However, possible tradeoffs between financial and environmental values exists such as calculating on rebound effects and paying for eco-friendly transports.

Moreover, the platforms is shown to develop and adjust their sustainable business model of creating value from waste. This is done through updated costumer segments, new channels and new revenue streams, through constantly developing customer relationships to working more strategic with partners. However, thisis done by focusing on key partners. The digital platforms are seen as a key resource, and its development and maintenance a key activity in developing the platforms.

As llustrated in *Figure 3*, the study show various interactions in the social spatial and institutional context.i Interaction between platforms and consumers is done (1) through the platform at the time of purchase an by sharing data with consumers through the platforms (2) through feedback mechanism from consumers through the app, (3) through social media, (4) indirectly to consumers through other platforms, (5) from consumers through dialogue with friends and family, considered as consumers, (6) indirectly through collaboration with other companies (7) through collaborations with other companies. Interaction with partners is done (1) through dialogue and lectures (continuous with bigger partners) (2) through sharing data in the app (3) through feedback mechanism in the app (4) through social media, (5) indirectly through other platforms. Interaction with other platforms is done (1) through newspapers and social media (2) indirectly through coexistence. Interaction with politicians is done (1) through media, and (2) indirectly through research institute.

Figure 3. Types of nteractions between the platform's key customers and other actors.



7 main opportunities and 6 main challenges were identified. The opportunities are (1) learning from other markets (2) collaboration with partners (3) data of sales (4) spreading knowledge collectively (5) biowaste legislation (6) New products and revenue streams (7) New geographical markets. The challenges are (1) convincing partners due to skepticism and a hectic work environment (2) concern about cannibalization (3) customer expectations (4) big variation of an unpredictable supply (5) Possible rebound effects (6) Costly tools for assessments on single products

5. Discussion

The following chapter delves into the analyzed results from the previous section, providing answers to the study's research questions and engaging in a discussion of the outcomes. Additionally, it offers critical reflections on previous studies conducted in the same field.

5.1 How food waste platforms are developed through interactions

To answer the research question, of how food waste platforms are developed through interaction Welter (2011) Contextualized sustainable entrepreneurship as a lens enabled looking at the context from a broad perspective, providing an understanding of how conditions in the context develop the platforms. Using different analytical levels, the result shows multifaceted interactions in the social, spatial, and institutional space. Firstly, exploring the *social context* showed interaction with investors friends, and family through dialogue, providing feedback and financial means to develop the platforms. Secondly, interaction in the *spatial context* is with partners, customers, other platforms, other companies, politicians, and research institutes in the Swedish market. The interactions in this context happen through dialogue, through the app, by media, and through collaboration. To make its simple for partners and customers in their day-to-day context, the platforms simplify the apps and collaborate with the partners on how to use the digital solution to fit their needs. Furthermore, in creating the market together, the study shows an example of community entrepreneurship, where change is done collectively in a social network. Thirdly, In the *institutional context*, the platforms interact within formal contexts consisting of rules and regulations working to the platform's advantage as they can leverage this in the collaboration with partners. Nevertheless, the informal context consists of skepticism of partners, and customer expectations. The platforms and the partners collaborate on making adjustents to fit customer needs. The process of sustainable entrepreneurship is developed through the process of creating value from waste by redistribution. As there is a natural incentive in the business models to be sustainable, financial values is produced by inhancing the social and environmental values. This is done through spreading knowledge, through collaboration and dialogue and by spreading the platforms to more consumers and partners. Moreover, the business models of the platforms are constanty developed and adjusted to fit the context and in creating value.

Thus, the food waste platforms and the delivery of values are developed through co-creation, involving collaboration with various stakeholders in a complex social system. Within this social, spatial, and institutional framework, the direct and indirect interaction through communication and digital interactions within this complex social system give agency to the platforms to collectively drive social change. Hence, this shows how sustainable entrepreneurship is not easily explained but instead developed by the cooperation of many involved actors, collectively developing entrepreneurship.

5.2 Opportunities and challenges of sustainable entrepreneurship

To answer the second research question of how opportunities and challenges are navigated within sustainable entrepreneurship of food waste platforms, a context-lens was used. In the context of the food waste platforms, opportunities and challenges were identified working to the advantage of the platform or posing obstacles. Firstly, the study shows opportunities in the social, spatial, and institutional context, navigated through communication and collaboration, and by usage of data. In the *social context,* learning from other markets is an opportunity, done through direct communication within the company group and being part of its community. *Spatial context* offers 5 main opportunities; collaborating and working strategically with partners, working strategically with other local companies, and reaching new geographical markets through collaboration, increasing awareness about environmental sustainability in the market, and doing this collectively with other platforms. Lastly, collaborating with local research institutes for better data. Besides navigating these opportunities through collaboration, opportunities in the *spatial context* are navigated by looking at evidence of increased awareness in the market and through having a positive attitude toward collaboration. In the *institutional context,* 3 main opportunities were identified: new biowaste legislation making the business model more attractive for market and partners, directives shifting investment streams, and consumer attention. Lastly, it gains more reach during inflation. Opportunities in the *spatial context* are navigated through dialogue with partners, and investors and through looking at evidence of data.

Secondly, the study shows challenges in the context. In the *social context*, no challenges were identified. In the *spatial context,* tools for the assessment of single products are identified as costly in the market. As assessment of single products is needed to calculate the possible rebound effect on consumption this poses as a possible tradeoff between environment and finance. Currently, this still poses a challenge. In the *institutional context,* skepticism and a hectic work environment

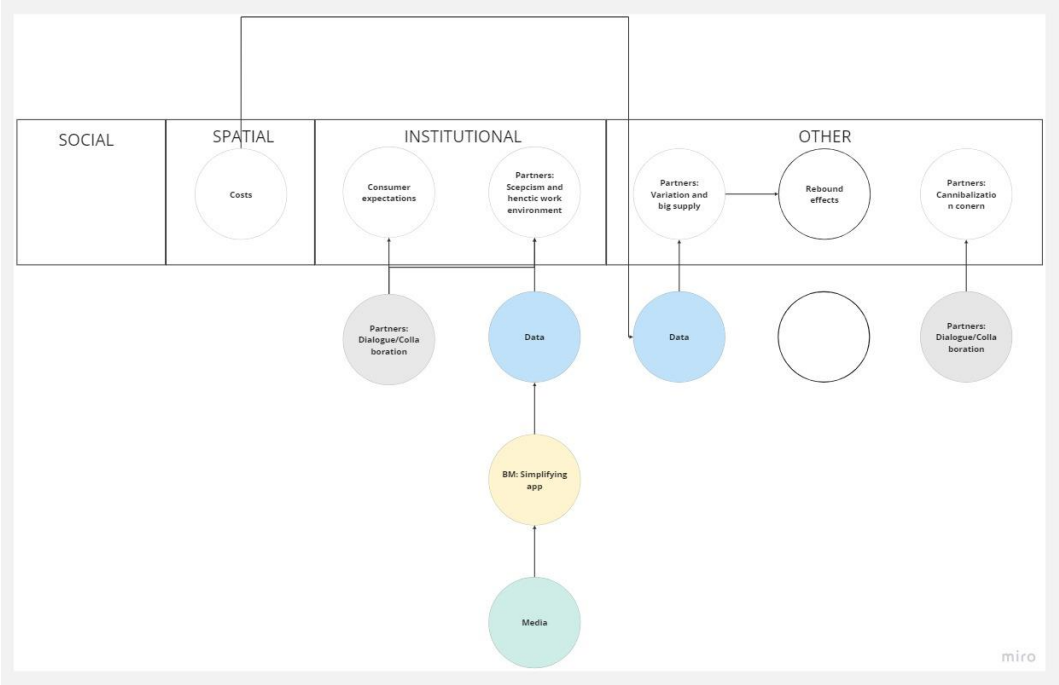
for partners were identified. Also, customer expectations of perfect and varying offerings of products are identified. Challenges in the institutional context are navigated through dialogue with partners.

Moreover, additional opportunities and challenges were identified concerning the business model and opportunities related to data usage. Opportunities with the business model concern the development of the business model, offering new products and revenue streams, and selling large volumes to make an impact. Data-related opportunities include using data to impact partners and consumers and the market and using calculation tools to impact partners and consumers. Lastly, using tracking tools as a possible tool to make stores more efficient. On the contrary, challenges with business models concern the possible rebound effects of additional sales. Furthermore, concern from partners about cannibalization serves as a small challenge. Also, big variations and unpredictable supply pose a challenge in making more detailed calculations.

Four different processes have been identified in navigating challenges: Using data, communication through media, development of the business model, collaborations, and communication through direct dialogue. (1) Challenges in the institutional context and with partners are navigated through using data, communicating through media to spread awareness, and simplifying and developing the app to the partner's satisfaction. Navigating challenges related to consumer expectations happens through collaboration with partners. (2) Challenges related to the business model are navigated through data and collaboration with partners. Nevertheless, cost challenges in the spatial context and possible rebound effects are enhanced by the big variation in big supply. No navigation through these combined challenges was identified.

In summary, the study shows how navigating challenges and opportunities is done mainly by interacting with other actors through collaboration, and by adjusting the business model to fit the context. As the platforms are cocreated with other actors in the market, the context gives an explanation on how navigating opportunities and challenges are done.

Figure 4. Navigating challenges in different contexts.



5.3 Contextual implications on sustainable entrepreneurship

This study shows the importance of context in understanding sustainable entrepreneurship. All platforms investigated balance social, environmental, and financial values by creating value from waste, but the context explains how this is done. In this study, it is shown that the social context can provide knowledge and financial support, impacting the environmental and financial tradeoffs. The institutional context, such as a lack of regulations and the existence of attitudes impacts the platform's activities and efforts in increasing awareness. The spatial context describes close collaboration between platforms, partners, and other businesses in improving everyday life for partners and customers by simplifying the apps and collaborating on innovative solutions. Furthermore, the spatial and institutional context context explains where the platforms lay their focus. In the spatial context, skepticism and a hectic work environment for partners are identified as the biggest obstacles. Therefore, interaction with partners is prioritized. Furthermore, institutional environments such as a lack of rules and new regulations affect how the platforms communicate in media while new regulations provide the platforms with new opportunities. Furthermore, the informal context, such as customer attitudes impacts how the platforms collaborate with the partners, by finding solutions to meet customer demands. Thus, the context explaines how

creating value from waste develops social, environmental and financial values in a secondary market.

6. Conclusion

The final chapter of this study addresses the aim of the study, summarizing responses to the research questions and outlining the study contribution and limitations. Additionally, it offers recommendations for further research.

6.1 Findings and Contributions

Sustainable entrepreneurship is a process of social change that happens in everyday life and through interactions that we know little about. This study aimed to address this gap by providing an understanding of how interactions happen in the context of food waste platforms. Thus, when exploring how food waste platforms are developed through interactions and how challenges and opportunities are identified and navigated, the following conclusions have been found. Firstly, this study shows that the platforms are developed through cocreation by many actors, collectively developing entrepreneurship. Furthermore, the study provide insight to how context of food way platforms work as opportunities in creating social, environmental and financial values. Due to a natural incentives in the platforms business model to be sustainable, the development os social and environmental values develops financial valus. However, rebound effects poses as a possible tradeoff between values which needs further investigation. Secondly, this study shows that challenges and opportunities are identified and navigated through collaboration and usage of data in communication. Moreover, navigating is done through adjusting and developing the business model to fit the spatial and institutional context, creating new revenue streams for the platforms and their partners.

Theoretically, this study shows the importance of context in understanding sustainable entrepreneurship. By combining a context lens with sustainable entrepreneurship two bodies of knowledge are combined. Furthermore, by exporing contextualized sustainable entrepreneurship in the shared economy, this study acknowledge entrepreneurship as embedded in social system and market. Moreover, the study enriches our understanding of the role of context in shaping social processes that evolve through interactions. In practice, this study provide insight to what the collaborative business models in the shared economy means for the sustainable entrepreneurship. It provides a deeper understanding to entrepreneurs, policymakers, and other stakeholders engaged in the domain of food waste. By shedding light on the details of social processes in entrepreneurship, this study goes beyond theory. It increases awareness about creating sustainable entrepreneurial projects. Overall, this research not only adds to discussions about

entrepreneurship but also promotes teamwork in addressing various issues, particularly in dealing with food waste.

This study has its limitations. Firstly, it was conducted at a specific point in time, and it is crucial to acknowledge that the social, environmental, and financial contexts are dynamic, impacting the ongoing relevance of the findings. Additionally, as this qualitative study involved interviews with a limited number of participants, the results cannot be statistically generalized (Bryman et al. 2019). Nevertheless, it allows for analytical or theoretical generalization that may find application in other contexts, as suggested by Alvesson & Sköldberg (2017). According to Bryman (2019), qualitative findings are more apt for generalizing theories rather than specific populations. It is important to note that the primary objective of this study is not to generalize cases but to obtain a profound understanding.

6.2 Further research

To enhance the understanding of the collaborative space of business models in the shared economy, the author suggests the incorporation of diverse research methodologies and empirical dimensions in the study. Firstly, In addition to interviews with partners and platforms, a suggestion is to employ alternative qualitative methods such as focus groups, participant observation, or case studies. These methods can offer a richer understanding of collaborative dynamics, allowing for a more nuanced exploration of shared economy business models. Secondly, a suggestion is to expand the empirical scope beyond the current focus, by investigating the collaborative space of shared economy business models within the clothing industry. Analyzing how platforms in this sector collaborate, innovate, and address challenges can provide valuable insights into the transferability and adaptability of collaborative models across different industries. Thirdly, the author suggests incorporating theories that delve into the values of founders or actors within shared economy platforms. Analyze how personal and organizational values influence decision-making, collaboration, and the overall sustainability of business models. This theoretical perspective can add depth to the understanding of collaborative dynamics. Moreover, it is recommended to explore cross-sector collaborations among food waste platforms and entities in other industries. This could involve examining how partnerships with governmental bodies, non-profits, and private sectors contribute to the scalability and broader societal impact of these platforms. Investigating the dynamics of cross-sector collaborations can shed light on the potential synergies, challenges, and overall effectiveness of such partnerships in advancing shared economy business models, particularly in the

context of food waste reduction. As the study identifies possible rebound effects of food waste consumption, future research should delve into this matter.

References

Literature and Publications

Alvesson, M., & Sköldberg, K. (2017). Reflexive Methodology – New Vistas for Qualitative Research. Third edition, Sage Publications Ltd.

Alvesson, M., Hardy, C., & Harley, B. (2008). Reflecting on Reflexivity: Reflexive Textual Practices in Organization and Management Theory. Organization Studies, 45(3). https://doi.org/10.1111/j.1467-6486.2007.00765.x

Anderson, A., Dodd, S., Jack, S. (2021). "Let them not make me a stone"—repositioning entrepreneurship. Journal of Small Business Management. 61(4), 1842-1870. https://doi.org/10.1080/00472778.2020.1867734

Atsiz, O., & Cifci, I. (2021). Exploring the motives for entrepreneurship in the mal-sharing economy. International Journal of Entrepreneurial Behavior & Research, 22(6), 864-873. https://doi.org/10.1080/13683500.2021.1908239

Bocken, N. M. P., Short, S. W., Rana, P., & Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. Journal of Cleaner Production. 65, 42-56. https://doi.org/10.1016/j.jclepro.2013.11.039

Bocken, N., Short, S., Rana, P., & Evans, S. (2013). A value mapping tool for sustainable business modeling. Corporate Governance. 13(5), 482-497. DOI:10.1108/CG-06-2013-0078

Boons, F., & Lüdeke-Freund, F. (2013). Business models for sustainable innovation: State of the Art and Steps Towards a Research Agenda. Journal of Cleaner Production. 45, 9-19. DOI:10.1016/j.jclepro.2012.07.007

Bourdieu, P. (2004). Science as Science and Reflexivity. Cambridge. Polity Press. 1-116.

Bower, J. L., & Doz, Y. (1979). Strategy formulation: A social and political process. In D. E. Schendel & C. W. Hofer (Eds.) Strategic Management: A New View of Business Policy and Planning. 152–165.

Bryman, A., Bell, E., & Harley, B. (2019). Business Research Methods. Fifth edition. Oxford, United Kingdom; New York, NY: Oxford University Press.

Cane, M., & Parra, C. (2020). Digital platforms: Mapping the territory of new technologies to fight food waste. British Food Journal. 122, 1647–1669. DOI:10.1108/BFJ-06-2019-0391

Cheng, M. (2016). Sharing Economy: A review and agenda for future research. International Journal of Hospitality Management. 57, 60-70. https://doi.org/10.1016/j.ijhm.2016.06.003

Chesbrough, H., & Rosenbloom, R. S. (2002). The role of business model in capturing value from innovation: evidence from Xerox Corporations technology spin-off

companies. Industrial and Corporate Change. 11(3), 529-555. DOI:10.1093/icc/11.3.529

Ciulli F, Kolk A, Boe-Lillegraven S (2020). Circularity brokers: Digital platform organizations and waste recovery in food supply chains. Journal of Business Ethics. 167, 299–331. DOI:10.1007/s10551-019-04160-5

De Bernardi P, Bertello A, Venuti F (2019). Online and on-site interactions within alternative food networks: Sustainability impact of knowledge-sharing practices. Sustainability. 11(5), 1457. https://doi.org/10.3390/su11051457

Doganova L., & Eyquem-Renault Marie (2009). What do business models do? Innovation devices in technology entrepreneurship. Research Policy. 38(10), 1559-1570. DOI:10.1016/j.respol.2009.08.002

Drakopoulou Dodd, S., Pret, T., & Shaw, E. (2016). Advancing understanding of entrepreneurial embeddedness: forms of capital, social contexts and time. In F. Welter & W. B. Gartner (Eds.), A research agenda on entrepreneurship and context, 120–133. DOI:10.4337/9781784716844.00014

Fetters M.D., Curry L.A., Creswell J.W., (2013). Achieving Integration in Mixed Methods Designs – Principles and Practices 48(6). https://doi.org/10.1111/1475-6773.12117

Fossey E., Harvey C., Davidson. (2002). Understanding and Evaluating Qualitative research. Australian & New Zealand Journal of Psychiatry. 36(6). https://doi.org/10.1046/j.1440-1614.2002.01100

Fuerst S., Sanchez-Dominguez O., Rodriguez-Montes M.A. (2023). The Role of Technology within the Business Model of Sustainable Entrepreneurship. 15(14), 10923. https://doi.org/10.3390/su151410923

George G., & J.Bock A (2010). The Business Model in practice and its implications for Entrepreneurship Research. Entrepreneurship Theory and Practice. 35(1), 83-111. https://doi.org/10.1111/j.1540-6520.2010.00424.x

Ghaziani, A., & Ventresca, M. J. (2005). Keywords and cultural change: Frame analysis of Business Model Public Talk, 1975-2000. Theory and Society. 20(4), 523-559. DOI:10.1007/s11206-005-9057-0

Gummesson, E. (2006). Qualitative management research: Addressing complexity, context, and persona. Management Decision. 44(2), 167–179. DOI:10.1108/00251740610650175

Hackman, R. (2003). Learning more by crossing levels: Evidence from airplanes, hospitals, and orchestras. Journal of Organizational Behavior. 24(8), 905–922. DOI:10.1002/job.226

Harvey, J., Smith, A., Goulding, J., & Illodo, I. B. (2019). Food sharing, redistribution, and waste reduction via mobile applications: A social network analysis. Industrial Marketing Management. 88, 437-448. https://doi.org/10.1016/j.indmarman.2019.02.019

Hockerts K, Wüstenhagen R. (2010). Greening Goliaths versus emerging Davids – theorizing about the role of incumbents and new entrants in sustainable entrepreneurship. Journal of Business Venturing. 25(5), 481–492. DOI:10.1016/j.jbusvent.2009.07.005

Jolink, A., & Niesten, E. (2015). Sustainable development and business models of entrepreneurs in the organic food industry. Business Strategy and the Environment. 24(6), 386–401. DOI:10.1002/bse.1826

Kakilla, C. (2021). Strengths and weaknesses of Semi-structured interviews in Qualitative research: A critical Essay (1). DOI: 10.20944/preprints202106.0491.v1

Katz, J. & Steyaert, C. (2004). Entrepreneurship in society: Exploring and theorizing new forms and practices of entrepreneurship. Entrepreneurship and Regional Development. 16(3), 179–250.

Keane, S.F., Cormican, K.T., Sheanhan, J.N. (2018). Comparing how entrepreneurs and managers represent the elements of the business model canvas. Journal of Business Venture Insights. 9, 65-74. https://doi.org/10.1016/j.jbvi.2018.02.004

Kyrö, P. (2015). Handbook of Entrepreneurship and Sustainable Development. DOI: 10.4337/9781849808248

Korsgaard, S. (2011). Its really out there: a review of the critique of the discovery view of opportunities. International Journal of Entrepreneurial Behaviour & Research. 19 (2), 130-148. DOI:10.1108/13552551311310347

Lindgren, M., & Packendorff, J. (2009). Social constructionism and entrepreneurship: Basic assumptions and consequences for theory and research. International Journal of Entrepreneurial Behavior & Research. 15(1), 25-47. https://doi.org/10.1108/13552550910934440

Makov, T., Shepon, A., Krones, J., et al. (2020). Social and environmental analysis of food waste abatement via the peer-to-peer sharing economy. Nature Communications. 11, 1156. DOI:10.1038/s41467-020-14899-5

Mattila, M., Mesiranta, N., & Heikkinen, A. (2020). Platform-based sustainable business models: Reducing food waste in food services. International Journal of Entrepreneurship and Innovation Management. 24, 249–265. DOI:10.1504/IJEIM.2020.10028425

Mazzucchelli, A., Gurioli, M., Graziano, D., et al. (2021). How to fight against food waste in the digital era: Key factors for a successful food sharing platform. Journal of Business Research. 124(1), 47–58. DOI:10.1016/j.jbusres.2020.11.055

Mbow, C., Rosenzweig, C., Barioni, L. G., et al. (2019). Food security. In: Shukla, P. R., Skea, J., Calvo Buendia, E., et al. (Eds.), Climate Change and Land: An IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems, In press.

Michelini, L., Principato, L., & Lasevoli, G. (2018). Understanding Food Sharing Models to Tackle Sustainability Challenges. Ecological Economics, 145, 205-2017. https://doi.org/10.1016/j.ecolecon.2017.09.009

Mu, W., Spaargaren, G., & Lansink, A. O. (2019). Mobile apps for green food practices and the role for consumers: A case study on dining out practices with Chinese and Dutch young consumers. Sustainability (Switzerland). 11(5), 1275. DOI:10.3390/su11051275

Muñoz, P., & Cohen, B. (2017). Sustainable entrepreneurship research: Taking stock and looking ahead. Business Strategy and the Environment. 27(3), 300-322. DOI:10.1002/bse.2000

Oroski, F. A., & Montenerio da Silva, J. (2022). Understanding food waste-reducing platforms: A mini-review. 41(4). https://doi.org/10.1177/0734242X221135248

Osterwalder, A. (2004). The Business Model Ontology—A Proposition in a Design Science Approach. PhD Thesis, University of Lausanne, Switzerland.

Osterwalder, A., & Pigneur, Y. (2010). Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers. Hoboken, New Jersey: John Wiley & Sons.

Pacheco, D. F., Dean, T. J., & Payne, D. S. (2010). Escaping the green prison: entrepreneurship and the creation of opportunities for sustainable development. Journal of Business Venturing. 25(5), 464–480. DOI:10.1016/j.jbusvent.2009.07.006

Papargyropoulou, E., Lozano, R., Steinberger, J. K., Wright, N., & Bin Ujang, Z. (2014). The food waste hierarchy as a framework for the management of food surplus and food waste. Journal of Cleaner Production. 76, 106-115. https://doi.org/10.1016/j.jclepro.2014.04.020

Ramoglou, S., & Tsang, E. W. (2017). In defense of common sense in entrepreneurship theory: Beyond philosophical extremities and linguistic abuses. Academy of Management Review, 42(4), 736–744. https://doi.org/10.5465/amr.2017.0169

Ribeiro, I., Sobral, P., Pecas, P., Henriques, E. (2018). A sustainable business model to fight food waste. Journal of Cleaner Production. 177, 262-275. https://doi.org/10.1016/j.jclepro.2017.12.200

Richards, C., Hurst, B., Messner, R. (2021). The paradoxes of food waste reduction in the horticultural supply chain. Industrial Marketing Management, 93, 482–491. https://doi.org/10.1016/j.indmarman.2020.12.002

Richards, T.J., Hamilton, S.F. (2018). Food waste in the sharing economy. Food Policy. 75, 109–123. https://doi.org/10.1016/j.foodpol.2018.01.008

Richter, C., Kraus, S., Brem, A., Durst, S., & Giselbrecht, C. (2017). Digital entrepreneurship: Innovative business models for the sharing economy. Creativity and Innovation Management. 26(3), 300-310. https://doi.org/10.1111/caim.12227

Roh, T.H. (2016). The sharing Economy: Business cases of social enterprises using collaborative networks. Procedia Computer Science. 91, 502-511. DOI:10.1016/j.procs.2016.07.129

Schaefer, K., Corner, P.D., Kearins, K. (2015). Social, environmental, and sustainable entrepreneurship research. Organization and Environment. 28(4), 394–413. DOI:10.1177/1086026615621111

Schroder, A., Prockl, G., Constantiou, I. (2021). How digital platforms with a social purpose trigger change towards sustainable supply chains. In: Proceedings of the Annual Hawaii International Conference on System Sciences, 5–8 January 2020, 4785–4794. Honolulu: Hawaii International Conference on System Sciences (HICSS). DOI:10.24251/HICSS.2021.580

Shafer, S.M., Smith, H.J., Linder, J.C. (2005). The power of business models. Business Horizons, 48 (3), 199-207. https://doi.org/10.1016/j.bushor.2004.10.014
Shepherd, D.A., Patzelt, H. (2011). The new field of sustainable entrepreneurship: studying entrepreneurial action linking 'what is to be sustained' with 'what is to be developed'.' Entrepreneurship: Theory and Practice. 35(1), 137–163. https://doi.org/10.1111/j.1540-6520.2010.0042
Sommer, A. (2012). Managing Green Business Model Transformations. Springer.
Stake, R. E. (1995). The Art of Case Study Research. Thousand Oaks. Sage Publications Inc.
Stake, R. E. (2006). Multiple Case Study Analysis. The Guilford Press, New York.
Teece, D.J. (2018). Business models and dynamic capabilities. Long Range Planning. 51(1), 40-49. DOI:10.1016/j.lrp.2017.06.007
Welter, F. (2011). Contextualizing entrepreneurship—conceptual challenges and ways forward. Entrepreneurship Theory & Practice. 35(1), 165-184. https://doi.org/10.1111/j.1540-6520.2010.00427
Yardley, L. (2000). Dilemmas in qualitative research. Psychology & Health. 15(2), 215-228. DOI: 10.1080/08870440008400302
Yardley, L. (2017). Demonstrating the validity of qualitative research. The Journal of Positive Psychology. 12(3), 295-296. DOI: 10.1080/17439760.2016.1262624
Zott, C., R. Amit, L. Massa (2011). The business model: recent developments and future research. Journal of Management. 37(4), 1019-1042. https://doi.org/10.1177/01492063114062

The Internet

Aktuell hållbarhet (2018). Nu kommer smarta kylen som ska minska matsvinnet. https://www.aktuellhallbarhet.se/miljo/klimat/nu-kommer-smarta-kylen-som-ska-minska-butikernas-matsvinn/ [2023-11-30]
Aktuell Hållbarhet (2021). Nudging: Brödillusion minskar brödsvinn. https://www.aktuellhallbarhet.se/miljo/livsmedel/nudging-brodillusion-minskar-brodsvinn/ [2023-11-30]
Breakit (2018). Karma tar in 100 miljoner – Stenbeck bland investerarna. https://www.breakit.se/artikel/14603/matsvinnsappen-tar-in-110-miljoner-stenbeck-bland-investerarna [2023-09-25]
Breakit (2020). Maträddarappen Too Good To Go lanserar I Sverige: "Vår modell har gjort att vi kunnat växa snabbt". https://www.breakit.se/artikel/25126/matraddarappen-too-good-to-go-lanserar-i-sverige-var-modell-har-gjort-att-vi-kunnat-vaxa-snabbt [2023-09-26]
Breakit (2021). Karmas coronasatsning gjorde succe' – nu kan det bli eget bolag. https://www.breakit.se/artikel/27456/karmas-coronasatsning-gjorde-succe-nu-kan-det-bli-eget-bolag [2023-09-25]
Cision News (2021). Matsmarts nya klimatberäkningar: Svenska kunder har sparat över 5000 ton CO2e. https://news.cision.com/se/matsmart/r/matsmarts-nya-

klimatberakningar--svenska-kunder-har-sparat-over-5000-ton-co2e,c3551549 [2023-09-26]
Cision News (2023). Milstolpe nådd – 100 000 kassar räddade av Coop och Too Good To Go. https://news.cision.com/se/coop/r/milstolpe-nadd---100-000-kassar-raddade-av-coop-och-too-good-to-go,c3793946 [2023-09-26]
Coop (2023). Milstolpe nådd – 100 000 kassar räddad av Coop och Too Good To Go. https://news.cision.com/se/coop/r/milstolpe-nadd---100-000-kassar-raddade-av-coop-och-too-good-to-go,c3793946 [2023-11-31]
Dagens Nyheter (2018). Svenskt bolag ska rädda mat från att slängas i London. https://www.dn.se/ekonomi/global-utveckling/svenskt-bolag-ska-radda-mat-fran-att-slangas-i-london/ [2023-10-03]
Dagens Nyheter (2023). Företagen som minskar matsvinnet – ”Cyniskt av politiker att lägga ansvaret på konsumenterna”. https://www.dn.se/ekonomi/foretagen-som-minskar-matsvinnet-cyniskt-av-politiker-att-lagga-ansvaret-pa-konsumenterna/ [2023-09-26]
Ellen Macarthur Foundation (2023). Food and the Circular Economy – deep dive. https://www.ellenmacarthurfoundation.org/food-and-the-circular-economy-deep-dive [2023-10-23]
ICA (2023). Halverat matsvinn till 2025. https://www.ica.se/hallbarhet/miljo/halverat-matsvinn/ [2023-11-31]
Instagram (2022). Karma post [2023-10-03]
Karma (2023). Mat har ett utgångsdatum. Vår planet borde inte ha det. https://save.karma.life/sv/om-karma [2023-12-06]
KTH (2020). Karma räddar överbliven mat från att slängas. https://www.kth.se/om/nyheter/centrala-nyheter/karma-raddar-overbliven-mat-fran-att-slangas-1.971318 [2023-12-05]
Ledarna Sveriges Chefsorganisation (2020). Kan vi äta upp problemet? Hållbar win-win-win modell. https://www.ledarna.se/om-ledarna/nyheter/nyheter/kan-vi-ata-upp-problemet-hallbar-win-win-win-modell/ [2023-09-25]
Matsmart (2023). En perfekt match! https://www.matsmart.se/stories/varumarken-och-produkter/en-perfekt-match [2023-11-30]
News Cision (2022). Matsmart och Linas matkasse i samarbete för minskat matsvinn. https://news.cision.com/se/matsmart/r/matsmart-och-linas-matkasse-i-samarbete-for-minskat-matsvinn,c3663898 [2023-11-30]
Via TT (2023). Ving vill stoppa matsvinn på semesterresan – inleder samarbete med Too Good to Go i pilotprojekt på Mallorca. https://via.tt.se/pressmeddelande/3350566/ving-vill-stoppa-matsvinn-pa-semesterresan---inleder-samarbete-med-too-good-to-go-i-pilotprojekt-pa-mallorca?publisherId=1726617 [2023-09-26]

Public Documents

European Commission (2023). EU action against food waste. https://food.ec.europa.eu/safety/food-waste/eu-actions-against-food-waste_en [2023-10-22]

European Commission (2023). Food Safety, Food Waste. https://food.ec.europa.eu/safety/food-waste_enopa.eu) [2023-10-27]

FAO, IFAD, UNICEF, WFP, WHO (2023). The state of food security and nutrition in the world 2023. Food and Agricultural Organization of United Nations. https://www.fao.org/3/cc3017en/online/cc3017en.html [2023-10-21]

UN (2022). World Population Prospects, Summary of Results. United Nations, Department of Economic and Social Affairs. https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/wpp2022_summary_of_results.pdf [2023-10-22]

United Nations (UN) (2023). Goal 12: Ensure sustainable consumption and production patterns. https://www.un.org/sustainabledevelopment/sustainable-consumption-production/ [2023-10-22]

United Nations (UN) (2023). Times of crisis, times of change. Science for accelerating transformations to sustainable development. Global sustainable development report 2023. https://sdgs.un.org/sites/default/files/2023-09/FINAL%20GSDR%202023-Digital%20-110923_1.pdf [2023-10-22]

United Nations Environment Programme (2021). UNEP Food Waste Index Report 2021. United Nations Environment Programme. https://www.unep.org/resources/report/unep-food-waste-index-report-2021 [2023-10-22]

US Department of Agriculture (USDA) (2022). Food Waste and its Links to Greenhouse Gases and Climate Change. https://www.usda.gov/media/blog/2022/01/24/food-waste-and-its-links-greenhouse-gases-and-climate-change [2023-10-23]

Popular science summary

Food waste is a big global problem, but local digital solutions are emerging to tackle it. Inspired by new economic models like the shared economy where people connext to share items like clothes, food and places to stay, food waste platforms represent sustainable entrepreneurship. These platforms aim to create value from waste by redistributing surplus food. They do this by creating a positive change for people and planet, while at the same time aiming to make a profit. However, the interactions involving various participants and many interactions in these pose challenges, and there's not enough research on how these dynamics affect sustainable entrepreneurship. This study explores these interactions and challenges, combining sustainable entrepreneurship with contextualized entrepreneurship. Through a study of three food waste platforms in Sweden and their partners, Too Good To Go, Matsmart and Karma, the findings reveal that these platforms evolve through collaboration with many actors. This means, the process of change is created collectively together with many actors. The study highlights the importance of context in understanding sustainable entrepreneurship, shedding light on how collaborative business models in the shared economy contribute to creating sustainable values.

Acknowledgments

I would like to express my sincere gratitude to all those who have contributed to the completion of this master's thesis. First and foremost, I am deeply thankful to my supervisor Hanna Astner, whose guidance, support and positive energy were instrumental throughout this research journey. I am also grateful to the faculty members and staff at Swedish University of Agricultural science for providing a inspiring academic environment, and to my opponent group that provided me with valuable insights.

Special thanks to my friends, family and colleagues for their unwavering encouragement and understanding during the challenging phases of this thesis. Your support has been a source of motivation and strength.

Additionally, I extend my appreciation to the participants Too Good To Go, Matsmart, Karma, Green Rabbit and ICA, who generously shared their time and insights, making this research possible.

Finally, I acknowledge the broader academic community whose collective knowledge has enriched my understanding and inspired my intellectual growth.

Thank you all for being part of this academic journey.

Appendix 2 – Business Models

Figure 5. Food Waste Platforms Business Model

Element	**Too Good To Go**	**Matsmart**	**Karma**	
Customer Segment	Partners: • looking to reduce food waste • looking to increase sales Customers: • looking to reduce food waste • who enjoy discounted meals • enjoying the surprise element	Partners: • looking to reduce food waste • looking to increase sales Customers: • looking to reduce food waste • who enjoy discounted meals	Partners: • looking to reduce food waste • Partners looking to increase sales • Partners looking to improve customer experience Customers: • looking to reduce food waste • who enjoy discounted meals	
Value Proposition	Partners: • Simple and easy digital solutions for partners that require minimal effort in addressing food waste Customers: • Offer discounted food in "surprise bags" that customers pick up	Partners: • Providing a solution to suppliers for excess inventory while addressing food waste Customers: • Offering deals on products • Offer transport to the customer's home	Partners: • helpful digital solution to reduce food waste • payment infrastructure for all types of transactions, "Order and pay" making payments easy for customers and restaurants Customers: • Offering deals on products, that customers pick up	

			• “Karma-box” Subscription boxes of fruit and vegetables delivered to the customer's home	
Customer Relationships	Partners: • Close and educational relationships with partners of big size • Digital communication with small-size partners Customers: • Engagement through digital platform	Partners: • Strategic relationships with partners of big size • Less close relationship with small partners • Collaborative relationship with selected partners Customers • Engagement through digital platform	Partners: • Engagement through the app by providing and receiving data Customers: • Engagement through the app by connecting supply and demand & communicating data	
Channels	Communicated: • via media, mobile app, education Distributed: • via app & partners	Communicated: Via media, -e-commerce platform, sustainability reporting, research Distributed: • via E-commerce platform and transport directly to the customer	Communicated: • via media, mobile app, education Distributed: • via app & partners	
Revenue streams	• Revenue generated from the sale of surplus products through the app	• Revenue generated from the sale of surplus products through the e-commerce platform.	• 25% on average revenue generated from the sale of surplus products through the app • Sales of product “order & pay” • Collaboration with partners may contribute to revenue through expanded outreach.	
Key Resources	• Mobile app platform • Capital from investors	• E-commerce platform & Mobile app platform • Capital from investors	• Mobile app platform • Capital from investors	

	• partnerships with food providers • dedicated development team	• Partnerships with over 700 suppliers. • Relationships with various stakeholders, including tech suppliers, distributors, and talents.	• partnerships with food providers • dedicated development and sales team	
Key Activities	• operating and maintaining the digital platform, • convincing partners • managing partnerships with businesses • conducting educational initiatives on food waste awareness	• Operating and maintaining the e-commerce platform. •Building and maintaining strategic partnerships with suppliers. • Communication and engagement with stakeholders to increase awareness of sustainability challenges • Purchasing surplus and inventory from suppliers	• maintaining and developing the digital platform, • managing partnerships with businesses, and • Analyzing data	
Key Partners	• Partners: restaurants, cafes, bakeries, and grocery stores, • Investors: the current CEO Mette Lykke at an early stage • Community: Company Group	• Partners: Over 700 suppliers (partners) • Investors, • Tech suppliers, • Distributors	• Partners: (Farmers, producers, restaurants, wholesalers, food chains) • Investors • Collaborating companies	
Cost Structure	• Operational expenses: developing and maintaining the digital platform, salaries • Costs related to partnerships	• Operational expenses: developing and maintaining the digital platform, salaries • Costs related to partnerships • purchasing surplus products • storage rent • Potentially research and institutional efforts for sustainability initiatives • transport	• Operational expenses: developing and maintaining the digital platform, salaries • Costs related to partnerships	

Appendix 2 – Interview Guide

- Tell the story of how and why Too Good to Go was started. What motivated it? What were the primary goals?
- Can you provide an overview of your digital platform and its key features?
- What does sustainability mean for your business?
- Which other stakeholders or actors are involved in your platform? (Tell a bit about each of them, how do they contribute, how do you impact each other, how does it work? Who contacts whom?)
- How do you work with restaurants, stores, cafes? Is there a difference? How do they affect you?
- Is there anything in the company's environment that has influenced how you have been able to develop the platform? For example, regulations, culture, financing opportunities, or similar? How? How has it affected you?
- How can sustainability be integrated into the platform? Are there any challenges with that?
- Can you share examples of sustainable business practices implemented within your platform?
- How do you perceive the relationship between your platform and principles of sustainable entrepreneurship?
- How do you handle conflicts between sustainability and profitability? Can you provide an example of when sustainability has 'won'? Can you provide an example of when profitability has 'won'?
- How do you measure the effectiveness of your platform in reducing food waste, and what data is used for this assessment?
- How does your platform adapt to different cultural contexts or regional variations when it comes to handling food waste?
- Can you share examples of successful adaptation efforts?
- Can you discuss any strategic alliances or partnerships that your platform has formed to strengthen sustainability efforts?
- Travel organizer, wine – how did that happen? How do you influence each other?
- How have these collaborations contributed to the reduction of food waste?

- Have you encountered any unexpected or undesirable consequences of your platform's operations in terms of sustainability or food waste reduction?
- How do you envision the future development of digital platforms for food waste in contributing to sustainable entrepreneurship and sustainable business models?
- Have you encountered challenges related to aligning your platform's goals with broader sustainability objectives?
- In your experience, how do digital platforms for food waste interact with traditional food chains?
- How do you see the role of technology evolving in the context of reducing food waste and sustainability?
- Do you find that the industry takes note of the data you share and that it impacts them?

Publishing and archiving

Approved students' theses at SLU are published electronically. As a student, you have the copyright to your work and need to approve the electronic publishing. If you check the box for **YES**, the full text (pdf file) and metadata will be visible and searchable online. If you check the box for **NO**, only the metadata and the abstract will be visible and searchable online. Nevertheless, when the document is uploaded it will still be archived as a digital file. If you are more than one author, the checked box will be applied to all authors. You will find a link to SLU's publishing agreement here:

- https://libanswers.slu.se/en/faq/228318.

☒ YES, I/we hereby permit to publication of the present thesis in accordance with the SLU agreement regarding the transfer of the right to publish a work.

☐ NO, I/we do not give permission to publish the present work. The work will still be archived and its metadata and abstract will be visible and searchable.